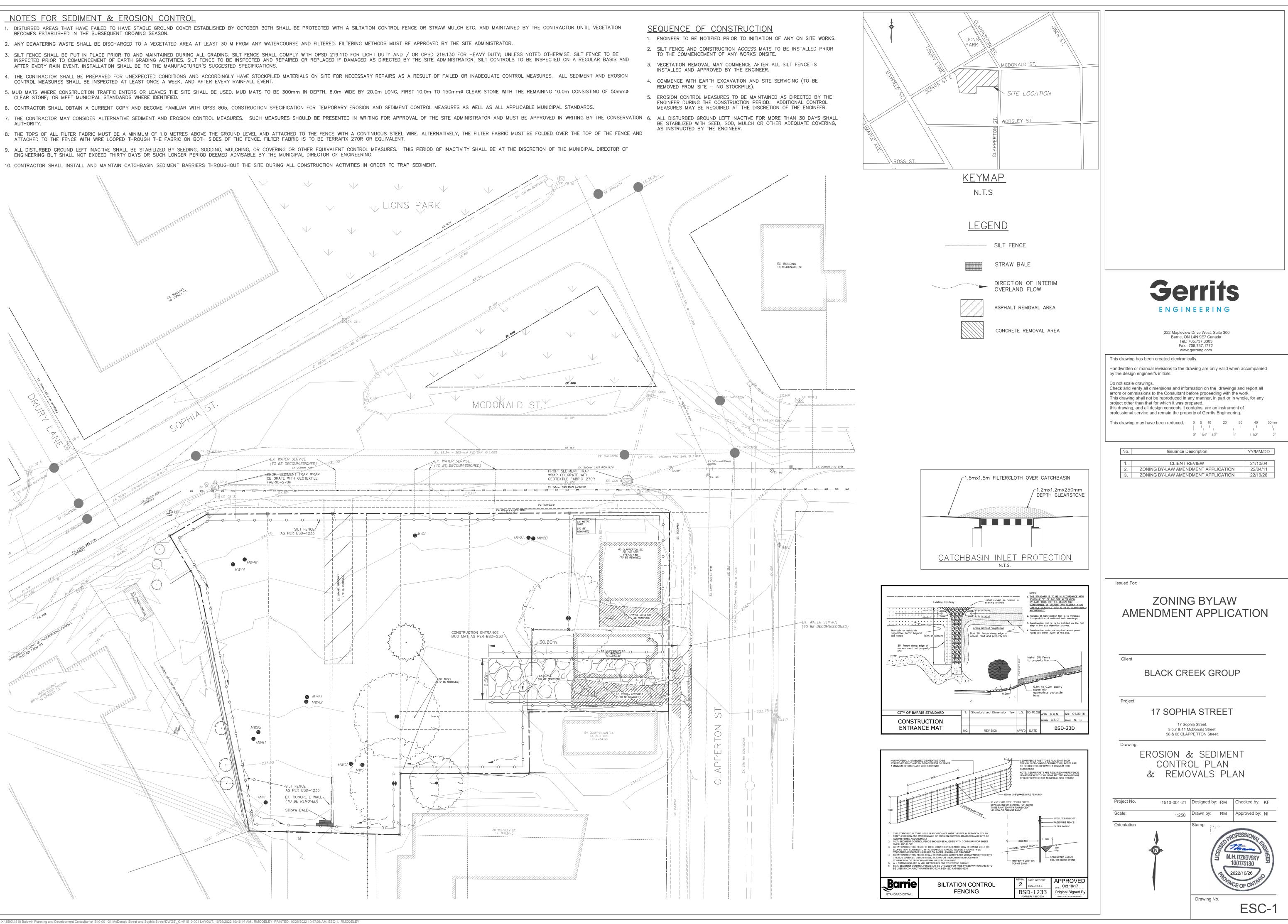
- BECOMES ESTABLISHED IN THE SUBSEQUENT GROWING SEASON.

- ENGINEERING BUT SHALL NOT EXCEED THIRTY DAYS OR SUCH LONGER PERIOD DEEMED ADVISABLE BY THE MUNICIPAL DIRECTOR OF ENGINEERING.



# DRAWINGS

- 1. THE NOTES ON THIS SHEET APPLY TO ALL WORKS UNDER THIS CONTRACT UNLESS OTHERWISE NOTED ON THE SPECIFIC DETAIL DWGS.
- 2. THE CITY OF BARRIE STANDARD DRAWINGS, ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OPSS) AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) CONSTITUTE PART OF THE PLANS OF THIS CONTRACT.
- 3. ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY THE LOCAL MUNICIPALITY AND
- SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS. 4. THE STANDARD DRAWINGS INCLUDED WITH THESE PLANS ARE PROVIDED FOR CONVENIENCE ONLY AND ARE NOT TO BE CONSTRUED TO BE A COMPLETE SET FOR THE PURPOSE OF THE CONTRACT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL RELEVANT STANDARD DRAWINGS AND SPECIFICATIONS AS REQUIRED FOR THIS CONTRACT.

