750 MAPLEVIEW DRIVE E.
SITE PLAN

CITY OF BARRIE

LIST OF DRAWINGS

DWG. No.	DESCRIPTION
	SITE PLAN DRAWINGS
CVR	COVER SHEET
GN–1	GENERAL NOTES
GR–1	GRADING PLAN
STM–TA–1	STORM TRIBUTARY AREA
SAN–TA–1	SANITARY TRIBUTARY AREA
SS–1	SITE SERVICING PLAN
PP–1	LANE A – PART 1
PP–2	LANE A – PART 2 & LANE B
PP–3	MH–1 TO MH–14 & OUTFALL
PP–4	MH–14 TO MH–17 & MH–20
PP–5	MH–4 TO MH–18 & MH–7 TO MH–16
SEC–1	SECTIONS A–A TO I–I
SEC–2	SECTIONS M–M TO P–P AND GREENSTORM STORAGE SYSTEM DETAILS
TC–1	TRAFFIC CONTROL PLAN
D–1	CROSS SECTIONS J–J TO L–L AND TYPICAL SAN. & WATER SERVICE DETAILS
D–2	STANDARD OPSD DETAILS
D–3	STANDARD CITY OF BARRIE DETAILS AND TYPICAL TRENCH PLUG DETAILS
D–4	BULK WATER METER AND BACK FLOW PREVENTER CHAMBER
UT–1	UTILITY COORDINATION PLAN

DENOTES COMPLETE SUBDIVISION LIMITS

1 GRADING PLANS

Barrie
ENGINEERING DEPARTMENT

CLIENT:

MAPLEVIEW DEVELOPMENTS Ltd.

30 WERTHEIM COURT, UNIT 3 – BLD 'A'
RICHMOND HILL, ON
L4B 1B9

CONSULTANT:

SCHAEFFERS
CONSULTING ENGINEERS
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PROJECTS No.

2020-4867

GENERAL NOTES – ROADWORKS

ROADS

A. SINGLE – STAGE CURB & GUTTER TO COMPLY WITH OPSD 600.040

B. TWO – STAGE CURB & GUTTER TO COMPLY WITH OPSD 600.070

C. SIDEWALKS TO COMPLY WITH OPSD–310.010 AND ARE TO BE 1.5 METRES WIDE.
MINIMUM THICKNESS AS FOLLOWS : – RESIDENTIAL DRIVEWAY 150mm
– COMMERCIAL/INDUSTRIAL DRIVEWAY 200mm
(REINFORCEMENT AS PER OPSS IF REQUIRED)
– WHEN NO DRIVEWAY IS PRESENT, 125mm.

D. NATIVE SUBGRADE SHALL HAVE A CROSSFALL OF 3% AND THE MATERIAL SHALL BE APPROVED BY A SOILS CONSULTANT AND IS SUBJECT TO APPROVAL BY THE DIRECTOR OF ENGINEERING.

E. THE ROAD BASE SHALL INCORPORATE 100mm DIAMETER SUBDRAIN WITH FACTORY INSTALLED FILTER FABRIC AS PER CITY OF BARRIE STANDARD BSD–34

F. ALL CURB RADII TO BE MINIMUM OF 10.0 METRES AT THE EDGE OF ASPHALT.

G. NATIVE SUBGRADE TO BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY AND SHALL BE PROOF ROLLED.

H. GRADE AND CROSS FALL ADJUSTMENT OF MAINTENANCE HOLE AND CATCH BASIN FRAMES WILL BE MADE USING PRODUCTS SPECIFICALLY MANUFACTURED FOR THAT PURPOSE. THE TOP ADJUSTMENT UNIT OF ALL CATCH BASIN AND MAINTENANCE HOLES SHALL BE RUBBER.

I. ADJUSTMENT UNITS MUST BE CERTIFIED TO MEET ALL PERTINENT OPS, CSA, ASTM AND MTO–DSM LIST, OR OTHER INDUSTRY GUIDELINES FOR MATERIALS, PERFORMANCE AND USE AS APPLICABLE.

J. ADJUSTMENT UNITS AND JOINTS WILL BE SEALED AND OR PARGED IN COMPLIANCE WITH MANUFACTURERS SPECIFICATIONS AND GUIDELINES.

K. MORTAR IS USED FOR LEVELING OF PRECAST UNITS ONLY. THE THICKNESS OF MORTAR WILL BE 10mm TO FILL ALL VOIDS CREATED BY IRREGULARITIES IN THE PRECAST UNITS TO ENSURE AN EVEN SURFACE ONLY.

L. NON–COMPRESSIBLE BACK FILL WILL BE USED DURING REBUILDING, ADJUSTING, OR ANY OTHER APPLICABLE CATCH BASIN OR MAINTENANCE HOLE WORKS.

CITY OF BARRIE STANDARD	NO.	REVISION	APR'D	DATE				
	4.	REVISED OPSD NUMBERS IN NOTES	K.C.	2000.08.17	APR'D:	R.G.N.	DATE:	92.05.15
	3.	REVISED NOTE E	K.C.	99.02.18				
GENERAL NOTES ROADWORKS	2.	NOTE 'H=L' ADDED	K.C.	98.03.30	DRAWN:	L.A.J.	SCALE:	N.T.S.
	1.	NOTE 'C'	K.C.	95.07.10	BSD-N2			

GENERAL NOTES – SANITARY SEWER

SANITARY SEWERS

A. SANITARY SEWER TO BE LOCATED AT THE CENTRELINE OF THE ROAD.

B. SEWERS SHALL BE CONSTRUCTED WITH BEDDINGS AS PER OPSD–802.010, (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD–802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.

C. MAXIMUM DEFLECTION FROM COMBINED LIVE AND DEAD LOADING SHALL NOT EXCEED ANY C.S.A., O.P.S. OR MANUFACTURERS RECOMMENDED SPECIFICATIONS.

D. PVC, CONCRETE AND PROFILE WALL PVC SEWERS SHALL HAVE RUBBER GASKET TYPE JOINTS AND SHALL BE CERTIFIED TO CONFORM TO ALL APPLICABLE CURRENT C.S.A. SPECIFICATIONS.

E. CONCRETE SANITARY SEWERS SHALL HAVE A MINIMUM STRENGTH OF 50 N/m/mm CONFORMING TO CSA STANDARD A257.2–1982, CLASS 50–D (PREVIOUSLY C.S.A. STANDARD A257.2–1974, CLASS II).

F. MAINTENANCE HOLE TOPS (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT GRADE AND THEN ADJUSTED TO FINAL GRADE WHEN THE TOP LIFT OF ASPHALT IS PLACE. ALL ADJUSTMENT WILL BE ACCORDANCE WITH BSD–N2.

G. 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 GUIDELINES.

CITY OF BARRIE STANDARD	NO.	REVISION	APR'D	DATE				
	4.	NOTE 'B' – "ENGINEERING"	B.R.	2002.10.28	APR'D:	R.G.N.	DATE:	92.05.15
	3.	NOTE 'B' OPSD NUMBER REVISION	K.C.	2000.03.16				
GENERAL NOTES SANITARY SEWERS	2.	NOTE 'I' CHANGED	K.C.	98.03.30	DRAWN:	L.A.J.	SCALE:	N.T.S.
	1.	CHANGES TO B. TO G.	K.C.	95.04.24	BSD-N3			

GENERAL NOTES – SANITARY SEWER

SANITARY SERVICE LATERALS

A. SANITARY LATERAL CONNECTION TO BE LOCATED AT THE CENTRELINE OF THE LOT AND CAPPED.

B. LOCATION OF LATERAL TO BE MARKED 2.0m PAST PROPERTY LINE WITH A 50 x 100mm WOOD MARKER, PAINTED GREEN, EXTENDING FROM SERVICE INVERT TO 300mm ABOVE GROUND LEVEL.

