

## WATERMAIN NOTES

- CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH OPSD STANDARDS AND SPECIFICATIONS, AS WELL AS CITY STANDARDS.
- 2. INDUSTRIAL/COMMERCIAL SERVICE CONNECTIONS TO BE 50mm COPPER PIPING AND SHALL CONFORM TO ASTM B88 TYPE 'K' SOFT.
- 3. WATERMAINS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 2.4m. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER CITY STANDARDS (IF AVAILABLE) OR
- 4. IF THE WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS EQUAL TO OR LESS THAN THAT WHICH IS RECOMMENDED BY THE MANUFACTURER.
- 5. THERMAL INSULATION OF WATERMAINS AT OPEN STRUCTURES AS PER CITY STANDARDS (IF AVAILABLE) OR OPSD 1109.030.
- VALVES TO BE OPERATED BY CITY STAFF ONLY.
   NO CONNECTION TO EXISTING WATER NETWORK SHALL BE COMPLETED LINTUL A WATER
- CONNECTION, EXCAVATION, BACKFILLING AND REINSTATEMENT TO BE COMPLETED BY CONTRACTOR.

  8. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ANY WATERMAIN CONNECTION(S) REQUIRED. THIS SHALL BE COMPLETED IN THE PRESENCE OF A DESIGNAT MUNICIPAL WATER OPERATOR AND THE SELECTED CONTRACTOR SHALL PROVE TO THE

PERMIT IS OBTAINED FROM THE CITY, CITY TO BE PRESENT FOR WATERMAIN CONNECTION

SATISFACTION OF THE CITY THAT THEY ARE COMPETENT TO PERFORM THE WORKS PRIOR

- TO INITIATING CONSTRUCTION.

  9. ALL WATERMAINS SHALL BE EQUIPPED WITH BUTTERFLY AND GATE VALVES AS PER OPSD
- 10. ALL FIRE HYDRANTS, VALVE AND VALVE BOX HSALL CONFORM TO OPSD 1103.020.
- 11. CONCRETE THRUST BLOCKS TO CONFORM TO OPSD 1103.010 AND OPSD 1103.020.12. ALL WATERMAIN TO BE CLASS 150 DR-18 OR APPROVED EQUIVALENT.
- 13. ALL WATERMAIN TO BE EQUIPPED WITH TRACER WIRE.

