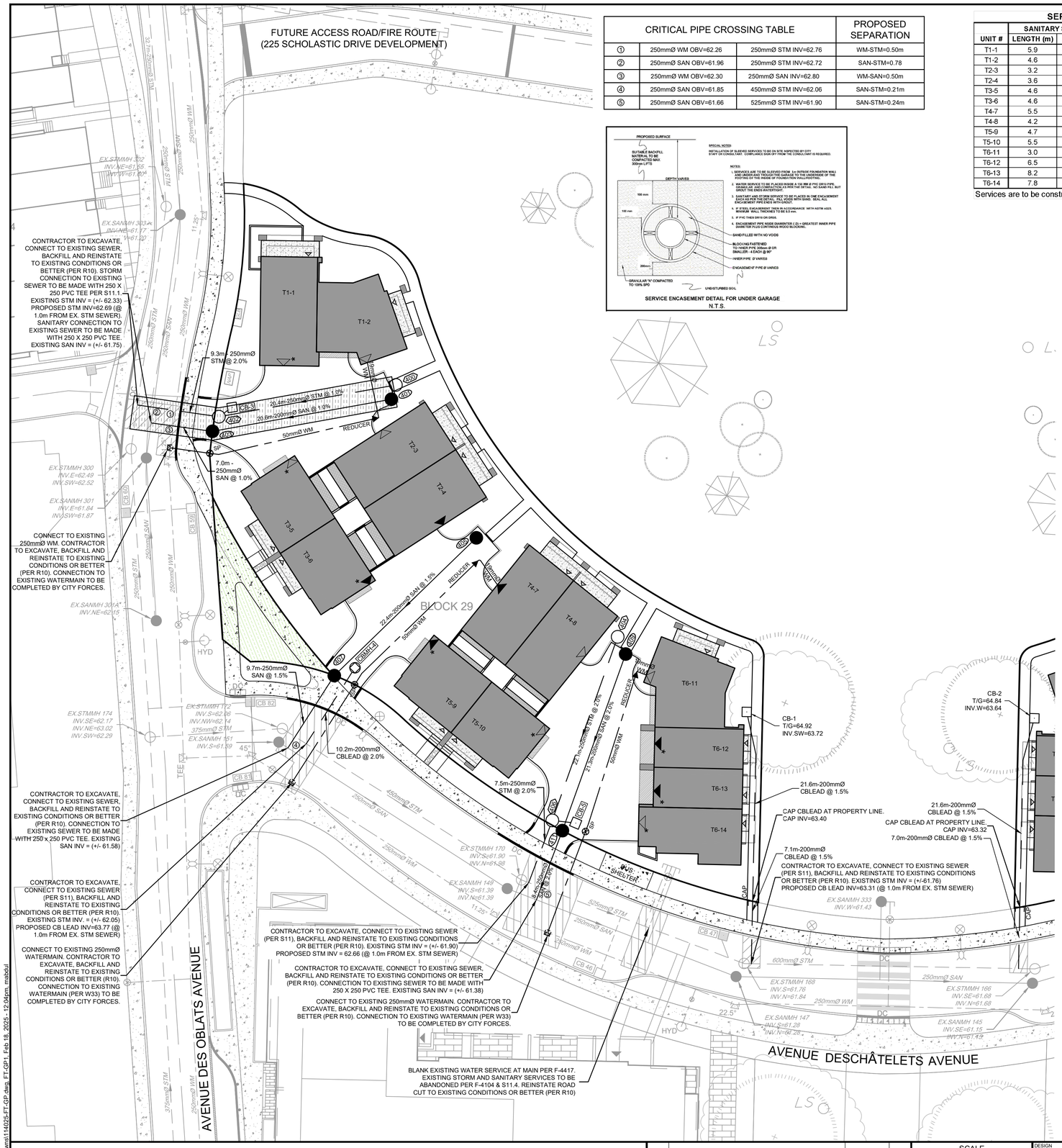


CRITICAL PIPE CROSSING TABLE			PROPOSED SEPARATION
①	250mmØ WM OBV=62.26	250mmØ STM INV=62.76	WM-STM=0.50m
②	250mmØ SAN OBV=61.96	250mmØ STM INV=62.72	SAN-STM=0.78
③	250mmØ WM OBV=62.30	250mmØ SAN INV=62.80	WM-SAN=0.50m
④	250mmØ SAN OBV=61.85	450mmØ STM INV=62.06	SAN-STM=0.21m
⑤	250mmØ SAN OBV=61.66	525mmØ STM INV=61.90	SAN-STM=0.24m

SERVICE ENCASEMENT DETAIL FOR UNDER GARAGE
N.T.S.

