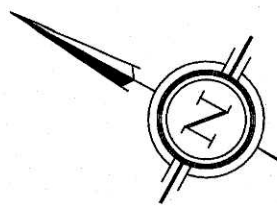


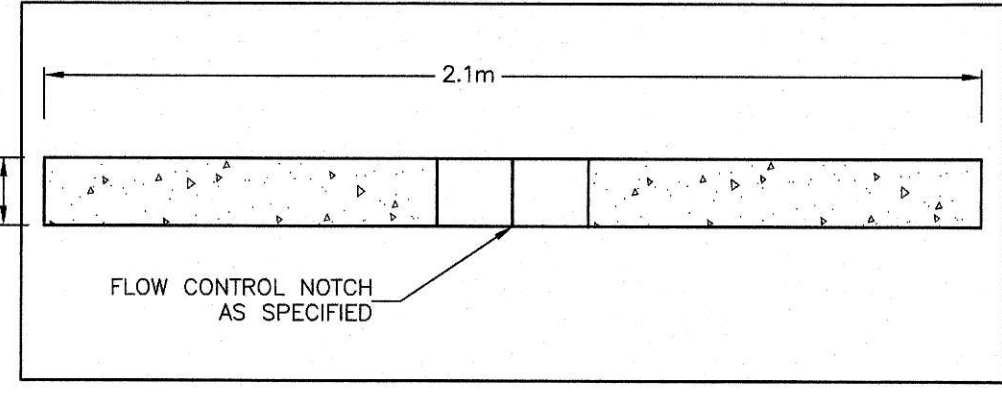
JOB BENCHMARK  
Fire Hydrant Top of  
Spindle=106.59



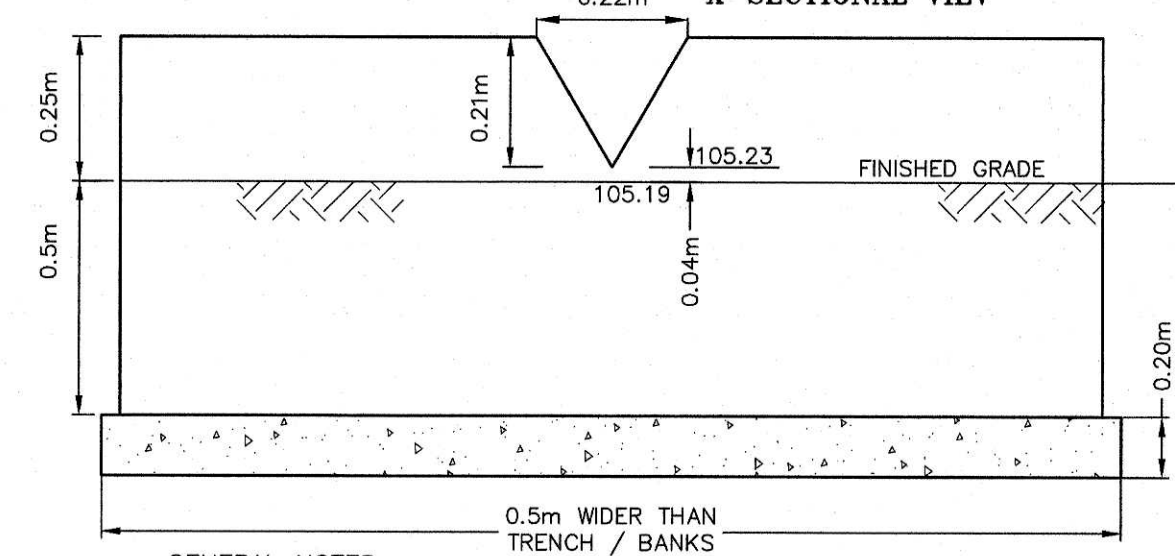
PROPOSED OUTLET CONTROL V-NOTCH WEIR WALL W / BASE

N.T.S.

PLAN VIEW



X-SECTIONAL VIEW



- GENERAL NOTES:
1. CONCRETE  $f_c=4000\text{psi}$  @ 28 DAYS MINIMUM.
  2. STEEL REINFORCEMENT: ASTM A-615, GRADE 60 BLACK DEFORMED BARS.
  3. SIZE, SHAPE AND LOCATION OF FLOW-CONTROL NOTCH BE DETERMINED BY CONTRACTOR PRIOR TO MANUFACTURE.
  4. OWNER'S STRUCTURAL AND SOILS ENGINEERS TO CHECK AND VERIFY PROPOSED CONCRETE OUTLET STRUCTURE PRIOR TO CONSTRUCTION.