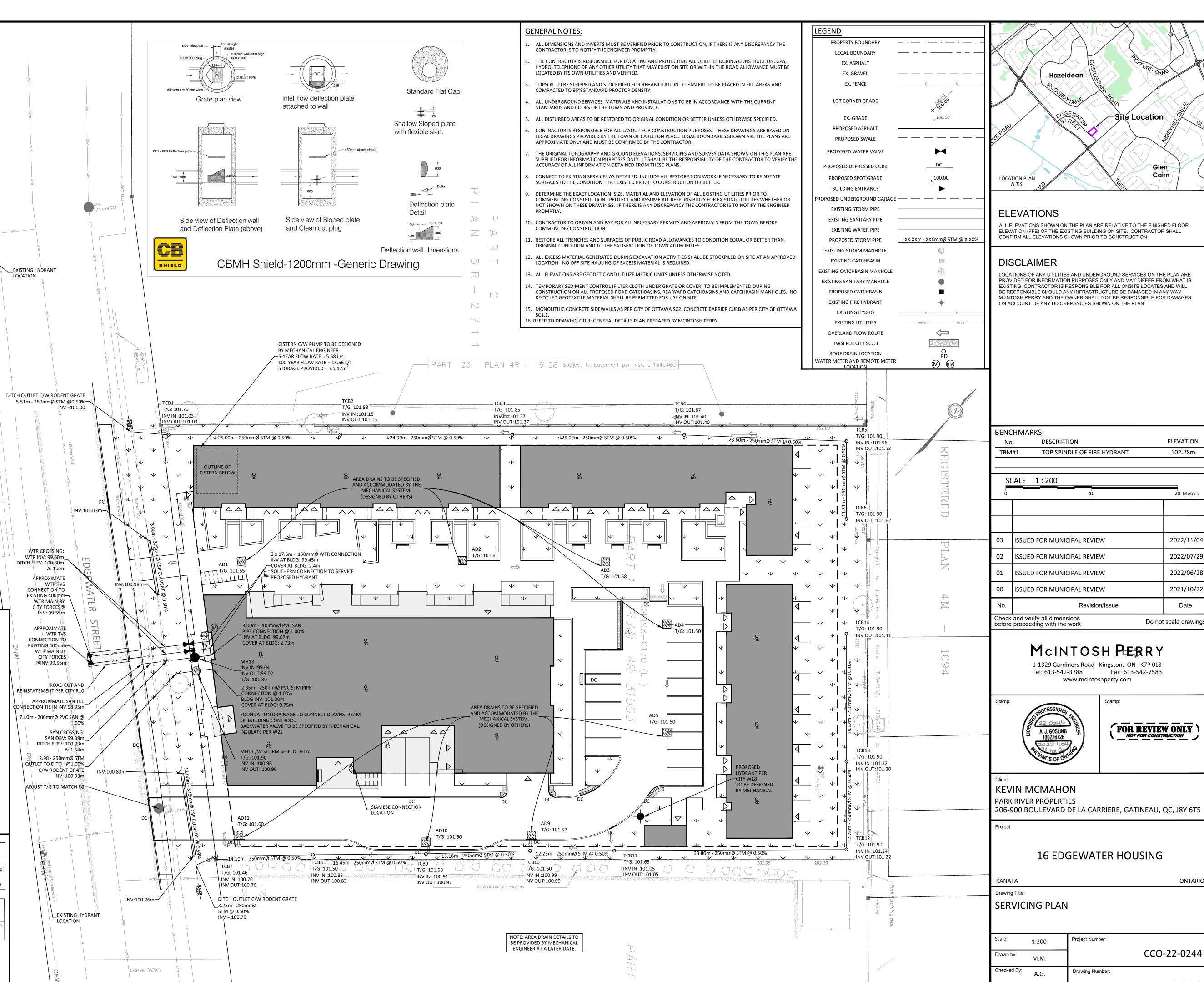
## **SEWER NOTES:**

- .. CONSTRUCT ALL SEWERS, CATCH BASINS, MANHOLES AND APPURTENANCES IN ACCORDANCE WITH OPSD STANDARDS AND SPECIFICATIONS, AS WELL AS CITY.
- SEWER TRENCHING AND BEDDING SHALL CONFORM TO OPSD 802.010 AND 802.013 UNLESS NOTED OTHERWISE.
   BEDDING SHALL BE A MINIMUM 150mm OF GRANULAR "A", COMPACTED TO MINIMUM 95% STANDARD PROCTOR DRY DENSITY. CLEAR STONE BEDDING SHALL NOT BE PERMITTED.
   SUB-BEDDING. IF REQUIRED SHALL CONSIST OF 450mm OF COMPACTED GRANULAR "B" TYPE 1.
- 2.3. BACKFILL TO AT LEAST 300mm ABOVE TOP OF PIPE WITH GRANULAR "A" OR GRANULAR "B" TYPE 1.
   2.4. TO MINIMIZE DIFFERENTIAL FROST HEAVING, TRENCH BACKFILL (FROM PAVEMENT SUBGRADE TO 2.0 METRES BELOW FINISHED GRADE) SHALL MATCH EXISTING SOIL CONDITIONS.
- 3. SANITARY SEWERS AND CONNECTIONS 150mm  $\not O$  AND SMALLER TO BE PVC SDR-28.
- 4. SEWERS AND CONNECTIONS 200mmØ AND LARGER TO BE PVC SDR-35. BEDDING TO BE TYPE "B" EXCEPT AT RISERS, UNLESS NOTED OTHERWISE.
- 5. INSULATE ALL STORM AND SANITARY SEWERS/SERVICES THAT HAVE LESS THAN 2.0m OF COVER WITH THERMAL INSULATION AS PER OPSD 1109.030.
- 6. SEWER CONNECTIONS ARE TO BE MADE ABOVE THE SPRINGLINE OF THE SEWERMAIN AS PER CITY OF OTTAWA STANDARD DRAWING S11, S11.1 & S11.2.
- 7. SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN AND DETAILED TO WITHIN 1.0m OF BUILDING. ALL ENDS OF SERVICES TO BE PROPERLY CAPPED AND LOCATED WITH 2"x4"X8' LONG MARKER.
- 3. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS ON SITE, OUTLET CONNECTION TO THE MAIN AND PIPES 150mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
- DYE TESTING IS TO BE COMPLETED ON SANITARY SERVICE TO CONFIRM PROPER CONNECTION TO SANITARY SEWER MAIN.

		SUBDRAIN STRUCTURE TABLE						
		NAME	RIM ELEV.	INVERT IN	INVERT OUT	DESCRIPTION		
		LCB6	101.90		NW101.617	CITY S30		
		LCB14	101.90		SE101.413	CITY S31		
		TCB1	101.70	NE101.030	SW101.028	CITY S30		
		TCB2	101.83	NE101.150	SW101.155	CITY S30		
		TCB3	101.85	NE101.270	SW101.275	CITY S30		
		TCB4	101.87	NE101.400	SW101.395	CITY S30		
		TCB5	101.90	SE101.560	SW101.518	CITY S30		
		TCB7	101.46	NE100.760	SW100.756	CITY S30		
5		TCB8	101.50	NE100.830	SW100.830	CITY S30		
		TCB9	101.58	NE100.910	SW100.912	CITY S30		
		TCB10	101.60	NE100.990	SW100.986	CITY S30		
1		TCB11	101.65	NE101.050	SW101.051	CITY S30		
5		TCB12	101.90	NW101.240	SW101.220	CITY S30		
		TCB13	101.90	NW101.320	SE101.304	CITY S30		

STM STRUCTURE TABLE								
NAME	RIM ELEV.	INVERT IN	INVERT OUT	DESCRIPTION				
MH1	101.90	NE100.976	SW100.960	STRUC OPSD 701.010 FRAME S25 COVER S24.1 C/W STORM SHIELD				
SAN STRUCTURE TABLE								
NAME	RIM ELEV.	INVERT IN	INVERT OUT	DESCRIPTION				
				STRUC OPSD 701.010				

MH1B 101.89 NE99.040 SW99.020



18623

Designed By: