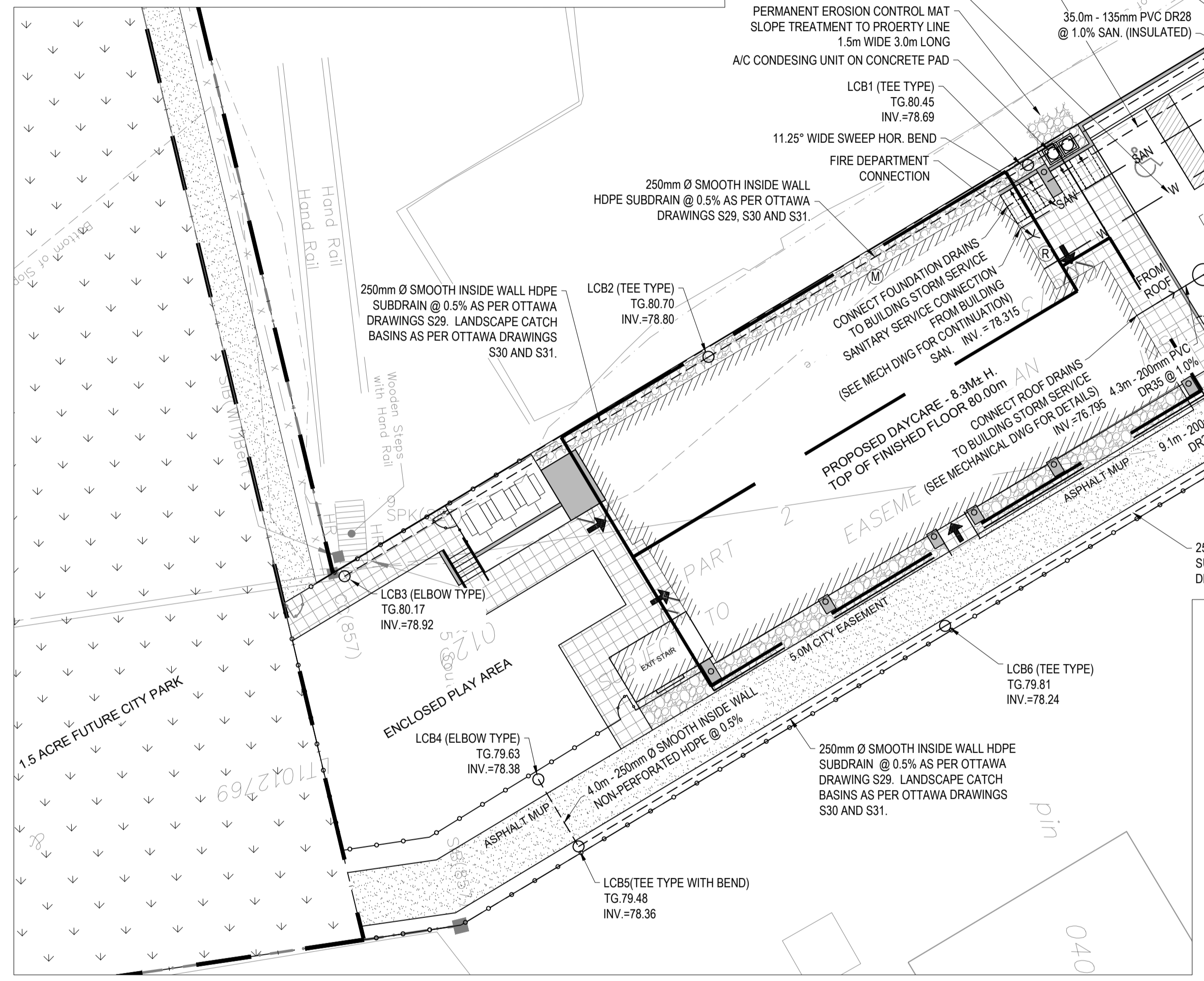


No.	INVERT (m)	CLEARANCE (m)	OBVERT (m)
1	77.80	0.50 OVER	77.30
2	77.83	3.11 OVER	74.72
3	77.86	1.22 OVER	76.64
4	76.91	2.19 OVER	74.72
5	76.94	0.30 OVER	76.64
6	77.99	0.30 OVER	77.69
7	78.00	0.73 OVER	77.27
8	76.80	0.58 UNDER	77.33
9	78.07	0.79 OVER	77.28

CROSSING NUMBER	STATION	DESCRIPTION	FINISHED GRADE	TOP OF WATERMAIN	INSULATION REQUIRED	COVER
4	0+000	200 x 150mm TEE	79.43	77.30	YES	2.13
5	0+004	CROSSING OVER EX. SAN	79.46	77.09	YES	2.37
6	0+005.5	CROSSING OVER EX. STM	79.42	77.09	YES	2.33
7	0+013	150mm VALVE & BOX	79.44	77.04		2.40
8	0+014	HYDRANT TEE	79.37	76.97		2.40
9	0+014.5	CROSSING UNDER CB LEAD	79.42	76.95		2.47
10	0+016	150 x 100mm REDUCER	79.34	76.94		2.40
11	0+024.4	CROSSING UNDER SAN	79.68	77.28		2.40
12	0+048	BUILDING ENTRY	79.96	77.56		2.40

**APPROVED**  
By Adam Brown at 9:55 am, Dec 20, 2019

**ADAM BROWN**  
MANAGER, DEVELOPMENT REVIEW - RURAL  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



STRUCTURE ID	TOP OF GRATE ELEVATION	INVERT IN	INVERT IN	INVERT OUT	SIZE	DESCRIPTION	COVER
LCB1	80.45	78.690		78.690	300mm	S29 & S31	S30
LCB2	80.70	78.800		78.800	300mm	S29 & S31	S30
LCB3	80.17	78.800		78.800	300mm	S29 & S31	S31
LCB4	79.63	78.380		78.380	300mm	S29 & S31	S31
LCB6	79.81	78.240		78.240	300mm	S29 & S31	S30
LCB5	79.48	78.360		78.360	300mm	S29 & S31	S30
CB1	79.90	78.130		77.701	600x600mm	OPSD-705.010	S19.1
CB2	79.60	78.550		77.590	600x600mm	OPSD-705.010	S19.1
CB3	79.29	77.086		77.086	600x600mm	OPSD-705.010	S19.1
CBMH1	79.71	76.752	77.610	76.732	1200mm DIA.	OPSD-701.101	S28.1
CBMH2	79.38	77.050	76.671	76.651	1200mm DIA.	OPSD-701.010	S28.1
STMH3/OGS	79.45	76.588		76.588	1200mm DIA.	HYDRO INTERNATIONAL FD-4HC	S24.1
SAN MH1	79.44	77.965		77.935	1200mm DIA.	OPSD-701.010	S24
SAN MH2	79.36	77.78/76.78	76.55	76.54	1200mm DIA.	OPSD-701.010	S24

**LEGEND**

- + 79.81 EXISTING GRADE ELEVATION
- CB EXISTING STORM CATCHBASIN
- MH-ST EXISTING STORM MANHOLE
- MH-S EXISTING SANITARY MANHOLE
- ST EXISTING STORM SEWER
- S EXISTING SANITARY SEWER
- W EXISTING WATERMAIN
- 81.43 PROPOSED GRADE ELEVATION
- 79.98TC PROPOSED TOP & BOTTOM OF CURB
- 79.91 PROPOSED TOP OF GRATE
- 80.50TW PROPOSED TOP OF WALL
- 80.55(S) PROPOSED SWALE ELEVATION
- 3% PROPOSED GRADE SLOPE
- PROPOSED 3H:1V TERRACE SLOPE
- W PROPOSED WATER SERVICE
- SAN PROPOSED SANITARY SEWER
- STM PROPOSED STORM SEWER
- STM MH1 PROPOSED STORM SUBDRAIN
- CB1 PROPOSED STORM CATCHBASIN
- LCB1 PROPOSED LANDSCAPE CATCHBASIN
- SAN MH1 PROPOSED SANITARY MANHOLE
- VB PROPOSED VALVE AND BOX
- FH PROPOSED REDUCER
- PROPOSED FIRE HYDRANT
- PROPOSED FIRE DEPARTMENT CONNECTION
- REMOTE WATER METER READER
- WATER METER LOCATION

