

LEGEND

- PROPOSED ELEVATION
- EXISTING ELEVATION
- F.F. PROPOSED TOP OF FIRST FLOOR ELEVATION
- T.O.F. PROPOSED TOP OF CONCRETE FOUNDATION ELEVATION
- U.S.F. PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION
- D/W PROPOSED DRIVEWAY
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATERMAIN
- PROPOSED 150mm PVC SANITARY LATERAL SERVICE
- PROPOSED 38mm WATER SERVICE (COPPER TYPE "K")
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING CATCH BASIN
- EXISTING UTILITY POLE
- EXISTING OVERHEAD WIRES
- PROPOSED V&V
- PROPOSED GENERAL DIRECTION OF LOT GRADING AND SURFACE FLOW
- PROPOSED WEeping TILE SUMP PIT LOCATION C/W SUMP PUMPS
- PROPOSED CONCRETE SPLASH PAD LOCATION
- PROPOSED HIGH RIDGE LINE
- PROPOSED CONTROLLED ROOF DRAIN LOCATION
- PROPOSED DEPRESSION CURB
- PROPOSED RETAINING WALL
- PROPOSED TOP OF RETAINING WALL ELEVATION
- 100 YR HIGH WATER LEVEL (150mm ABOVE THE ROOF DRAIN)
- 5 YR HIGH WATER LEVEL (110mm ABOVE THE ROOF DRAIN)
- PROPOSED ROOF SCUPPER LOCATION

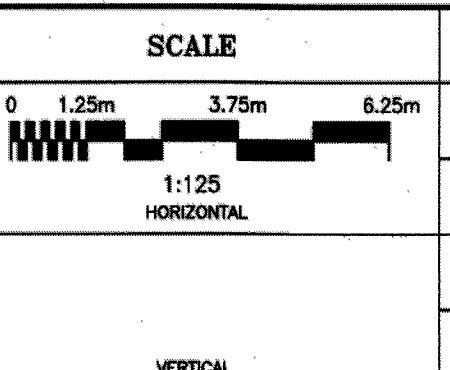
KEY PLAN

(NOT TO SCALE)