C. PIPE TO BE MINIMUM 100 mm DIA. PVC SDR28, 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 SDR28 FOR INDUSTRIAL/COMMERCIAL DEVELOPMENT.

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.

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 GUIDELINES.

F. MINIMUM PIPE SLOPE TO BE 2.0%, MAXIMUM 8.0% (SEE OPSD–1006.010, 1006.020).

CITY OF BARRIE STANDARD	NO.	REVISION	APR'D	DATE				
					APR'D:	R.G.N.	DATE:	92.05.15
GENERAL NOTES SANITARY SEWERS	2.	OPSD NUMBERS REVISED	K.C.	2000.08.17	DRAWN:	L.A.J.	SCALE:	N.T.S.
	1.	CHANGES TO B. TO G.	K.C.	95.04.24	BSD-N4			

GENERAL NOTES – STORM SEWER

STORM SEWER

A. STORM SEWER TO BE PROVIDED ON ALL ROADS WITH CURB AND GUTTER.

B. PLACE ALL CATCH BASIN LATERALS AT 2% GRADE UNLESS OTHERWISE NOTED.
PIPE SIZE MINIMUM 250mm DIA. SINGLE , 300mm DIA. DOUBLE.

C. STORM SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD–802.010 (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD–802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.

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.

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 OR APPROVED FACTORY TEE CONNECTION AS PER OPSD–708.01 OR 708.03.

G. 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 (PREVIOUSLY C.S.A. STANDARD A257.2–1974, CLASS II) OR PVC CERTIFIED TO C.S.A. STANDARDS 182.2 AND 182.4.

H. STORM SEWER TO BE MINIMUM 300mm DIAMETER WITH JOINTS CONFORMING TO C.S.A. STANDARD A257.3.

I. ALL PIPE BEDDING MUST CONFORM TO OPSD, MAXIMUM COVER TABLE. NO FLEXIBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH OF COVER GREATER THAN 6 METRES UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF ENGINEERING.

J. ALL PIPE HANDLING INSTALLATIONS MUST BE IN STRICT COMPLIANCE WITH MANUFACTURES INSTALLATION GUIDES AND THE O.C.P.A. OR UNIBELL GUIDELINES.

K. SUMP PUMP DISCHARGE PIPING IN BOULEVARD:
IN THE EVENT OF OVERACTIVE SUMP PUMP ACTIVITY, A 150mm DIAMETER PVC DR–28 SEWER MAY BE INSTALLED, WHEN SO DIRECTED BY THE DIRECTOR OF ENGINEERING, ALONG THE FRONTAGES OF DESIGNATED LOTS, WITH AN OFFSET OF 0.6m FROM BACK OF CURB. 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.

CITY OF BARRIE STANDARD	NO.	REVISION	APR'D	DATE				
	4.	NOTE 'K' – SUMP PUMP DISCHARGE PIPING	B.R.	2003.01.07	APR'D:	R.G.N.	DATE:	92.05.15
	3.	NOTE 'I' & 'C' – "DIRECTOR OF ENGINEERING"	B.R.	2002.10.28				
GENERAL NOTES STORM SEWERS	2.	NOTE 'C' OPSD NUMBER REVISION	K.C.	2000.03.16	DRAWN:	L.A.J.	SCALE:	N.T.S.
	1.	NOTE 'D' CHANGED	K.C.	98.03.30	BSD-N5			

GENERAL NOTES

1. DRAWINGS

A. ALL DRAWINGS SHALL BE PRODUCED IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARDS & SYMBOLS FOR PLAN & PROFILE DRAWINGS, GENERAL SERVICE PLANS AND LOT GRADING PLANS.

2. MEASUREMENTS

A. ALL DIMENSIONS ARE IN METRES, EXCEPT PIPE DIAMETERS, WHICH ARE IN MILLIMETRES, UNLESS SPECIFIED OTHERWISE.

3. GENERAL

A. ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARD DRAWINGS (BSD) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).

B. ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY CITY OF BARRIE STANDARD DRAWINGS (BSD) AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).

C. LOCATION OF EXISTING SERVICES ARE NOT GUARANTEED.
THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.

D. A ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE ROADS AND PARKS OPERATIONS BRANCH PRIOR TO THE COMMENCEMENT OF WORK WITHIN ANY CITY RIGHT–OF–WAY.

E. A SITE ALTERATION PERMIT IS REQUIRED FROM THE ENGINEERING DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY EARTH WORKS ON THE SITE.

F. NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.

G. GRANULAR MATERIAL , USED FOR BACKFILL , SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

H. ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE CITY ENGINEERING DEPARTMENT.

I. ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE CITY ENGINEERING DEPARTMENT.

CITY OF BARRIE STANDARD	NO.	REVISION	APR'D	DATE				
					APR'D:	R.G.N.	DATE:	92.05.15
	3.	3. NOTE: 3.E. REVISED & 3.I. ADDED	J.S.	05.01.10				
GENERAL NOTES	2.	3.D. – "ENGINEERING DEPARTMENT"	B.R.	02.10.28	DRAWN:	L.A.J.	SCALE:	N.T.S.
	1.	3.E. TOPSOIL PERMIT		01.12.06	BSD-N6			

GENERAL NOTES - WATERMAIN

1. CONTRACTORS SHALL INFORM THE CITY OF BARRIE WATER OPERATIONS DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF THEIR INTENTIONS TO PERFORM WORK ON WATER INFRASTRUCTURE.

2. OPERATION OF HYDRANTS AND VALVES ON THE POTABLE WATER SYSTEM BY OTHER THAN QUALIFIED WATER OPERATIONS STAFF IS PROHIBITED BY CURRENT BY-LAW. CITY SERVICE FEES ARE PER THE CURRENT FEES BY-LAW. THE CITY'S WATER OPERATIONS STAFF WILL SWAB, PRESSURE TEST, CHLORINATE AND FLUSH ALL NEW WATERMAINS.

3. MINIMUM COVER OVER WATERMAIN SHALL BE 1.7m. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMAIN AND SEWERS SHALL BE 2.5m WHERE WATERMAIN CONFLICTS WITH SEWER PIPES, DEFLECT WATERMAIN HORIZONTALLY OR VERTICALLY WHILE PROVIDING A MINIMUM OF 0.5m CLEARANCE BETWEEN WATERMAIN AND SEWERS. MAINTAIN MINIMUM DEPTH OF COVER AT ALL TIMES.

4. WATERMAIN SHALL BE INSTALLED IN BEDDING AS PER OPSD 802.010 (GRANULAR 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD 802.030 OR 802.031 CLASS 'B' (GRANULAR 'A' BEDDING MATERIAL, GRANULAR 'A' OR SELECT NATIVE COVER MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF WATER OPERATIONS. ALTERNATIVE EMBEDMENT MATERIAL - SAND MEETING GRADATION REQUIREMENTS OF OPSS.MUNI 1004.05.07 COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY IS PERMISSIBLE WHERE NOTED IN STANDARD DETAILS. GEOTECHNICAL CERTIFICATION OF MATERIAL AND COMPACTION TESTING MUST BE PROVIDED EVERY 150 METRES. THE COMPACTION TESTING MUST INCLUDE THE ENTIRE EMBEDMENT ENVELOPE (HAUNCHES, BEDDING, TOP OF PIPE AND COVER).

5. COPPER WATER MAINS AND SERVICES 25mm TO 50mm IN DIAMETER SHALL BE EMBEDDED IN SAND 100mm ABOVE AND BELOW TO CONFORM TO OPSS.MUNI 1004.05.07.

6. RESTRAINING WILL BE REQUIRED ON ALL HYDRANTS. THRUST BLOCKS, AS PER OPSD 1103.010 AND 1103.020. RESTRAINING DEVICES MAY BE REQUIRED IN ADDITION TO STANDARD CONCRETE THRUST BLOCKING WHERE SOIL CONDITIONS WARRANT AT THE CITY'S DISCRETION.