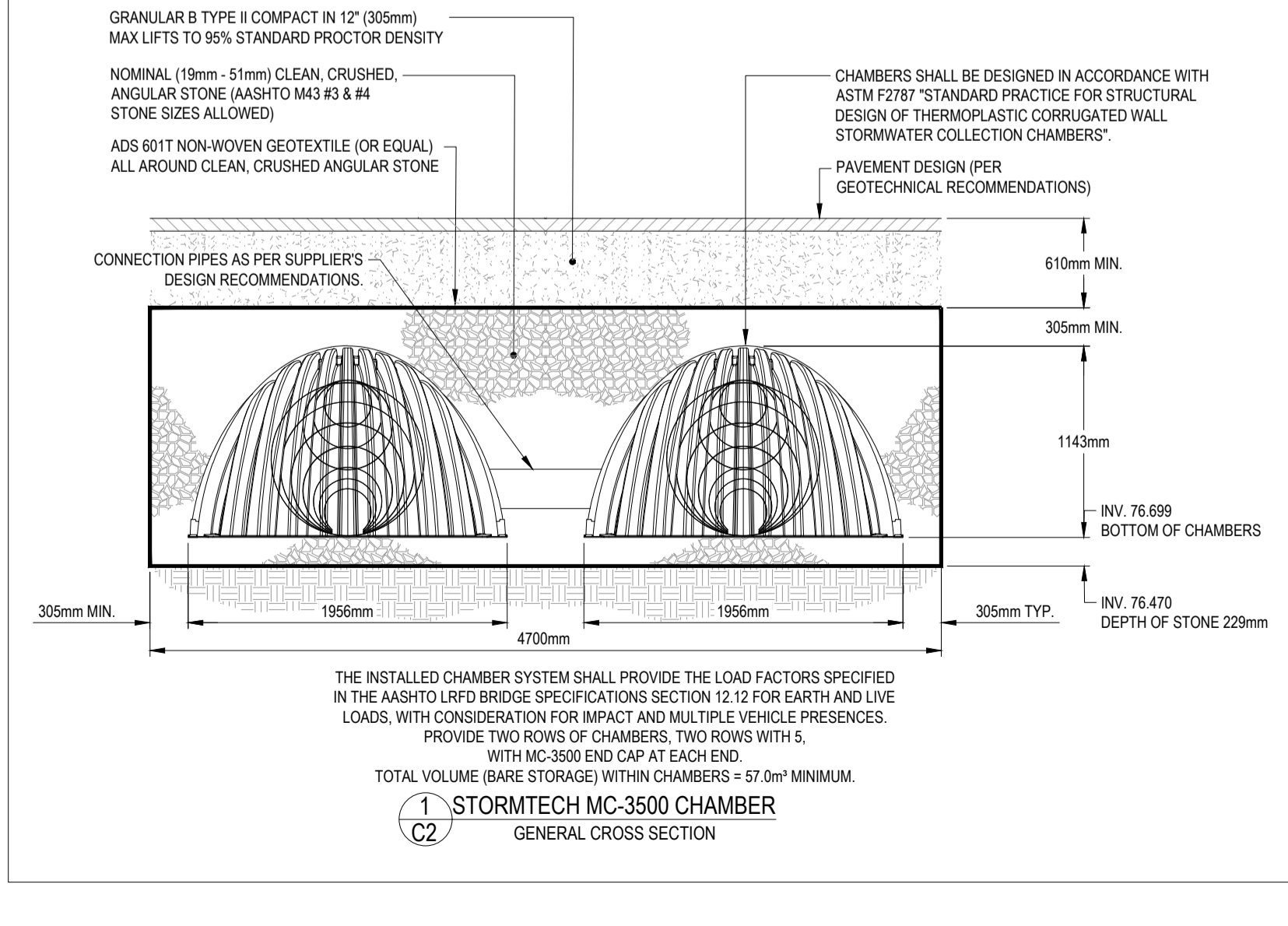
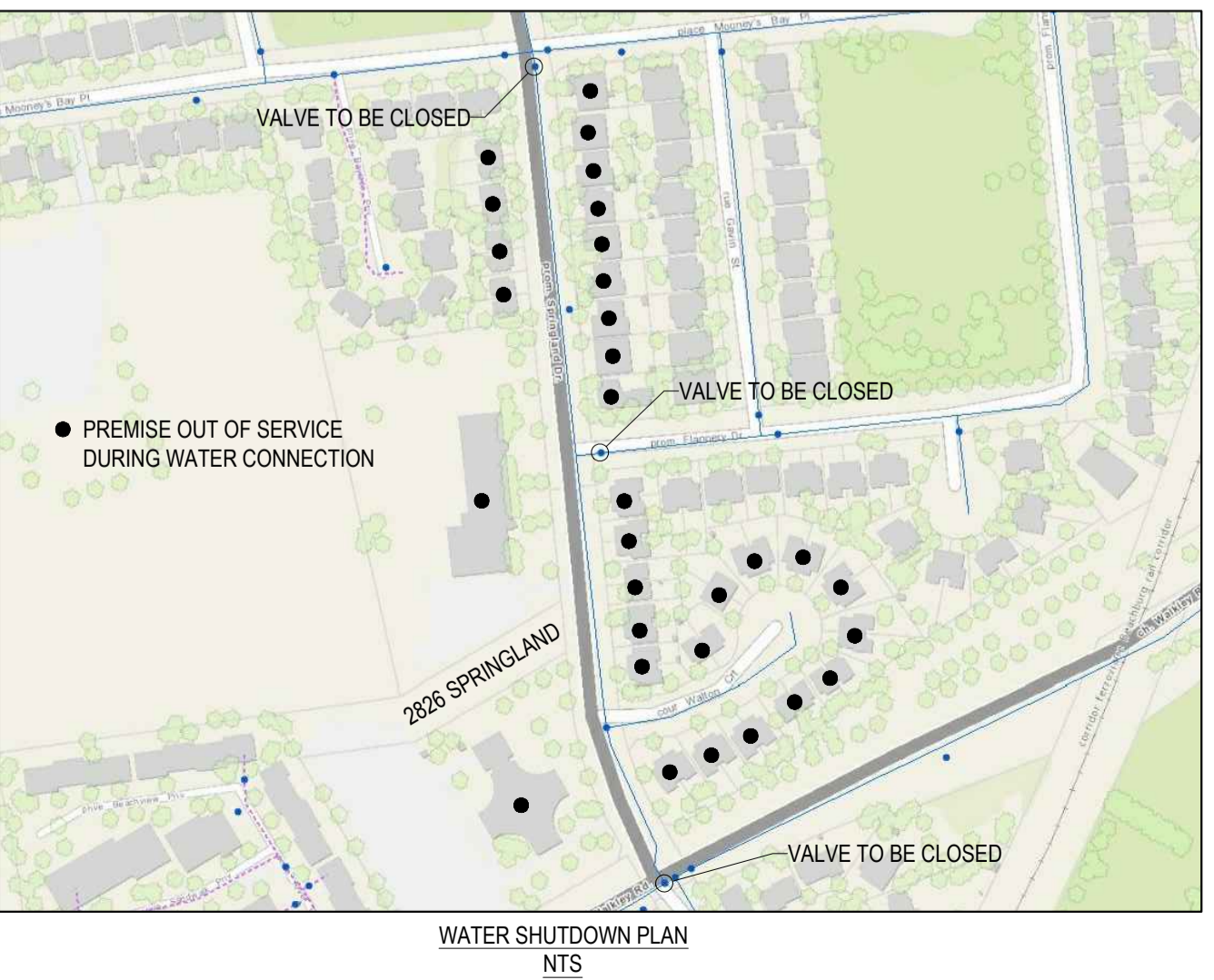
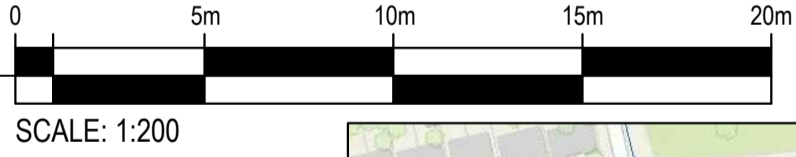
- WATER NOTES**
- ALL WATER SERVICE AND VALVE MATERIALS TO CONFORM WITH CITY OF OTTAWA STANDARDS. SITE WATER SERVICE AND MAIN TO BE PVC DR18.
  - OBTAIN AND PAY FOR WATER PERMIT FROM CITY OF OTTAWA. HYDROSTATIC AND BACTERIOLOGICAL TESTING REQUIRED AS PER OTTAWA STANDARDS. ALL MATERIALS, EXCAVATION, BACKFILL, LABOUR AND REINSTATEMENT BY CONTRACTOR. CITY PROVIDED SERVICES WILL BE PAID UNDER THE WATER PERMIT.
  - COMPLY WITH THE FOLLOWING OTTAWA STANDARD DRAWINGS:
    - W17 STANDARD TRENCH DETAIL
    - W18 HYDRANT LOCATION
    - W22 THERMAL INSULATION FOR WATERMANS IN SHALLOW TRENCHES
    - W23 THERMAL INSULATION OF WATERMANS AT OPEN STRUCTURES - APPLICABLE AT CB3
    - W24 VALVE BOX ASSEMBLY
    - W25-3 CONCRETE THRUST BLOCKS
    - W25-4 THRUST BLOCK DIMENSION TABLES
    - W25-5 RESTRAINING AND RETAINING RINGS
    - W25-6 TABLES OF RESTRAINED LENGTHS
    - W25 WATERMAIN CROSSING BELOW SEWER - MIN. CLEARANCE

