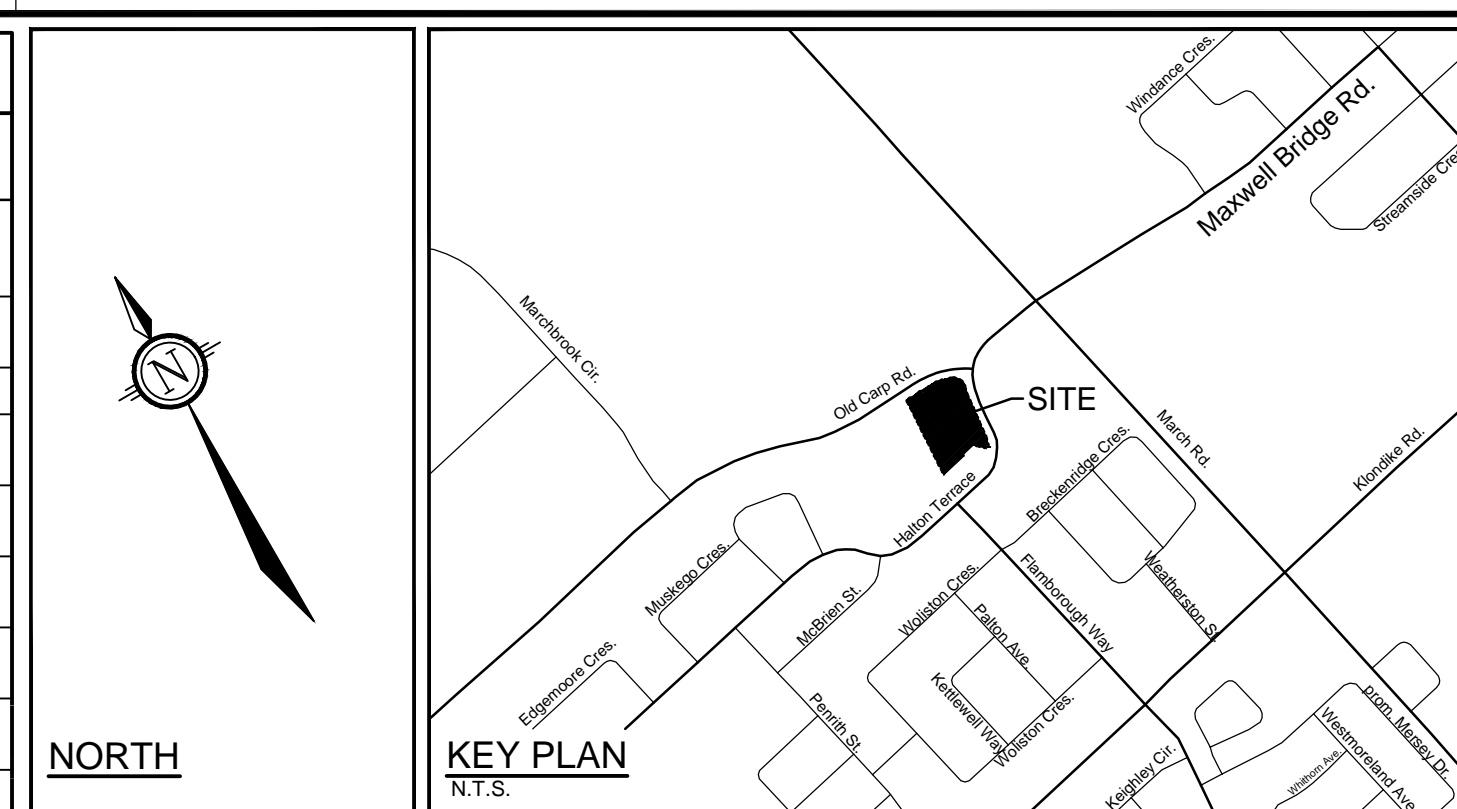



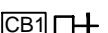















WATERMAIN TABLE			
Station	F/G ELEVATION	TOP OF WATERMAIN	DESCRIPTION
1+000.00	83.34	80.94	200x300 TEE
1+008.86	83.46	81.07	VB1
1+022.15	83.71	81.31	45° H.BEND
1+023.89	83.79	81.39	45° H.BEND
1+029.31	83.89	81.49	CAP

STM MANHOLE TABLE				
MANHOLE ID	SIZE (mm)	T/G ELEV	INVERT	PIPE DIA. (mm)
CBMH3	1200Ø	81.66	SW=80.75 NW=80.70 S=80.98	NE=500 SW=500 S=250
CBMH2	1200Ø	85.55	SE=82.88 NW=83.48	SE=300 NW=600
CBMH1	1200Ø	85.55	SE=83.69	SE=600
2	1200Ø	83.79	NE=81.35 SW=81.78	NE=450 SW=450
4	1200Ø	85.74	NE=82.17 SE=82.77	NE=450 SE=300
6	1200Ø	85.82	NW=82.70 SE=82.70	SE=200 NW=600
8	1200Ø	85.88	SE=82.77 NE=82.77	SE=600 NE=250
103	1200Ø	84.06	NW=80.23 S=80.52	NW=1500 S=1500
104	1200Ø	82.73	NW=79.99 NE=79.39 SE=80.00	NE=1500 NW=375 SE=1500



