#### **GENERAL NOTES:**

- ALL WORKS AND MATERIALS SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE.
- THE LOCATION OF UTILITIES IS APPROXIMATE ONLY, AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LOCATION AND STATUS OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION OF PLANT AND EQUIPMENT FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION, TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING SERVICES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONFIRM LOCATIONS AND ELEVATIONS OF EXISTING SERVICES AND STRUCTURES TO BE CONNECTED TO AND EXISTING SERVICES THAT MAY BE DAMAGED OR CAUSE CONFLICTS PRIOR TO CONSTRUCTION OF ANY NEW SEWER, WATER AND/OR STORM WATER WORKS. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES, INTERPRETATIONS, CHANGES AND ADDITIONS TO THESE DRAWINGS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER, WHEN NOTED AND BEFORE PROCEEDING WITH CONSTRUCTION WORKS, DO NOT CONTINUE CONSTRUCTION IN AREAS WHERE DISCREPANCIES APPEAR UNTIL SUCH DISCREPANCIES HAVE BEEN RESOLVED.
- 4. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED. ALL DRAWINGS SHOULD NOT BE SCALED BY THE CONTRACTOR. ANY MISSING OR QUESTIONABLE DIMENSIONS ARE TO BE CONFIRMED WITH THE ENGINEER IN WRITING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND BEAR COST OF THE
- 6. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS", THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, BACKFILL AND REINSTATEMENT OF ALL AREAS DISTURBED DURING CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER, THE CITY OF OTTAWA AND THE
- ANY AREAS BEYOND THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COMPLY WITH THE CITY OF OTTAWA REQUIREMENTS FOR TRAFFIC CONTROL WHEN WORKING ON CITY STREETS. ALL CONSTRUCTION SIGNAGE MUST CONFORM TO THE M.T.O. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST AMENDMENT).
- 10. THE SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- 11. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS WRITTEN APPROVAL BY THE ENGINEER HAS BEEN OBTAINED.
- 12. EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.

ENGINEER AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING.

- 13. THE SITE LAYOUT IS THE RESPONSIBILITY OF THE CONTRACTOR. AS-BUILT SITE SERVICING & GRADING DRAWINGS SHALL BE MAINTAINED ON SITE BY THE CONTRACTOR.
- 14. THE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL BEDDING OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH, AS SPECIFIED BY OPSD, IS EXCEEDED.
- 15. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED AY THE CONTRACTOR. REVIEW WITH
- 16. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO
- PLACING NEW PAVEMENT.
- 17. ALL BOREHOLES SHOWN ON THE DRAWINGS ARE FOR INFORMATION ONLY. FOR GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY EXP. SERVICES INC, DATED MAY 14, 2019.
- 18. THE CONTRACTOR SHALL APPRAISE HIS/HER SELF OF ALL SURFACE AND SUBSURFACE CONDITIONS TO BE ENCOUNTERED AND SHALL CARRY OUT THEIR OWN TEST PITS AS REQUIRED TO MAKE THEIR OWN INDEPENDENT ASSESSMENT OF GROUND CONDITIONS. THE CONTRACTOR SHALL NOT MAKE ANY CLAIM FOR ANY EXTRA COST DUE TO ANY SUCH GROUND CONDITIONS VARYING FROM THOSE ANTICIPATED BY THE CONTRACTOR.
- 19. DO NOT CONSTRUCT USING DRAWINGS THAT ARE NOT MARKED "ISSUED FOR CONSTRUCTION".
- 20. FOR TOPOGRAPHICAL INFORMATION REFER TO PLAN PREPARED BY FAIRHALL MOFFAT WOODLAND LIMITED. DATED APRIL 3, 2019.
- 21. CIVIL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, LANDSCAPE AND LEGAL DRAWINGS.
- 22. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING.
- 23. STREET LIGHTING SHALL BE TO CITY OF OTTAWA STANDARDS.

