LEGEND

CONTROL / MONUMENTS / PROPERTY / SURVEY

IB ■	IRON BAR
SIB ■	STANDARD IRON BAR
RIB ●	ROUND IRON BAR
CC ⊠	CUT CROSS
CM ⊕	CONCRETE MONUMENT
NL ⊙	NAIL
TSP △	TOTAL STATION POINT
BM ##	BENCHMARK
— - — - —	PROPERTY LINE / RIGHT-OF-WAY / EASEMENT
— — — —	SETBACK LINE

GROUND FEATURES / SURFACE OBJECTS / GRADING

101.21 ×	PROPOSED GRADING ELEVATIONS
100.00×	EXISTING GRADE ELEVATIONS
⇨	MAJOR OVERLAND FLOW ROUTE
0.0% →	SURFACE GRADE (SLOPE%)
—— X ——	FENCE LINES
	FENCE GATE
—— Max Pond ——	LIMIT OF MAXIMUM PONDING
═══	PROPOSED CURB
═══	PROPOSED DEPRESSED CURB
	TOP OF BANK
〰〰	PROPOSED SILT FENCE
▨	PROPOSED CONCRETE SIDEWALK/WALKWAY
▨	PROPOSED HEAVY DUTY ASPHALT
▨	PROPOSED LIGH DUTY ASPHALT
▨	PROPOSED UNIT PAVERS
▨	PROPOSED STONEDUST PATH
	PROPOSED SWALE

WATER / STORM / SANITARY

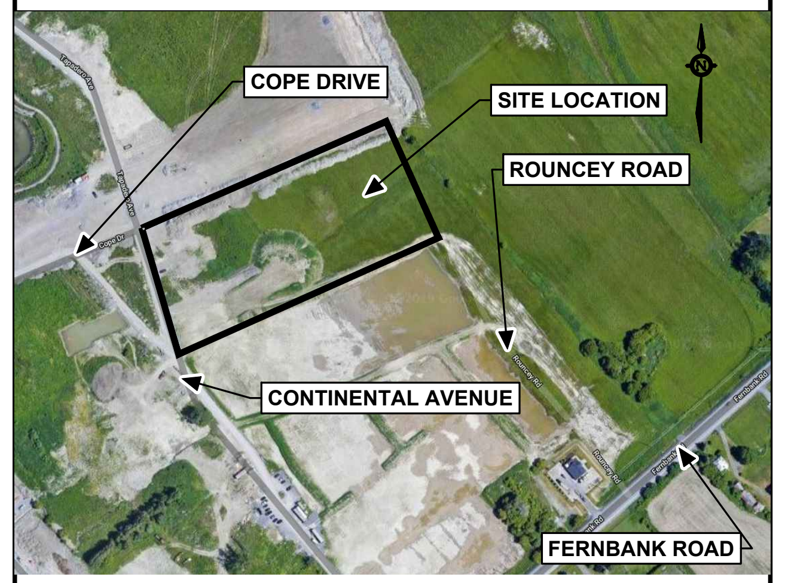
—— W ——	PROPOSED WATERMAIN
Ⓜ	REMOTE WATER METER
Ⓦ	WATER METER
EFH	EXISTING FIRE HYDRANT
NFH	NEW FIRE HYDRANT
WV ⋈	PROPOSED WATER VALVE
○	DRAINAGE MANHOLE
⊡	CATCH BASIN MANHOLE
□	CATCH BASIN (SINGLE)
○	REAR YARD CATCH BASIN/ TWIN CATCH BASIN
—— STM ——	PROPOSED STORM SEWER
- - - - - -	PROPOSED HDPE PERFORATED PIPE
····· SD ·····	PROPOSED SUBDRAIN
○	SANITARY MANHOLE
—— SAN ——	PROPOSED SANITARY SEWER
⊓	PROPOSED CAP (STORM, SANITARY & WATER)
⊡	PROPOSED ROOF DRAIN
□	PROPOSED ROOF SCUPPER

MISCELANEOUS

┼┼┼┼┼┼┼┼	BIKE RACK
▦ ▦ ▦	EARTH BINS
♿	BARRIER FREE PARKING SYMBOL
A1 Controlled 0.094 0.90	AREA ID RUNOFF COEFFICIENT AREA (ha)
▬▬▬	PROPOSED DRAINAGE AREA BOUNDARY
//////	PROPOSED BUILDING

OTTAWA-CARLETON
DISTRICT SCHOOL BOARD

Jp2g Consultants Inc.
ENGINEERS · PLANNERS · PROJECT MANAGERS
1150 Morrison Drive, Suite 410, Ottawa, ONT.
Phone: (613) 828-7800 Fax: (613) 828-2600



No.	DESCRIPTION	YYYY-MM-DD
4	REVISED PER CITY COMMENTS	2020-05-01
3	REVISED PER CITY COMMENTS	2020-02-18
2	ISSUED FOR BUILDING PERMIT	2019-12-19
1	ISSUED FOR SITE PLAN CONTROL	2019-11-28

N45 ARCHITECTURE INC.
43 Eccles Street, 2nd Floor - Ottawa, Ontario, K1R 6S3
tel. 613.224.0095 fax 613.224.9811

project
FERNBANK ELEMENTARY SCHOOL

480 COPE DRIVE, OTTAWA, ONTARIO

seal
B.E. KIMMERLE
100145098
2020-05-01

drawing title
LEGEND

scale N.T.S	drawn by M.S.
date DEC 2019	checked by B.K.
project number	drawing number C01

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

DO NOT SCALE DRAWINGS.

revision

D07-12-19-0200

#18083

Folder: C:\Barbra\01-Current Barbra\19-5070A - N45 New OCDSB Fernbank Elementary School\08 Drawings\04 ONGOING | ***Drawing:*** Fernbank Civil 01-05-2020 - CURRENT.dwg | ***Layout:*** LEGEND | ***Print date:*** 9:56 AM May 4, 2020

GENERAL NOTES

1. DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND LANDSCAPE DRAWINGS.
2. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL STANDARD SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT.
3. THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING. WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO POWER, COMMUNICATION AND GAS LINES.
5. ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS AND AS PER THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL REPORT.
6. REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS & LAYOUT. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
7. TOPOGRAPHIC SURVEY COMPLETED AND PROVIDED BY FARLEY, SMITH & DENIS SURVEYING DATED SEPTEMBER 23, 2019. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
8. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. VERIFY THAT JOB BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED.
9. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCHBASIN OUTLETS ARE PROVIDED.
10. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM.
11. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
12. ABUTTING PROPERTY GRADES TO BE MATCHED UNLESS OTHERWISE SHOW.
13. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION, INCLUDING WATER PERMIT AND ROAD CUT PERMIT.
14. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
15. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
16. AT PROPOSED UTILITY CONNECTION POINTS AND CROSSINGS (I.E. STORM SEWER, SANITARY SEWER, WATER ETC.) THE CONTRACTOR SHALL DETERMINE THE PRECISE LOCATION AND DEPTH OF EXISTING UTILITIES AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER BEFORE COMMENCING WORK.
17. CONTRACTOR TO OBTAIN POST-CONSTRUCTION TOPOGRAPHIC SURVEY COMPLETED BY OLS OR P.ENG CONFIRMING COMPLIANCE WITH DESIGN GRADING AND SERVICING. SURVEY IS TO INCLUDE LOCATION AND INVERTS FOR BURIED UTILITIES.
18. ABIDE BY RECOMMENDATIONS OF GEOTECHNICAL REPORT. REPORT ANY VARIATIONS IN OBSERVED CONATIONS FROM THOSE INCLUDED IN THE REPORT.
19. REFERENCE DOCUMENTS

i. DESIGN BRIEF, PREPARED BY JP2G
ii. PRELIMINARY GEOTECHNICAL REPORT, PREPARED BY EXP

20. PROVDE CCTV INSPECTION REPORT FOR ALL SEWERS AND CATCHBASIN LEADS 200mm DIAMETER AND LARGER. REPEAT CCTV INSPECTION FOLLOWING RECTIFICATION OF ANY DEFICIENCIES.

WATERMAIN NOTES

1. ALL WATERMAIN AND WATERMAIN APPURTANANCES, MATERIALS CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
2. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLYVINYL CHLORIDE (PVC) CLASS 150 DR18 MEETING AWWA SPECIFICATION C900.
3. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMAINS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE SHALL BE MAINTAINED. WHERE WATERMAINS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA DETAIL W22. WHERE A WATERMAIN IS IN CLOSE PROXIMITY TO AN OPEN STRUCTURE, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W23.
4. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 AND W25.4.
5. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARDS W40 AND W42.
6. ALL VALVES AND VALVE BOXES AND CHAMBERS, HYDRANTS AND HYDRANT VALVES AND ASSEMBLIES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS.
7. FIRE HYDRANT LOCATION AND INSTALLATION AS PER CITY OF OTTAWA STANDARD W18 AND W19. CONTRACTOR TO PROVIDE FLOW TEST AND PAINTING OF NEW HYDRANT IN ACCORDANCE WITH CITY STANDARDS.
8. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

SANITARY SEWER AND MANHOLE NOTES

1. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCES AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. PROVIDE CCTV INSPECTION FOR ALL NEW SANITARY PIPING. PROVIDE DYE TESTING FOR NEW SERVICES.
3. SANITARY SEWER PIPE SIZE 150mm DIAMETER AND GREATER TO BE PVC SDR35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2.3.4.
4. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
5. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.
6. MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES AS PER OPSD 701.021.
7. ANY SANITARY SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.
8. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

STORM SEWER AND STRUCTURE NOTES

1. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. STORM SEWERS 450mm DIAMETER AND SMALLER SHALL BE PVC SDR35 WITH RUBBER GASKET PER CSA A-257.3..
3. STORM SEWER LARGER THAN 450mm SHALL BE REINFORCED CONCRETE CLASS 65-D.
4. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
5. ALL STORM MANHOLES TO BE AS PER STORM STRUCTURE TABLE ON DRAWING C03.
6. ANY NEW OR EXISTING STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.
7. CATCHBASINS IN LANDSCAPED AREAS SHALL BE AS PER CITY OF OTTAWA STANDARD S30 AND S31.
8. ALL CATCHBASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.
9. STORM CATCHBASINS AS PER OPSD 705.010 AND FRAME/COVER AS PER CITY STANDARD DRAWING S19. STORM CATCHBASIN MANHOLES (CBMH) AS INDICATED IN TABLE WITH SUMP. ADJUSTMENT SECTIONS SHALL BE AS PER OPSD 704.010.
10. INSTALLATION OF FLOW CONTROL ICD'S TO BE VERIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY THE CONTRACTOR.

EROSION AND SEDIMENT CONTROL NOTES

CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MONITORING, REPAIR AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL FEATURES.

1. PRIOR TO START OF CONSTRUCTION:
   - 1.1. INSTALL SILT FENCE IN LOCATION SHOWN ON DRAWINGS.
   - 1.2. INSTALL FILTER FABRIC OR SILT SACK FILTERS IN ALL CATCHBASINS AND MANHOLES TO REMAIN DURING CONSTRUCTION WITHIN THE SITE (SEE TYPICAL DETAIL).
   - 1.3. INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.

2. DURING CONSTRUCTION:
   - 2.1. MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE AND IMPACTS TO EXISTING GRADING.
   - 2.2. PERIMETER VEGETATION TO REMAIN IN PLACE UNTIL PERMANENT STORM WATER MANAGEMENT IS IN PLACE. OTHERWISE IMMEDIATELY INSTALL SILT FENCE WHEN THE EXISTING SITE IS DISTURBED AT THE PERIMETER.
   - 2.3. PROTECT DISTURBED AREAS FROM OVERLAND FLOW BY PROVIDING TEMPORARY SWALES TO THE SATISFACTION OF THE FIELD ENGINEER. TIE-IN TEMPORARY SWALE TO EXISTING CATCHBASINS AS REQUIRED.
   - 2.4. PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS.
   - 2.5. INSPECT SILT FENCES, FILTER FABRIC FILTERS AND CATCHBASIN SUMPS WEEKLY AND WITHIN 24 HOURS AFTER A STORM EVENT. CLEAN AND REPAIR WHEN NECESSARY.
   - 2.6. DRAWING TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION.
   - 2.7. EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES.
   - 2.8. DO NOT LOCATE TOPSOIL PILES AND EXCAVATED MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES ARE TO BE SEEDED IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
   - 2.9. CONTROL WIND-BLOWN DUST OFF SITE BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY (PROVIDE WATERING AS REQUIRED AND TO THE SATISFACTION OF THE ENGINEER).
   - 2.10. NO ALTERNATIVE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE FIELD ENGINEER.
   - 2.11. CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING AS REQUIRED.
   - 2.12. DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPED.
   - 2.13. ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
   - 2.14. TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ABUTTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN UP ANY AREAS SO AFFECTED.
   - 2.15. ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
   - 2.16. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCROUSE DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

PARKING LOT AND WORK IN PUBLIC RIGHTS OF WAY NOTES

1. CONTRACTOR TO REINSTATE ROAD CUTS AS PER CITY OF OTTAWA DETAIL R10.
2. CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROOFROLLING TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.
3. FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.
4. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. CONTRACTOR TO PROVIDE TESTING AND CERTIFICATION TO SHOW THAT THE MATERIAL COMPLIES WITH THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
5. GRANULAR A MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR B PLACEMENT.
6. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR A MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR A MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
7. ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR A PLACEMENT.
8. CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. CONTRACTOR TO PROVIDE TESTING AND CERTIFICATION TO SHOW THAT THE MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
9. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS AND FOR PROVIDING THE CONSULTANT WITH VERIFICATION PRIOR TO PLACEMENT.
10. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, THE CONTRACTOR IS TO NOTIFY THE CONSULTANT. CONSULTANT IS TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.
11. PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESS) FOR HEAVY DUTY, LIGHT DUTY AND BASKETBALL COURT AREAS TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT AND SHOWN ON THE PLANS.