KEY PLAN  
(NOT TO SCALE)

NOTES:

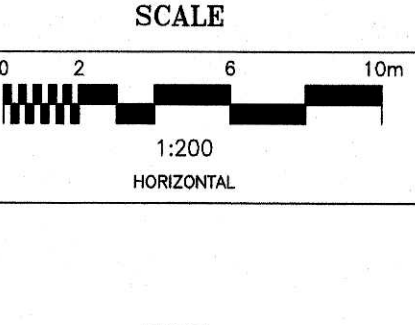
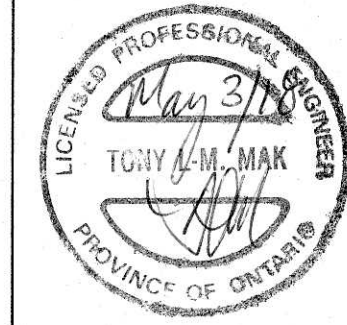
1. EXISTING SERVICES AND UTILITIES SHOWN ON THIS DRAWING WERE TAKEN FROM THE BEST AVAILABLE RECORDS BUT ARE NOT COMPLETE. CONTRACTOR IS REQUIRED TO CHECK IN THE FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH AUTHORITIES AND UTILITIES TO HIS SATISFACTION BEFORE DIGGING.
2. CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS AS DEEMED NECESSARY. PRIOR TO 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 THE PROPOSED INSTITUTIONAL BUILDING.
3. STING DETAILS FOR THE PROPOSED BUILDING ADDITION WERE PROVIDED BY SUSAN D. SMITH ARCHITECT AS DETAIL ON THEIR SITE PLAN (DWG. No. A1 REV. 2) RECEIVED ON JULY 5, 2017. BUILDING ELEVATIONS SHOWN (i.e. T.O.F. AND U.S.F.) WERE PROVIDED BY SUSAN D. SMITH ARCHITECT AS PER SECTIONS PLAN (DWG. No. A4 REV. 2 DATED JULY/14) RECEIVED ON JANUARY 18, 2017.
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 FARLEY, SMITH AND DENIS SURVEYING LIMITED AS SHOWN ON THEIR TOPOGRAPHICAL SURVEY PLAN (FILE No. 87-17 DATED MAY 6, 2016 AND UPDATED ON APRIL 19, 2017), T.L. MAK ENGINEERING CONSULTANTS LTD. DOES NOT TAKE ANY RESPONSIBILITY FOR THE SURVEY INFORMATION SHOWN HERE.
5. INFORMATION REGARDING THE EXISTING LEITRIM ROAD STORM AND SANITARY SEWERS SHOWN ON THIS PLAN WAS TAKEN FROM FARLEY, SMITH AND DENIS SURVEYING LTD.'S TOPOGRAPHICAL SURVEY AND THE CITY OF OTTAWA PLAN AND PROFILE "AS-BUILT" DRAWING LEITRIM ROAD DRAWING No. 2762 SHEET 1 REV. 1 DATED AUGUST 1981. FOR "AS-BUILT" WATERMAIN PLAN AND PROFILE INFORMATION ON LEITRIM ROAD, REFER TO CITY OF OTTAWA DWG No. 2762 SHEET 1.
6. ALL GRADING SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA. ALL GRADES SHOWN ARE GEODETIC AND METRIC.
7. ALL WATERWORKS SHALL BE CONSTRUCTED TO CITY'S LATEST REVISED STANDARDS ON APPROVAL BY THE CITY OF OTTAWA.
8. CONSTRUCT ALL SANITARY PIPES IN ACCORDANCE WITH CITY OF OTTAWA'S LATEST REVISED STANDARD, OTHERWISE AS PER OPSD AND OPSD SPECIFICATIONS.
9. ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND AS PER CITY'S REQUIREMENTS.
10. THE CONTRACTOR SHALL CONSTRUCT AND ENSURE THAT THE 25mm WATER SERVICE ON THIS LOT SHALL HAVE A MINIMUM OF 2.4m OF GROUND COVER OTHERWISE INSULATE WITH RIGID 5/4" STYROFOAM IN ACCORDANCE WITH THE SITE SOILS ENGINEER'S REQUIREMENTS. THE WATER SERVICE INSTALLATION SHALL BE COPPER 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 BUILDING PERMIT ISSUANCE. ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND PER CITY'S REQUIREMENTS. THIS GRADING PLAN SHALL NOT BE USED FOR BUILDING CONSTRUCTION LAYOUT PURPOSES. REFER TO THE ARCHITECT'S APPROVED SITE PLAN FOR EXACT DIMENSIONS REGARDING BUILDING LAYOUT.
12. WHERE ROOF EAVESDROUGHS ARE INSTALLED, ROOF DOWNSPOUTS SHALL BE DIRECTED TO OUTLET DISCHARGE TO THE FRONT YARD AND SIDE YARDS WHERE POSSIBLE BUT NOT TO THE REAR YARD.
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 LEITRIM ROAD WATERMAIN, STORM SEWER, AND SANITARY SEWER SHOWN ON THIS PLAN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY IN THE FIELD TO CONFIRM EXACT LOCATIONS PRIOR TO EXCAVATION (SEE NOTE 24).
16. PROPOSED SURFACE GRADE SHALL BE 7% (MAXIMUM) WHERE THE GROUND DROPS OFF STEEPLY. TERRACE THE GROUND AT 3% (MAX.) TO 1% AS NECESSARY TO MEET THE CITY'S GRADING REQUIREMENTS.
17. WATER SERVICE T/S CONNECTION ON LEITRIM ROAD 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.
18. IF WATER SERVICE IS LESS THAN 1.0m FROM SEWER, MANHOLE, OR CATCH BASIN, CONTRACTOR IS REQUESTED TO INSULATE BETWEEN THEM WITH 5/4" RIGID INSULATION (AS PER CITY DETAIL 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 SERVICE LATERAL SHALL BE PVC DR-28 OR EQUIVALENT. SANITARY SERVICE BENDS AND RISERS USED MUST BE CONSTRUCTED TO THE CITY'S SATISFACTION.
