

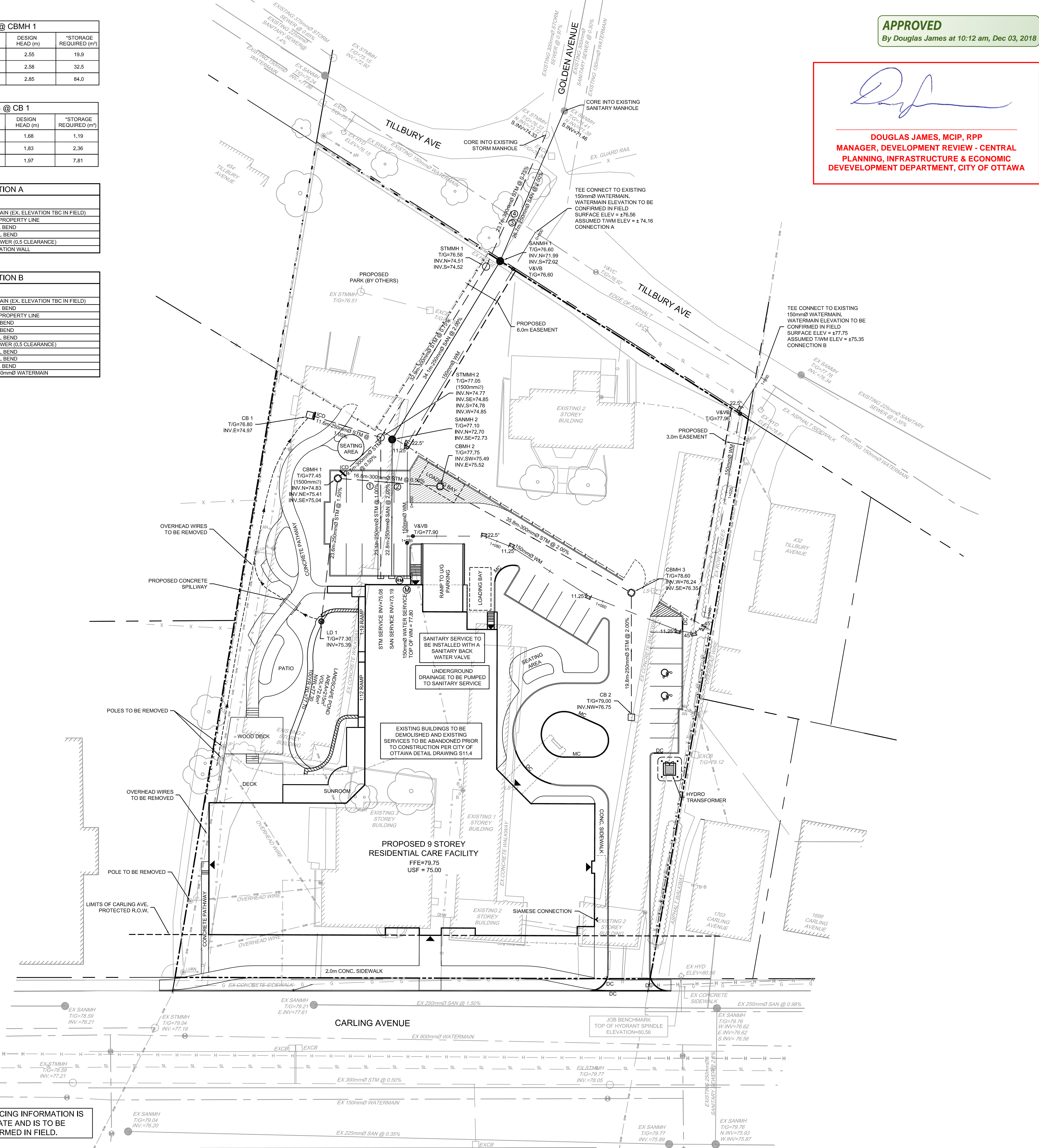
INLET CONTROL DEVICE FOR AREA A-3 @ CBMH 1					
DESIGN EVENT	ICD TYPE AND SIZE	DIAMETER OF OUTLET PIPE (mm)	DESIGN FLOW (L/s)	DESIGN HEAD (m)	*STORAGE REQUIRED (m³)
1.2 YEAR	TEMPEST LMF 105	300	15.6	2.55	19.9
1.5 YEAR	TEMPEST LMF 105	300	15.8	2.58	32.5
1:100 YEAR	TEMPEST LMF 105	300	16.6	2.85	84.0