7. NEW WATERMAINS TO BE PVC DR18 CL150 MINIMUM. DUCTILE IRON CL52 AS PER THE APPROVED MANUFACTURERS PRODUCTS FOR LINEAR WATER SYSTEMS LIST.

8. TRACING WIRE SHALL BE #12 AWG HIGH STRENGTH COPPER CLAD (HS-CCS) AND SHALL BE INSTALLED ON THE TOTAL LENGTH OF ALL WATERMAIN AND BROUGHT UP AT EACH HYDRANT AND CONNECTED TO FLANGE BOLT. ALL SPLICES TO UTILIZE CONNECTORS AS PER THE APPROVED MANUFACTURERS PRODUCTS FOR LINEAR WATER SYSTEMS LIST.

9. ALL WATER SERVICES SHALL BE MINIMUM 25mm TYPE 'K' COPPER OR 25mm CROSS-LINKED POLYETHYLENE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF WATER OPERATIONS. WATER SERVICE SADDLES SHALL BE USED WHEN TAPPING INTO PVC WATERMAIN.

10. SERVICE TAPPINGS SHALL BE PLACED AT A MINIMUM SEPARATION OF 1.0m AND A MINIMUM OF 0.6m FROM JOINTS. (ENDS OF PIPE)

11. RISER PIPES ARE TO BE INSTALLED AS PER SSD-510, AND REMOVED AS DIRECTED. SWABBING SCHEDULE TO BE SUPPLIED BY A WATER OPERATIONS FIELD REPRESENTATIVE. ALL RISERS ARE TO BE RESTRAINED OR THRUST BLOCKED.

12. ALL NEW CURB STOPS AND BOXES TO BE LOCATED AT PROPERTY LINE AND OUT OF DRIVEWAYS AND SIDEWALKS.

City of BARRIE STANDARD DETAIL	GENERAL NOTES - WATERMAIN	REV No. 2	DATE: MAY 2015	APPROVED DATE: May 24/15 DIRECTOR OF ENGINEERING
		BSD-500	SCALE: N.T.S.	

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL SEDIMENT CONTROL MEASURES SUCH AS SEDIMENT CONTROL FENCE, TEMPORARY PONDS, CONSTRUCTION ACCESS MATS, SEDIMENT TRAPS, SWALES AND CHECK DAMS MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE WORKS.
2. SEDIMENT CONTROLS SHOULD BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT. REPAIRS TO ESC MEASURES MUST BE COMPLETED IN A TIMELY MANNER TO PREVENT SEDIMENT MIGRATION.
3. ADDITIONAL MATERIALS SUCH AS CLEAR STONE, FILTER FABRIC, PUMPS, HOSES AND SILTSOXX TO BE KEPT ONSITE AT ALL TIMES FOR CONDUCTING REPAIRS TO SEDIMENT CONTROL MEASURES.
4. ALL DISTURBED AREAS LEFT INACTIVE FOR MORE THAN THIRTY DAYS ARE TO BE STABILIZED.
5. NATIVE AND NON–INVASIVE SEED MIXTURE TO BE USED FOR STABILIZATION OF DISTURBED AREAS. A NURSE COVER CROP OF ANNUAL RYE OR EATS SHOULD BE PROVIDED AT THE SAME APPLICATION RATE.
6. THE STABILIZATION SEED MIXTURE IS TO BE APPLIED AT A MINIMUM RATE OF 25 kg/ha.
7. ENGINEERED CHANGES TO THE ESC MEASURES MAY BE NEEDED AS SITE CONDITIONS CHANGE THROUGHOUT THE CONSTRUCTION PROCESS. THESE UPDATES MUST REFLECT BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENT AND EROSION ONSITE AND SHOULD BE COMPLETED BASED ON DIRECTION FROM THE SITE ENGINEER. ADDITIONAL MEASURES MAY BE REQUIRED AS DIRECTED BY AN ENGINEER THROUGHOUT THE CONSTRUCTION PROCESS.
8. THE CONSTRUCTION ENTRANCE MAT IS TO BE INSTALLED AS THE FIRST STEP IN THE SITE ALTERATION PROCESS.
9. SEDIMENT CONTROL FENCE IS TO BE INSTALLED DOWN SLOPE OF ALL DISTURBED AREAS. A DOUBLE ROW OF SEDIMENT CONTROL FENCE IS TO BE INSTALLED SURROUNDING ALL NATURAL HERITAGE FEATURES AND AS DIRECTED BY THE SITE ENGINEER. SEDIMENT CONTROL FENCE IS TO BE AS PER LSRCA STANDARD ESC–4 or ESC–5 AS A MINIMUM. LIGHT DUTY SEDIMENT CONTROL FENCE IS NOT ACCEPTABLE.
10. CUT–OFF SWALES OR DITCHES ARE TO BE INSTALLED AS SHOWN ON THE ESC PLANS AND AS NECESSARY BASED ON CHANGING SITE CONDITIONS TO DIRECT OVERLAND FLOW TO THE APPROPRIATE SEDIMENT TRAP OR TEMPORARY SEDIMENT POND.
11. CHECK DAMS ARE TO BE INSTALLED IN ALL SWALES AND DITCHES IN ACCORDANCE WITH DRAWING LSRCA ESC–2, AS A MINIMUM
12. TEMPORARY SEDIMENT TRAP(S) ARE TO BE CONSTRUCTED AT THE BEGINNING OF SITE GRADING AND IF THE SITE DRAINAGE CHANGES DURING CONSTRUCTION. IT MAY BE NECESSARY FOR TEMPORARY SWALES TO BE CONSTRUCTED TO DIRECT SITE FLOWS TO THE TEMPORARY SEDIMENT TRAP(S) DURING ROUGH GRADING AND AS CONSTRUCTION PROGRESSES.
13. FILTREXX SILTSOXX OR APPROVED EQUIVALENT TO BE INSTALLED DOWNSTREAM FROM SEDIMENT TRAP AND TEMPORARY SEDIMENT POND OUTLETS TO A MINIMUM HEIGHT OF 300mm.
14. IF STOCKPILES ARE USED ON–SITE FOR THE STORAGE OF EXCESS MATERIAL, THEY ARE TO BE IN ACCORDANCE WITH DETAIL DRAWING LSRCA ESC–6.
15. ANY DEWATERING OCCURRING ONSITE MUST BE IN ACCORDANCE WITH AN APPROVED DEWATERING PLAN. ADDITIONAL DEWATERING REQUIREMENTS MAY BE DEEMED NECESSARY AND SHALL BE IMPLEMENTED AS DIRECTED BY THE ENGINEER, CONTRACT ADMINISTRATOR OR LOCAL MUNICIPALITY.
16. REFUELING IS TO TAKE PLACE A MINIMUM OF THIRTY METRES FROM ANY WATERCOURSE OR ENVIRONMENTALLY SENSITIVE AREA
17. AN APPROVED SPILLS MANAGEMENT PLAN IS TO BE KEPT ONSITE.
18. SPILL CLEANUP EQUIPMENT SUCH AS ABSORPTIVE MEDIA IS TO BE MAINTAINED ONSITE FOR IMMEDIATE USE IN THE EVENT OF A SPILL
19. SPILLS ARE TO BE REPORTED IMMEDIATELY TO THE MOECC SPILLS ACTION CENTRE AT 1–800–268–6060
20. THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEAN–UP AND RESTORATION, INCLUDING ALL COSTS, DUE TO THE RELEASE OF SEDIMENT FROM THE SITE.
21. LOW IMPACT DEVELOPMENT (LID) MEASURES ARE NOT TO BE USED AS SEDIMENT CONTROL DEVICES.
22. ADDITIONAL SEDIMENT CONTROL DEVICES MAY BE DEEMED NECESSARY AND AS SITE CONDITIONS CHANGE AND SHALL BE INSTALLED AS DIRECTED BY THE SITE ENGINEER. CONTRACTOR, ADMINISTRATOR OR LOCAL MUNICIPALITY.