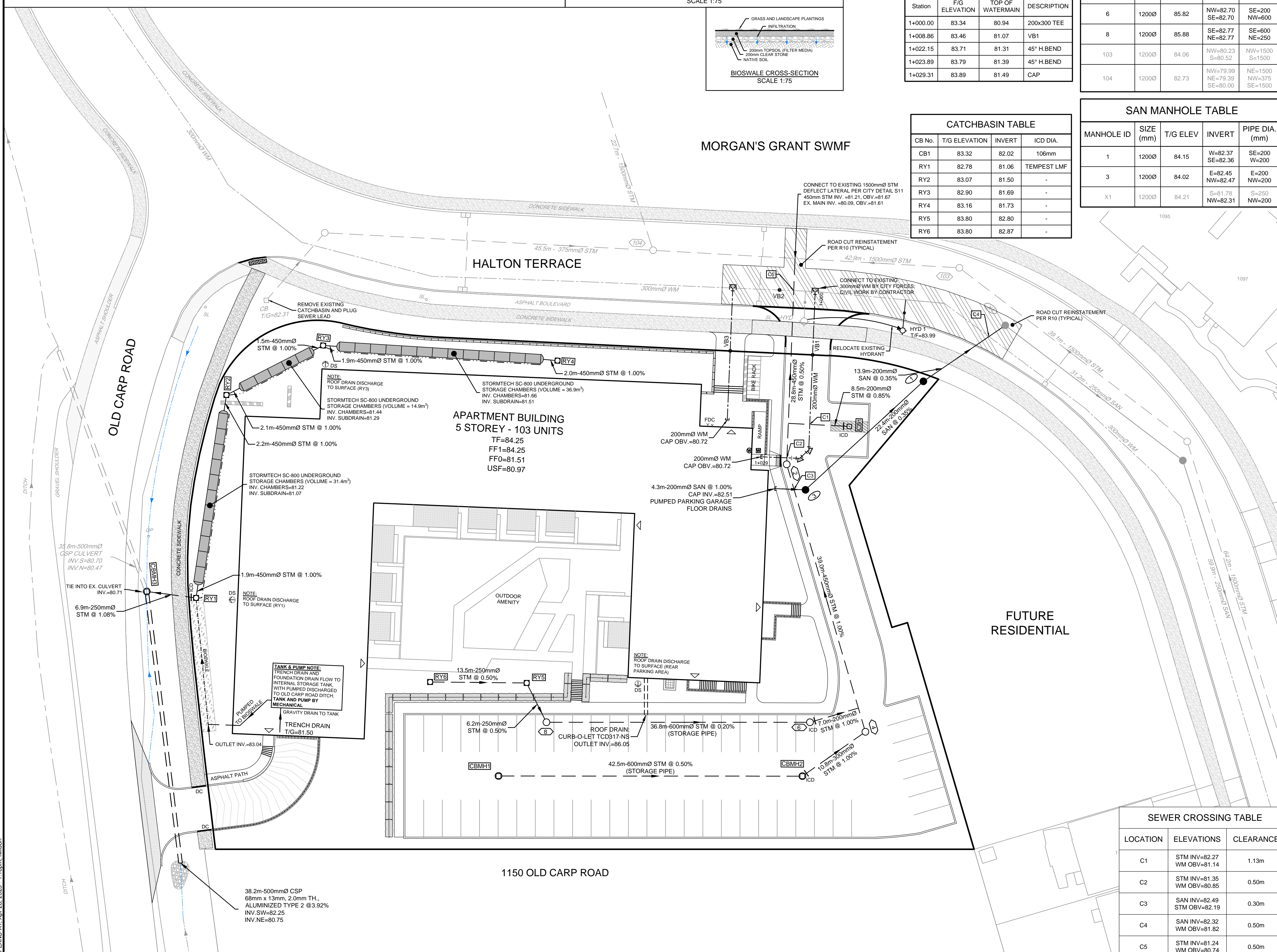
LEGEND			
	SANITARY MANHOLE, SEWER & DIRECTION OF FLOW		CATCHBASIN MANHOLE
	STORM MANHOLE, SEWER & DIRECTION OF FLOW		ROAD CATCHBASIN WITH ICD
	WATERMAIN AND DIAMETER		REAR YARD CATCH BASIN
	VALVE & VALVE BOX		UNDERGROUND STORAGE CHAMBERS WITH SUBDRAIN
	BEND AND THRUST BLOCK		ROOFTOP DOWNSPOUT LOCATION
	HYDRANT C/W VALVE & LEAD		PUMP OUTLET LOCATION
	CAP		FIRE DEPARTMENT CONNECTION
	FEATURE WALL		WATER METER
			REMOTE METER

1. DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCING CONSTRUCTION.
2. THE ORIGINAL TOPOGRAPHY AND GROUND ELEVATIONS, SERVICING AND SURVEY INFORMATION SHOWN ON THIS PLAN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF ALL INFORMATION OBTAINED FROM THIS PLAN.
3. CO-ORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
4. BEFORE COMMENCING CONSTRUCTION, PROVIDE PROOF OF COMPREHENSIVE ALL RISK AND OPERATIONAL LIABILITY INSURANCE INCLUDING BLASTING. INSURANCE POLICY TO NAME THE OWNER, ENGINEER AND THE CITY AS CO-INSURED.
5. CONNECT TO EXISTING SYSTEMS AS DETAILED, INCLUDING ALL RESTORATION WORK NECESSARY TO REINSTATE SURFACES TO EXISTING CONDITIONS OR BETTER.
6. 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 THESE DRAWINGS.
7. OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS BEFORE COMMENCING CONSTRUCTION.
8. RESTORE ALL TRENCHES AND SURFACE FEATURES TO EXISTING CONDITIONS OR BETTER AND TO THE SATISFACTION OF MUNICIPAL AUTHORITIES.
9. REMOVE FROM SITE ALL DEBRIS AND EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.
10. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
11. REFER TO GEOTECHNICAL INVESTIGATION PG4872-1 (DATED MAY 3, 2019), PREPARED BY PATERSON GROUP INC. FOR SUBSURFACE CONDITIONS AND CONSTRUCTION RECOMMENDATIONS.
12. PERFORATED PIPE SUB-DRAINS TO BE PROVIDED AT SUBGRADE LEVEL EXTENDING FROM THE ROADSIDE CATCHBASIN FOR A DISTANCE OF 3.0m, PARALLEL TO THE CURB IN TWO DIRECTIONS.

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200x)	701.010	OPSD
ROADSIDE CB, FRAME & COVER	S24 / S19	CITY OF OTTAWA
STORM / SANITARY MH FRAME & COVER	S24 / S24 & S25	CITY OF OTTAWA
STORM SEWER	PVC DR 35 OR CONC.	(CLASS SPECIFIED ON PROFILE DRAWINGS)
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	
<p>2. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmX1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.</p> <p>3. SERVICES ARE TO BE CONSTRUCTED TO PROPERTY LINE AT MINIMUM SLOPE OF 1.0% (2.0% IS PREFERRED).</p> <p>4. 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.</p> <p>5. SEWER SERVICE CONNECTIONS PER CITY OF OTTAWA DETAILS S11 AND S11.1.</p> <p>6. THE SITE SERVICING CONTRACTOR SHALL PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPS4 007.16 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SEWERS TO 300MM COVER OR DEEPER FOR CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER.</p> <p>7. STORM MANHOLES AND CBMSH SHALL HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.</p> <p>8. CONTRACTOR TO TELEVIEW (CTTV) ALL PROPOSED SEWERS, 200mm OR GREATER PRIOR TO BASE COURSE ASPHALT, UPON COMPLETION OF CONTRACT. THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.</p>		

1.	GENERAL: ITEM WATERMAIN TRENCHING THERMAL INSULATION IN SHALLOW TRENCHES WATERMAIN CROSSING BELOW SEWER / OVER SEWER HYDRANT LOCATION	DETAIL No. W17 W22 W25 / W25.2 W18	REFERENCE CITY OF OTTAWA CITY OF OTTAWA CITY OF OTTAWA CITY OF OTTAWA
2.	THE WATERMAIN SHALL BE PVC DR 18 IN ACCORDANCE WITH MATERIAL SPECIFICATION MW-18.1, UNLESS OTHERWISE INDICATED.		
3.	SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS, EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.		
4.	WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.		
5.	PROVIDE MINIMUM 0.50m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.		


LOCATION	ELEVATIONS	CLEARANCE
C1	STM INV=82.27 WM OBV=81.14	1.13m
C2	STM INV=81.35 WM OBV=80.85	0.50m
C3	SAN INV=82.49 STM OBV=82.19	0.30m
C4	SAN INV=82.32 WM OBV=81.82	0.50m
C5	STM INV=81.24 WM OBV=80.74	0.50m



5.	CITY SUBMISSION		APR 25/25	MAB	
4.	SIDEWALK UPDATE - OLD CARP		FEB 27/25	MAB	
3.	CITY SUBMISSION		SEP 18/24	MAB	
2.	CITY SUBMISSION		NOV 3/23	MAB	
1.	CITY SUBMISSION		OCT 19/21	MAB	
No.	REVISION		DATE	BY	


SCALE

1:300



A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 3, 6, 9, and 12. Above the bar, the text "1:300" is centered.

DESIGN	DTD
CHECKED	LWR
DRAWN	DTD
CHECKED	MAB
APPROVED	ICB



NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

<p>CITY OF OTTAWA 1104 HALTON TERRACE</p>	<p>PROJECT No.</p> <p>11902</p>
<p>GENERAL PLAN OF SERVICES</p>	<p>REV</p> <p>REV #</p> <p>DRAWING No.</p> <p>119024-GF</p>