### MEASUREMENTS

- 1. ALL DIMENSIONS ARE IN METRES, EXCEPT PIPE DIAMETERS, WHICH ARE IN MILLIMETRES, UNLESS SPECIFIED OTHERWISE.
- 2. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION, AND ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER

## GENERAL

- 1. EXISTING SERVICES AND UTILITIES SHOWN ON THESE CONTRACT DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE AND THEIR LOCATIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS THEY WISH WITH THE UNDERSTANDING THAT THE OWNER DISCLAIMS ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
- 2. NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- 3. GRANULAR MATERIAL, USED FOR BACKFILL, SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- 4. ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE ENGINEER. ALL GRASS AND VEGETATION COVERED AREAS SHALL BE RESTORED BY PLACING 200mm OF APPROVED TOPSOIL AND NURSERY SOD UNLESS NOTED OTHERWISE.

#### 4. PARKING LOT

- 1. THE PARKING LOT PAVEMENT STRUCTURE SHALL CONSIST OF THE FOLLOWING:
- LIGHT\_DUTY 40mm\_HL3\_or\_HL4\_ASPHALT HEAVY DUTY - 50mm HL3 or HL4 ASPHALT \_
- 60mm HL8 – 70mm HL8
- 150mm GRANULAR 'A' – 150mm GRANULAR 'A' – 450mm GRANULAR 'B' – 300mm GRANULAR 'B'
- 2. NATIVE SUBGRADE TO BE COMPACTED TO MINIMUM 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- 3. PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO START OF CONSTRUCTION

## <u>SEWERS</u>

- 1. INTERNAL SANITARY SEWERS AND LATERALS TO BE MINIMUM 150mm DIAMETER PVC DR 28 WITH JOINTS CONFORMING TO CSA STANDARD A257.3.
- 2. SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD 802.010 (GRANULAR 'A' EMBEDMENT MATERIAL), UNLESS APPROVED OTHERWISE BY THE ENGINEER.
- 3. PRECAST MANHOLES SHALL BE 1200mm DIAMETER UNLESS OTHERWISE SPECIFIED, AND SHALL BE IN ACCORDANCE WITH OPSD 701.010. FRAME AND GRATE TO BE WATERTIGHT AND TO CONFORM TO OPSD 401.030.
- 4. MANHOLE TOPS ARE TO BE SET TO FINAL GRADE.

#### WATERMAINS

- 1. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE WATERMAIN AND THE SANITARY/STORM SEWER IS TO BE 2.5 METERS.
- 2. A MINIMUM OF 0.5m VERTICAL CLEARANCE BETWEEN THE WATERMAIN AND ALL UTILITIES MUST BE KEPT, WHILE STILL MAINTAINING A MINIMUM DEPTH OF COVER AT ALL TIMES. WHERE WATERMAIN CONFLICTS WITH SEWER PIPE, DEFLECT WATERMAIN HORIZONTALLY OR VERTICALLY TO OBTAIN MINIMUM COVER AND VERTICAL CLEARANCE.
- 3. WATERMAINS SHALL BE PVC DR 18 AND INSTALLED WITH A MINIMUM COVER OF 1.7m OVER THE MAINS. IF MINIMUM COVER CAN NOT BE ACHIEVED, INSULATION AS PER DETAIL (THIS SHEET) WILL BE REQUIRED.
- 4. WATERMAIN SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD 802.010 (GRANULAR 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES.
- 5. COPPER WATER SERVICES 25mm DIA. SHALL BE EMBEDDED IN SAND 100mm ABOVE AND BELOW TO CONFORM TO OPSS 1104.010.
- 6. WATERMAIN BEDDING SHALL CONSIST OF WINTER SAND, 150mm BELOW AND 300mm ABOVE THE WATERMAIN.
- 7. CONCRETE THRUST BLOCKS ARE TO INSTALLED AT ALL TEES, BENDS, HYDRANTS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER AS PER STANDARD DRAWINGS. ALL BENDS TO BE RESTRAINED.
- 8. ALL JOINTS MUST BE RESTRAINED AND THRUST BLOCKED.
- 9. ANY EXISTING, ON SITE, WATER WELLS MUST BE DECOMMISSIONED.
- 10. WHERE A COPPER SERVICE MUST BE JOINED UNDER THE FLOOR, THE COPPER SHALL BE JOINED BY SILVER SOLDER CONNECTION ONLY.
- 11. ALL SERVICE PIPE MATERIAL MUST BE DUCTILE IRON FROM THE RESTRAINING FLANGE TO A MINIMUM OF 3 METERS OUTSIDE THE FOUNDATION. REFER TO BSD-61. ALL DUCTILE SHALL BE POLY WRAPPED FOR ADDED PROTECTION.
- 12. OPERATION OF FIRE HYDRANTS AND VALVES ON POTABLE WATER BY OTHER THAN MUNICIPAL WORKS DEPARTMENT IS PROHIBITED.
- 13. THE CITY WILL SWAB, CHLORINATE AND FLUSH ALL NEW SERVICES. THE CONTRACTOR SHALL PERFORM PRESSURE TEST WITH WATER FIELD COORDINATOR WITNESSING.
- 14. EXTERNAL CONTRACTOR TO COORDINATE WITH INTERNAL CONTRACTOR ON ALL INSTALLATION, SWABBING, CHLORINATING AND TESTING WITNESSED BY WATER FIELD SERVICES COORDINATOR.
- 15. RESTRAINING WILL BE REQUIRED ON ALL HYDRANTS A MINIMUM OF THREE LENGTHS OF PIPE. HYDRANTS TO BE PAINTED RED.
- 16. TRACING WIRE (#12 TWU STRANDED COPPER) TO BE INSTALLED ON THE TOTAL LENGTH OF ALL PVC WATERMAIN'S AND BROUGHT UP AT EACH HYDRANT AND CONNECTED TO FLANGE BOLT.

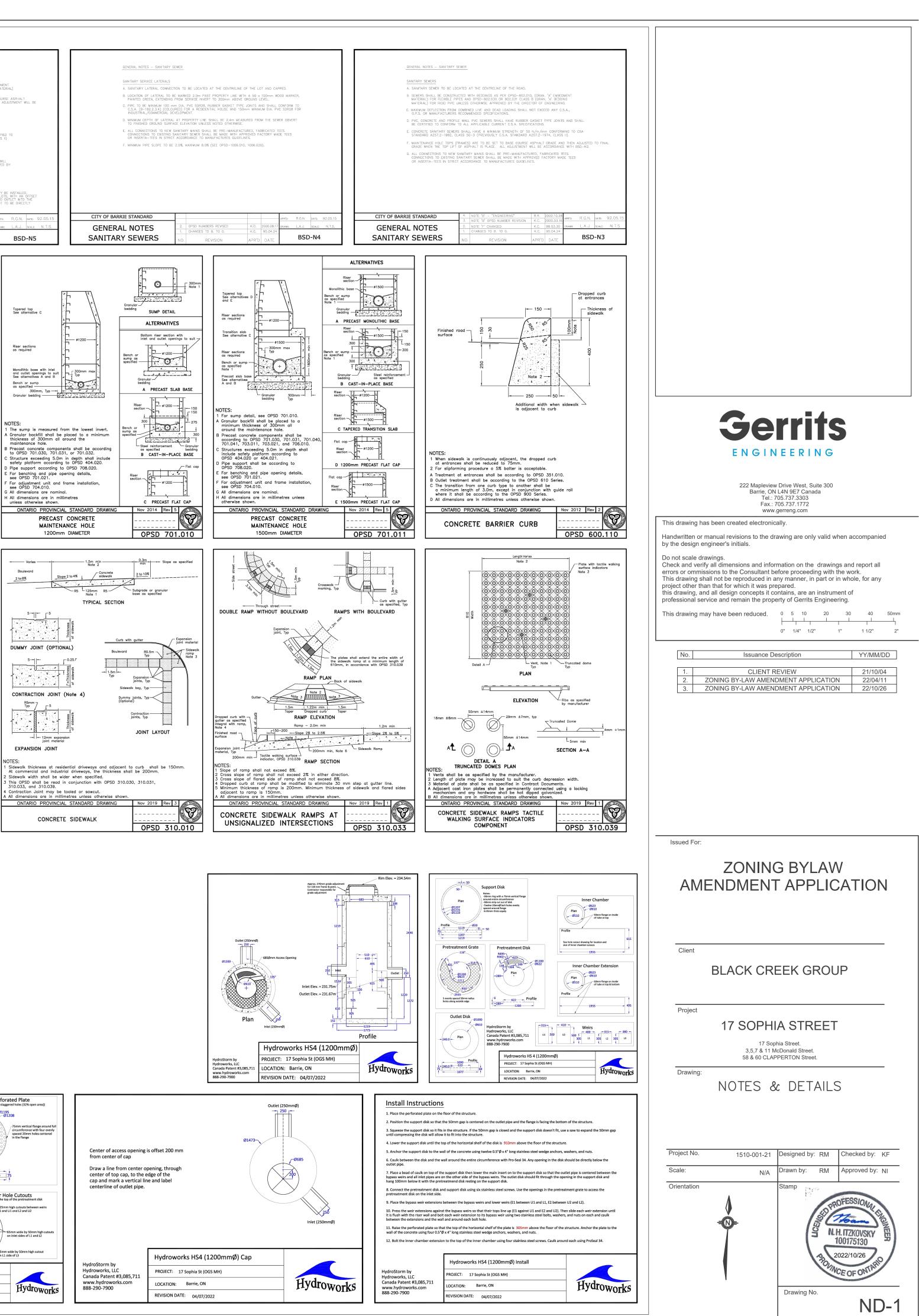
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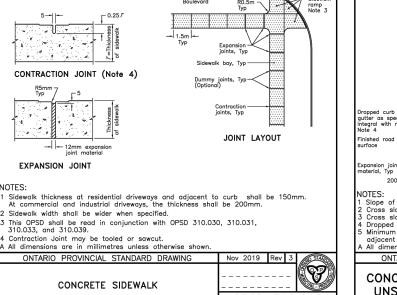
- 17. SERVICE TAPINGS SHALL BE PLACED AT A MINIMUM SEPARATION OF 1.0m AND A MINIMUM OF 0.6m FROM JOINTS.
- 18. CONTRACTOR TO PROVIDE PLAN FOR REMOVING CHLORINATED WATER FROM SITE.
- 19. A CHLORINATION TAIL SHALL BE INSTALLED JUST BEHIND TAPPING VALVE TO FACILITATE CHLORINATING SERVICE, TO BE REMOVED AFTER TESTING.