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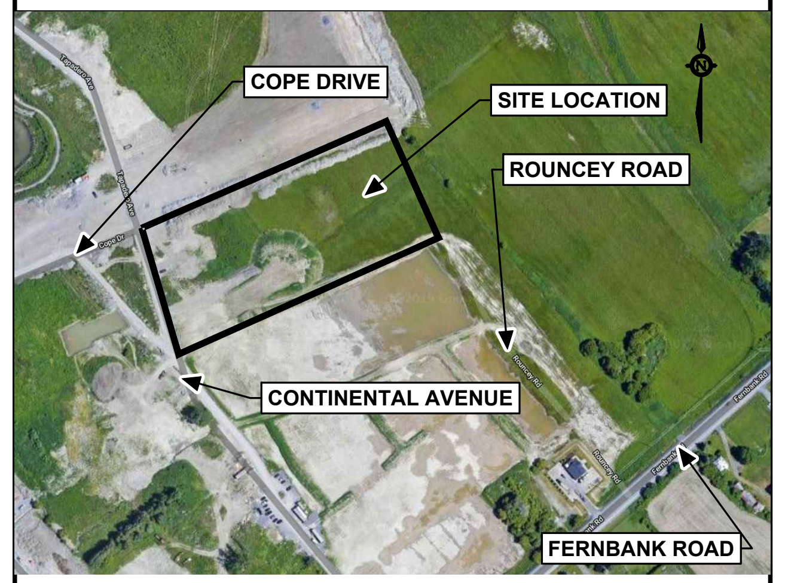
1150 Morrison Drive, Suite 410, Ottawa, ONT.
Phone: (613) 828-7800 Fax: (613) 828-2600



2	REVISED PER CITY COMMENTS	2020-05-01
1	REVISED PER CITY COMMENTS	2020-02-18
No.	DESCRIPTION	YYYY-MM-DD

N45 ARCHITECTURE INC.
43 Eccles Street, 2nd Floor - Ottawa, Ontario, K1R 6S3
tel. 613.224.0095 fax 613.224.9811

project
FERNBANK ELEMENTARY SCHOOL

480 COPE DRIVE, OTTAWA, ONTARIO

seal
LICENSED PROFESSIONAL ENGINEER
B.E. KIMMERLE
100145098
2020-05-01
PROVINCE OF ONTARIO

drawing title
LEGEND

scale N.T.S	drawn by M.S.
date DEC 2019	checked by B.K.
project number	drawing number C02

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

DO NOT SCALE DRAWINGS.

revision

D07-12-19-0200

#18083

WATER SERVICE TABLE

ID	DESCRIPTION	FINISHED GRADE (m)	T/O WATERMAIN (m)	CHAINAGE (m)	OFFSET (m)
1	CONNECTION TO EXISTING STUB	101.120	98.72	0+000	0.00
2	45° BEND	100.700	98.30	0+013.78	0.00
3	45° BEND	100.720	98.32	0+016.58	0.00
4	45° BEND	100.630	97.81	0+041.81	0.00
5	200 X 150 TEE	100.71	98.00	0+059.10	0.00
6	150mm VALVE	100.83	98.00	1+005.00	0.00
7	45° BEND	100.95	95.55	1+008.82	0.00
8	150 X 150 TEE	100.95	97.14	1+044.12	0.00
9	150mm VALVE	100.95	97.14	1+044.12	1.00
10	PROPOSED FIRE HYDRANT	100.88	97.14	1+044.12	9.50
11	CAP	101.00	97.14	1+053.15	0.00
12	45° BEND	100.72	98.32	0+062.26	0.00
13	200 X 150 TEE	100.83	98.43	0+087.49	0.00
14	150mm VALVE	100.83	98.43	2+000.91	0.00
15	45° BEND	100.79	98.39	2+019.17	0.00
16	PROPOSED FIRE HYDRANT	100.68	98.28	2+032.00	0.00
17	CONNECTION AT BUILDING FOUNDATION	101.100	98.70	0+095.18	0.00
NOTE: PROVIDE MINIMUM 2.4m COVER OVER T/O WATERMAIN TO FINISHED GRADE, OTHERWISE PROVIDE THERMAL INSULATION HL40 AS PER CITY OF OTTAWA DETAIL W22.					

CROSSING TABLE

LOCATION	OVER / UNDER	FINISHED GRADE (m)	INVERT	OBVERT	CLEARANCE (m)
1	PROP. WATERMAIN / PROP. SANITARY	100.72	98.12 (WATERMAIN)	97.53 (SANITARY)	0.59
2	PROP. STORM SEWER / PROP. SANITARY SEWER	100.56	98.42 (STORM)	97.68 (SANITARY)	0.64
3	PROP. STORM SEWER / PROP. WATERMAIN	100.62	98.41 (STORM)	97.81 (WATERMAIN)	0.50
4	PROP. STORM SEWER / PROP. WATERMAIN	100.94	98.59 (STORM)	98.00 (WATERMAIN)	0.50
5	PROP. STORM SEWER / PROP. WATERMAIN	100.73	99.27 (STORM)	98.33 (WATERMAIN)	0.84
6	PROP. STORM SEWER / PROP. WATERMAIN	100.86	98.74 (STORM)	98.14 (WATERMAIN)	0.50

MANHOLE AND CATCHBASIN SCHEDULE

STRUCTURE ID	TOP OF FRAME ELEVATION (m)	PIPE INVERT ELEVATION (m)	STRUCTURE DIAMETER (mm) / OPSD No.	FRAME (CITY OF OTTAWA OR OPSD)
CB-1	100.600	99.82 E	600 / 705.01	S25 / S19
CB-2	100.650	99.66 E	600 / 705.010	S25 / S19
CBMH1	100.700	99.62 W / 99.54 S	1200 / 701.010	S25 / S28.1
CBMH2	100.750	99.44 NW / 99.46 W / 99.38 SE	1200 / 701.010	S25 / S28.1
CBMH3	100.650	99.14 NE / 99.22 NW / 99.53 S	1200 / 701.010	S25 / S28.1
CBMH4	100.600	98.98 NW / 99.20 N / 98.83 NE	1200 / 701.010	S25 / S28.1
CBMH5	100.60	98.70 W / 98.64 SE	1500 / 701.011	S25 / S28.1
CBMH6	100.56	98.66 SE / 98.51 NW / 98.39 E	1500 / 701.011	S25 / S28.1
CBMH7	100.61	98.90W / 98.90 N	1200 / 701.010	S25 / S28.1
CBMH8	100.60	98.88 NW / 98.73 E	1200 / 701.010	S25 / S28.1
CBMH9	100.47	98.67 W / 98.61 S	1200 / 701.010	S25 / S28.1
CBMH10	100.50	98.51 N / 98.27 SW / 98.04 SE	1500 / 701.011	S25 / S28.1
STMH1	101.120	97.97 NW / 97.91 NE	1800 / 701.012	S25 / S24.1
TCB1	100.900	99.90 S / 99.90 E	S30	S30
TCB2	100.900	99.83 E / 99.83 W	S30	S30
TCB3	100.900	99.75 E / 99.75 W	S30	S30
TCB4	100.900	99.68 E / 99.68 W	S30	S30
TCB5	100.900	99.61 W / 99.61 S	S30	S30
TCB6	100.900	99.73 N / 99.73 E	S30	S30
TCB7	100.900	99.65 E / 99.65 W	S30	S30
TCB8	100.900	99.58 E / 99.58 W	S30	S30
TCB9	100.900	99.50 E / 99.50 W	S30	S30
TCB10	100.900	99.43 N / 99.43 E / 99.43 W	S30	S30
TCB11	100.900	99.47 SE	S31	S31
TCB12	100.82	99.23 W / 99.23 E	S30	S30
TCB13	100.66	98.98 W / 98.98 E	S30	S30
TCB14	100.75	99.25 S	S31	S31
TCB15	100.75	99.17 N / 98.17 S	S30	S30
TCB16	100.73	99.10 W / 99.10 E	S30	S30
RYCB1	100.680	99.68 N	S31	S31
RYCB2	100.84	99.33 E / 99.33 W	S30	S30
SANMH1	100.710	97.68 NW / 97.62 SE	1200 / 701.010	S25 / S24
SANMH2	100.580	97.55 NW / 97.49 S	1200 / 701.010	S25 / S24
SANMH3	100.720	97.39 NW / 97.33 E	1200 / 701.010	S25 / S24
EXSANMH	101.120	97.26 NW / 97.23 E	N/A	N/A

OTTAWA-CARLETON
DISTRICT SCHOOL BOARD

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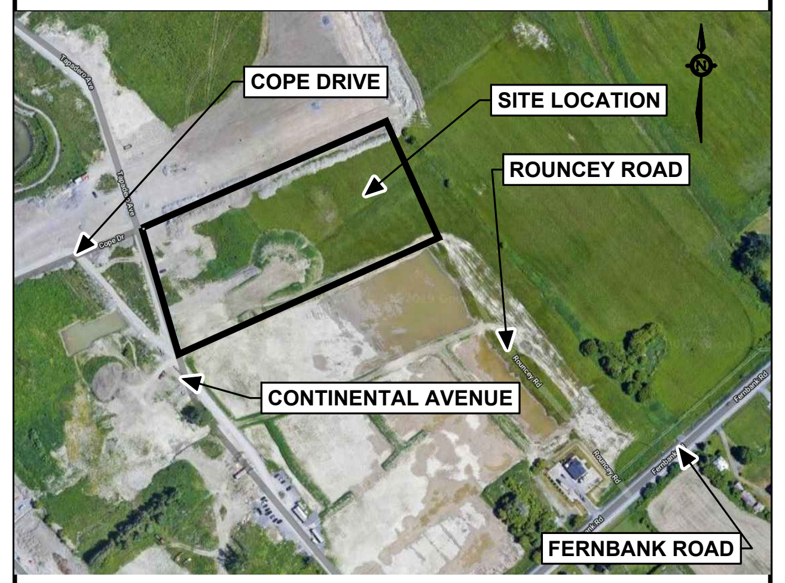

No.	DESCRIPTION	YYYY-MM-DD
4	REVISED PER CITY COMMENTS	2020-05-01
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N45 ARCHITECTURE INC.
43 Eccles Street, 2nd Floor - Ottawa, Ontario, K1R 6S3
tel. 613.224.0095 fax 613.224.9811

project
FERNBANK ELEMENTARY SCHOOL

480 COPE DRIVE, OTTAWA, ONTARIO

seal
B.E. KIMMERLE
100145098
2020-05-01

drawing title
SERVICING TABLES

scale N.T.S	drawn by M.S.
date DEC 2019	checked by B.K.
project number	drawing number C03

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

DO NOT SCALE DRAWINGS.

revision

D07-12-19-0200

#18083

GENERAL NOTES

1. DESIGN AND CONSTRUCTION IS TO BE IN ACCORDANCE WITH MOST RECENT ONTARIO BUILDING CODE.
2. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS WITH RESPECT TO SITE CONDITIONS AND ALL MATERIALS TO THE PROJECT. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
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5. ALL UNITS ARE IN METERS UNLESS NOTED OTHERWISE.
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7. CONTRACTOR RESPONSIBLE FOR OBTAINING ALL REQUIRED UTILITY LOCATES, INSPECTIONS, PERMITS, AND APPROVALS, INCLUDING ALL ASSOCIATED COSTS. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE ONLY AND BASED ON BEST AVAILABLE INFORMATION.

DRAWING NOTES

01 CONNECT NEW PLAY AREA SUB-DRAIN TO NEW 250mmØ STORM SEWER STUB. PROVIDE WATERTIGHT CONNECTIONwith SOLENO PRE-MANUFACTURED END CAP OR APPROVED EQUIVALENT FITTED FOR A 250mm PVC PIPE.

02 CONNECT NEW 200mmØ WATERMAIN TO EXISTING 200mmØ STUB. CONTRACTOR TO COORDINATE WITH CITY OF OTTAWA FORCES.

03 SUPPLY AND INSTALL NEW 200mmØ PVC DR18 WATERMAIN WITH MINIMUM 2.4m COVER. OTHERWISE PROVIDE THERMAL INSULATION IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL DRAWING W22.

04 BREAK INTO EXISTING SANITARY MANHOLE AND CONNECT NEW 200mm Ø PVC SANITARY SEWER TO EXISTING MANHOLE. ADJUST BENCHING TO SUIT NEW SANITARY SEWER CONNECTION. PROVIDE WATERTIGHT CONNECTION.