SPECIAL ENGINEERING NOTES:

UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE FOLLOWING REQUIREMENTS SHALL APPLY TO THE WORKS.

1. USE A MINIMUM IF 300MM THICK OF 19MM CLEAR STONE MATERIAL AS PIPE BEDDING. THE CLEAR STONE SHOULD BE WRAPPED WITH GEOTEXTILE FILTER FABRIC(SUCH AS TEXEL F–300 OR EQUIVALENT).
2. ALL CONCRETE PIPE JOINTS SHOULD BE ADEQUATELY SEALED USING A WATERTIGHT RUBBERIZED ADHESIVE MEMBRANE(OR EQUIVALENT).
3. ALL SANITARY MAINTENANCE HOLE JOINTS, BETWEEN BASE OF MAINTENANCE HOLE UP TO THE PRECAST CONCRETE ADJUSTMENT UNITS SHALL BE SEALED WITH AN EXTERNAL RUBBER SLEEVE (I.E. GATOR WRAP OR EQUIVALENT). THE WIDTH OF THE RUBBER SLEEVE SHALL BE 225MM (9") OR GREATER. THE SEAL SHALL BE MADE OF A STRETCHABLE, SELF–SHRINKING, INTRA–CURING HALOGENATED BASED RUBBER WITH A MINIMUM THICKNESS OF 30 MILS. THE BACKSIDE OF EACH UNIT SHALL BE COATED WITH A CROSS–LINKED RE–ENFORCED BUTYL ADHESIVE. THE BUTYL ADHESIVE SHALL BE NON–HARDENING SEALANT WITH A MINIMUM THICKNESS OF 30 MILS. THE SEAL SHALL BE DESIGNED TO STRETCH AROUND THE JOINT AND THEN OVERLAPPED CREATING A CROSS–LINKED AND FUSED BOND BETWEEN THE RUBBER AND BUTYL ADHESIVE.
4. PRECAST CONCRETE ADJUSTMENT UNITS (MODULOC OR APPROVED EQUIVALENT) FOR MAINTENANCE HOLES AND CATCHBASINS SHALL HAVE A SOLVENT DAMP PROOFING MASTIC ASPHALT COMPOUND APPLIED AFTER PARGING. PRECAST ADJUSTMENT UNITS TO BE IN ACCORDANCE WITH OPSD 704.010.
5. ALL MAINTENANCE HOLES LOCATED OUTSIDE OF ROAD ALLOWANCE (I.E. WITHIN EASEMENT, WALKWAY, ETC) SHALL BE EQUIPPED WITH A SECURITY TYPE COVER PER OPSD 401.060.
6. FROST STRAPS SHOULD BE PROVIDED TO HOLD PRE–CAST MANHOLE SECTIONS TOGETHER. THREE(3) TOP SECTIONS OF PRE–CAST MANHOLES SHOULD HAVE THREE STEEL STRAPS HELD BY BOLTS IN THE TOP AND BOTTOM SECTIONS. FOR MATERIAL OF FROST STRAPS AND BOLTS REFER TO OPSD 701.100.
7. ALL RLCB SHALL BE EQUIPPED WITH A CAST IRON, SQUARE FRAME WITH SQUARE FLAT GRATE FOR CATCH BASINS, PERFORATED OPENINGS REFER TO OPSD 400.100.
8. ALL CB ALONG THE ROADS SHALL USE THE CAST IRON, SQUARE FRAME FISH TYPE COVER REFER TO OPSD 401.081.
9. ALL SEWER PIPE AND WATERMAIN BEDDING MUST CONFORM TO THE APPLICABLE CITY STANDARD SPECIFICATIONS. IT IS RECOMMENDED THAT THE SUBGRADE MATERIALS ENCOUNTERED AT PIPE LEVEL BE VISUALLY INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE BEDDING MATERIALS. LOOSE, SOFT, ORGANIC, EXCESSIVELY WET, DILATED OR OTHERWISE UNSUITABLE SOILS SHOULD BE REMOVED AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND REPLACED BY SELECT SUBGRADE MATERIAL (OPSS SSM) COMPACTED TO 98% OF SPMDD. THE BEDDING MATERIALS SHOULD CONSIST OF BROADLY GRADED OPSS GRANULAR 'A' MATERIAL OR 19 MM CRUSHER RUN LIMESTONE. THESE MATERIALS SHOULD BE FULLY EXTENDED AGAINST THE TRENCH WALLS AND PIPE HAUNCHES AND PLACED IN MAXIMUM 150 MM THICK LAYERS AND COMPACTED TO 98% SPMDD. 300 MM THICK, 19 MM CLEAR STONE MATERIAL MAY BE USED AS AN ALTERNATIVE FOR PIPE BEDDING. IF CLEAR STONE IS USED, THEN IT SHOULD BE WRAPPED WITH GEOTEXTILE FILTER FABRIC (SUCH AS TEXEL F–300 OR EQUIVALENT) TO PREVENT MIGRATION OF FINES FROM THE SURROUNDING SOILS, WHICH MAY RESULT IN SETTLEMENT OF THE PIPES.

BENCH MARKS U.T.M. COORDINATES: ZONE 17 NAD 83
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884
MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.
MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)
MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

PAVEMENT LAYER	COMPACTION REQUIREMENTS	RESIDENTIAL ROADWAYS
ASPHALTIC CONCRETE	MINIMUM 92% RELATIVE DENSITY	40mm HL3 70mm HL8
19 mm CRUSHER–RUN LIMESTONE OR SAND AND GRAVEL MATERIAL MEETING OPSS GRANULAR 'A' BASE REQUIREMENTS	100% SPMDD*	150mm
50 mm CRUSHER–RUN LIMESTONE OR SAND AND GRAVEL MATERIAL MEETING OPSS GRANULAR 'B' TYPE 1 BASE REQUIREMENTS	100% SPMDD*	450mm

BENCH MARKS U.T.M. COORDINATES: ZONE 17 NAD 83
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884
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NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT 4 2021 PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN

GENERAL NOTES

Barrie
ENGINEERING DEPARTMENT

SCALE HOR.		VERT.		PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	GN - 1
REVIEWED	H.T.	DATE	MARCH 2021		