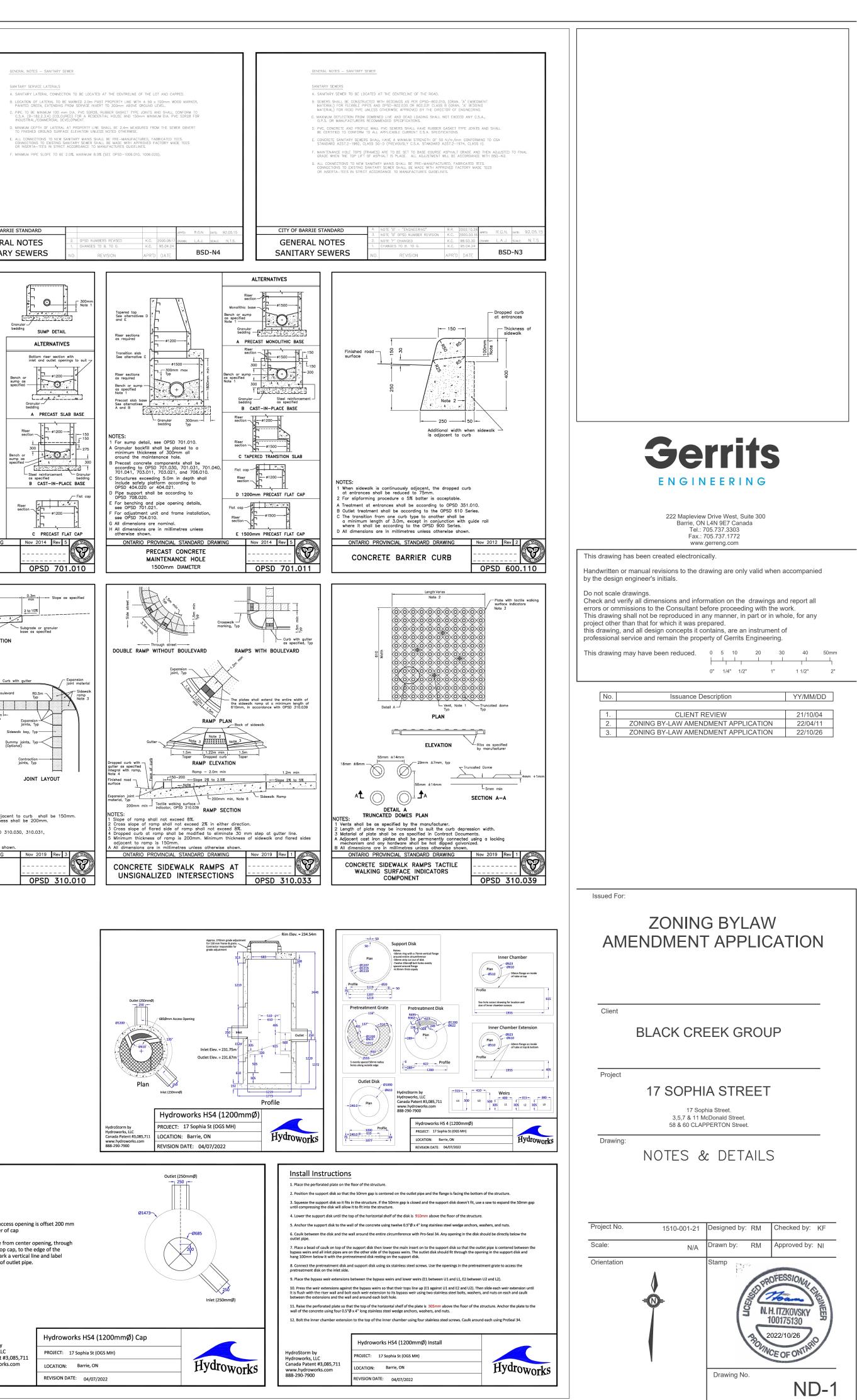
1. DRAWINGS A. ALL DRAWINGS SHALL BE PRODUCED & SYMBOLS FOR PLAN & PROFILE D 2. MEASUREMENTS A. ALL DIMENSIONS ARE IN METRES, UNLESS SPECIFIED OTHERWISE. 3. GENERAL A. ALL WORK SHALL BE IN ACCORDAN AND ONTARIO PROVINCIAL STANDAR B. ORDER OF PRECEDENCE OF STAND/ DRAWINGS (BSD) AND SECONDLY O LOCATION OF EXISTING SERVICES THE CONTRACTOR IS REQUIRED TO THE COMMENCEMENT OF AN D. A ROAD OCCUPANCY PERMIT IS R PRIOR TO THE COMMENCEMENT OF E. A SITE ALTERATION PERMIT IS REQ COMMENCEMENT OF ANY EARTH WO F. NATIVE MATERIAL, SUITABLE FOR PROCTOR MAXIMUM DRY DENSITY G. GRANULAR MATERIAL, USED FOR MAXIMUM AND COMPACTED TO 100 H. ALL DISTURBED AREAS ARE TO BE AS DETERMINED BY THE CITY ENGIN ALL SILT CONTROL AND EROS CITY OF BARRIE STANDARD

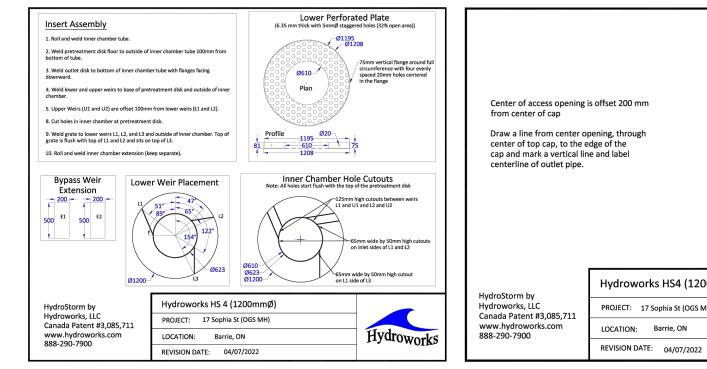
GENERAL NOTES

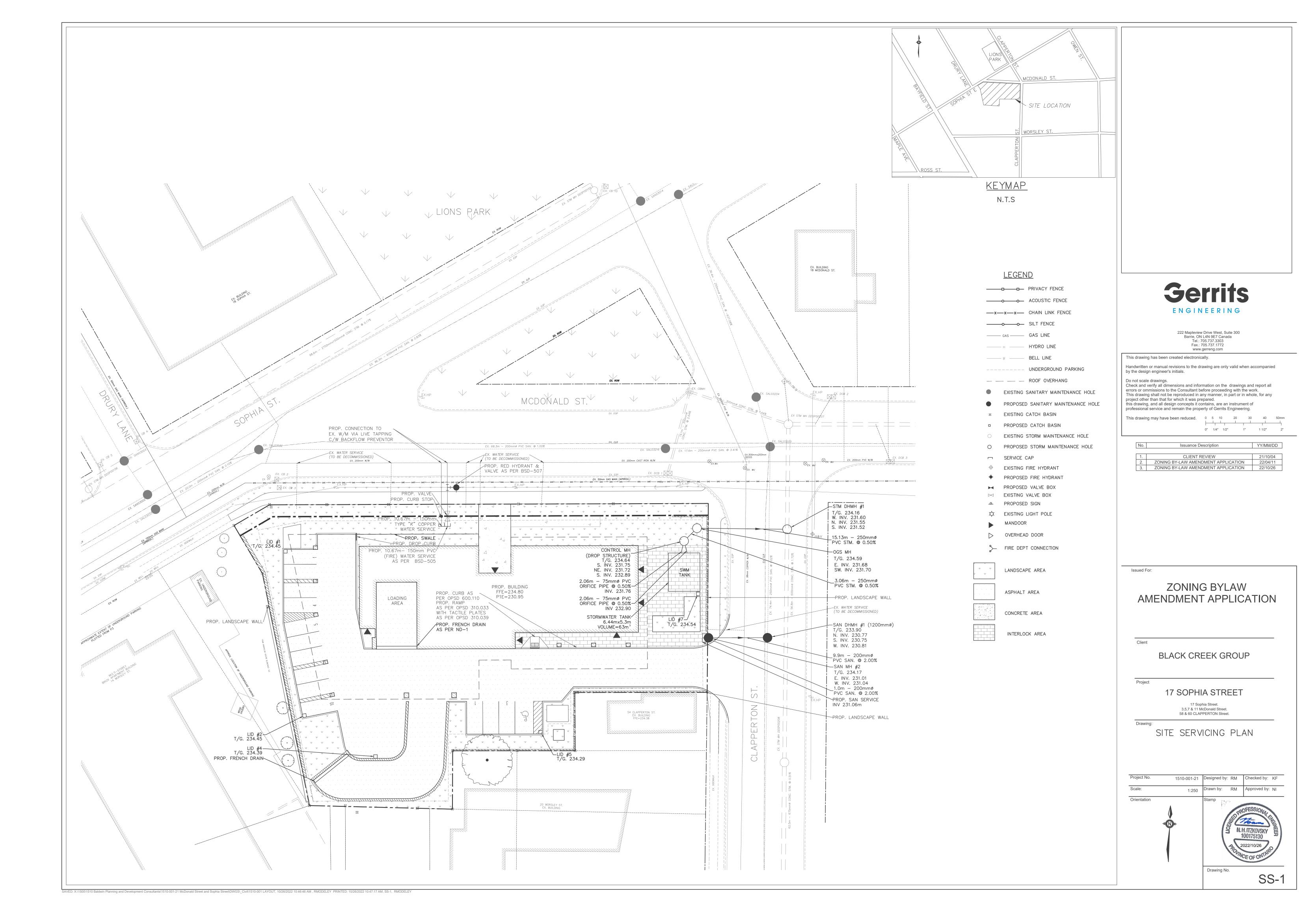
3.         3. NOTE: 3.E. REVISED & 3.I. ADDED J.S.         DS.01.10         ARD: R.G.N. [DATE: 92.03.13]           2.         3.D "ENDINEERING DEPARTMENT"         B.R. 02.10.28         DRAWE: L.A.J. scale         N.T.S.           1.         3.E. TOPSOIL PERMIT         01.12.06         BSD-N6           NO.         REVISION         APR'D         DATE	CITY OF BARRIE STANDARD         4.         NOTE 'K' - SUMP PUMP DISCHARGE PIPHIC         B.R.         2003.01.07         PAPD.         R.G.N.         DATE         92.05.15           GENERAL NOTES         3.         NOTE 'K 'C' OPSD NUMBER REVISION         K.C.         2000.03.16         DATE         92.05.15           STORM SEWERS         1.         NOTE 'D' CHANCED         K.C.         98.03.30         DATE         BSD-N5	CITY OF BARRIE STANDARD     APR'D:     R.G.N.       GENERAL NOTES     2.     OPSD NUMBERS REVISED     K.C.     2000.08.17     DRAWNE     L.A.J.       SANITARY SEWERS     NO.     REVISION     APR'D:     DATE     BSI
ON PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE TION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE TION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, IE CITY ENGINEERING DEPARTMENT.	K. SUMP PUMP DISCHARGE PIPING IN BOULEVARD: IN THE EVENT OF OVERACIVE SUMP PUMP ACTIVITY, A 150mm DIAMETER PVC DR-28 SEWER MAY BE INSTALLED, WHEN SO DIRECTED BY THE DIRECTOR OF ENONCEMING, ALONG THE FRONTAGES OF DESIGNATED LOTS, WITH AN OFFSET OF 0.6m FROM BACK OF CLUBE. THIS SEWER IS TO BE CAPPED AT THE UPSTREAM END AND IS TO OUTLET INTO THE NEAREST CATCHBASIN DOWNSTREAM. DEPTH OF SEWER IS TO BE EQUAL TO SUBDRAIN DEPTH. NOT TO BE DIRECTLY CONNECTED TO FOUNDATION DRAINS.	