INLET CONTROL DEVICE FOR AREA A-4 @ CB 1					
DESIGN EVENT	ICD TYPE AND SIZE	DIAMETER OF OUTLET PIPE (mm)	DESIGN FLOW (L/s)	DESIGN HEAD (m)	*STORAGE REQUIRED (m³)
1.2 YEAR	TEMPEST LMF 60	250	4.2	1.68	1.19
1.5 YEAR	TEMPEST LMF 60	250	4.3	1.83	2.36
1:100 YEAR	TEMPEST LMF 60	250	4.5	1.97	7.81

150mmØ WATERMAIN TABLE - CONNECTION A				
STATION	ELEVATION	TOP OF WATERMAIN	DESCRIPTION	
0+000	75.56	74.16	CONNECTION TO EXISTING 150mmØ WATERMAIN (EX. ELEVATION TBC IN FIELD)	
0+007.0	76.60	74.20	VALVE AND VALVE BOX AT PROPERTY LINE	
0+040.4	77.18	74.78	22.5° HORIZONTAL BEND	
0+040.8	77.18	74.78	11.25° HORIZONTAL BEND	
0+047.0	77.65	74.71	CROSSING PROPOSED STORM SEWER (0.5 CLEARANCE)	
0+063.0	77.80	75.40	CAP 1.0m FROM FOUNDATION WALL	

150mmØ WATERMAIN TABLE - CONNECTION B				
STATION	ELEVATION	TOP OF WATERMAIN	DESCRIPTION	
1+000	75.55	74.25	CONNECTION TO EXISTING 150mmØ WATERMAIN (EX. ELEVATION TBC IN FIELD)	
1+006.2	77.96	75.96	22.5° HORIZONTAL BEND	
1+008.9	77.96	75.96	VALVE AND VALVE BOX AT PROPERTY LINE	
1+042.4	78.92	76.92	45° HORIZONTAL BEND	
1+044.1	78.82	76.82	45° HORIZONTAL BEND	
1+046.7	78.82	76.42	11.25° HORIZONTAL BEND	
1+055.0	78.85	75.85	CROSSING PROPOSED STORM SEWER (0.5 CLEARANCE)	
1+062.4	78.85	76.35	11.25° HORIZONTAL BEND	
1+077.4	78.09	75.09	11.25° HORIZONTAL BEND	
1+082.2	78.00	75.60	22.5° HORIZONTAL BEND	
1+095.0	77.92	75.52	CONNECTION TO PROPOSED 150mmØ WATERMAIN	