# SANITARY SEWER NOTES

- ALL SANITARY SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- ALL SANITARY SEWERS SHALL BE PVC SDR 35. IPEX "RING-TITE" (OR EQUIVALENT). AS PER CSA STANDARD 8182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE NOTED.
- SANITARY SEWER TRENCH AND BEDDING SHALL BE AS PER CITY OF OTTAWA STD. S6 AND S7, CLASS 'B BEDDING UNLESS OTHERWISE NOTED.
- 4. ALL SANITARY LATERALS ARE TO BE PVC SDR 28, IPEX "RING-TITE" (OR EQUIVALENT), ANY COLOR EXCEPT WHITE AND MARKED WITH A 50MM X 100MM WOODEN MARKER, EXTENDING FROM THE INVERT TO 1.0 M
- SEWER BEDDING AS PER CITY STANDARD S6 & S7. GRANULAR 'A' BEDDING TO BE INCREASED TO 300MM WHERE SEWERS ARE BELOW THE GROUNDWATER TABLE.
- SANITARY SEWER MANHOLES SHALL BE BENCHED AS PER OPSD 701.021. SANITARY MANHOLE FRAME AND COVERS SHALL BE AS PER CITY OF OTTAWA STD. S24 AND S25. SAFETY PLATFORMS SHALL BE AS PER OPSD 404.02. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01.
- THE CONTRACTOR SHALL CONDUCT INFILTRATION/EXFILTRATION (AS PER CURRENT OPSS) TESTING ON ALL NEWLY INSTALLED SANITARY SEWERS. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWER INSTALLATION AND VIEWED BY THE ENGINEER.
- 8. THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED SANITARY SEWERS AND EXISTING SEWERS CONNECTED TO. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED.
- . ALL SERVICE CONNECTIONS TO BE CONSTRUCTED AS PER CITY STANDARD S11 & S11.1.
- 10. THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE SANITARY SEWERS IN ACCORDANCE WITH OPSD 802,010 AND 802.013. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
- 11. ALL SANITARY BUILDING DRAINS TO BE EQUIPPED WITH SANITARY BACKWATER VALVES INSTALLED PER CITY OF OTTAWA STANDARD DRAWING S14.1.
- 12. WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE.
- 13. MINIMUM SOIL COVER TO BE 2.1m TO PROTECT SEWERS FROM FROST DAMAGE. IN AREAS WHERE ADEQUATE FROST COVER CANNOT BE ACHIEVED, EQUIVALENT THERMAL INSULATION TO BE INSTALLED AS PER

#### STORM SEWER NOTES

- 1. ALL STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- 2. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2 (LATEST AMENDMENT). ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.L (LATEST AMENDMENT). PIPE SHALL BE JOINTED WITH STD. RUBBER GASKETS AS PER CSA A257.3 (LATEST AMENDMENT).
- 3. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
- 4. THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE STORM SEWERS IN ACCORDANCE WITH OPSD 802.010 AND 802.013. RIGID STORM PIPE SHALL BE CONSTRUCTED IN ACCORDANCE WITH OPSD 802.030. DURING CONSTRUCTION THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
- 5. SEWER BEDDING AS PER CITY STANDARD S6 & S7.
- 6. ALL STORM LATERALS SHALL BE PVC SDR 28, WHITE IN COLOR AND MARKED WITH A 50MM X IOOMM WOODEN MARKER EXTENDING FROM THE INVERT TO 1.0M ABOVE GRADE PAINTED GREEN.
- 7. ALL SERVICE CONNECTIONS TO BE CONSTRUCTED AS PER CITY STANDARD S11 & S11.1.
- 8. WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE
- 9. MINIMUM SOIL COVER TO BE 2.1M TO PROTECT SEWERS FROM FROST DAMAGE. IN AREAS WHERE ADEQUATE FROST COVER CANNOT BE ACHIEVED, EQUIVALENT THERMAL INSULATION TO BE INSTALLED AS PER
- 10. ALL STORM SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.
- 11. STORM MANHOLE FRAME AND COVERS SHALL BE AS PER CITY OF OTTAWA STD. S24, S24.1 AND S25.
- 12. SAFETY PLATFORMS SHALL BE IN ACCORDANCE WITH OPSD 404.02.
- 13. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01.
- 14. STORM SEWER MANHOLES SERVING LOCAL SEWERS LESS THAN 900MM SHALL BE CONSTRUCTED WITH A 300MM SUMP. FOR STORM SEWERS 900MM AND OVER USE BENCHING IN ACCORDANCE WITH OPSD 701
- 15. SINGLE AND DOUBLE CATCHBASINS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S1. AND OPSD 705.020, RESPECTIVELY. FRAMES AND GRATE SHALL BE AS PER CITY OF OTTAWA STD. S19 FOR REAR LOT CATCHBASINS, AND STREET CATCHBASINS.
- 16. CURB INLET TYPE CATCH BASIN (CICB) SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S3. AND GRATE SHALL BE AS PER CITY OF OTTAWA STD. S22 AND S23, UNLESS OTHERWISE NOTED.
- 17. SINGLE AND DOUBLE CATCHBASIN LEADS SHALL BE 200MM AND 250MM DIA (MIN) RESPECTIVELY, 1.0% SLOPE (MIN.) UNLESS OTHERWISE NOTED.
- 18. ALL CATCHBASINS AND CATCHBASIN MANHOLES SHALL HAVE SUMPS WITH 300MM DEPTH, UNLESS OTHERWISE
- 19. CONTRACTOR SHALL ENSURE THAT CATCHBASINS ARE INSTALLED AT THE LOW POINT OF SAG CURB WORKS.
- 20. THE STORM SEWER CLASSES HAVE BEEN DESIGNED BASED ON BEDDING CONDITIONS SPECIFIED. WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADDITIONAL BEDDING, A DIFFERENT TYPE OF BEDDING OR A HIGHER PIPE STRENGTH AT HIS OWN EXPENSE AND SHALL ALSO BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE
- 21. THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED STORM SEWERS AND EXISTING SEWERS CONNECTED TO. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED.