OR BACKFILL SHALL BE COMPACTED TO 95% STANDARD TY FOR BACKFILL , SHALL BE PLACED IN LAYERS 150mm IN DEPTH 100% STANDARD PROCIDER MAXWUM ORY DENSITY. D BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, ENGINEERING DEPARTMENT.	<ul> <li>I. ALL PIPE BEDDING MUST CONFORM TO OPSD, MAXMUM COVER TABLE. NO FLEXUBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH OF COVER GREATER THAN 6 METRES UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF ENGINEERING.</li> <li>J. ALL PIPE HANDLING INSTALLATIONS MUST BE IN STRICT COMPLIANCE WITH MANUFACTURES INSTALLATION GUIDES AND THE O.C.P.A. OR UNIBELL GUIDELINES.</li> </ul>	
REQUIRED FROM THE ENGINEERING DEPARTMENT PRIOR TO THE H WORKS ON THE SITE.	H. STORM SEWER TO BE MINIMUM 300mm DIAMETER WITH JOINTS CONFORMING TO C.S.A. STANDARD A257.3.	F. MINIMUM PIPE SLOPE TO BE 2.0%, MAXIMUM 8.0% (SEE OPSD-1006.010, 1006.020).
ES ARE NOT GUARANTEED. J TO NOTEY THE VARIOUS UTILITY COMPANIES 4B HOURS PRIOR NY WORK. IS REQUIRED FROM THE ROADS AND PARKS OPERATIONS BRANCH TO FWORK WITHIN ANY CITY RIGHT-DF-WAY.	<ul> <li>C. ALL CONTROLLED FACTORY THE CONNECTION AS PER OPSD-708.01 OR 708.03.</li> <li>C. PIPE MATERIAL TO BE REINFORCED CONCRETE WITH A MINIMUM STRENGTH OF 50 N/m/mm CERTIFIED TO C.S.A. STANDARD A247.2-1982, CLASS 50-D [PREVOUSLY C.S.A. STANDARD A257.2-1974, CLASS II) OR PVC CERTIFIED TO C.S.A. STANDARD S18.22 AND 182.24.</li> </ul>	<ul> <li>B. LOCATION OF LATERAL TO BE MARKED 2.0m PAST PROPERTY LINE WITH A 50 × 100mm WOOD MARKER, PAINTED GREEN, EXTENSION GROW SERVICE INVERT TO 300mm ABOVE GROUND LEVEL.</li> <li>C. PIPE TO BE MINIMUM 100 mm DIA. PVC SDR2B, RUBBER GASKET TYPE JOINTS AND SHALL CONFORM TO C.S.A. (B-182.2.3.4) (COLOURED) FOR A RESIDENTIAL HOUSE AND 150mm MINIMUM DIA. PVC SDR2B FOR INDUSTRIAL/COMMERCIAL DEVELOPMENT.