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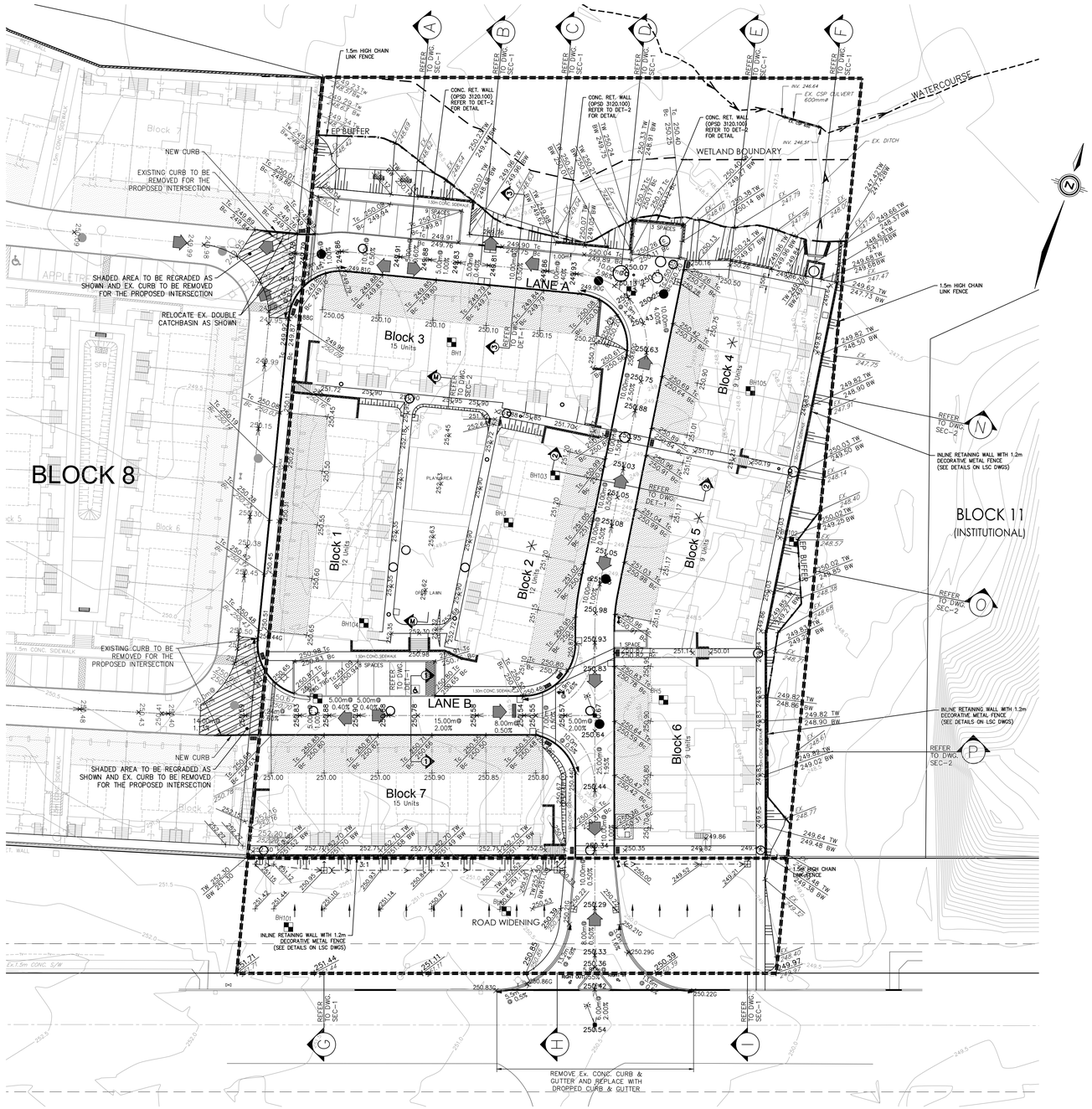

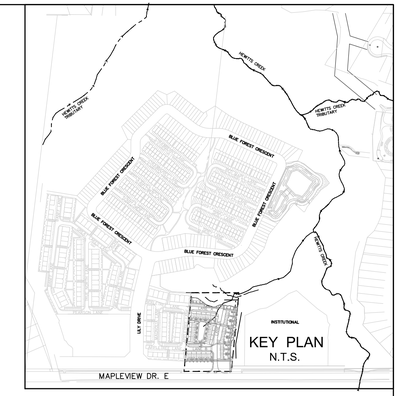

NOTES:

1. FOR GENERAL AND SPECIAL NOTES REFER TO DWG GN-1.
2. FOR SECTIONS REFER TO DWG's SEC-1.
3. FOR SAND FILTRATION BED DETAILS REFER TO DWG SFB-D1.
4. PREGRADE ELEVATIONS BELOW THE PROPOSED GRADES ARE: FOR LOTS, BLOCKS AND PARKS 0.30m AND FOR ROADS 0.55m.

LEGEND

- DENOTES VALVE AND BOX
- DENOTES HYDRANTS
- DENOTES SINGLE OR DOUBLE CATCHBASIN
- DENOTES SINGLE OR DOUBLE DITCH INLET WITH HONEY COMB GRATING BOLTED DOWN
- DENOTES CATCHBASIN MANHOLE
- DENOTES SANITARY MANHOLE
- DENOTES STORM MANHOLE
- 287.35 DENOTES PROPOSED ELEVATION
- 285.0 DENOTES EXISTING CONTOUR
- DENOTES PRIVACY FENCE
- DENOTES HIGH CHAIN LINK FENCE
- DENOTES RETAINING WALL
- DENOTES DECORATIVE METAL FENCE
- DENOTES LIMIT OF SUBDIVISION
- DENOTES LOTS WHERE FILL EXCEEDS 1.2m (SEE NOTES)
- DENOTES DIRECTION OF OVERLAND FLOW

SPECIAL NOTES FOR CONSTRUCTION OF HOUSES:

1. PRIOR TO CONSTRUCTION OF THE HOUSES, THE GROUND AT FOUNDATION LEVEL OF EACH HOUSE TO BE INSPECTED BY THE GEOTECHNICAL/HYDROGEOLOGICAL CONSULTANT FOR WATER TABLE.
2. WHERE REQUIRED BASEMENTS SHALL BE INSTALLED WATERTIGHT AS PER SECTION 9.13.3 OF THE ONTARIO BUILDING CODE (OBC).
3. THE BUILDER SHOULD VERIFY SUCH LOTS IN ADVANCE BEFORE APPLYING FOR BUILDING PERMIT IN ORDER TO AVOID DELAYING THE PERMIT PROCESS.

SPECIAL CONSTRUCTION NOTES:

1) PRIOR TO CONSTRUCTION LAYOUT, THE CONTRACTOR'S SURVEYOR SHALL CHECK ENGINEERING DRAWINGS AGAINST THE LATEST LEGAL PLAN AND REPORT TO THE ENGINEER ANY DISCREPANCIES HE MAY FIND.

BENCH MARKS U.T.M. COORDINATES: ZONE 17 NAD 83
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.86m EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 001193 1U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH-EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH-EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.

6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2021 PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

GRADING PLAN

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:400	VERT.	PROJECT NO.	4867
DESIGN M.K.	DRAWN G.B.	SHEET NO.	GR-1
REVIEWED H.T.	DATE MARCH 2021		