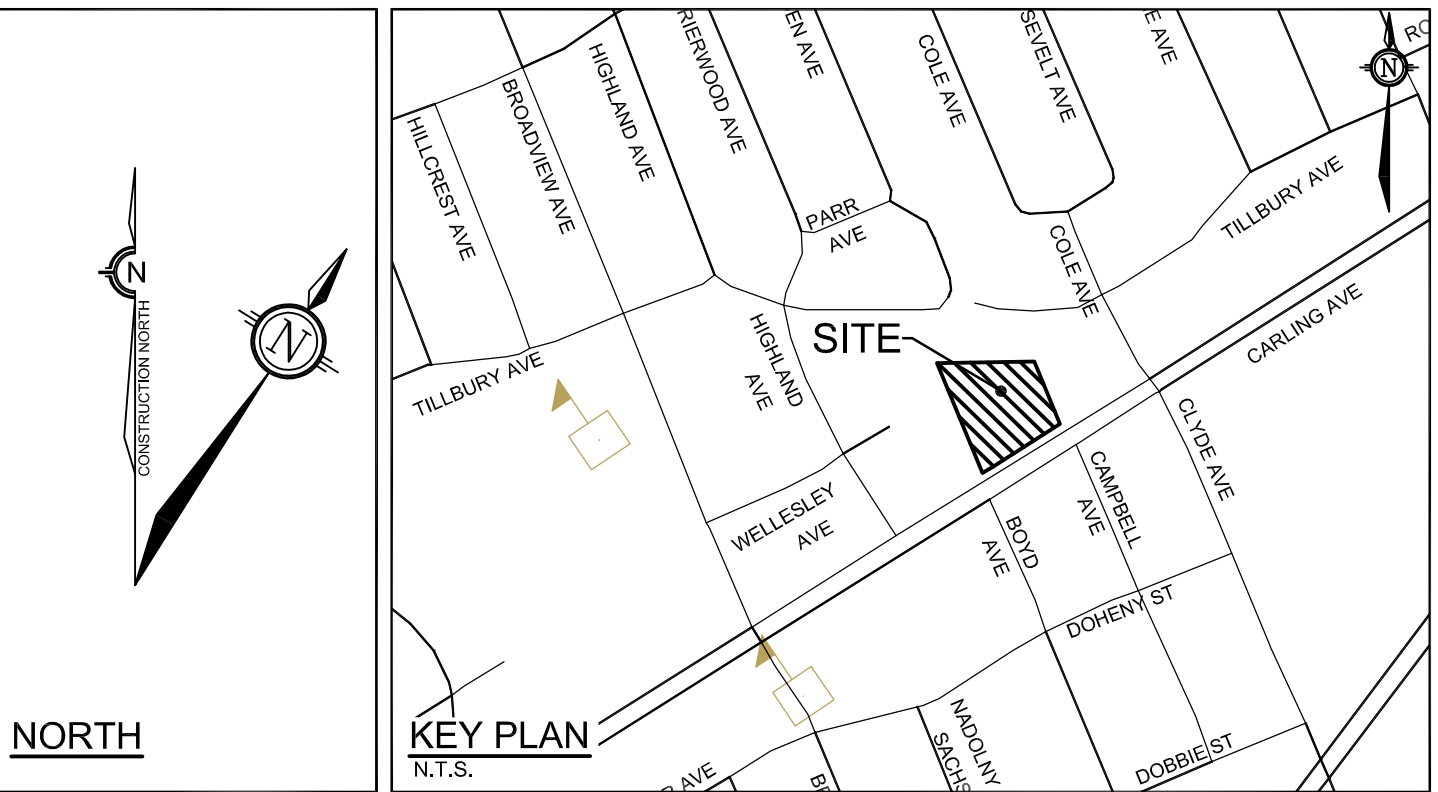
PIPE CROSSING TABLE			
CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE
①	250mmØ STM OBV=75.15	300mmØ STM INV=75.45	±0.3m
②	250mmØ SAN OBV=73.12	300mmØ STM INV=75.45	±2.3m
③	250mmØ SAN OBV=72.09	150mmØ WM INV=74.00	±1.9m
④	150mmØ T.V.W.=74.10	300mmØ STM INV=74.45	±0.35m



**APPROVED**  
By Douglas James at 10:12 am, Dec 03, 2018

*Douglas James*

**DOUGLAS JAMES, MCIP, RPP**  
MANAGER, DEVELOPMENT REVIEW - CENTRAL  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



