

Legend	
	PROPOSED WATERMAIN
	PROPOSED VALVE BOX
	PROPOSED VALVE CHAMBER
	PROPOSED FIRE HYDRANT
	PROPOSED SANITARY SEWER AND MH
	PROPOSED STORM SEWER AND MH
	PROPOSED STORM SEWER AND MH
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED CATCHBASIN
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WATERMAIN
	EXISTING CATCHBASIN
	PROPOSED INSULATION AS PER CITY STANDARD W22
	PHASING LIMITS
	SITE/PARKING LOT LIGHTS

Notes

- GENERAL NOTES**
- ALL WORK SHALL BE CARRIED OUT IN COMPLIANCE WITH THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
  - ALL WORK AND MATERIALS TO CONFORM WITH CURRENT MINISTRY OF THE ENVIRONMENT & ENERGY OF ONTARIO, CITY OF OTTAWA AND ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS. LOCAL UTILITY STANDARDS AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.
  - THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES AND COORDINATION WITH ALL OTHER CONTRACTORS AND PREVENT CONFLICTS.
  - THE INFORMATION SHOWN FOR EXISTING UTILITIES WAS PROVIDED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL UTILITIES DURING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE LOCATED AND VERIFIED BY EACH UTILITY PRIOR TO COMMENCEMENT OF WORK. ANY VARIANCE IS TO BE IMMEDIATELY REPORTED TO THE ENGINEER. LOSS OF TIME DUE TO FAILURE BY THE CONTRACTOR TO CONFIRM UTILITY LOCATIONS AND NOTIFY THE ENGINEER OF POSSIBLE CONFLICTS PRIOR TO CONSTRUCTION WILL BE AT THE CONTRACTOR'S EXPENSE.
  - ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOLOGICAL REPORT.
  - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND TO BEAR THE COST OF SAME INCLUDING WATER PERMIT AND ASSOCIATED COSTS.
  - ALL DISTURBED AREAS SHALL BE RESTORATED TO EQUAL OR BETTER CONDITION TO THE SATISFACTION OF THE ENGINEER AND THE CITY. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH OPSD 309.010 AND OPSD 310.
  - FOR DETAILS RELATING TO STORMWATER MANAGEMENT AND ROOF DRAINAGE, SEE THE STORMWATER MANAGEMENT REPORT PREPARED BY STANTEC CONSULTING LTD. ROOF DRAINAGE TO BE PROVIDED VIA RESTRICTED RELEASE ROOF DRAINS AS DETAILED IN THE REPORT.
  - BENCHMARKS: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON DRAWING GP-1.
  - THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER 1 (ONE) SET OF AS CONSTRUCTED SITE SERVICES, GRADING, AND SITE ELECTRICAL DWGS.
  - ROAD CUT TO BE RE-INSTATED AS PER CITY OF OTTAWA STANDARD DETAIL R10.