S11.1 NOTES:
INSTALLATION OF SLEEVED SERVICES TO BE ON SITE INSPECTED BY CITY STAFF OR CONSULTANT. COMPLIANCE SIGN OFF FROM THE CONSULTANT IS REQUIRED.

NOTES:
1. SERVICES ARE TO BE SLEEVED FROM 1m INTERIOR FINISHED WALL TO EXTERIOR AND THROUGH THE GARAGE TO THE UNDERSIDE OF THE FOOTING OF THE INSIDE OF FOUNDATION WALL/FOOTING.
2. WATER SERVICES TO BE PLACED INSIDE A 150 MM Ø PVC DR14 PIPE. ENDS OF PIPE TO BE SEALED WITH CAULKING AND THE DETAIL NOT SAND FILL BUT GROUT THE ENDS WATERTIGHT.
3. SANITARY AND STORM SERVICE TO BE PLACED IN ONE ENCASEMENT EACH AS PER THE DETAIL. FILL VOIDS WITH SAND. SEAL ALL ENCASEMENT PIPE ENDS WITH GROUT.
4. IF STEEL FIELD BENDING TREN IN ACCORDANCE WITH ASTM A615. MINIMUM BENDING RADIUS TO BE 5.5 min.
5. IF PVC THEN DR14 OR DR35.
4. ENCASEMENT PIPE INSIDE DIAMENTER (ID) = GREATEST INNER PIPE DIAMETER PLUS CONTINUOUS WOOD BLOCKING.

SERVICE LATERALS (TO BUILDING FACE)

UNIT #	SANITARY SERVICE		STORM SERVICE		WATER SERVICE	
	LENGTH (m)	INVERT	LENGTH (m)	INVERT	LENGTH (m)	TOP W/M
T1-1	5.9	63.45	4.4	63.45	8.2	63.05
T1-2	4.6	63.45	3.1	63.45	6.4	63.05
T2-3	3.2	63.85	4.7	63.85	1.4	63.45
T2-4	3.6	63.85	-	-	5.6	63.45
T3-5	4.6	63.70	6.4	63.70	2.3	63.30
T3-6	4.6	63.70	-	-	6.6	63.30
T4-7	5.5	64.00	-	-	3.5	63.60
T4-8	4.2	64.00	2.7	64.00	5.8	63.60
T5-9	4.7	63.85	-	-	2.7	63.45
T5-10	5.5	63.85	4.0	63.85	7.6	63.45
T6-11	3.0	63.70	4.5	63.70	1.2	63.30
T6-12	6.5	63.70	-	-	4.6	63.30
T6-13	8.2	63.70	-	-	6.0	63.30
T6-14	7.8	63.70	9.3	63.70	5.4	63.30

Services are to be constructed as per S11.3.

LEGEND

- SITE BOUNDARY
- PROPOSED CURB
- 101 PROPOSED SANITARY MANHOLE & SEWER
- 100 PROPOSED STORM MANHOLE & SEWER
- 50mmØ PROPOSED WATERMAIN
- PROPOSED CATCHBASIN AND LEAD
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED DIRECTION OF FLOW
- V&VB PROPOSED VALVE & VALVE BOX LOCATION
- SP PROPOSED STAND POST LOCATION
- PROPOSED SERVICE LOCATION
  - SAN - 135mmØ PVC DR28 @ 2.0% (1.0% MIN)
  - STM - 100mmØ PVC DR28 @ 2.0% (1.0% MIN)
  - WATER - 19mmØ PEX
- PROPOSED SERVICE LOCATION
  - SAN - 135mmØ PVC DR28 @ 2.0% (1.0% MIN)
  - WATER - 19mmØ PEX
- PROPOSED SERVICE LOCATION C/W SLEEVE
  - SAN - 135mmØ PVC DR28 @ 2.0% (1.0% MIN)
  - STM - 100mmØ PVC DR28 @ 2.0% (1.0% MIN)
  - WATER - 19mmØ PEX
- PROPOSED SERVICE LOCATION C/W SLEEVE
  - SAN - 135mmØ PVC DR28 @ 2.0% (1.0% MIN)
  - WATER - 19mmØ PEX
- 200mmØ EXISTING SANITARY MANHOLE & SEWER
- 250mmØ EXISTING STORM MANHOLE AND SEWER
- EXISTING WATERMAIN
- V&VB EXISTING VALVE AND VALE BOX
- HYD EXISTING FIRE HYDRANT C/W LEAD
- EX.CB EXISTING CATCHBASIN
- PROPOSED ROAD CUT LIMITS
- PROPOSED INSULATION FOR SHALLOW SEWERS AS PER S35
- LAND TO BE TRANSFERRED TO THE CITY