05 REMOVE EXISTING 1500mmØ MANHOLE AND REPLACE WITH NEW 1800mm Ø MANHOLE STMH-2. PROVIDE WATERTIGHT CONNECTIONS TO EXISTING AND NEW STORM SEWERS.

06 INSTALL SILT FENCE IN ACCORDANCE WITH OPSD 219.130.

DRAWING NOTES (Continued)

07 CONNECT SERVICES TO INTERIOR PLUMBING 1m FROM BUILDING FOUNDATION. SEE MECHANICAL AND ARCHITECTURAL PLANS.

08 INSTALL 3.0m LONG 100mmØ PERFORATED DRAIN PIPE c/w FILTER SOCK, EXTENDING FROM CBMH / STMH AT PAVEMENT SUBGRADE LEVEL.

09 INSTALL NEW 100mmØ PERFORATED DRAIN PIPE c/w FILTER SOCK SURROUNDED IN 25mm CLEAR STONE, 150mm IN DEPTH. REFER TO LANDSCAPE PLAN FOR EXACT LOCATION.

10 CONNECT PLAY AREA SUBDRAIN TO STORM MANHOLE.

11 WATTS RD-100 FLOW CONTROL ROOF DRAIN OR APPROVED EQUIVALENT TO BE INSTALLED.MAXIMUM DISCHARGE 0.63l/s PER ROOF DRAIN. MAXIMUM DISCHARGE 18.3 l/s TOTAL. 100-YEAR ROOF PONDING DEPTH 0.12m.

12 INSTALL FLOW REGULATOR INSIDE CATCHBASIN MANHOLE CBMH5 OUTLET . MAXIMUM DISCHARGE 300 l/s, MAXIMUM HEAD 2.21 m. ORIFICE PLATE REFER TO DRAWING C06.

13 INSTALL PRESSURE REDUCING VALVE. REFER TO MECHANICAL PLANS.

DRAWING NOTES (Continued)

14 NEW EMERGENCY OVERFLOW SCUPPER.

15 INSTALL BACKFLOW PREVENTER VALVE. REFER TO MECHANICAL PLANS.

16 EXISTING MANHOLE INVERTS, STMH2 AND EXSANMH, TO BE CONFIRMED PRIOR TO CONSTRUCTION. INVERT ELEVATIONS FOR MANHOLES AND CATCHBASINS LOCATED ON, "MANHOLE AND CATCHBASIN SCHEDULE" ON DRAWING C03.

17 EXISTING FIRE HYDRANT TO BE RELOCATED BEHIND NEW LAYBY.

18 SIAMESE CONNECTION

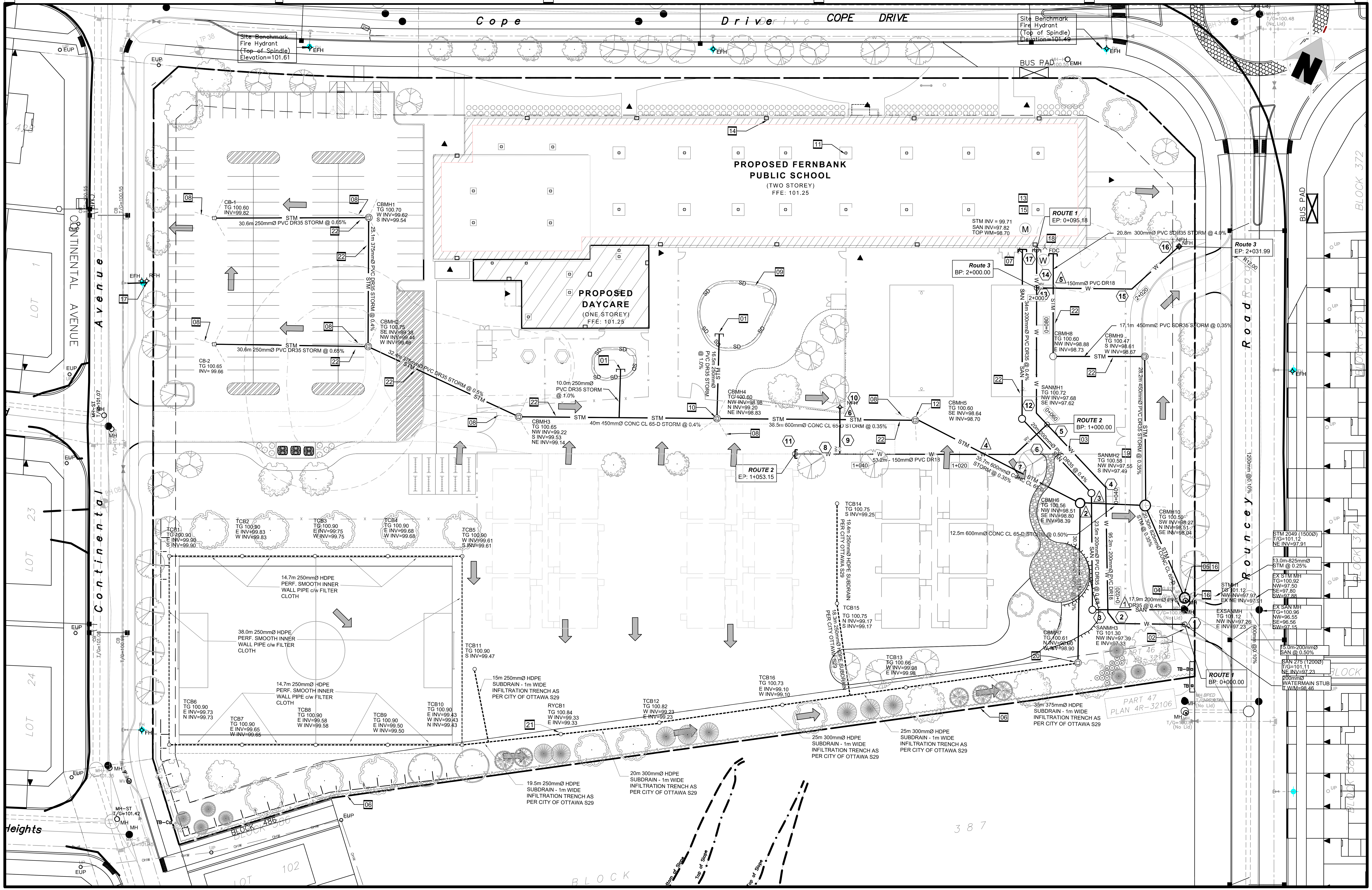
19 PROVIDE WATERTIGHT SANITARY MANHOLE COVER TO SANMH2

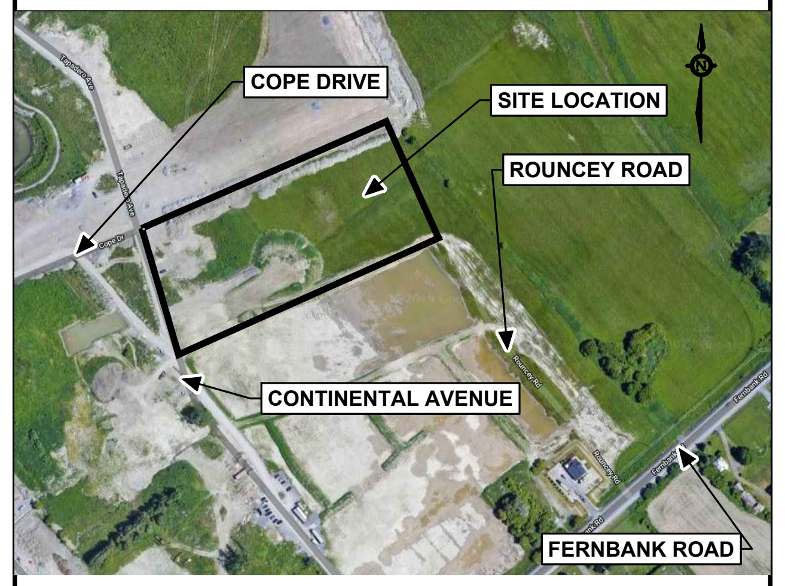
20 INSTALL FLOW REGULATOR INSIDE CATCHBASIN MANHOLE CBMH7 OUTLET . MAXIMUM DISCHARGE 60 l/s, MAXIMUM HEAD 1.81 m. ORIFICE PLATE REFER TO DRAWING C06.

21 REAR YARD CATCHBASIN IN ACCORDANCE TO S30/S31 ON DRAWING C06.

22 INSULATE SEWER PIPE PER W22

DRAWING NOTES (Continued)





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43 Eccles Street, 2nd Floor - Ottawa, Ontario, K1R 6S3
tel. 613.224.0095 fax 613.224.9811

project
FERNBANK ELEMENTARY SCHOOL
480 COPE DRIVE, OTTAWA, ONTARIO

seal
B. E. KIMMERLE
100145098
2020-05-01

drawing title
SITE SERVICING PLAN

scale 1:400
drawn by M.S.
date DEC 2019
checked by B.K.
project number
drawing number C04
revision

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

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D07-12-19-0200

#18083

GENERAL NOTES

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DRAWING NOTES

01 MATCH EXISTING GRADES AT PROPERTY LINES AND LIMITS OF WORK.

02 CONNECT NEW SIDEWALK TO MATCH EXISTING SIDEWALK ELEVATION

03 INSTALL SILT FENCE IN ACCORDANCE TO OPSD 219.130

04 NEW EMERGENCY OVERFLOW SCUPPER

05 NEW ROOF DRAIN.

06 ANY DISTURBED AREA WITHIN THE RIGHT-OF-WAY SHALL BE REINSTATED TO EQUAL OR BETTER CONDITION TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE CITY STANDARDS FOR ROAD CUTS

07 PROVIDE CURB CUT PER DETAIL 4/C06

08 LIGHT DUTY ASPHALT PER DETAIL 1/C6

09 HEAVY DUTY ASPHALT PER DETAIL 2/C6

10 PROVIDE DEPRESSED SIDEWALK ACCESS

11 STONEDUST PATHWAY - SEE LANDSCAPE

DRAWING NOTES (Continued)

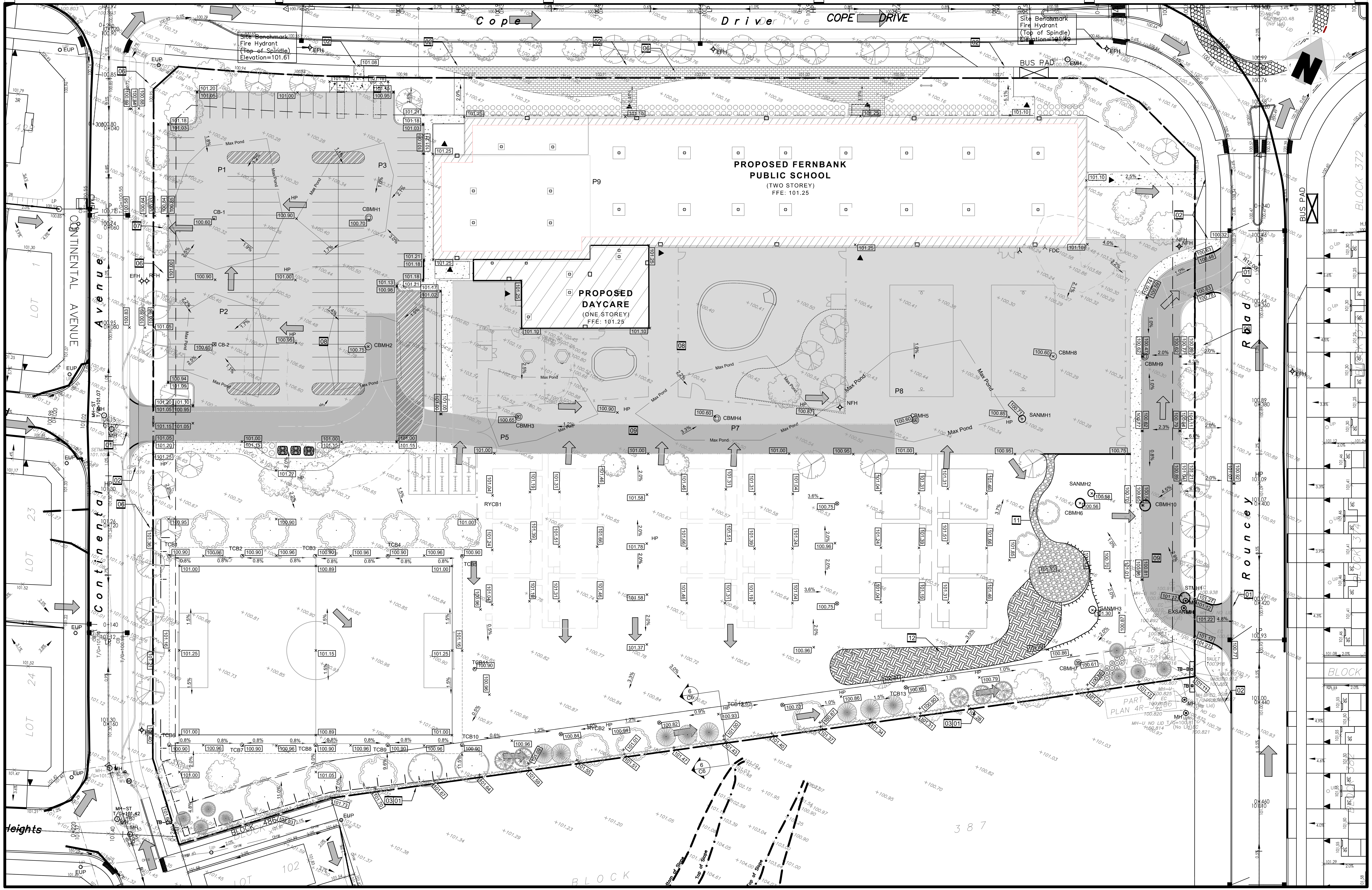
12 REFER TO LANDSCAPE DRAWINGS

EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATER COURSE, DURING CONSTRUCTION ACTIVITIES; THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS, AND INSTALLING AND MAINTAINING MUD MATS FOR OUTGOING CONSTRUCTION TRAFFIC DURING CONSTRUCTION ACTIVITIES.
2. PREVENT SOIL LOSS DURING CONSTRUCTION (BY STORM WATER RUNOFF OR WIND EROSION).
3. PROTECT TOPSOIL BY STOCKPILING FOR REUSE.
4. PREVENT SEDIMENTATION OF STORM SEWERS AND RECEIVING STREAMS.
5. PREVENT AIR POLLUTION FROM DUST AND PARTICULATE MATTER.
6. ALL STORM MANHOLES AND CATCHBASIN MANHOLES TO HAVE 300mm SUMPS; ALL CATCHBASINS TO HAVE 600mm SUMPS.
7. INSTALL FILTER BAG INSERT IN ALL STORM MANHOLES AND CATCH BASINS IMPACTED DURING CONSTRUCTION, INCLUDING CATCH BASINS IN THE RIGHT OF WAY.
8. STORM WATER PUMPED INTO CITY SERVICE SHALL FLOW THROUGH A FILTER SOCK.