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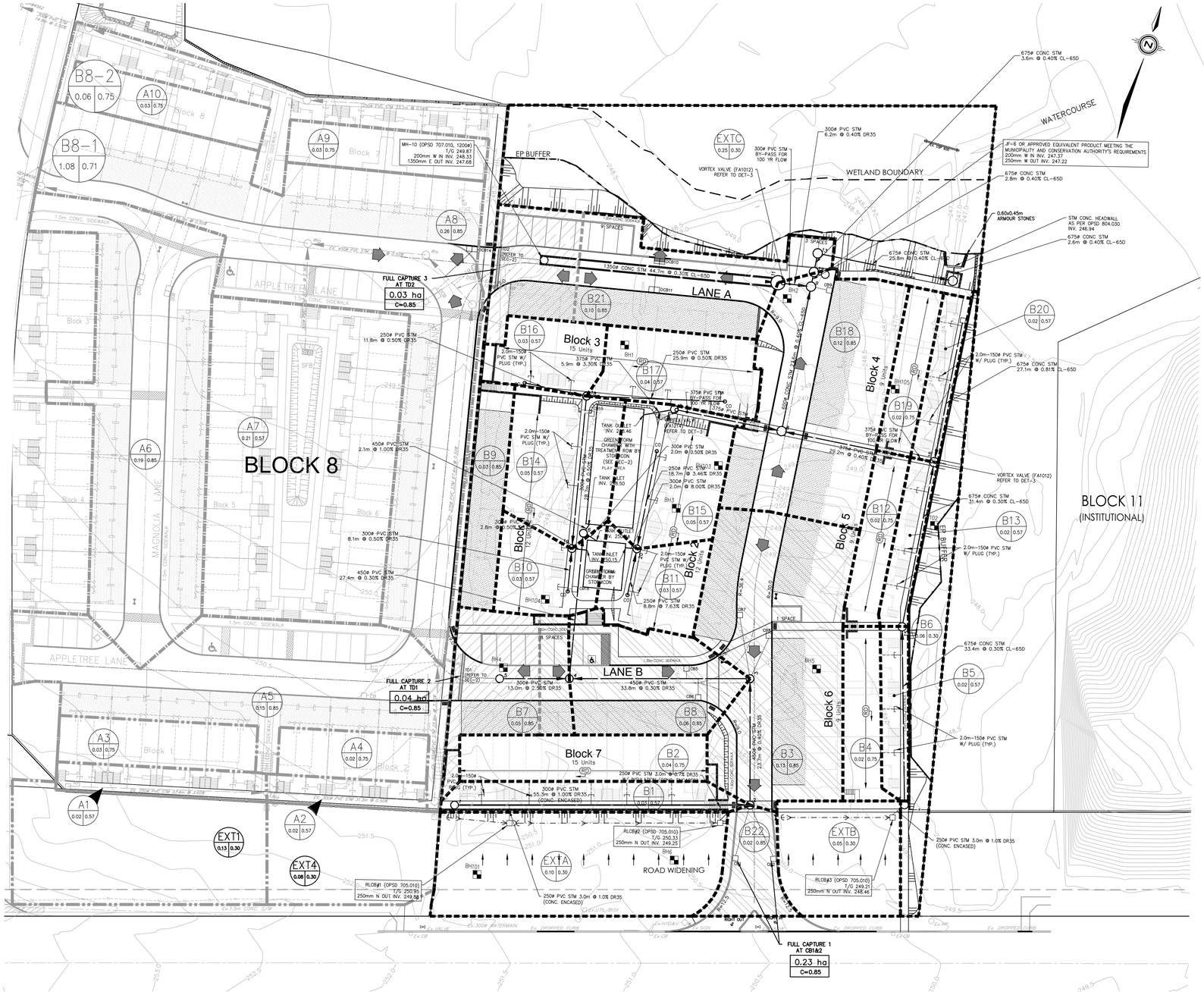

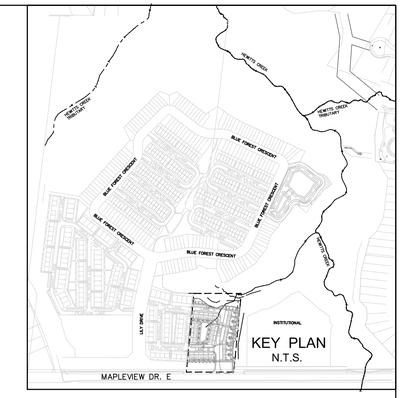

NOTES:

1. FOR GENERAL NOTES REFER TO DWG GN-1.

LEGEND

A3 / 0.23 / 0.65	DENOTES SUB-CATCHMENT LABEL DENOTES RUNOFF COEFFICIENT DENOTES AREA IN HECTARES
EXT2 / 0.17 / 0.30	DENOTES EXTERNAL SUB-CATCHMENT LABEL DENOTES RUNOFF COEFFICIENT
0.25 ha / C=0.65	DENOTES AREA IN HECTARES DENOTES RUNOFF COEFFICIENT
RD	DENOTES LOTS/UNITS WITH FRONT YARD ROOF DOWNSPOUTS CONNECTED TO STORM SEWERS.
	DENOTES DRAINAGE AREA BOUNDARY
	DENOTES EXTERNAL DRAINAGE AREA BOUNDARY
	DENOTES SINGLE OR DOUBLE CATCHBASIN
	DENOTES MAJOR OVERLAND FLOW
285.0	DENOTES EXISTING CONTOUR
	DENOTES FULL CAPTURE AREAS

BENCH MARKS U.T.M. COORDINATES: ZONE 17 NAD 83

DISTANCE NOTE

DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.

6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 4 2021 PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

STORM TRIBUTARY AREA PLAN

Barrie
ENGINEERING DEPARTMENT

SCALE HOR.	1:400	VERT.		PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	STM-TA-1
REVIEWED	H.T.	DATE	MARCH 2021		

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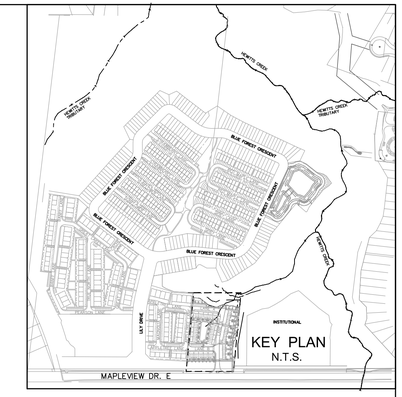

NOTES:

1. FOR GENERAL NOTES REFER TO DWG. GN-1.

LEGEND

CATCHMENT IDENTIFIER — A5 0.28 — AREA (ha)
No. OF UNITS — 60 2.34 — POPULATION @ 2.34 PPU

CATCHMENT IDENTIFIER EXTERNAL — EXT1 0.28 — AREA (ha)
No. OF UNITS — 60 2.34 — POPULATION @ 2.34 PPU

DENOTES DRAINAGE AREA BOUNDARY

DENOTES DRAINAGE AREA BOUNDARY FOR BLOCKS

BENCH MARKS
DISTANCE NOTE

U.T.M. COORDINATES: ZONE 17 NAD 83

DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
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A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 001191U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH-EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH-EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
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Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU Oct. 5, 2021 PROVINCE OF ONTARIO

CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

SANITARY TRIBUTARY AREA PLAN

Barrie
ENGINEERING DEPARTMENT

SCALE HOR.	1:300	VERT.		PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	SAN-TA-1
REVIEWED	H.T.	DATE	MARCH 2021		

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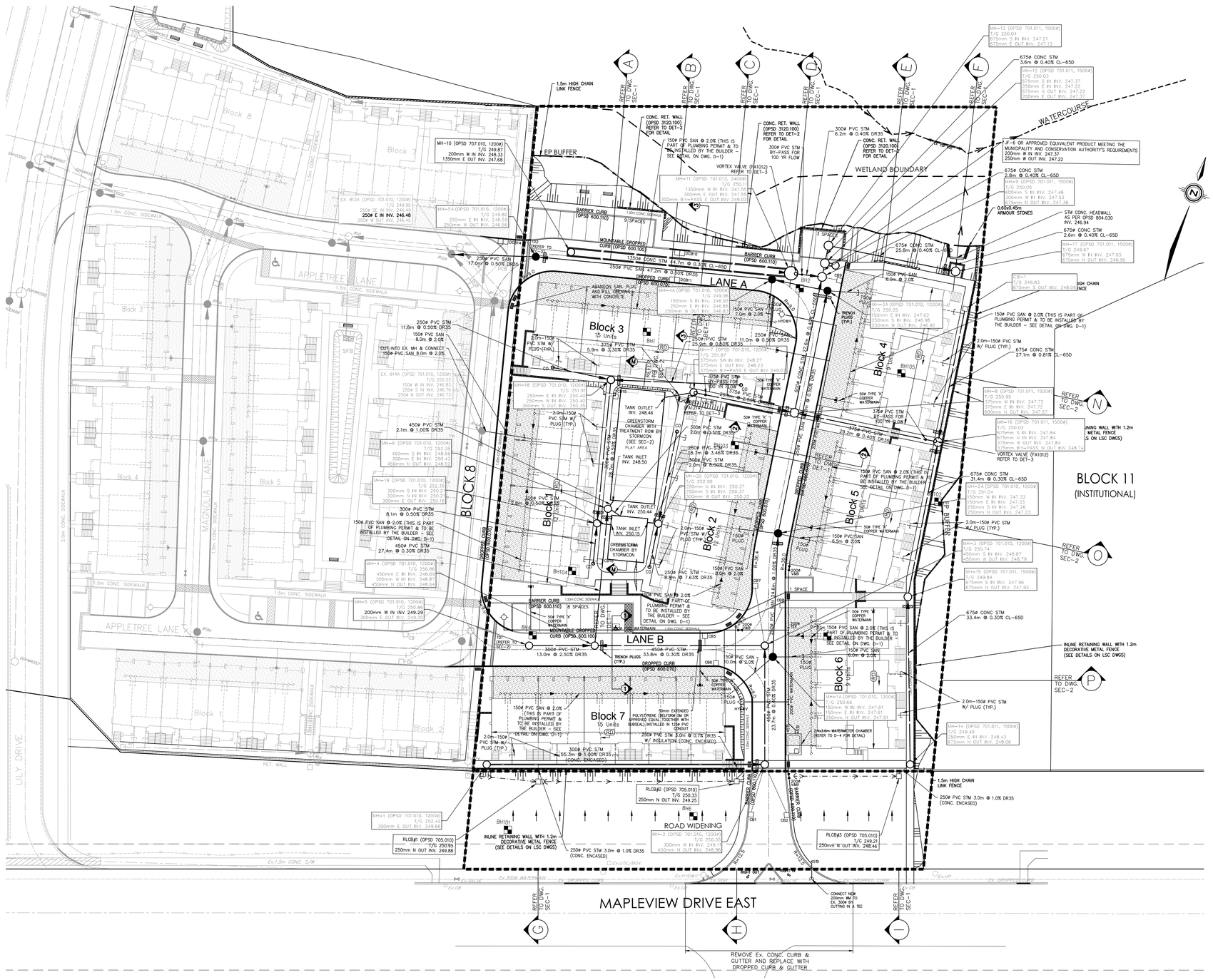