SAN MANHOLE TABLE

MANHOLE ID	SIZE (mm)	T/G ELEV (m)	INVERT (m)
401[2]	1200mmØ	65.26	NW=63.10
403	1200mmØ	64.96	SE=62.89 N=62.84
405[2]	1200mmØ	65.49	NW=62.78
407[1]	1200mmØ	65.21	SE=62.44 W=61.73
409[2]	1200mmØ	65.41	W=62.70
411[1]	1200mmØ	65.23	E=62.27 W=61.55

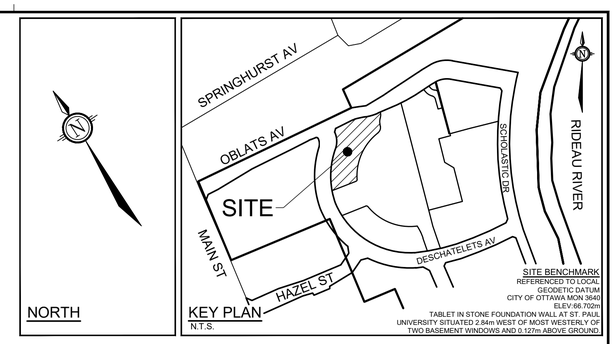
1. MAINTENANCE HOLE TO HAVE EXTERNAL DROP STRUCTURE AS PER OPSD 1003.010
2. MAINTENANCE HOLE FRAME AND COVER TO BE WATERTIGHT, "CAMPRESSION" (#41420049W01) BY EJ.

STM MANHOLE TABLE

MANHOLE ID	SIZE (mm)	T/G ELEV (m)	INVERT (m)
400	1200mmØ	65.24	NW=63.09
402	1200mmØ	64.88	SE=62.89 N=62.86 SE=63.60
404	1200mmØ	65.53	W=63.26
406	1200mmØ	65.21	E=62.82 W=62.79 S=63.88

CATCHBASIN TABLE

CB ID	SIZE (mm)	T/G ELEV (m)	INVERT (m)	ICD DIA (mm)	100yr CAPTURE RATE (L/s)
CB-1	610 x 610 CB	64.92	SW=63.72	LMF 60	3.7
CB-3	610 x 610 CB	64.84	NW=63.64	83mmØ	16.3
CB-5	610 x 610 CB	65.13	N=63.93	83mmØ	16.2
CBMH-4	1,200 mm dia CBMH	65.15	W=63.95	83mmØ	16.2



SOURCE REFERENCE:
PLAN OF SUBDIVISION OF PART OF LOT "H" CONCESSION "D" (RIDEAU FRONT), PREPARED BY ANNIS, O-SULLIVAN, VOLLEBEKK LTD. ON DECEMBER 15, 2017. (PLAN 4M-1596)
TOPOGRAPHIC INFORMATION:
HORIZONTAL DATUM: NAD 83 (ORIGINAL), MTM - ZONE 9
VERTICAL DATUM: CGVD28:78
1. *DRAFT PLAN OF SUBDIVISION OF PART OF LOT "H" CONCESSION "D" (RIDEAU FRONT), PREPARED BY ANNIS, O-SULLIVAN, VOLLEBEKK LTD (2015)*
2. *NOVATECH TOPOGRAPHIC SURVEY, APRIL 2024*

GENERAL NOTES:

1. DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO START OF 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. PRIOR TO COMMENCING ANY ON SITE SERVICING THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF THE EXISTING SEWERS, WATERMAINS AND UTILITIES IN THE OBLATS AVENUE AND DESCHÂTELETS AVENUE RIGHT OF WAY.
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. 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 STRUCTURAL PLANS FOR UNDERSIDE OF FOOTING AND TOP OF FOUNDATION INFORMATION.
12. REFER TO GEOTECHNICAL INVESTIGATION PG6948-1 (DATED FEBRUARY 1, 2024), PREPARED BY PATERSON GROUP
13. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A MARKED UP COPY OF THE GENERAL PLAN OF SERVICES 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 LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
14. ALL WORK TO BE CONSTRUCTED TO CITY OF OTTAWA AND ONTARIO PROVINCIAL STANDARDS.
15. ALL UNITS ARE PROPOSED TO BE SLAB ON GRADE (I.E. NO BASEMENTS).

SEWER NOTES:

1. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MAINTENANCE HOLE (1200Ø)	701.010	OPSD
STORM / SANITARY MH FRAME & COVER	S24.1 / S24 & S25	CITY OF OTTAWA
STORM SEWER	PVC SDR 35	
SANITARY SEWER	PVC SDR 35	
CATCHBASIN LEAD	PVC SDR 35	
SEWER TRENCH	S6	CITY OF OTTAWA
SANITARY AND STORM SERVICES	PVC SDR28 (S11.3)	CITY OF OTTAWA
CBMH FRAME & COVER	S25 & S28.1	CITY OF OTTAWA
CB FRAME & COVER	S19	CITY OF OTTAWA