EROSION AND SEDIMENT NOTES (Continued)

9. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENTATION CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.



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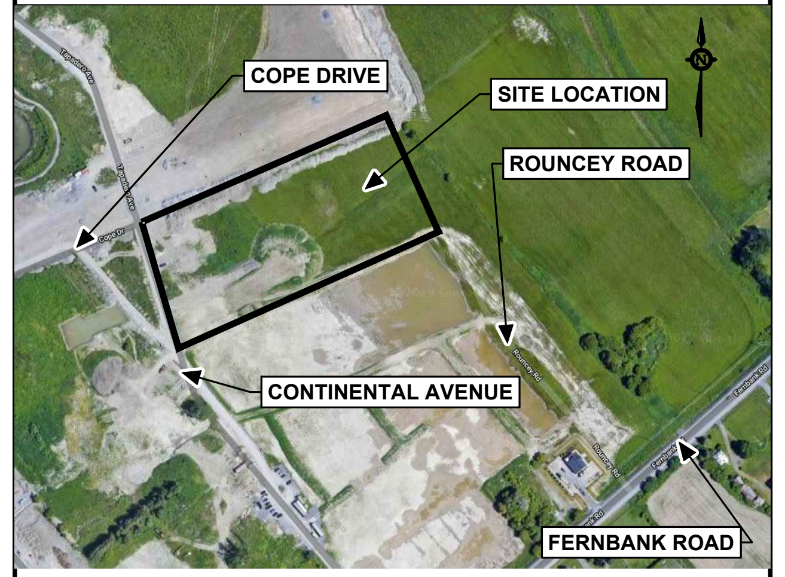

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project
FERNBANK ELEMENTARY SCHOOL
480 COPE DRIVE, OTTAWA, ONTARIO

seal
B.E. KIMMERLE
100145098
2020-05-01

drawing title
SITE GRADING AND DRAINAGE, EROSION AND SEDIMENT CONTROL PLAN

scale 1:400	drawn by M.S.
date DEC 2019	checked by B.K.
project number	drawing number C05

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

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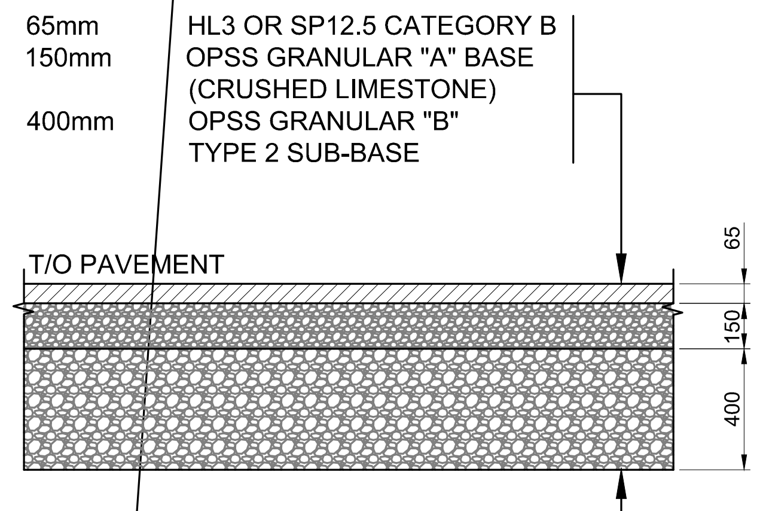
revision

D07-12-19-0200

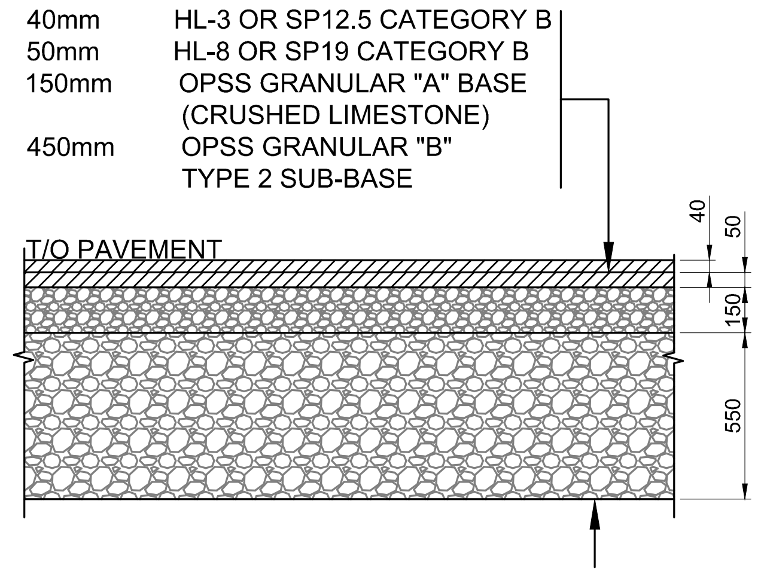
#18083

Folder: C:\Barbra\01-Current Barbra\19-5070A - N45 New OCDSB Fernbank Elementary School\08 Drawings\04 ONGOING | **Drawing:** Fernbank Civil 01-05-2020 - CURRENT.dwg | **Layout:** GRADING | **Print date:** 9:56 AM May 4, 2020



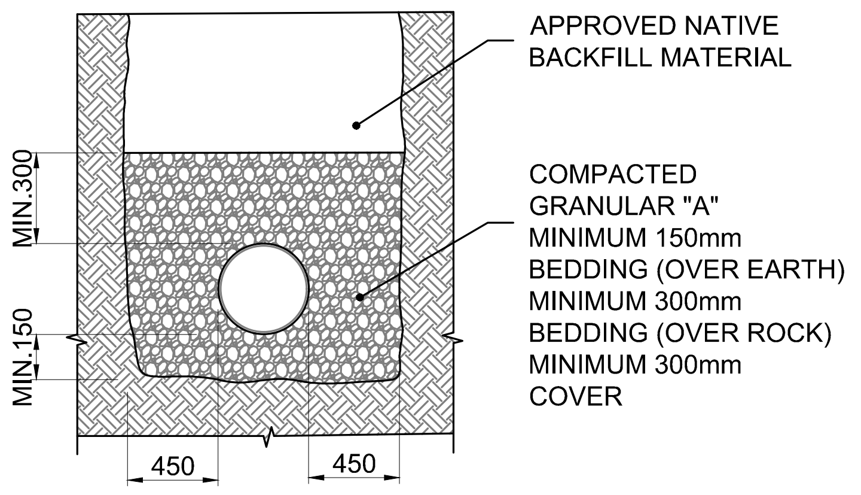
1 / C6 PAVEMENT STRUCTURE FOR LIGHT DUTY TRAFFIC

SCALE: 1 : 25



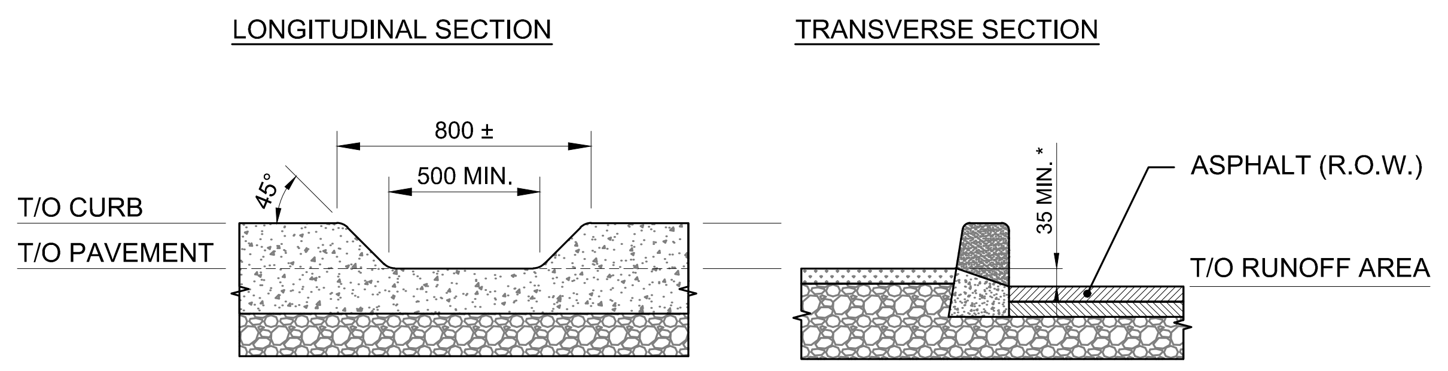
2 / C6 PAVEMENT STRUCTURE FOR HEAVY DUTY TRAFFIC