</li> <li>D. MINIMUM DEPTH OF LATERAL AT PROPERTY LINE SHALL BE 2.4m MEASURED FROM THE SEWER OBVERT TO FINISHED GROUND SURFACE ELEVATION UNLESS NOTED OTHERWISE.</li> <li>E. ALL CONNECTIONS TO NEW SANITARY MAINS SHALL BE PRE-MANUFACTURED, FABRICATED TEES. CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE MADE WITH APPROVED FACTORY MADE TEES OR INSERTA-TEES IN STRICT ACCORDANCE TO MANUFACTURES 200ELINES.</li> </ul>
TANDARD DRAWINGS IS FIRSTLY CITY OF BARRIE STANDARD LY ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).	E, STORM SEWER TO BE LOCATED OFFSET 3.0m SOUTH OR EAST OF CENTRELINE UNLESS OTHERWISE SPECIFIED. F. ALL CONNECTIONS TO THE STORM MAIN SHALL BE MADE WITH A STORM MANHOLE	
RDANCE WITH CURRENT CITY OF BARRIE STANDARD DRAWINGS (BSD) NDARD DRAWINGS (DPSD).	D. MAINTENANCE HOLE TOPS (FRAMES) AND CATCH BASIN (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT GRADE AND THEN ADJUSTED TO FINAL GRADE WHEN THE TOP LIFT OF ASPHALT IS PLACED. ALL ADJUSTMENT WILL BE ACCORDANCE WITH BSD-N2.	
ES, EXCEPT PIPE DIAMETERS, WHICH ARE IN MILLIMETRES,	C. STORM SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD-802.010 (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSO-802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RICH PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.	SANITARY SERVICE LATERALS A. SANITARY LATERAL CONNECTION TO BE LOCATED AT THE CENTRELINE OF THE LOT AND CAPPED.
FILE DRAWINGS, GENERAL SERVICE PLANS AND LOT GRADING PLANS.	B: PLACE ALL CATCH BASIN LATERALS AT 2% GRADE UNLESS OTHERWISE NOTED. PIPE SIZE MINIWUM 250mm DIA. SINGLE , 300mm DIA. DOUBLE.	
DUCED IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARDS	STORM SEWER A. STORM SEWER TO BE PROVIDED ON ALL ROADS WITH CURB AND GUTTER.	GENERAL NOTES - SANITARY SEWER