- TRENCHES**
- W23 THERMAL INSULATION OF WATERMANS AT OPEN STRUCTURES - APPLICABLE AT CB3
  - W24 VALVE BOX ASSEMBLY
  - W25-3 CONCRETE THRUST BLOCKS
  - W25-4 THRUST BLOCK DIMENSION TABLES
  - W25-5 RESTRAINING AND RETAINING RINGS
  - W25-6 TABLES OF RESTRAINED LENGTHS
  - W25 WATERMAIN CROSSING BELOW SEWER - MIN. CLEARANCE
- 500mm**
- W36 TRACER WIRE INSTALLATION
  - W40 CATHODIC PROTECTION
  - W42 TYPICAL ANODE INSTALLATION

- PROVIDE MINIMUM 2.4m COVER, IF NOT ACHIEVABLE, PROVIDE THERMAL INSULATION TO THE SATISFACTION OF THE CITY, AND IN ACCORDANCE WITH OTTAWA DRAWINGS W22 AND W23.
- PROVIDE FLOW TESTING FOR NEW FIRE HYDRANT AND PAINT HYDRANT BASED ON FLOW RATING IN ACCORDANCE WITH CITY OF OTTAWA REQUIREMENTS FOR PRIVATE HYDRANTS.

**1 SERVICES PLAN**  
SCALE= 1:200

- SEWER NOTES**
- CONSTRUCT SEWERS AND APPURTENANCES AS PER OTTAWA AND MINISTRY OF THE ENVIRONMENT STANDARDS. CONFIRM EXISTING TIE IN ELEVATIONS PRIOR TO CONSTRUCTION. SEWER TRENCH SHALL INCLUDE CLASS 'B' BEDDING AS PER OTTAWA S6 AND S7. COMPACTION TO BE A MINIMUM OF 95% SPMD FOR PIPE AND DRAINAGE STRUCTURE BEDDING AND BACKFILL.
  - PVC STORM SEWERS AND CATCH BASIN LEADS TO BE PVC DR 35 CERTIFIED TO CAN/CSA-B182.2. PVC SANITARY SERVICE TO BE DR28 TO CAN/CSA B182.2.
  - PROVIDE FLEXIBLE BOOT CONNECTION FOR ALL PVC SEWER CONNECTIONS AT MANHOLES. PROVIDE RUBBER CONNECTORS IN ACCORDANCE WITH CSA A257.3-09 FOR CONCRETE PIPE CONNECTORS TO MANHOLES.
  - CATCHBASIN SUMP TO BE 600mm.
  - SEWERS AND SERVICES SHALL BE CONSTRUCTED WITH A MINIMUM CLEARANCE OF 2.0m FROM TREES.
  - STORM MANHOLES TO HAVE 300mm MINIMUM SUMP BELOW LOW INVERT. SANITARY MANHOLES TO BE BENCHMARKED AS PER OPSD 701.021.
  - PROVIDE CAMERA INSPECTION OF ALL SEWERS FOLLOWING COMPLETION OF CONSTRUCTION AND PROVIDE TO ENGINEER. MAINTAIN SEWERS IN CLEAN CONDITION UNTIL OWNER ACCEPTANCE.
  - TEMPORARY FLOW CONTROLS TO BE PLACED ON SEWER OUTLETS AS PER OTTAWA TECHNICAL BULLETIN ISD 2010-1. INLET CONTROL DEVICE PLACEMENT TO BE CERTIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY CONTRACTOR.
  - PROVIDE 50mm THICK HIGH DENSITY GRADE POLYSTYRENE INSULATION ACROSS WIDTH OF TRENCH (MINIMUM 1200mm) AT 150mm ABOVE SANITARY SEWER.
  - PERFORM LEAKAGE TESTING OF SANITARY SEWERS IN ACCORDANCE WITH OPSD 410.07.01.15 AND 407.07.25. TESTING SHALL BE OBSERVED BY AN ONTARIO REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.