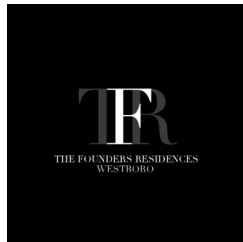
- LEGEND**
- PROPERTY LINE
  - PROPOSED CURB
  - DC PROPOSED DEPRESSED CURB
  - MC PROPOSED MOUNTABLE CURB
  - PROPOSED RETAINING WALL
  - V&VB PROPOSED VALVE AND VALVE BOX
  - PROPOSED CAP
  - PROPOSED WATER METER
  - PROPOSED REMOTE METER
  - PROPOSED SANITARY SERVICE c/w MANHOLE
  - PROPOSED STORM SEWER AND MANHOLE
  - PROPOSED WATERMAIN
  - PROPOSED BUILDING ENTRANCE
  - DIRECTION OF FLOW
  - PROPOSED LANDSCAPE DRAIN
  - PROPOSED CATCHBASIN MANHOLE
  - PROPOSED CATCHBASIN
  - SIAMSESE CONNECTION
  - EXISTING UTILITY POLE C/W GUY WIRES
  - EXISTING WATERMAIN C/W VALVE & VALVE CHAMBER
  - EXISTING HYDRANT C/W VALVE & LEAD
  - EXISTING SANITARY MANHOLE & SEWER
  - EXISTING STORM MANHOLE & SEWER
  - EXISTING CATCH-BASIN
  - EXISTING GAS MAIN
  - EXISTING OVERHEAD WIRES
  - EXISTING BELL LINE

- GENERAL NOTES:**
- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
  - DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
  - OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
  - BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$2,000,000.00, INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
  - RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA.
  - REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS, EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL (IF ANY) SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
  - ALL ELEVATIONS ARE GEODETIC, THE SITE BENCHMARK IS THE TOP OF SPINDLE ON THE HYDRANT ON THE NORTH SIDE OF CARLING AVENUE (ELEV = 80.56), REFER TO ANNIS, O'SULLIVAN VOLLEBERG LTD. TOPOGRAPHIC PLAN OF PART OF LOT 30 CONVESSION 1.
  - REFER TO GEOTECHNICAL REPORT PG4423-1, DATED FEB 16, 2018, PREPARED BY PATERSON GROUP INC. FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
  - REFER TO ARCHITECTS AND LANDSCAPE ARCHITECTS DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
  - REFER TO DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT (R-2018-059) PREPARED BY NOVATECH.
  - SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT.
  - CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES AND GRADING PLAN INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN, AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T&G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATION, T.W.M. ELEVATIONS, ANY ALIGNMENT CHANGES, AND ALL SURFACE ELEVATION AS-BUILT GRADES.
  - REFER TO CITY OF OTTAWA ROAD REINSTATEMENT DETAIL R10 FOR ALL REQUIRED ROAD REINSTATEMENTS.

- SERVICE NOTES:**
- SPECIFICATIONS:
  - SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
  - PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
  - FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES (FOR EXAMPLE KORN-SEAL, PSX, POSITIVE SEAL AND DURASEAL), THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
  - DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN.
  - STORM MANHOLES AND CBMHs ARE TO HAVE 300mm SUMP UNLESS OTHERWISE INDICATED.
  - CONTRACTOR TO TELEVISION (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT, UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
  - INSULATE ALL STORM AND SANITARY SEWERS THAT HAVE LESS THAN 2.0m OF COVER.
  - BACK FLOW VALVES FOR STORM SERVICE CONNECTIONS ARE REQUIRED, REFER TO MECHANICAL DRAWINGS.

- WATERMAIN NOTES:**
- SPECIFICATIONS:
  - SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
  - WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
  - PROVIDE MINIMUM 0.30m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
  - WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

NOTE:  
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED, BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.



No.		REVISION	DATE	BY
3.	ISSUED FOR SITE PLAN APPROVAL	OCT 15/18	CJR	
2.	REVISED PER CITY COMMENTS	AUG 8/18	CJR	
1.	SITE PLAN APPLICATION	APR 20/18	CJR	

SCALE	
1:300	
0 3 6 9 12	

DESIGN	
AJL	CJR
FOR REVIEW ONLY	
CJR	AJL
CJR	CJR
SG	



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Website www.novatech-eng.com

LOCATION 1705 CARLING AVE, CITY OF OTTAWA THE FOUNDERS RESIDENCES WESTBORO		PROJECT No.	117216-00
DRAWING NAME GENERAL PLAN OF SERVICES		REV	REV # 3
		DRAWING No.	117216-0P