SCALE: 1 : 25



3 / C6 SINGLE TRENCH SEWER SERVICES

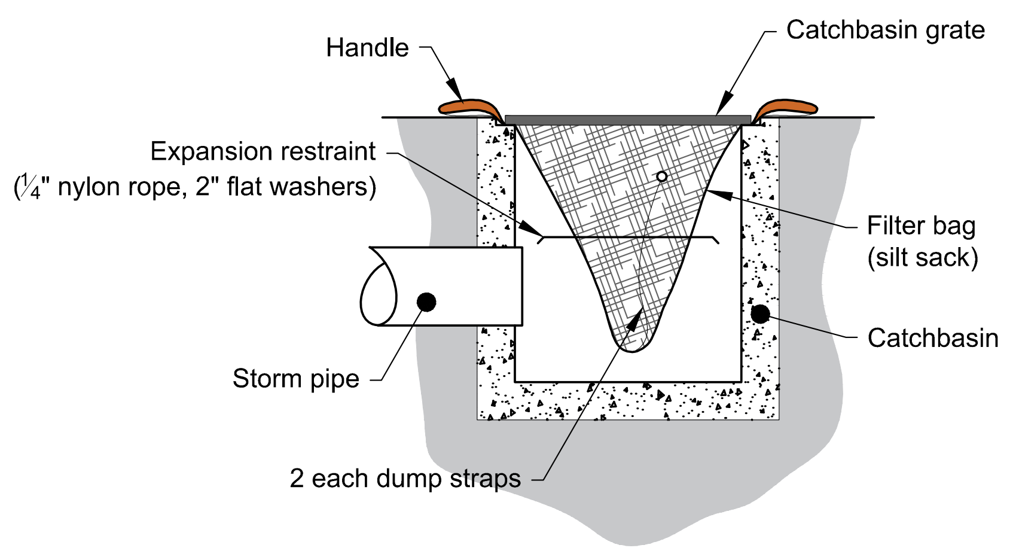
SCALE: 1 : 25



** PROVIDE 35mm MINIMUM DROP IN GRADE BETWEEN CURB CUT ENTRY POINT AND FINISHED GRADE OF STORM WATER FACILITY.*

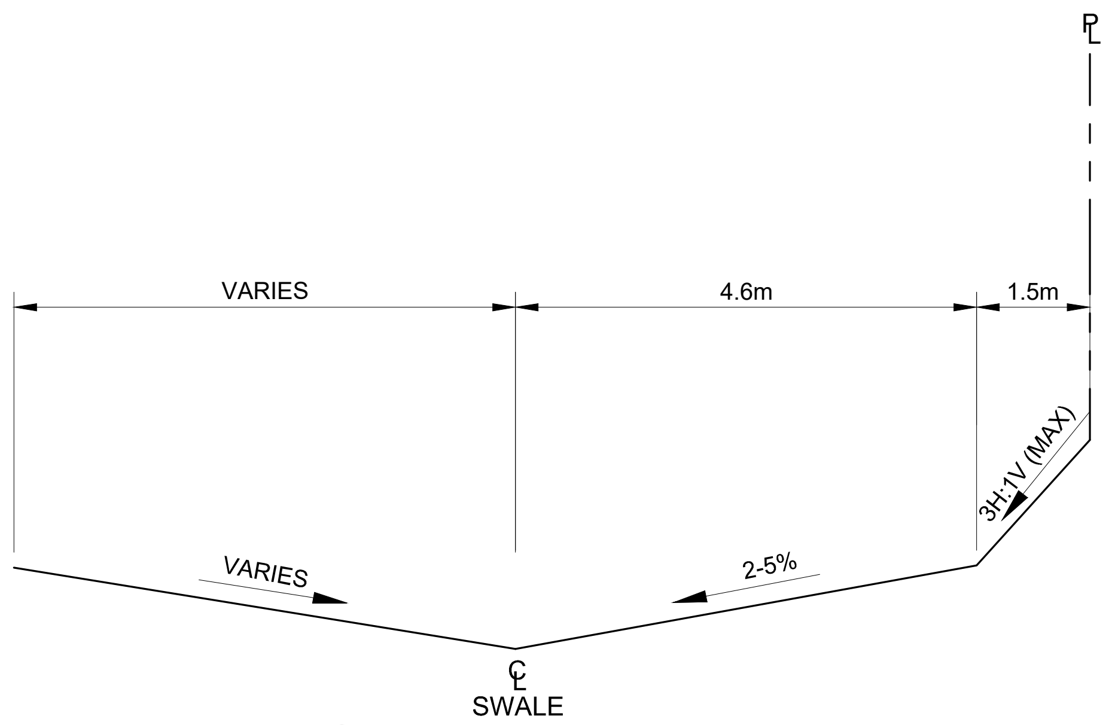
4 / C6 CURB CUT

SCALE: 1 : 25



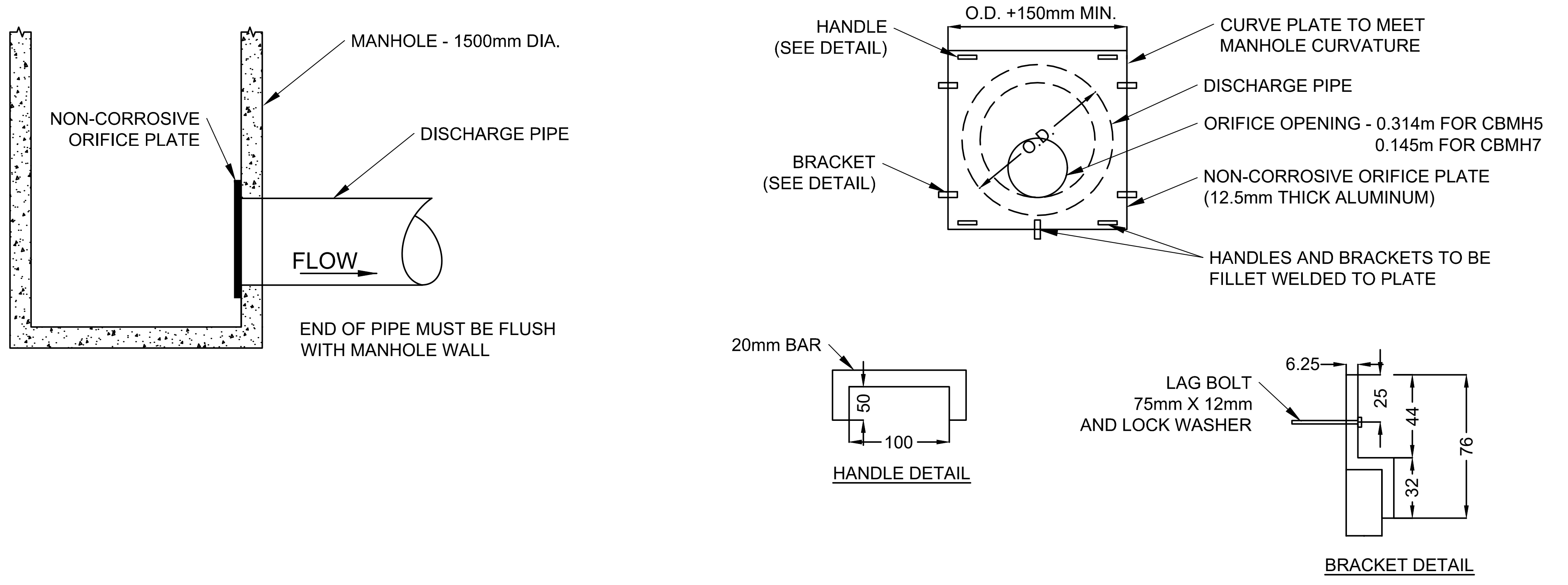
5 / C6 Catchbasin Filter Bag / Insert

Scale: **Not to scale**



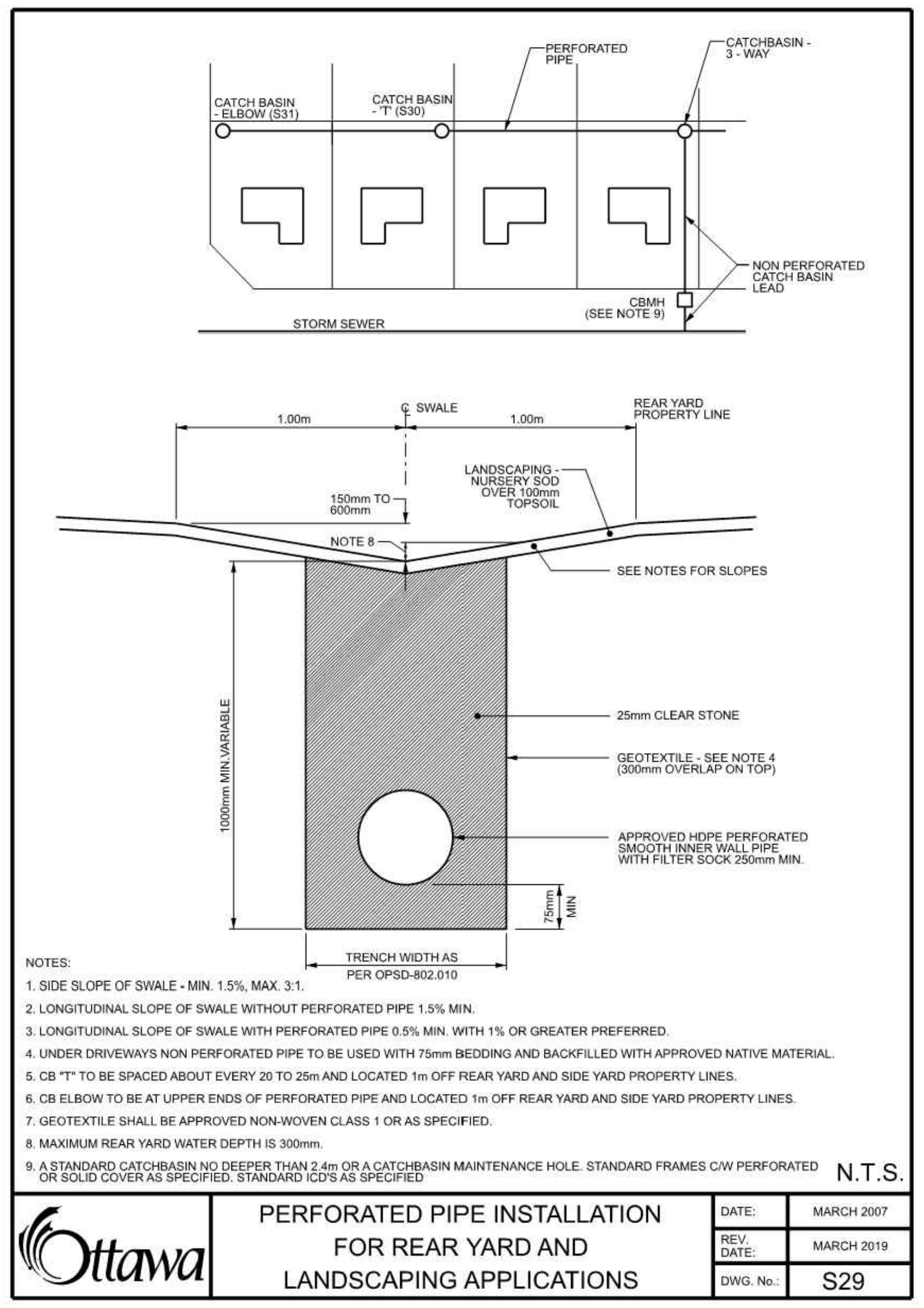
6 / C6 Swale Cross-Section

Scale: **Not to scale**



7 / C6 ORIFICE PLATE DETAIL

Scale: **Not to scale**

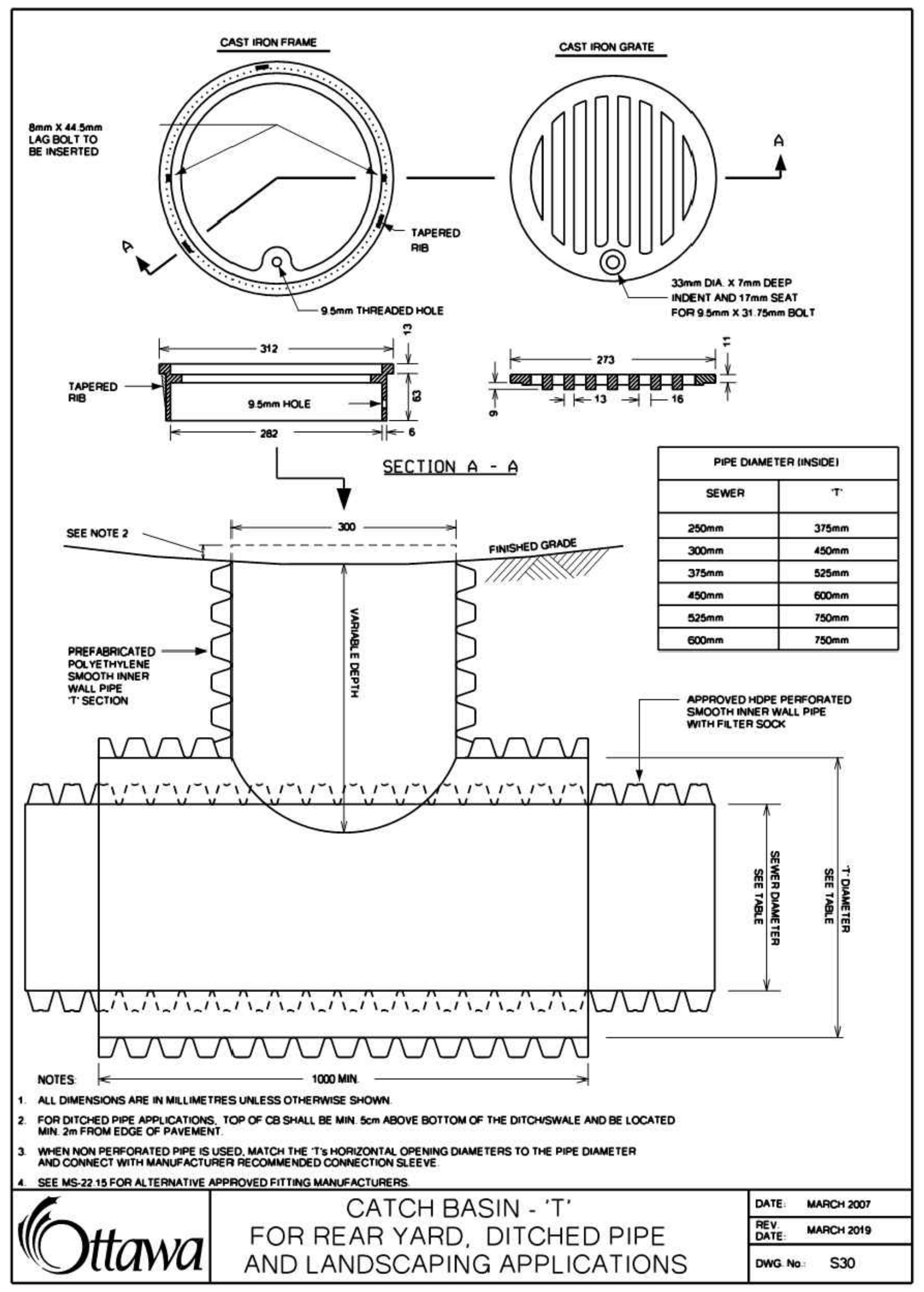


NOTES:
1. SIDE SLOPE OF SWALE - MIN. 1.5%, MAX. 3:1.
2. LONGITUDINAL SLOPE OF SWALE WITHOUT PERFORATED PIPE 1.5% MIN.
3. LONGITUDINAL SLOPE OF SWALE WITH PERFORATED PIPE 0.5% MIN. WITH 1% OR GREATER PREFERRED.
4. UNDER DRIVEWAYS NON PERFORATED PIPE TO BE USED WITH 75mm BEDDING AND BACKFILLED WITH APPROVED NATIVE MATERIAL.
5. CB "T" TO BE SPACED ABOUT EVERY 20 TO 25m AND LOCATED 1m OFF REAR YARD AND SIDE YARD PROPERTY LINES.
6. CB ELBOW TO BE AT UPPER ENDS OF PERFORATED PIPE AND LOCATED 1m OFF REAR YARD AND SIDE YARD PROPERTY LINES.
7. GEOTEXTILE SHALL BE APPROVED NON-WOVEN CLASS 1 OR AS SPECIFIED.
8. MAXIMUM REAR YARD WATER DEPTH IS 300mm.
9. A STANDARD CATCHBASIN NO DEEPER THAN 2.4m OR A CATCHBASIN MAINTENANCE HOLE. STANDARD FRAMES C/W PERFORATED OR SOLID COVER AS SPECIFIED. STANDARD ICD'S AS SPECIFIED

N.T.S.