Revision	By	Appd.	YY/MM/DD
1	MJS	PM	14.02.18
2	MJS	PM	14.02.12

File Name	Drawn	Chkd.	Dgn.	YY/MM/DD
160400812C DB-JFFY LUBE	MJS	PM	MJS	14.02.12

Client/Project  
**KANATA SOUTH  
COMMERCIAL DEVELOPMENT**

**FERNBANK & TERRY FOX  
JIFFY LUBE**  
Ottawa, ON, Canada

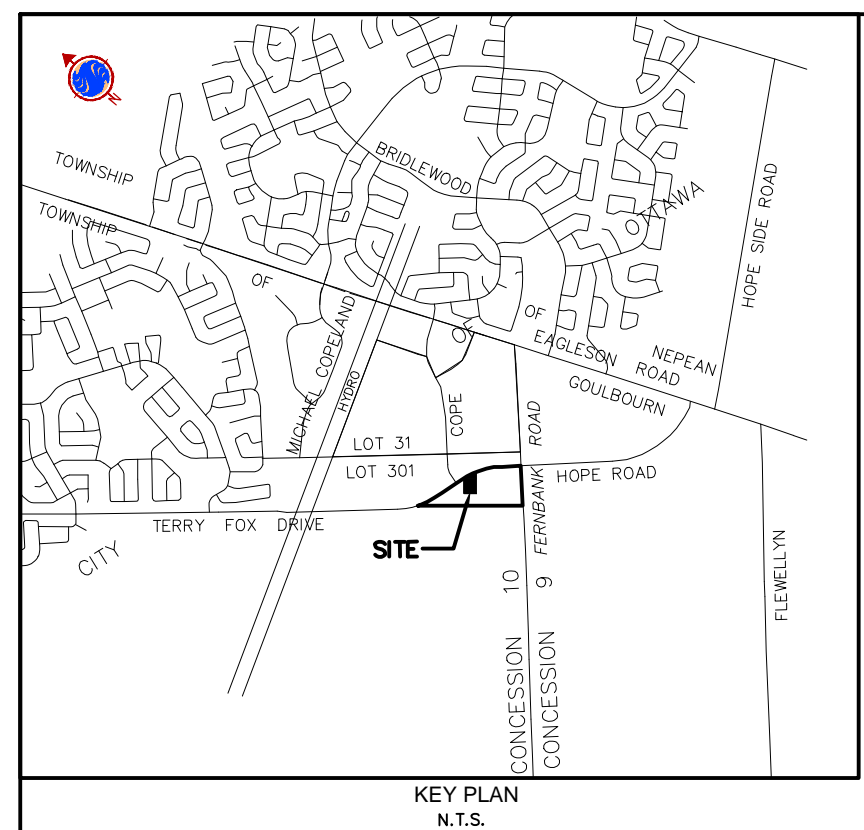
Title  
**SITE SERVICING PLAN**

Project No. 160400838	Scale 1:400	Sheet 1 of 5	Revision 1
--------------------------	----------------	-----------------	---------------

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	97.65	95.25±	TVS CONNECTION TO EX. 300mmØ WATERMAIN
0+010.6	98.03	95.630	150mmØ VALVE AND BOX
0+018.1	98.18	95.780	22 1/2 HORIZONTAL BEND
0+019.7	98.20	95.800	CAP 1.0m OFF BUILDING FACE

CROSSING	STM INV	STM OBV	SAN INV	SAN OBV	WTR TOP	WTR BTM
▲	95.81	96.19	93.36	93.61	95.29	94.99
▲					95.42	95.12

STRUCTURE ID	DRAINAGE AREA ID	MAXIMUM HEAD (m)	ICD SIZE (mm)	100YR RELEASE RATE (L/s)
CB 500	ST102A	0.84	100	19.45
CB 501	ST103B	0.97	110	25.29