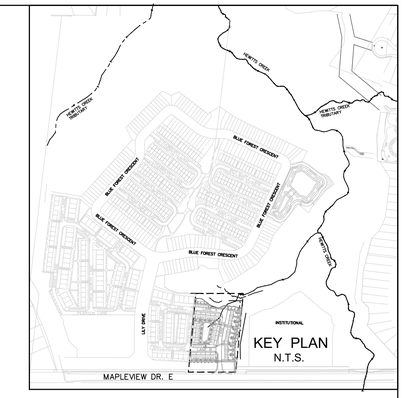

NOTES:

1. FOR GENERAL NOTES REFER TO DWG GN-1.
2. FOR SECTIONS A, B, C, D, E, F, G, H, I, M, N, & O REFER TO DWG SEC-1 & SEC-2.
3. FOR SECTIONS 1, 2 & 3 REFER TO DWG D-1.
4. UNDERGROUND SERVICING CONTRACTOR SHALL INSTALL:
   a) 150ø PVC SANITARY CONNECTION OF EACH INDIVIDUAL BLOCK FROM SANITARY MANHOLE UP TO A PLUG SHOWN ON DRAWING.
   b) 50ø COPPER WATER CONNECTION OF EACH INDIVIDUAL BLOCK FROM WATERMAIN UP TO CURB STOP.
   c) FOR BLOCKS 1 TO 7 150ø PVC PIPE AND PLUG AT 2.0m FROM STORM SEWER FOR FRONT YARD ROOF DOWNSPOUT CONNECTIONS.
5. BACK YARD ROOF DOWNSPOUTS OF BLOCKS 4 TO 7 TO BE DISCHARGED TO THE GROUND SURFACE.
6. ROOF DOWNSPOUTS FOR BLOCKS 1 TO 3 TO BE DISCHARGED TO THE STORM SEWER.
7. ANY REQUIRED DEWATERING OF SEWER TRENCHES SHALL BE AS PER SOILS REPORT.
8. ALL VERTICAL AND HORIZONTAL WATERMAIN'S BENDS LESS THAN 3.8° DEGREES SHALL BE ACHIEVED BY DEFLECTION (NOT TO EXCEED THE MANUFACTURER'S RECOMMENDED ANGLE) OF ONE OR MORE JOINTS OF THE PIPE. FOR LARGER BENDS STANDARD PREMANUFACTURED BENDS OF 5°, 11.25°, 22.50°, ETC. WILL BE USED. DEFLECTION OF PIPE IS NOT ALLOWED.
9. ALL STORM AND SANITARY SEWERS AND MANHOLE JOINTS SHOULD BE ADEQUATELY SEALED USING A WATERTIGHT RUBBERIZED ADHESIVE MEMBRANE OR EQUIVALENT.
10. ALL MAINTENANCE HOLES SHOULD HAVE SELF LEVELING LIDS AS PER BSD-41. REFER TO D-4 FOR DETAIL.

LEGEND

M	DENOTES VALVE AND BOX
	DENOTES HYDRANTS
	DENOTES SINGLE OR DOUBLE CATCHBASIN
	DENOTES SINGLE OR DOUBLE DITCH INLET WITH HONEYCOMB GRATING BOLTED DOWN
	DENOTES CATCHBASIN MANHOLE
	DENOTES SANITARY MANHOLE
	DENOTES STORM MANHOLE
285.0	DENOTES EXISTING CONTOUR
	DENOTES SITE PLAN BLOCK BOUNDARY
—— X ——	DENOTES 1.5m HIGH CHAIN LINK FENCE
	DENOTES RETAINING WALL
RD	DENOTES LOTS/UNITS WITH FRONT YARD ROOF DOWNSPOUTS CONNECTED TO STORM SEWERS. (SEE NOTE 4c)

SPECIAL NOTES FOR CONSTRUCTION OF HOUSES:

1. PRIOR TO CONSTRUCTION OF THE HOUSES, THE GROUND AT FOUNDATION LEVEL OF EACH HOUSE TO BE INSPECTED BY THE GEOTECHNICAL/HYDROGEOLOGICAL CONSULTANT FOR WATER TABLE.
2. WHERE REQUIRED BASEMENTS SHALL BE INSTALLED WATERTIGHT AS PER SECTION 9.13.3 OF THE ONTARIO BUILDING CODE (OBC).
3. THE BUILDER SHOULD VERIFY SUCH LOTS IN ADVANCE BEFORE APPLYING FOR BUILDING PERMIT IN ORDER TO AVOID DELAYING THE PERMIT PROCESS.

SPECIAL CONSTRUCTION NOTES:

1) PRIOR TO CONSTRUCTION LAYOUT, THE CONTRACTOR'S SURVEYOR SHALL CHECK ENGINEERING DRAWINGS AGAINST THE LATEST LEGAL PLAN AND REPORT TO THE ENGINEER ANY DISCREPANCIES HE MAY FIND.

BENCH MARKS
DISTANCE NOTE
U.T.M. COORDINATES: ZONE 17 NAD 83
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

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MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS
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REGISTERED PROFESSIONAL ENGINEER
H. O. TOZCU
OCT. 5, 2021
PROVINCE OF ONTARIO

CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

SITE SERVICING PLAN

Barrie
ENGINEERING DEPARTMENT

SCALE HOR.	1:400	VERT.		PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	SS-1
REVIEWED	H.T	DATE	MARCH 2021		