### WATERMAIN NOTES

- 1. ALL WATERMAIN MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- 2. NO WORK SHALL COMMENCE UNLESS A CITY WATER WORKS INSPECTOR IS ON SITE. WATERMAIN CONNECTIONS BY CITY OF OTTAWA FORCES WITH ALL EXCAVATION BACKFILL AND ROAD REINSTATEMENT BY
- 3. ALL PVC WATERMAINS SHALL BE EQUAL TO AWWA C-900 CLASS 150, SDR 18, OR APPROVED EQUAL.
- 4. WATERMAINS TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17, UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
- 5. ALL PVC WATERMAINS SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W36.
- 6. WATER SERVICES ARE TO BE TYPE K SOFT COPPER AS PER CITY OF OTTAWA STD. W26 UNLESS OTHERWISE SPECIFIED. ALL WATER SERVICES CROSSING SEWERS ARE TO BE INSTALLED AS PER CITY OF OTTAWA STD. W38. WATER SERVICES SHALL BE MARKED WITH A "50mm X IOOmm", EXTENDING FROM THE INVERT TO 1.0M ABOVE GRADE PAINTED BLUE. STAND POSTS/SHUT-OFFS SHALL BE INSTALLED AT THE PROPERTY LINE.
- 7. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AS PER CITY OF OTTAWA STD. W40 AND
- 8. VALVE BOXES SHALL BE INSTALLED AS PER CITY OF OTTAWA DETAIL W24.
- 9. ALL FIRE HYDRANTS TO BE INSTALLED AS PER CITY STANDARD W19 AND LOCATED AS PER CITY STANDARD W18 AND/OR CITY STANDARD CROSS SECTIONS.
- 10. ALL WATERMAINS TO BE INSTALLED AT MINIMUM COVER OF 2.4m.
- 11. THRUST BLOCKS AND RESTRAINT AS PER CITY OF OTTAWA DWGS: W25.3 AND W25.4, W25.5 AND W25.6.
- 12. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
- 13. DISINFECTION AND TESTING OF WATERMAIN TO BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
- 14. WATER METERS TO BE INSTALLED AS PER W30 FOR WATER SERVICES.
- 15. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS AND BLOW-OFFS AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAN.
- 16. INSULATION FOR WATERMAIN CROSSING OVER AND BELOW SEWER SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY, WHERE WATERMAN COVER IS LESS THAN 2.4m.
- 17. WHERE THE SEPARATION BETWEEN SERVICES AND MANHOLES IS LESS THAN 1.2m, WATER SERVICES ARE TO BE INSULATED AS PER CITY OF OTTAWA STD. W23.
- 18. AS PER CITY GUIDELINE, THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER / UTILITY IS 0.25M FOR CROSSING OVER THE SEWER, AS PER CITY STD W25.2. FOR CROSSING UNDER SEWER, THE MINIMUM VERTICAL CLEARANCE IS 0.50M AS PER CITY STD. W25. FOR CROSSING UNDER SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.

## ROADWAY SPECIFICATIONS

COMMENCEMENT OF CONSTRUCTION.

SIDE AT FLOWBY CATCHBASINS

- 1. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD ALLOWANCE PRIOR TO THE
- 2. CONCRETE CURB SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. SCI.1.1(BARRIER CURB) AND SC1.3 (MOUNTABLE CURB), AS NOTED. PROVISION SHALL BE MADE FOR CURB DEPRESSIONS AT SIDEWALKS AND
- 3. ROAD SUBDRAINS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. R1. SUBDRAINS SHALL BE 6M IN LENGTH AT CATCHBASINS. SUBDRAINS SHALL BE INSTALLED BOTH SIDES AT LOWPOINTS AND ON THE HIGH
- 4. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. R10 AND OPSD 509.010, OPSS 310.
- 5. GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300MM AROUND ALL STRUCTURES WITHIN PAVEMENT AREA.
- 6. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR DENSITY.
- 7. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE ENGINEER.
- 8. SUB- EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 300MM LIFTS.
- 9. PAVEMENT STRUCTURE: REFER TO LEGEND.

### **GENERAL NOTES FOR GRADING**

- 1. IT SHALL BE THE BUILDER'S RESPONSIBILITY TO ENSURE THAT GRADING AROUND HYDRANTS, TRANSFORMERS, AND UTILITY PEDESTALS, ETC., MEET CURRENT CITY OF OTTAWA, HYDRO AND UTILITY COMPANY
- 2. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
- 3. CONTRACTOR TO ADJUST EXISTING CATCH BASINS, MANHOLES, FIRE HYDRANTS, VALVE CHAMBERS AND VALVE BOXES TO FINAL GRADE AS REQUIRED.
- 4. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING FOUNDATIONS OF ADJACENT BUILDINGS DURING EXCAVATION AND CONSTRUCTION PERIOD.
- 5. GRADING IN GRASSED AREAS WILL BE BETWEEN 2% TO 7%. GRADES IN EXCESS OF 7% WILL REQUIRE A MAXIMUM 3:1 TERRACING.

# EXISTING LEGEND

 $-\Box$ 

<b>-</b> ■-	SURVEY MONUMENT FOUND						
——— OH ———— OH ———	OVERHEAD WIRES						
OUP	UTILITY POLE						
O LS	LIGHT STANDARD						
СВ	CATCH BASIN TOP OF GRATE						
T/G							
□ GM	GAS METER						
□ <i>TB</i> − <i>T</i>	TRAFFIC CONTROL BOX						
GG	GAS MAIN						
cc	COMMUNICATIONS						
R R	ROGERS CABLE						
——— В ————————————————————————————————	BELL TELEPHONE						
—— P —— P ——	POWER						
	TRAFFIC AND MANHOLE						
	STORM SEWER AND MANHOLE						
	SANITARY SEWER AND MANHOLE						
₩₩	WATERMAIN AND VALVE AND VALVE B						
- <b>ộ</b> - <i>FH</i>	FIRE HYDRANT						
— X— ST — X—— ST — X——	ABANDONED STORM SEWER						
— X— SA — X—— SA — X	ABANDONED SANITARY SEWER						
	ABANDONED WATERMAIN						
\ \ /							

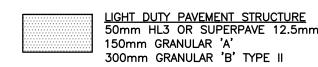
SURVEY MONUMENT PLANTED

EXISTING TREES/SHRUBS οВ BOLLARD BOARD FENCE WRW WOODEN RETAINING WALL C/L CENTREI INF

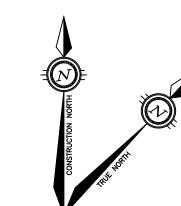
LOCATION OF ELEVATION

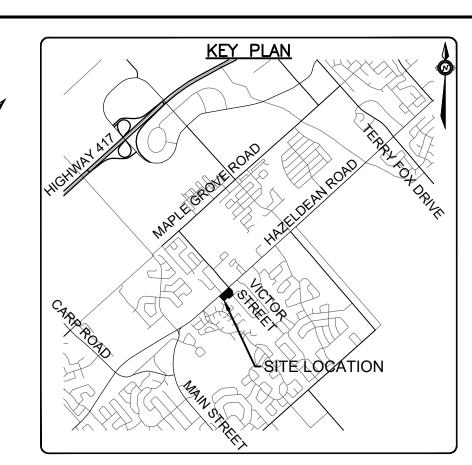
TOP OF CURB ELEVATION \_\_\_\_\_X \_\_\_\_\_X \_\_\_\_\_FFNCF \_\_\_\_\_55.00\_\_\_\_\_ORIGINAL GROUND CONTOURS