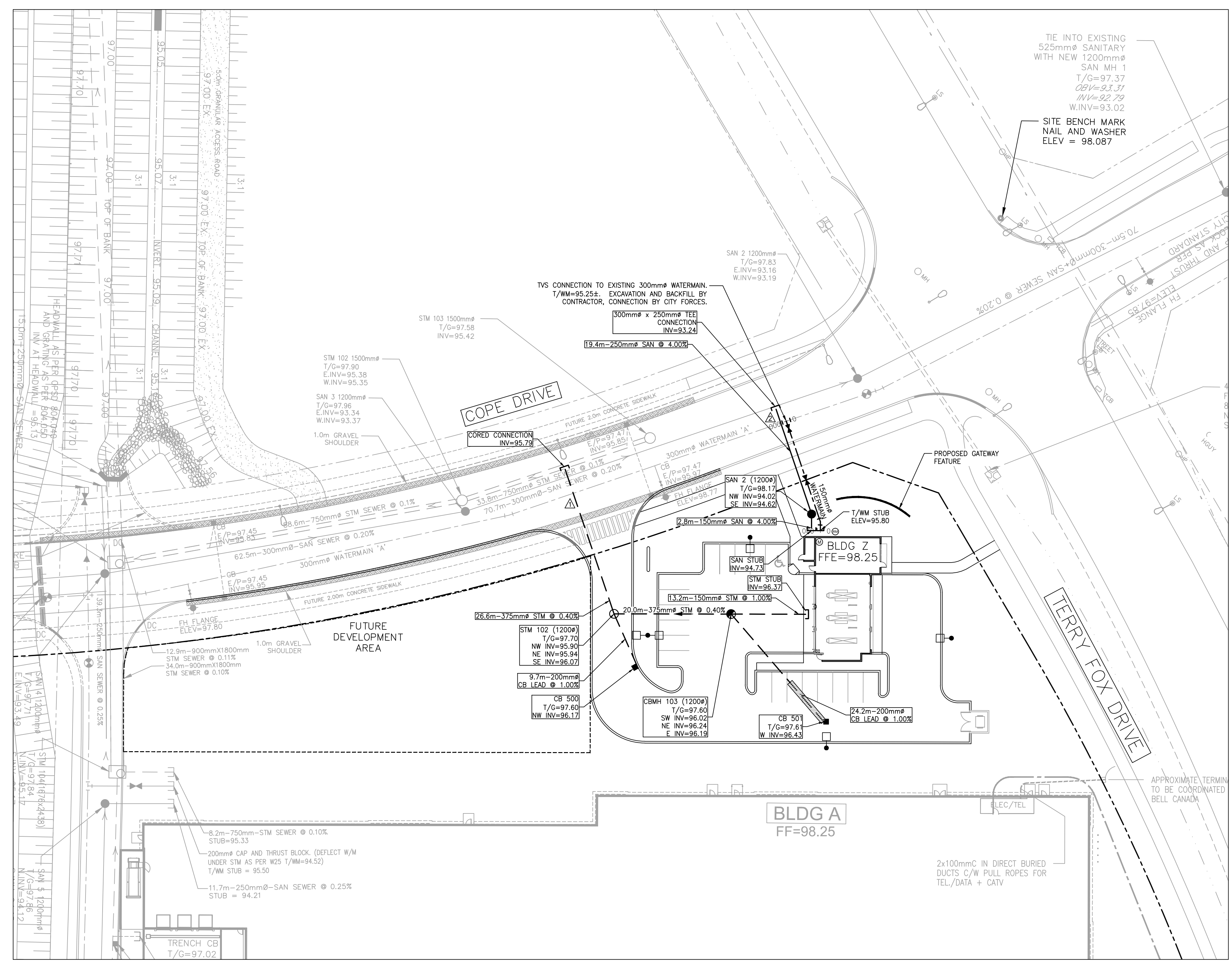


**STORM AND SANITARY SEWERS**

- STORM AND SANITARY MANHOLES SHALL BE IN ACCORDANCE WITH OPSD 701.010 TO 701.014. STORM MANHOLES TO HAVE FRAME AND COVER PER OPSD 401.020. CATCH BASIN MANHOLES TO HAVE FRAME AND COVER PER OPSD 400.020. SANITARY MANHOLES TO HAVE WATERTIGHT FRAME AND COVER PER OPSD 401.030. SAFETY PLATFORM TO BE INSTALLED IN ALL MANHOLES WHERE DEPTH EXCEEDS 5.0m.
- ALL CATCH BASINS TO BE PRECAST TO OPSD 705.010 c/w FRAME AND GRATE AS PER OPSD 400.020.
- SEWER TRENCH SHALL CONSIST OF CLASS 'B' BEDDING PER CITY OF OTTAWA STANDARDS S6 AND S7. COMPACTION SHALL BE A MINIMUM OF 98% STANDARD PROCTOR DENSITY.
- ALL STORM SEWER PIPES UP TO AND INCLUDING 375mm DIA. SHALL BE PVC SDR-35 OR APPROVED EQUIVALENT. ALL STORM SEWER PIPES 450mm DIA. AND LARGER SHALL BE CONCRETE AND EQUAL TO C.S.A. SPECIFICATIONS A25.7.2 REINFORCED CLASS AS SPECIFIED (65-D, 100-D, 140-D) OR LATEST AMENDMENT UNLESS OTHERWISE SPECIFIED.
- ALL SANITARY PVC SEWER PIPES SHALL BE SDR-35 EQUAL TO CSA SPECIFICATIONS B182.2-M1990 OR LATEST AMENDMENT UNLESS OTHERWISE NOTED.
- ALL MANHOLE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY.
- STORM MANHOLES SHALL NOT BE BENCHED UNLESS OTHERWISE SPECIFIED. SANITARY MANHOLES SHALL BE BENCHED TO GYVERT. MINIMUM WIDTH OF BENCHING TO BE 230mm OR AS SPECIFIED ON DRAWINGS. GRANULAR 'X' SHALL BE PLACED TO A MIN. THICKNESS OF 300mm AROUND ALL STRUCTURES IN PAVEMENT AREA. MANHOLE DROP STRUCTURES TO BE INSTALLED PER OPSD 1003.01.
- "MODULOC" OR APPROVED PIPE-CAST MANHOLE AND CATCH BASIN ADJUSTERS TO BE USED IN LIEU OF BRICKING. PAVEMENT ADJUSTING UNITS ON THE OUTSIDE ONLY.
- FOR CONSTRUCTION DETAILS NOT SHOWN ON PLANS, REFERENCE SHALL BE MADE TO THE ONTARIO PROVINCIAL STANDARDS DRAWINGS AND MUNICIPAL STANDARDS.
- SERVICES TO BUILDINGS TO BE TERMINATED 1.5m FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
- ALL SINGLE CATCH BASIN LEADS TO BE 200mmØ PVC, SDR-35 OR APPROVED EQUIVALENT UNLESS OTHERWISE SPECIFIED. CATCH BASIN LEADS TO HAVE MINIMUM GRADE OF 1.0%.
- ALL CB LEAD INVERTS TO BE 1.5m BELOW FINISHED GRADE UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SANITARY AND STORM SEWERS, INCLUDING PICTORIAL REPORT, ONE (1) CD COPY AND TWO (2) VIDEO TAPES IN A FORMAT SATISFACTORY TO THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION. ASPHALT NEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT.
- LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
- EXISTING MANHOLES TO BE RE-BENCHED WHERE A NEW CONNECTION IS MADE.
- FROST PROTECTION PER CITY OF OTTAWA STANDARD DRAWING W22 WHERE LESS THAN 1.5m OF COVER.
- ALL CATCH BASINS AND CATCH BASIN MANHOLES TO HAVE 3.0m LONG SUB-DRAINS HEADING OUT IN 4 DIRECTIONS IN PARKING AREAS AND UNDER SIDEWALKS ADJACENT TO BUILDING SUBDRAINS TO BE PLACED 300mm BELOW SUBGRADE. THE SUB-DRAIN PIPES SHOULD BE SURROUNDED BY 10mm DIA CLEAR STONE DRAINAGE ZONE OF MIN. 150mm THICKNESS, WHICH SHOULD HAVE NON-WOVEN GEOTEXTILE WRAP-AROUND.
- CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSD 410 AND OPSD 407. A COPY OF THE INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW.
- STORM SEWER INLET CONTROL DEVICES TO BE INSTALLED AS OUTLINED IN THE ICD SCHEDULE ON THIS DRAWING. ALL INLET CONTROL DEVICES TO BE INSTALLED AT THE DOWNSTREAM MANHOLE OR CATCH BASIN INVERT.