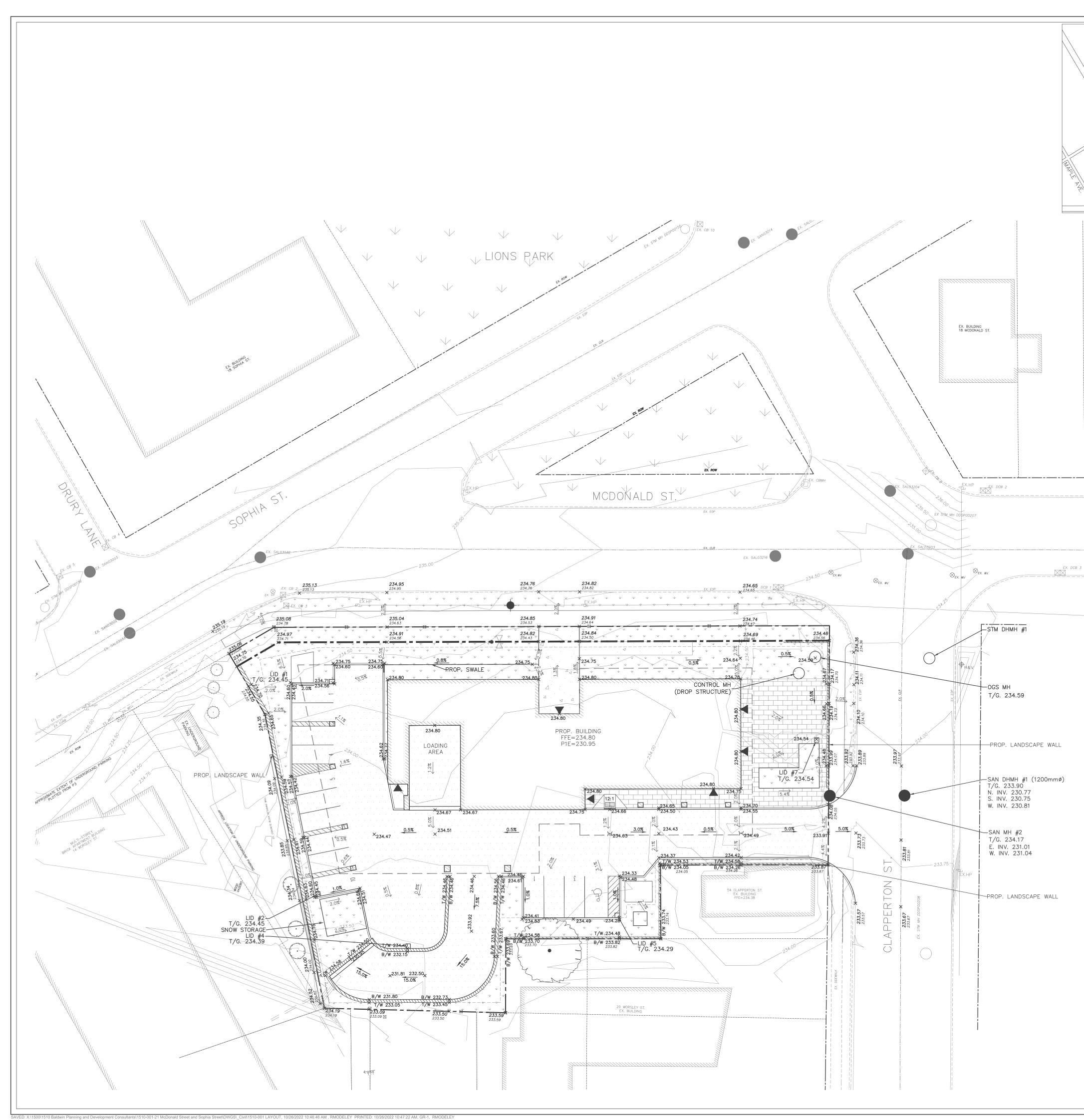












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<ul> <li>▶ FIRE DEPT CONNECTION</li> <li>▲ LANDSCAPE AREA</li> <li>▲ SPHALT AREA</li> <li>▲ SPHALT AREA</li> <li>▲ CONCRETE AREA</li> <li>▲ INTERLOCK AREA</li> <li>▲ 220.75</li> <li>PROPOSED ELEVATION T/W-TOP WALL</li> <li>▲ 2022 PROPOSED GRADE</li> <li>▲ ( HICH POINT</li> <li>④ MECHANICAL PLANT ROOM</li> <li>④ ELECTRICAL PLANT ROOM</li> <li>④ ELECTRICAL PLANT ROOM</li> </ul>	Issued For:         State         Client         BLACK CREEK GROUP         Project         17 Sophia Street         SJ & 11 McDonald Street         SJ & 20 CLAPPERTON Street         Drawing:         Project No.         1510-001-21         Designed by: RM         Orientation         Vision Street         State         1260         Drawn by: RM         Opproved by: NI         Orientation         Vision Rest         State         1260         Drawn by: RM         Opproved by: NI         Orientation