PERFORATED PIPE INSTALLATION FOR REAR YARD AND LANDSCAPING APPLICATIONS

DATE:	MARCH 2007
REV. DATE:	MARCH 2019
DWG. No.:	S29

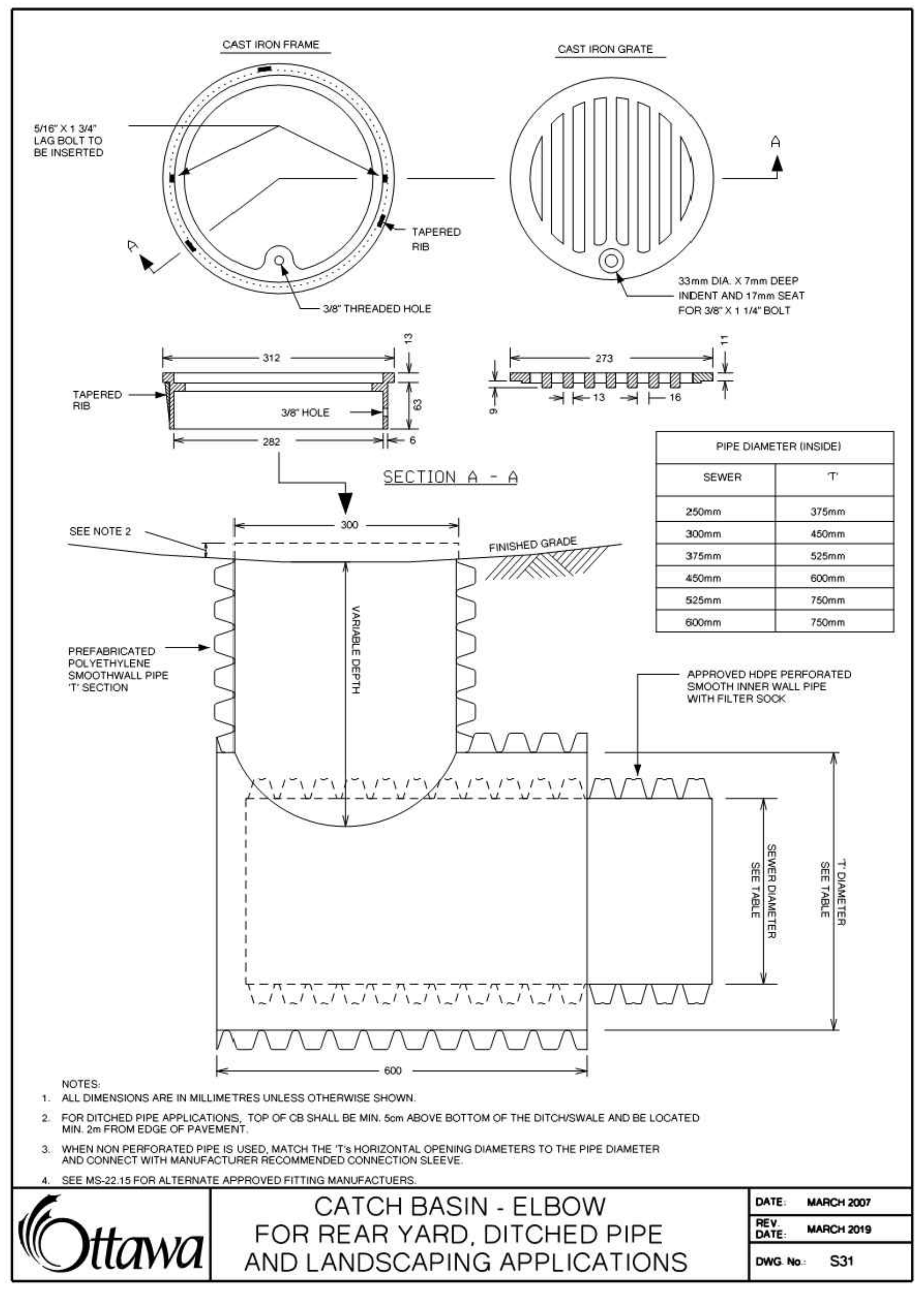


PIPE DIAMETER (INSIDE)	
SEWER	'T'
250mm	375mm
300mm	450mm
375mm	525mm
450mm	600mm
525mm	750mm
600mm	750mm

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
2. FOR DITCHED PIPE APPLICATIONS, TOP OF CB SHALL BE MIN. 5cm ABOVE BOTTOM OF THE DITCH/SWALE AND BE LOCATED MIN. 2m FROM EDGE OF PAVEMENT.
3. WHEN NON PERFORATED PIPE IS USED, MATCH THE 'T's HORIZONTAL OPENING DIAMETERS TO THE PIPE DIAMETER AND CONNECT WITH MANUFACTURER RECOMMENDED CONNECTION SLEEVE.
4. SEE MS-22.15 FOR ALTERNATIVE APPROVED FITTING MANUFACTURERS.

CATCH BASIN - 'T' FOR REAR YARD, DITCHED PIPE AND LANDSCAPING APPLICATIONS

DATE:	MARCH 2007
REV. DATE:	MARCH 2019
DWG. No.:	S30



PIPE DIAMETER (INSIDE)	
SEWER	'T'
250mm	375mm
300mm	450mm
375mm	525mm
450mm	600mm
525mm	750mm
600mm	750mm

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
2. FOR DITCHED PIPE APPLICATIONS, TOP OF CB SHALL BE MIN. 5cm ABOVE BOTTOM OF THE DITCH/SWALE AND BE LOCATED MIN. 2m FROM EDGE OF PAVEMENT.
3. WHEN NON PERFORATED PIPE IS USED, MATCH THE 'T's HORIZONTAL OPENING DIAMETERS TO THE PIPE DIAMETER AND CONNECT WITH MANUFACTURER RECOMMENDED CONNECTION SLEEVE.
4. SEE MS-22.15 FOR ALTERNATE APPROVED FITTING MANUFACTUERS.

CATCH BASIN - ELBOW FOR REAR YARD, DITCHED PIPE AND LANDSCAPING APPLICATIONS

DATE:	MARCH 2007
REV. DATE:	MARCH 2019
DWG. No.:	S31

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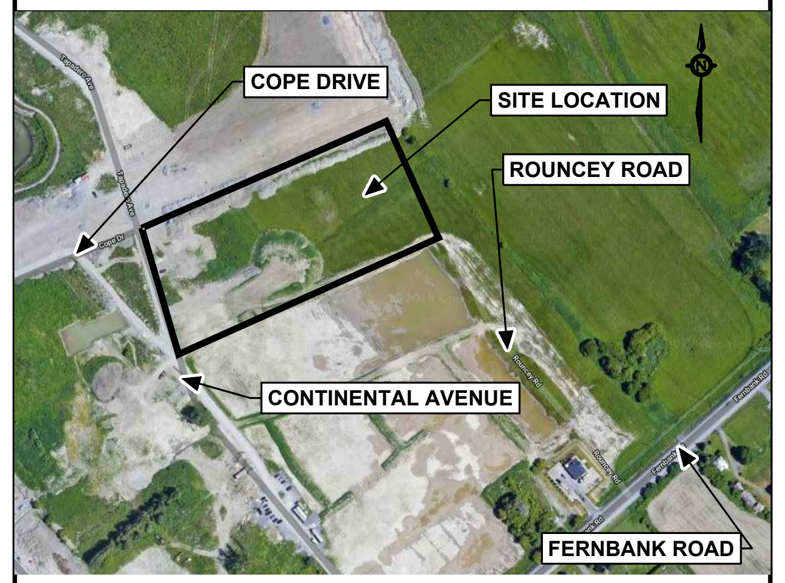

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tel. 613.224.0095 fax 613.224.9811

project
FERNBANK ELEMENTARY SCHOOL

480 COPE DRIVE, OTTAWA, ONTARIO

seal
B. E. KIMMERLE
100145098
2020-05-01

drawing title
DETAILS

scale NOTED	drawn by M.S.
date DEC 2019	checked by B.K.
project number	drawing number C06

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

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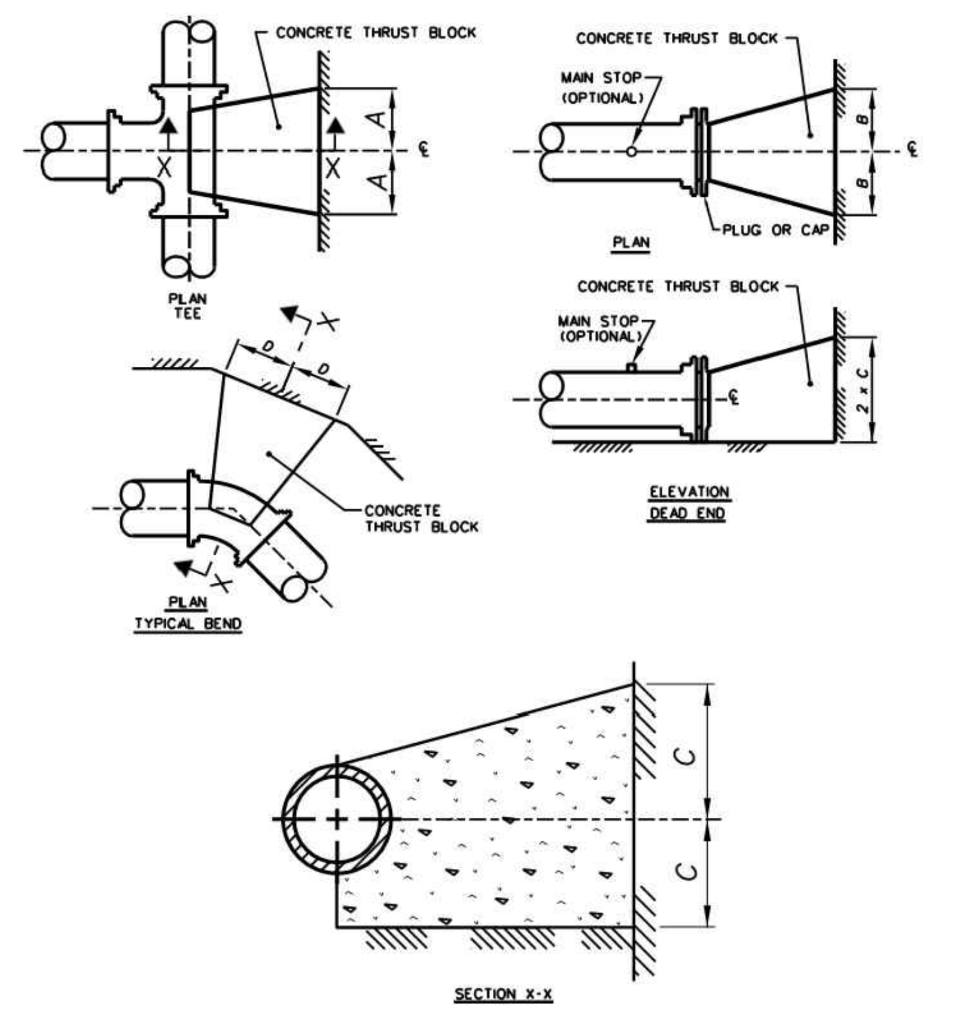
revision

D07-12-19-0200

#18083



NOTES:

1. CONCRETE SHALL BE PLACED TO WITHIN 50mm OF FACE OF THE BELL.
2. BOND BREAKER TO BE USED BETWEEN CONCRETE AND FITTINGS.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
4. REFER TO W25.4 FOR ADDITIONAL REQUIREMENTS.
5. THRUST BLOCKS SHALL BE 20 MPa. CONCRETE AND AS SHOWN ON ABOVE DRAWINGS UNLESS OTHERWISE DIRECTED BY THE CONTRACT ADMINISTRATOR. THE BLOCK SHALL BE CENTERED ON THE THRUST FORCE AND SHALL ALSO PARTIALLY CRADLE THE FITTING TO DISTRIBUTE THE FORCE. THE SIDES OF THE BLOCK SHALL BE 80mm FROM THE JOINT ON EITHER SIDE OF THE BEND OR TEE.
6. THE CONCRETE WHERE POSSIBLE SHALL BE PLACED AGAINST UNDISTURBED SOIL AT THE BOTTOM AND SIDE OF THE TRENCH. WHERE IT IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND THE UNDISTURBED SOIL MUST BE COMPACTED IN ACCORDANCE WITH D-029.
7. EXCEPT FOR THE ADDITION OF WATER, CONCRETE FOR THRUST BLOCKS SHALL COME PREMIXED FROM CONCRETE SUPPLIER, AS 'READY MIX' FROM A CONCRETE TRUCK. ON-SITE MIXING OF CEMENT, SAND AND AGGREGATE ETC. BY THE CONTRACTOR, FOR THE PURPOSE OF MAKING CONCRETE THRUST BLOCKS/ ANCHORS WILL NOT BE ACCEPTED.