**WATERMAINS**

- WATERMAIN SHALL BE POLYVINYL CHLORIDE (PVC) CLASS 150 DR-18 PIPE MANUFACTURED TO AWWA C900-89 AND CSA CAN3 B137.3-M1986 WITH GASKETED BELL END C/W #14 AWG SOLID COPPER TRACER WIRE.
- ALL WATERMAINS, WATER SERVICES, CONNECTIONS AND APPURTENANCES AS PER CITY OF OTTAWA STANDARDS. THE CONTRACTOR SHALL CO-ORDINATE AND PAY ALL RELATED COSTS INCLUDING THE COST OF CONNECTION, INSPECTION AND DISINFECTION BY CITY OF OTTAWA PERSONNEL. WATERMAIN TRENCH TO BE IN ACCORDANCE WITH CITY OF OTTAWA W17.
- ALL WATERMAINS SHALL HAVE MIN. COVER OF 2.4m. WATERMAINS ARE TO BE INSTALLED TO THE ELEVATIONS SHOWN ON THE APPROVED SITE SERVICING DRAWING, WHERE SPECIFIC WATERMAIN ELEVATIONS ARE NOT SHOWN ON SERVICING DRAWING, A MINIMUM COVER OF 2.4m FROM PROPOSED GRADES, AS SHOWN ON THE GRADING PLAN, MUST BE MAINTAINED AT ALL TIMES. IN PREGRADE AREAS COVER TO BE FROM PREGRADE ELEVATIONS.
- ALL WATERMAIN BENDS, JOINTS, TEES AND PLUGS SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
- ALL FIRE HYDRANT INSTALLATIONS SHALL BE PER CITY OF OTTAWA W19. HYDRANTS SHALL BE PAINTED IN ACCORDANCE WITH OTTAWA STANDARDS. CONTRACTOR SHALL ORIENT HYDRANTS AS DIRECTED BY LOCAL FIRE DEPARTMENT.
- ALL BOTTOM OF HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.15m ABOVE PROPOSED FINISHED GRADE AT HYDRANT.
- BUILDING SERVICE TO BE CAPPED 2.0m OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12m BACK FROM STUB.
- WATERMAINS MUST COMPLY WITH MINIMUM HORIZONTAL AND VERTICAL CLEARANCES IN ACCORDANCE WITH LOCAL PROVINCIAL GUIDELINES AND THE APPLICABLE BUILDING AND PLUMBING CODE, WHERE HORIZONTAL SEPARATIONS CANNOT BE ACHIEVED, APPROVAL FROM THE ENGINEER MUST BE OBTAINED AND A MINIMUM 500mm VERTICAL SEPARATION MUST BE MAINTAINED.
- ALL WATERMAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
- ALL WATERMAINS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES. ALL CHLORINATED WATER TO BE DISCHARGED AND PRETREATED TO ACCEPTABLE LEVELS PRIOR TO DISCHARGE. ALL DISCHARGED WATER MUST BE CONTROLLED AND TREATED SO AS NOT TO ADVERSELY AFFECT THE ENVIRONMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
- ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50mm BLOW OFF UNLESS OTHERWISE NOTED.
- CATHODIC PROTECTION PER CITY OF OTTAWA W40 AND W42.



V:\01-60A\active\160400812\_kanata\_south\civil\design\drawing\160400812C\_DB-JFFY\_LUBE.dwg  
2014/02/18 10:53 AM BR\_39000.mxe