NOTES

- 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.
- 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 PATTERSON GROUP (REPORT NO. P04332-LET.01 DATED NOVEMBER 21, 2017).
- 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 ANNIS, O'SULLIVAN, VOLLEBECK LTD. AS SHOWN ON THEIR TOPOGRAPHICAL SURVEY PLAN (JOB NO. 17299-17) COMPLETED ON SEPTEMBER 11, 2017 AND DATED SEPTEMBER 13, 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" DRAWINGS (PLAN NO. 13788, DWG. NO. 5034-05 SHEET 5 OF 7 ENTITLED "DONALD STREET SANITARY SEWER, STORM SEWER AND WATERMAIN REPLACEMENT").
- SITE LAYOUT AND DETAILS FOR GRADING, SERVING AND SWM DESIGN WERE PROVIDED BY THE OWNER'S HOUSE DESIGNER THERIAULT DESIGN AS DETAILED ON THEIR SITE PLAN RECEIVED ON OCTOBER 17, 2017. BUILDING ELEVATIONS SHOWN ON DWG. NO. 1/8 REV. 1 (i.e. F.F., T.O.F., U.S.F., ETC.) WERE PROVIDED BY THERIAULT DESIGN ON DECEMBER 1, 2017.
- ALL GRADES SHOWN ARE GEODETIC AND METRIC (SEE ANNIS, O'SULLIVAN, VOLLEBECK LTD.'S TOPOGRAPHICAL PLAN).
- PIPE SIZES SHOWN ON THIS PLAN ARE METRIC.
- 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.
- ALL GRADING SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA.
- CONNECTION OF THE 38mm WATER SERVICE TO THE EXISTING 400mm DONALD STREET 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.
- CONSTRUCT ALL WATERMANS, WATER SERVICES, SANITARY AND STORM SEWER SYSTEMS IN ACCORDANCE WITH CITY OF OTTAWA'S LATEST REVISED STANDARD OTHERWISE AS PER OPS & OPSD REQUIREMENT AND DONE TO THE SATISFACTION OF THE CITY. FOR DETAILS OF TYPICAL WATER SERVICE LINE, REFER TO CITY DETAIL W33.
- BEDDING AND HAUNCHING MATERIAL FOR SEWER INSTALLATIONS TO BE GRANULAR "A" INSTALLED AND COMPACTED AS PER CITY STANDARD DETAIL DWG. NO. S6 AND S7.
- THE PROPOSED SANITARY LATERAL PIPE MATERIAL SHALL BE PVC DR-28.
- ALL WATER SERVICES/MAINS SHALL HAVE 2.4m COVER (MIN.). THE 38mm WATER SERVICE SHALL BE COPPER TYPE "K". 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. METHOD OF PROTECTION FOR NEW WATERMAIN AND SERVICE AS PER CITY DETAIL W40 REV. DATE MARCH 2005.
- 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).
- ROOF SCUPPER LOCATIONS AND INSTALLATION DETAILS AS PER HOUSE DESIGNER'S DRAWINGS.
- THIS GRADING AND SERVING PLAN WAS PREPARED FOR THE OWNERS FOR THE PURPOSE OF ASCERTAINING A BUILDING PERMIT ONLY. ALL WORKS CONSTRUCTED TO THE SATISFACTION OF 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 LAYOUT.
- LOCATION OF EXISTING WATERMANS, SEWERS AND SERVICES SHOWN ON THIS DRAWING WERE TAKEN FROM ANNIS, O'SULLIVAN, VOLLEBECK LTD.'S TOPOGRAPHICAL SURVEY PLAN, SANITARY AND STORM SEWER INVERT INFORMATION ALONG DONALD STREET WAS TAKEN FROM THE CITY'S AS-BUILT DRAWING PLAN NO. 13978 DWG. NO. 5034-05 SHEET 5 OF 7 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.
- 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-817-79 DATED NOVEMBER 2017 ALSO FOR DETAILS.
 - CONTROLLED ROOF DRAIN FLOW RATE SHALL BE 0.63L/S OR 10 US GAL/MIN.
- ALL PROPOSED BUILDING SANITARY AND WATER SERVICES SHALL TERMINATE ±1.0m OUTSIDE THE FOUNDATION WALL, CONNECTION TO PLUMBING BY OTHERS.
- SANITARY BUILDING DRAIN TO BE EQUIPPED WITH A FULL PORT BACKWATER VALVE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND INSTALLED AS PER CITY REQUIREMENTS. REFER TO CITY OF OTTAWA STANDARD DRAWING S14, S14.1 AND S14.2 FOR DETAILS.
- PRIOR TO CONCRETE FOOTING AND FOUNDATION POURING, THE OWNERS AND/OR CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SURGRADE ON THIS LOT IS SUFFICIENT TO SUPPORT THE PROPOSED RESIDENTIAL BUILDING.
- 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 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 TO REPORT THE FINDING IN ORDER TO ADJUST THE BUILDING FOUNDATION GRADES PRIOR TO CONCRETE POURING.
- 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, OPS & 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.
- PROPOSED UNDERSIDE OF FOOTING ELEVATIONS SHALL BE REVIEWED AND APPROVED BY THERIAULT DESIGN PRIOR TO CONSTRUCTION.

NO.	REVISION	DATE	BY
2	REVISIONS PER HOUSE DESIGNER'S INFORMATION OF DEC. 1/17	12/01/17	TLM
1	REVISIONS PER OWNER AND OWNER'S HOUSE DESIGNER'S REVIEW	11/17/17	TLM



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

PROJECT	324-326 DONALD STREET LOTS 187 and 188 REGISTERED PLAN 441 CITY OF OTTAWA
DRAWING TITLE	PROPOSED GRADING, SERVING AND STORMWATER MANAGEMENT PLAN

PROJECT No.	817-79	DATE	OCTOBER 2017	DRAWING No.	G-1
T.L. MAK ENGINEERING CONSULTANTS LTD. CONSULTING ENGINEERS					