Ottawa

CONCRETE THRUST BLOCKS FOR PVC AND DI PIPE 400mm AND UNDER

DATE: MAY 2001
REV. DATE: MARCH 2016
DWG. No.: W25.3

---

1. SOIL DESCRIPTION: VERY FINE SANDS, SANDY CLAYS, CLAYS.
SOILS WITH TYPICAL BEARING STRENGTH OF 100 TO 199 KPa

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	250	250	200	200
152	400	400	250	300
203	550	550	300	450
254	650	650	400	500
305	800	800	450	650
406	1050	1050	600	850

2. SOIL DESCRIPTION: SILTY SAND GRAVELS OR CLAYEY SAND GRAVEL MIXTURES, MODERATE AMOUNT OF FINES.
SOILS WITH TYPICAL BEARING STRENGTH OF 200 TO 299 KPa

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	200	200	150	150
152	250	250	200	200
203	350	350	250	270
254	450	450	300	350
305	500	500	350	400
406	750	750	400	600

3. SOIL DESCRIPTION: SANDS, GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.
SOILS WITH TYPICAL BEARING STRENGTH OF 300 KPa AND OVER

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	150	150	150	150
152	200	200	200	200
203	300	300	200	230
254	400	400	250	270
305	450	450	300	300
406	650	650	350	450

NOTES:

1. THE ABOVE THRUST BLOCK DIMENSIONS MEET OR EXCEED THE WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATIONS AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT.
2. THE ASSUMPTIONS MADE FOR THE ABOVE CALCULATIONS ARE AS FOLLOWS:
   a) MAXIMUM OPERATING PRESSURE OF 100 psi.
   b) MAXIMUM SURGE PRESSURE WITH A FLOW VELOCITY CHANGE OF 0.6 m/s OF 115 psi (115 psi FOR CLASS 52 DI AND FOR PVC MAX. SURGE IS 35 psi)
3. THE TABLES APPLY TO BOTH DUCTILE IRON AND PVC. WHERE ONE LENGTH EXCEEDED THE OTHER THE LONGER LENGTH WAS USED.
4. DIMENSIONS MAY BE ADJUSTED SO LONG AS THE BEARING SURFACE AREA OF THE THRUST BLOCK IS NOT REDUCED.
4. TO BE USED IN CONJUNCTION WITH W25.3.

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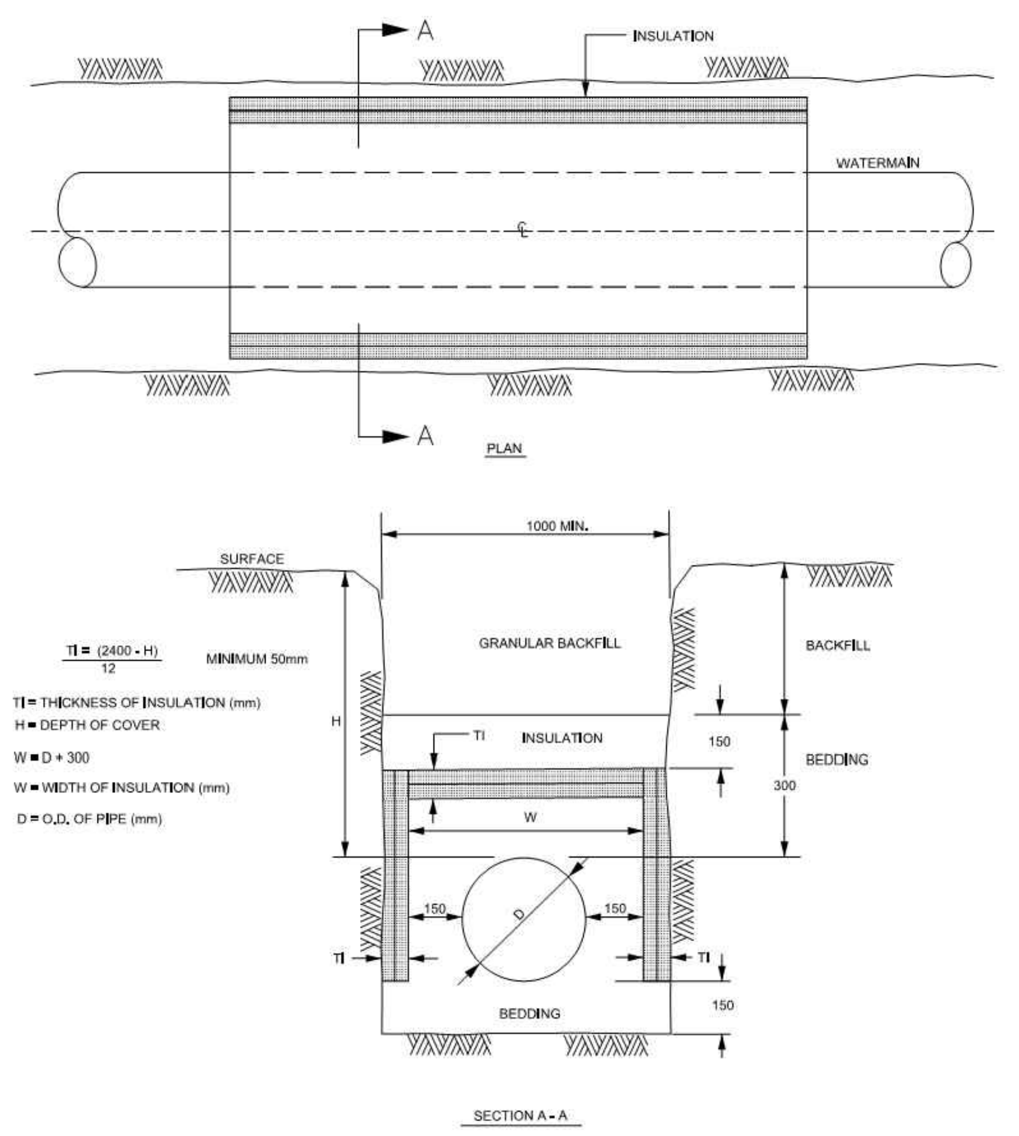
THRUST BLOCK DIMENSION TABLES FOR PVC AND DI PIPE 400mm AND UNDER

DATE: MAY 2001
REV. DATE: MARCH 2011
DWG. No.: W25.4



NOTES

FOR 150 - 400mm (NOMINAL DIAMETER) WATERMAINS, WHERE THE DEPTH OF COVER IS LESS THAN 2400mm

1. INCREMENTS OF THICKNESS SHALL BE ADJUSTABLE TO 25mm.
2. IN PROXIMITY OF MAINTENANCE HOLES, CULVERTS, CATCHBASINS, ETC., INSULATION SHALL BE PLACED PER DETAIL W23
3. DEPTH OF COVER LESS THAN 1200mm REQUIRES SPECIAL DESIGN
4. STAGGER JOINTS OF MULTIPLE SHEETS.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

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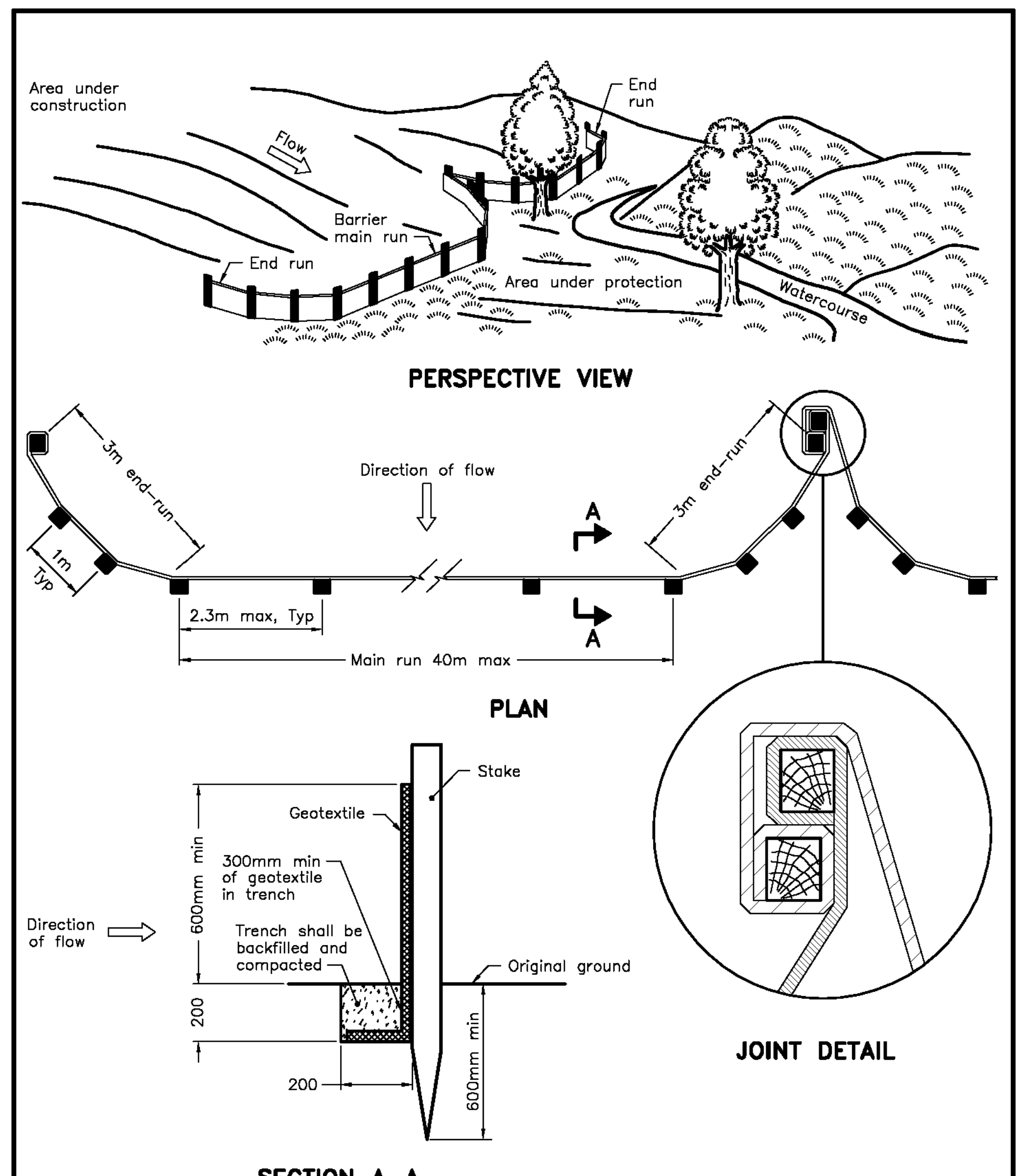
THERMAL INSULATION FOR WATERMAINS IN SHALLOW TRENCHES

DATE: MAY 2001
REV. DATE: MARCH 2013
DWG. No.: W22

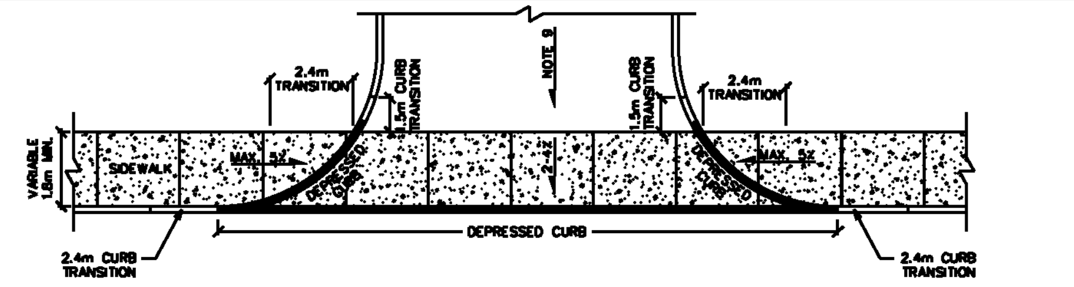


NOTE:
A All dimensions are in millimetres unless otherwise shown.