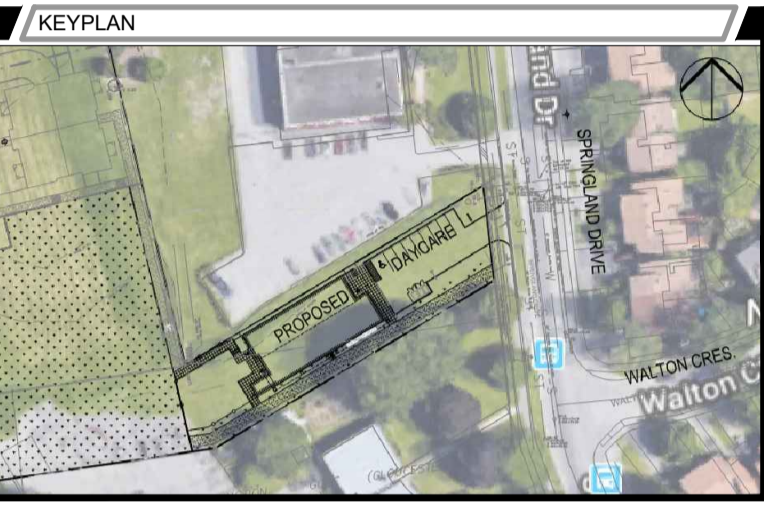


**wsp**  
300-2611 QUEENSWAY DRIVE  
OTTAWA ONTARIO CANADA K2B 8K2  
TEL: 1-613-829-2800 | FAX: 1-613-829-8299 | WWW.WSPGROUP.COM

**CLIENT**

DEVELOPER:  
CANOE BAY DEVELOPMENT INC.  
51 CORTLEIGH DRIVE, OTTAWA,  
ONTARIO K2J 3Z8  
613-447-0208

OWNER:  
ANDREW FLECK CHILD SERVICES



**PROFESSIONAL ENGINEER**  
J. C. JOHNSTON  
2019-12-17  
PROVINCE OF ONTARIO

No.	ISSUE NOTES	DATE
8		
7		
6		
5	REVISED PER SITE PLAN CHANGES	2019-12-17
4	REVISED PER SITE PLAN CHANGES	2019-07-31
3	REVISED PER SITE PLAN CHANGES	2019-07-26
2	REVISED PER CITY COMMENTS	2019-07-23
1	ISSUED FOR SITE PLAN APPLICATION	2019-05-10

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**PROJECT NAME** / NOM DU PROJET  
**RIVERSIDE PARK EARLY LEARNING CENTRE**  
2826 SPRINGLAND DRIVE  
OTTAWA, ONTARIO

**DRAWING TITLE** / TITRE DU DESSIN  
**CIVIL SERVICES PLAN**

INFORMATION	SHEET No. / No. PAGE
Designed by: JJ	
Drawn by: BN	
Reviewed by: JJ	
Approved by: JJ	
Scale: AS SHOWN	
Date: 2019-03-22	
Project No.: 191-03236-00	
Client Plan#: NA	

**C2**