22. THE CONTRACTOR SHALL SAW CUT EXISTING SANITARY MANHOLE AND CONSTRUCT SANITARY MANHOLE BENCHING AS PER CITY OF OTTAWA STANDARDS.
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 SERVING TRENCHES.
24. DETAILS OF THE EXISTING SEWERS AND WATERMAIN SHOWN ON LEITRIM ROAD 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 FROST OF THIS PROPERTY FIRST TO ENSURE THAT 1% (MINIMUM) PIPE SLOPE OF THE SANITARY LATERAL CAN BE ACHIEVED USING THE PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION. IF 1% (MINIMUM) 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 LOT, THE CONTRACTOR MUST FIRST CONSTRUCT THE UNDERGROUND SANITARY AND WATER SERVICES FROM SEWER AND WATERMAIN TO THE PROPERTY. THE CONTRACTOR SHALL VERIFY SEWER DEPTHS TO ENSURE THAT SEWER LATERALS CAN ACHIEVE A SLOPE OF 1% (MINIMUM) AND STILL BE BELOW EXISTING UNDERSIDE OF CONCRETE FOOTING ELEVATION OF THE EXISTING BUILDING. 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 CONSTRUCTION.
26. INSULATE THE BUILDING SERVICE LATERALS WITHIN THE PRIVATE PROPERTY AND ROAD RIGHT OF WAY WHERE GROUND COVER FOR FROST PROTECTION IS LESS THAN 2.4m FOR WATER SERVICE AND 2.4m FOR SANITARY GRAVITY SEWER. MINIMUM GROUND COVER OVER THE BUILDING SERVICE PIPES SHALL NOT BE LESS THAN 2m. EXACT INSULATION THICKNESS SHALL BE DETERMINED BY THE CITY INSPECTOR ON SITE AND/OR OWNER'S SOILS ENGINEER. ALL INSULATION WORKS SHALL BE CARRIED OUT AS PER CITY'S CURRENT ENGINEERING STANDARDS.
27. 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 OUT BUILDING FOOTING AND FOUNDATION OF THE BUILDING TO PROVIDE SUFFICIENT FROST COVER FOR THE FOUNDATION STRUCTURES. THE INSULATION REQUIREMENTS SHALL BE REVIEWED AND RECOMMENDED BY THE OWNER'S SOILS ENGINEER. EXACT INSULATION REQUIREMENTS SHALL BE CONFIRMED BY THE OWNER'S ARCHITECT AND THE SITE SOILS ENGINEER TO THE CONTRACTOR PRIOR TO INSTALLATION.
28. IT IS RECOMMENDED THAT A FULL PORT BACKWATER VALVE BE INSTALLED FOR THE NEW SANITARY LATERAL SERVICE PROPOSED TO SERVICE THE EXISTING BUILDING UNDER THE CURRENT REGULATION OF THE ONTARIO PLUMBING CODE AND AS PER CITY STANDARDS S14, S14.1 AND S14.2.
29. EXISTING WATER WELL AND SEPTIC SYSTEM SHALL BE ABANDONED. ALL WORKS SHALL BE PER MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE STANDARDS AND REQUIREMENTS.
30. THE 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 THE NEW SERVICE LATERALS FOR THE PROPOSED BUILDING AND THE NEW DRAINWAY, THE CONTRACTOR SHALL RESTORE THE EXISTING ROADWAY BOULEVARD DRAINAGE ACROSS THIS LOT TO DRAIN POSITIVELY TO ITS EXISTING OUTLET. THE WORKS SHALL BE CARRIED OUT TO THE SATISFACTION OF THE CITY.
32. AT THE TIME OF CONSTRUCTION OF DRIVEWAY FOR THE NEW BUILDING, REGRADE ROADWAY BOULEVARD TO CARRY INTO EXISTING SWM OUTLET TO THE CITY'S SATISFACTION AND REQUIREMENTS.
33. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES REGARDING LOCATION OF THE EXISTING OVERHEAD UTILITY WIRES FOR RELOCATION AND POSSIBLE CONFLICT CLEARANCE PRIOR TO CONSTRUCTION.
34. LOCATION AND ELEVATION OF EXISTING SANITARY AND STORM SEWERS SHOWN ON THIS DRAWING WERE TAKEN FROM FARLEY, SMITH AND DENIS SURVEYING LTD.'S TOPOGRAPHICAL SURVEY PLAN. THE CONTRACTOR SHALL OBTAIN AND REVIEW THESE PLANS AND SATISFY HIMSELF OR HERSELF ALONE WITH OBTAINING LOCATES OF THESE SERVICES PRIOR TO CONSTRUCTION.
35. THE CONTRACTOR SHALL REFER TO THE OWNER'S ARCHITECT'S FINAL PLANS PREPARED BY SUSAN D. SMITH ARCHITECT FOR DETAILS OF ANY PROPOSED BUILDING FOUNDATION CHECK DOWNS PRIOR TO CONCRETE POURING.