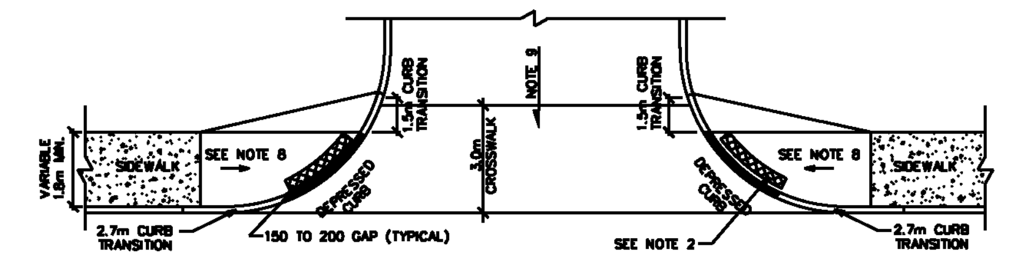
ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2015 | Rev 2

LIGHT-DUTY SILT FENCE BARRIER

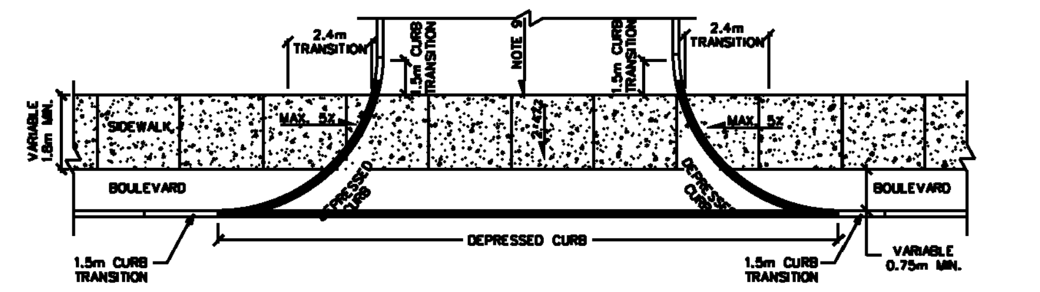
OPSD 219.110



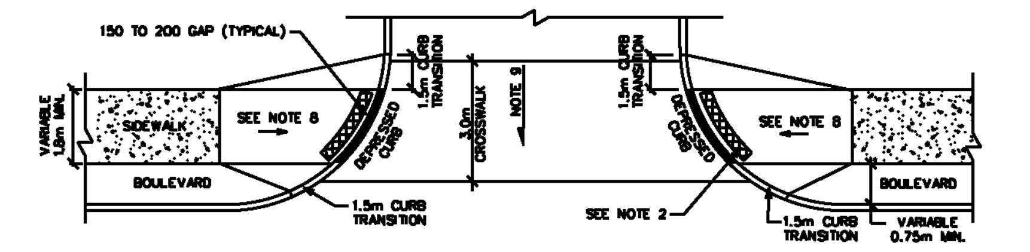
CURB RETURN AT A PRIVATE OR COMMERCIAL ENTRANCE – UNSIGNALIZED INTERSECTION



COMMERCIAL ENTRANCE OR CURB RETURN PRIVATE ENTRANCE AT A CONTROLLED INTERSECTION



CURB RETURN AT A PRIVATE OR COMMERCIAL ENTRANCE WITH BOULEVARD – UNSIGNALIZED INTERSECTION



COMMERCIAL ENTRANCE OR CURB RETURN PRIVATE ENTRANCE WITH BOULEVARD AT A CONTROLLED INTERSECTION

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. APPROVED 610 X WIDTH OF CURB RAMP (1500MIN) TACTILE WALKING SURFACE INDICATOR, RADIUS TO MATCH CURB. DRAIN GROOVES AS PER SC7.
3. CURB DETAILS SEE SC1.1, SC1.2 AND SC1.3.
4. SIDEWALK DETAILS SEE SC2 AND SC3.
5. CURB RAMPS AS PER SC6 AND SC7.
6. CONTROLLED MEANS SIGNALIZED OR A 4-WAY STOP INTERSECTION.
7. SUBJECT TO AVOIDANCE OF MEDIANS, CROSSWALK LINES TO BE CENTRED ON THE CURB RAMP.
8. FOR CURB RAMPS, SLOPE OF 2% TO 5%, MAXIMUM 8%.
9. MAXIMUM SLOPE VARIES, SEE PRIVATE APPROACH BYLAW

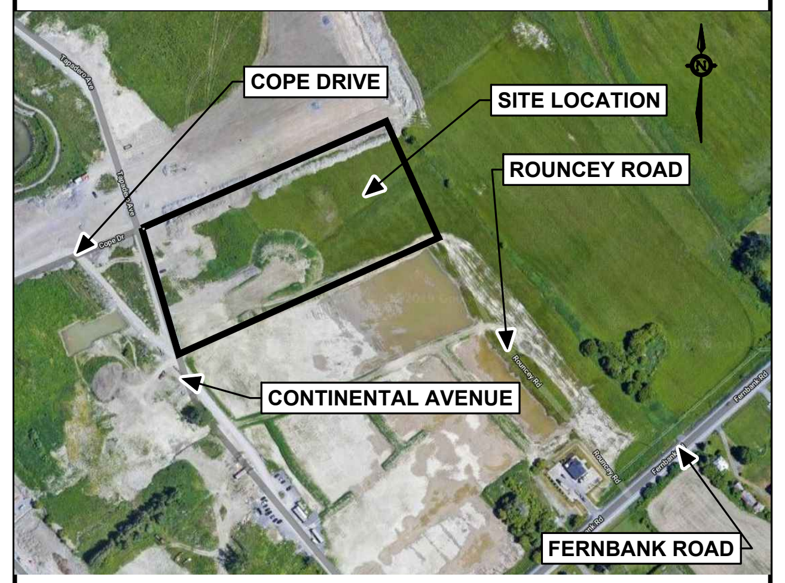
Ottawa

CURB RETURN ENTRANCES

DATE: MARCH 2007
REV. DATE: MARCH 2017
DWG. No.: SC7.1

OTTAWA-CARLETON
DISTRICT SCHOOL BOARD

Jp2g Consultants Inc.
ENGINEERS · PLANNERS · PROJECT MANAGERS
1150 Morrison Drive, Suite 410, Ottawa, ONT.
Phone: (613) 828-7800 Fax: (613) 828-2600



No.	DESCRIPTION	YYYY-MM-DD
1	REVISED PER CITY COMMENTS	2020-05-01

N45 ARCHITECTURE INC.
43 Eccles Street, 2nd Floor - Ottawa, Ontario, K1R 6S3
tel. 613.224.0095 fax 613.224.9811

project
FERNBANK ELEMENTARY SCHOOL

480 COPE DRIVE, OTTAWA, ONTARIO

seal
B. E. KIMMERLE
100145098
2020-05-01

drawing title
DETAILS

scale: NOTED
drawn by: M.S.
date: DEC 2019
checked by: B.K.
project number:
drawing number: C07

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

DO NOT SCALE DRAWINGS.

revision

D07-12-19-0200

#18083

PONDING TABLE

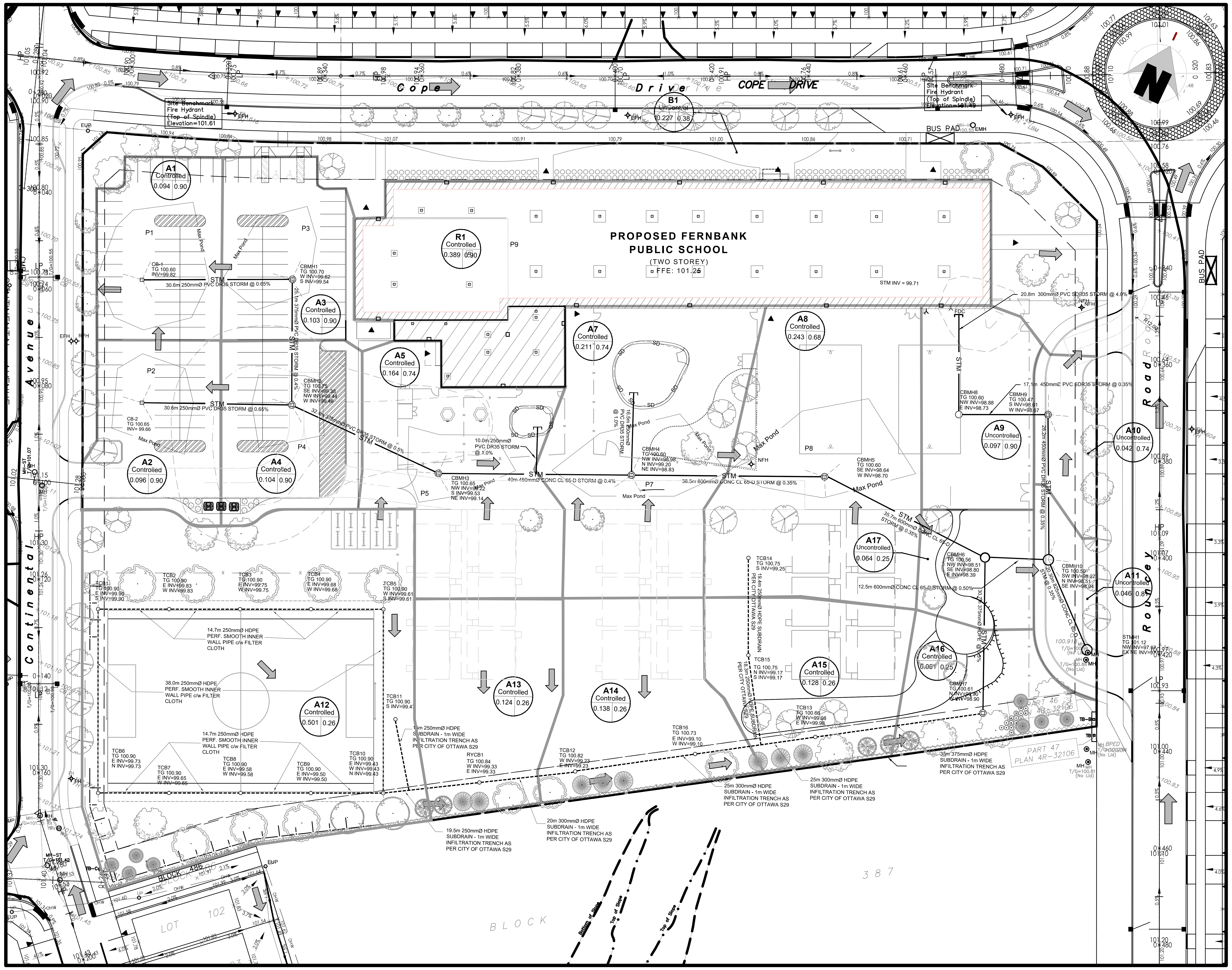
POND NO.	LOCATION	POND ELEV. (m)	TOP OF CB ELEV. (m)	POND DEPTH (m)	POND VOL. (m³)
P1	CB1	100.85	100.60	0.25	37.93
P2	CB2	100.85	100.67	0.18	15.42
P3	CBMH1	100.85	100.70	0.15	13.81
P4	CBMH2	100.85	100.72	0.13	24.81
P5	CBMH3	100.85	100.65	0.20	15.98
P7	CBMH4	100.85	100.62	0.18	30.60
P8	CBMH5	100.85	100.60	0.25	41.66
P9	ROOF			0.12	153.01
				Total=	333.22

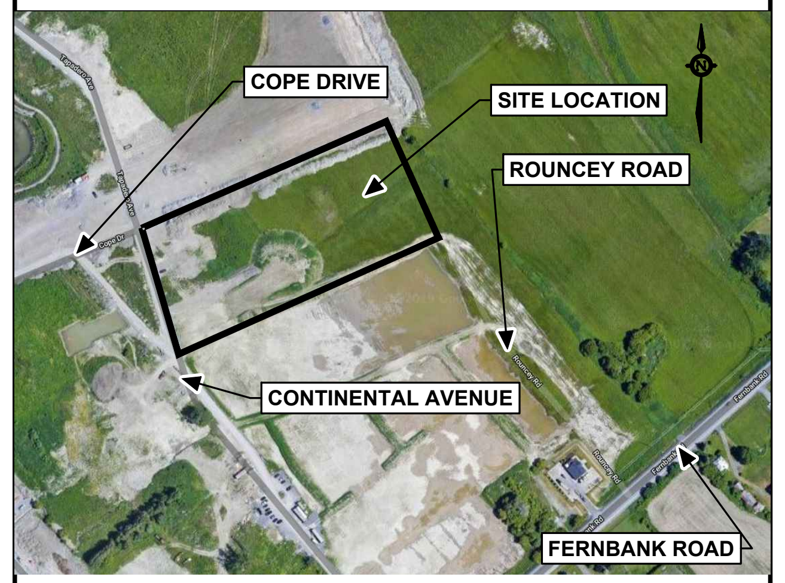
NOTE: PONDING VOLUME CALCULATED BY MULTIPLYING THE PONDING AREA BY THE MAXIMUM PONDING DEPTH AND DIVIDING BY 3 FOR A CONICAL POND

A1
Controlled
0.094 0.90

AREA ID
RUNOFF COEFFICIENT
AREA (ha)

▬	PROPOSED DRAINAGE AREA BOUNDARY
▨	PROPOSED BUILDING
➡	MAJOR OVERLAND FLOW ROUTE





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No.	DESCRIPTION	YYYY-MM-DD
4	REVISED PER CITY COMMENTS	2020-05-01
3	REVISED PER CITY COMMENTS	2020-02-18
2	ISSUED FOR BUILDING PERMIT	2019-12-19
1	ISSUED FOR SITE PLAN CONTROL	2019-11-28

N45 ARCHITECTURE INC.
43 Eccles Street, 2nd Floor - Ottawa, Ontario, K1R 6S3
tel. 613.224.0095 fax 613.224.9811

project
FERNBANK ELEMENTARY SCHOOL

480 COPE DRIVE, OTTAWA, ONTARIO

seal
B.E. KIMMERLE
100145098
2020-05-01

drawing title
STORM DRAINAGE PLAN

scale 1:500	drawn by M.S.
date DEC 2019	checked by B.K.
project number	drawing number SD1

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

DO NOT SCALE DRAWINGS.

revision

D07-12-19-0200

#18083