## PAVEMENT STRUCTURES



HEAVY DUTY PAVEMENT STRUCTURE 40mm HL3 OR SUPERPAVE 12.5mm 50mm HL8 OR SUPERPAVE 19.0mm 150mm GRANULAR 'A' 450mm GRANULAR 'B' TYPE I





ROPOSED	<b>LEGEND</b>	

	PROPERTY LINE						
200mmø SAN	SANITARY SEWER						
	STORM SEWER						
200mmø WATERMAIN	WATERMAIN						
OSTM MH 200	STORM MANHOLE						
SAN MH 100	SANITARY MANHOLE						
■ CB1	CATCHBASIN						
O CBE2	CATCHBASIN ELBOW (AS PER CITY S31)						
O CBT	CATCHBASIN TEE (AS PER CITY S30)						
◆ V&VB	VALVE AND VALVE BOX						
<b>⊗</b> V&VC	VALVE AND VALVE CHAMBER (AS PER CITY W3)						
<b>-</b>	FIRE HYDRANT						
<b>∼</b> 145°	45° WATERMAIN BEND						
<b>~</b> 22°	22.5° WATERMAIN BEND						
<b>⊢</b> 11°	11.25° WATERMAIN BEND						
<b>ॉ</b> 200×150	WATERMAIN TEE (MAIN BRANCH)						
₫ 200×200×200	WATERMAIN CROSS						
▲ 200×150	WATERMAIN REDUCER						
M	WATER METER						
RM	REMOTE WATER METER READER						
sc >	SIAMESE CONNECTION						
FF=	FINISHED FLOOR ELEVATION						
TF=	TOP OF FOOTING ELEVATION						
BF=	BASEMENT FLOOR ELEVATION						
USF=	UNDERSIDE OF FOOTING ELEVATION						
3.0%	SLOPE AND DIRECTION OF FLOW						

FINAL GRADE

HIGH POINT

T/G= TOP OF GRATE ELEVATION T/F= TOP OF FLANGE SILT FENCE BARRIER CURB (SC1.1) DEPRESSED BARRIER CURB LOCATION

5<u>4.75</u>×

**-⊕** BH1

ONSITE OVERLAND FLOW ROUTE EXTERNAL OVERLAND FLOW ROUTE AREA IN HECTARES RUNOFF COEFFICIENT

—··—··— SWALE AND DIRECTION OF FLOW

CATCHMENT AREA TYPICAL SERVICE TRENCH TYPE 1 1-19mm WATER SERVICE (TYPE K COPPER) 1-125mm SANITARY SERVICE (PVC SDR28) TYPICAL SERVICE TRENCH TYPE 2 2-19mm WATER SERVICE (TYPE K COPPER)

2-125mm SANITARY SERVICE (PVC SDR28) 1-100mm STORM SERVICE (PVC SDR28) TYPICAL SERVICE TRENCH TYPE 3 2-19mm WATER SERVICE (TYPE K COPPER)

BOREHOLE LOCATION AND NUMBER

2-125mm SANITARY SERVICE (PVC SDR28)

EXISTING TO BE REMOVED

	CAUTION THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES							SCALE  0 3m 6m 12m  HORIZONTAL 1:300	DESIGNED BY	REVIEWED BY		DEAN CROSSING INC. 21 KILSPINDIE RIDGE OTTAWA, ON.	BASEPLAN SAB DESIGN JLF	HAZELDEAN CROSSING TOWNS 5924 HAZELDEAN ROAD OTTAWA, ONTARIO.	PROJECT No.  OTT-00250806-A0  SURVEY  FSD
۸g	AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH LITHLITES AND							HURIZUNIAL 1:500			.00	exp Services Inc.	CHECKED  BMT  CAD	TITLE	DATE APRIL 2019  DRAWING No.
le∷ exp-64.ctr :es: xref-TB.d\	STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR					2 ISSUED FOR SITE PLAN APPROVA  1 ISSUED FOR REVIEW	18/04/19 AO BMT				exp.	t: +1.613.688.1899   f: +1.613.225.7330 2650 Queensview Drive, Unit 100 Ottawa, ON K2B 8H6 Canada www.exp.com	AO PROJECT MANAGER BMT	NOTES AND LEGEND	C001
en lab Referend	DAMAGE TO THEM.	REV	REVISION DESCRIPTION	DATE	BY APP	D REV REVISION DESCRIPTION	DATE BY APPD				1	BUILDINGS • EARTH & ENVIRONMENT • ENERGY • INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •	<i>APPROVED</i> <b>BMT</b>		