2. ALL CATCHBASIN AND CATCHBASIN MAINTENANCE LEADS ARE TO BE 200mm DIA. PVC SDR 35 AT 2% SLOPE UNLESS OTHERWISE SPECIFIED ON THE DRAWING.
3. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 2.0m COVER AS PER THE INSULATION DETAIL FOR SHALLOW SEWERS AS PER DETAIL S35.
4. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM BUILDING FACE AT 2.0% SLOPE (1.0% MINIMUM). SERVICES TO BE CONNECTED TO MAINLINE SEWER AS PER CITY OF OTTAWA S11.1.
5. PIPE BEDDING AND COVER ARE TO BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE COVER MATERIAL SHALL CONSIST OF OPSS GRANULAR 'A' AND SHOULD EXTEND FROM THE SPRING LINE OF THE PIPE TO AT LEAST 300mm ABOVE THE OBVERT OF THE PIPE.
6. SANITARY PIPE TO BE IPEX SDR 35 OR EQUIVALENT WITH JOINT PRESSURE RATING OF 345kPA MINIMUM. WHERE PRIVATE SANITARY SEWER DOES NOT HAVE 2.5m CLEARANCE TO THE WATERMAIN, THE CONTRACTOR SHALL COMPLETE PRESSURE TESTING OF THE SANITARY SEWER TO CONFIRM THE 345kPa (min.) PRESSURE RATING OF THE SANITARY PIPE. TESTING TO BE COMPLETED PRIOR TO SANITARY LATERAL INSTALLATIONS
7. THE SITE SERVICING CONTRACTOR SHALL PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY AND STORM SERVICES TO CONFIRM PROPER CONNECTION TO THE SEWER MAINS. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER.
8. STORM MAINTENANCE HOLES SHALL HAVE 300mm SUMPS AND CATCHBASIN MAINTENANCE HOLES SHALL HAVE 600mm SUMPS UNLESS OTHERWISE INDICATED.
9. CONTRACTOR TO TELEVISE (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.
10. CONTRACTOR SHALL OBTAIN A VIDEO INSPECTION OF THE CITY SEWER SYSTEM WITHIN OBLATS AVENUE AND DESCHÂTELETS AVENUE RIGHT OF WAY UPON COMPLETION OF CONSTRUCTION TO DETERMINE IF THE CITY SEWER SYSTEM SUSTAINED ANY DAMAGES AS A RESULT OF CONSTRUCTION ON THE LANDS.

WATERMAIN NOTES:

1. GENERAL:

ITEM	DETAIL No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER / OVER SEWER	W25 / W25.2	CITY OF OTTAWA
WATER SERVICE: 19mm PEX SDR9CTS	W26	CITY OF OTTAWA
WATERMAIN: 50mm PEX SDR9CTS	W33	CITY OF OTTAWA

2. 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 SHALL BE PERFORMED BY CITY OFFICIALS.
3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED. CONTRACTOR TO SUPPLY AND INSTALL INSULATION AS PER W22 FOR ALL WATERMAIN LESS THAN 2.4m BELOW GRADE.
4. PROVIDE MINIMUM CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS PER W25 (0.50m) AND W25.2 (0.25m).
5. WATER SERVICES ARE TO BE INSTALLED 1.0m FROM THE BUILDING FACE, WITH 15m OF PIPE LEFT COILED
6. CURB STOPS ARE TO BE LOCATED 2.0m FROM THE FOUNDATION WALL WHEREVER POSSIBLE
7. WATERMAINS LOCATED WITHIN 2.4m FROM OPEN STRUCTURES ARE TO BE INSULATED AS PER CITY OF OTTAWA STANDARD DETAIL W23

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, 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
6.	REVISED PER CITY COMMENTS	FEB 19/25	TJM
5.	REVISED PER CITY COMMENTS	DEC 20/24	TJM
4.	REVISED PER CITY COMMENTS	NOV 29/24	TJM
3.	RE-ISSUED FOR SITE PLAN APPROVAL	OCT 17/24	TJM
2.	ISSUED FOR SITE PLAN APPROVAL	AUG 14/24	TJM
1.	ISSUED FOR DISCUSSION	APR 26/24	TJM

SCALE
1:250
1:250
0 2 4 6 8 10

DESIGN SAM
CHECKED TJM
DRAWN SAM
CHECKED TJM
APPROVED TJM

LICENSED PROFESSIONAL ENGINEER
T. J. MCKAY
100195434
MARCH 4, 2025
PROVINCE OF ONTARIO

NOVATECH
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LOCATION
CITY of OTTAWA
GREYSTONE VILLAGE

DRAWING NAME
BLOCK 29
GENERAL PLAN OF SERVICES

PROJECT No. 114025
REV # 6
DRAWING No. 114025-FT-GP1

D07-12-24-0130

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