LEGEND

- PROPOSED ELEVATION  
EXISTING ELEVATION  
T.O.F.  
U.S.F.  
PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION  
PROPOSED DRIVEWAY  
EXISTING SANITARY SEWER  
EXISTING STORM SEWER  
EXISTING WATERMAIN  
PROPOSED 250mm PVC SANITARY SEWER  
PROPOSED 125mm PVC SANITARY LATERAL SERVICE @ 1% (MIN) SLOPE  
PROPOSED 25mm WATER SERVICE (COPPER TYPE "K")  
EXISTING SANITARY MANHOLE  
EXISTING STORM MANHOLE  
EXISTING CATCH BASIN  
EXISTING FIRE HYDRANT  
EXISTING WATER VALVE
- EXISTING UTILITY POLE  
EXISTING OVERHEAD WIRES  
PROPOSED V&VB  
PROPOSED DRAINAGE SWALE LOCATION  
PROPOSED GENERAL DIRECTION OF LOT GRADING AND SURFACE WATER FLOW  
PROPOSED CONCRETE SPLASH PAD LOCATION FOR WEEDING TILE WATER DISCHARGE  
PROPOSED REFURBISHED SUMP PIT C/W DUPLEX SUMP PUMP LOCATION PER ARCHITECT'S DRAWINGS  
PROPOSED SANITARY MANHOLE  
PROPOSED RIGID STYROFOAM INSULATION 75mm THICK (MIN.)  
PROPOSED GARAGE SLAB ELEVATION  
PROPOSED 500mm CSP CULVERT 2.8mm F.G. THICKNESS  
PROPOSED TERRACING 3:1 (MAX.) TO 1 V  
PROPOSED 5 YR HIGH WATER LEVEL=105.37  
PROPOSED 100 YR HIGH WATER LEVEL=105.44

PROFILE TABLE FOR 25mm 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 ±105.83	EXISTING ±103.55
0+05.5	25mm V&VB AT PROPERTY LINE	105.20	102.80
0+13	25mm WATER SERVICE	105.44	103.04
0+20	25mm WATER SERVICE AT BUILDING LINE	105.67	103.27

NO.	REVISION	DATE	BY
3	REVISIONS AS PER REVISED SITE PLAN OF MARCH 12, 2018	04/08/18	T.L.M.
2	REVISIONS AS PER CITY'S ENGINEERING REVIEW COMMENTS OF OCTOBER 13, 2017	10/24/17	T.L.M.
1	REVISIONS AS PER REVISED SITE PLAN OF JULY 5, 2017	07/14/17	T.L.M.



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

PROJECT  
3310 LEITRIM ROAD  
PART OF LOT 16  
CONCESSION 5 (RIDEAU FRONT)  
CITY OF OTTAWA

DRAWING TITLE  
PROPOSED ADDITION  
HIEU GIANG VIETNAMESE BUDDHIST TEMPLE  
PROPOSED GRADING, SERVICING AND STORM  
WATER MANAGEMENT PLAN

T.L. MAK ENGINEERING CONSULTANTS LTD. CONSULTING ENGINEERS			
PROJECT No.	DATE	DRAWING No.	
816-47	MAY 2017	G-1	