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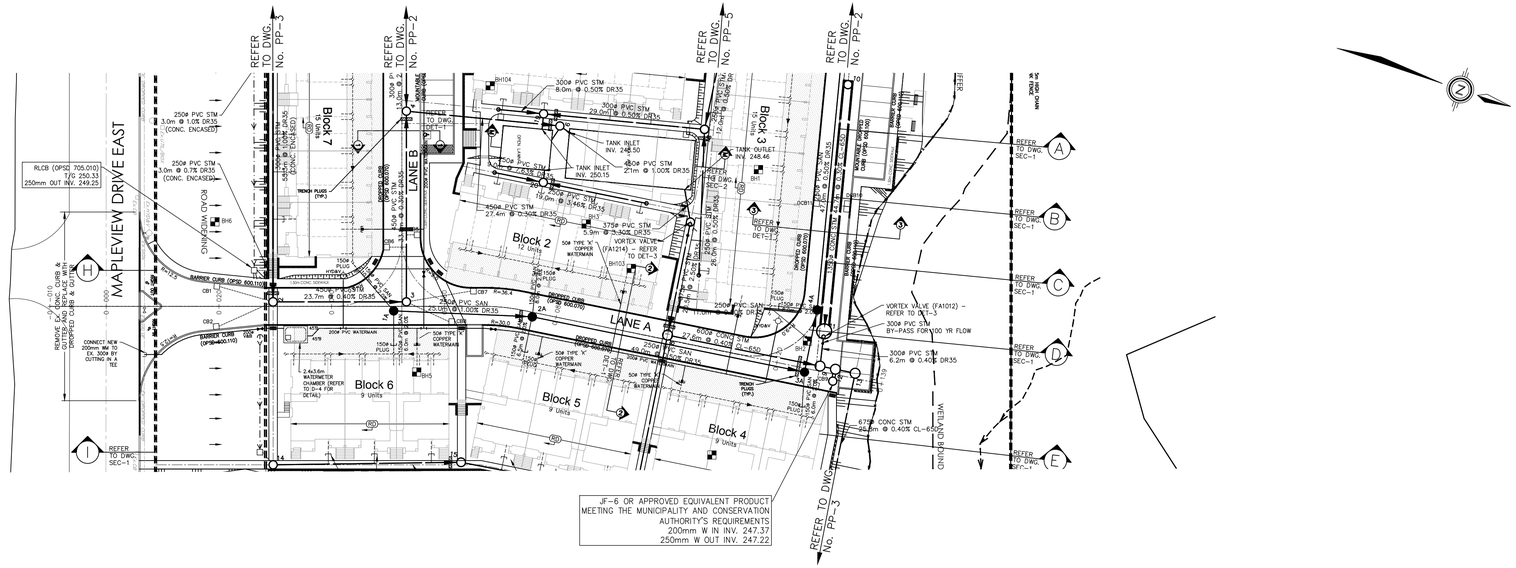

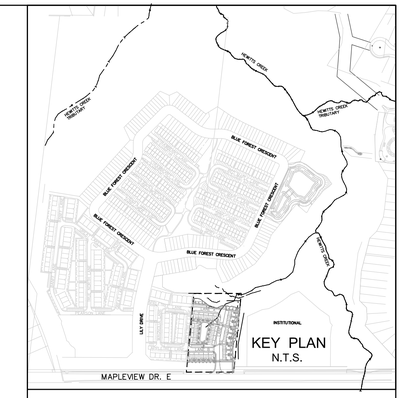

NOTES:

1. FOR GENERAL NOTES REFER TO DWG GN-1.
2. UNDERGROUND SERVICING CONTRACTOR SHALL INSTALL:
   a) 150ø PVC SANITARY CONNECTION OF EACH INDIVIDUAL BLOCK FROM SANITARY MANHOLE UP TO A PLUG SHOWN ON DRAWING.
   b) 50ø COPPER WATER CONNECTION OF EACH INDIVIDUAL BLOCK FROM WATERMAIN UP TO CURB STOP.
3. ANY REQUIRED DEWATERING OF SEWER TRENCHES SHALL BE AS PER SOILS REPORT.
4. ALL VERTICAL AND HORIZONTAL WATERMAIN'S BENDS LESS THAN 3.8° DEGREES SHALL BE ACHIEVED BY DEFLECTION (NOT TO EXCEED THE MANUFACTURER'S RECOMMENDED ANGLE) OF ONE OR MORE JOINTS OF THE PIPE. FOR LARGER BENDS STANDARD PREMANUFACTURED BENDS OF 5°, 11.25°, 22.50°, ETC. WILL BE USED. DEFLECTION OF PIPE IS NOT ALLOWED.
5. ALL STORM AND SANITARY SEWERS AND MANHOLE JOINTS SHOULD BE ADEQUATELY SEALED USING A WATERTIGHT RUBBERIZED ADHESIVE MEMBRANE OR EQUIVALENT.
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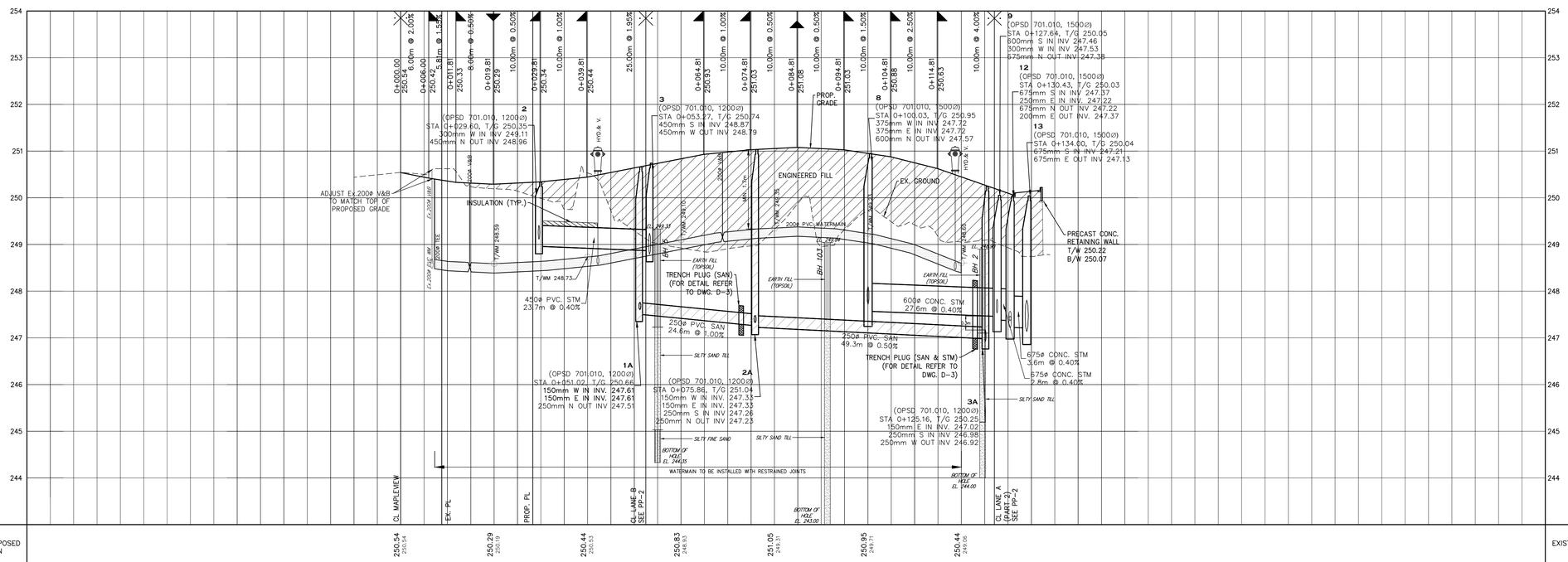
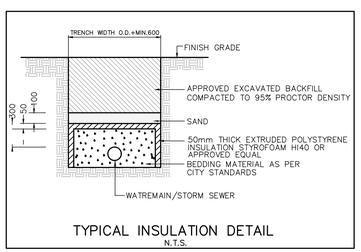
LEGEND

	DENOTES VALVE AND BOX
	DENOTES HYDRANTS
	DENOTES SINGLE OR DOUBLE CATCHBASIN
	DENOTES SINGLE OR DOUBLE CATCHBASIN WITH HEAVY DUTY HONEYCOMB GRATING BOLTED DOWN
	DENOTES SANITARY MANHOLE
	DENOTES STORM MANHOLE
	DENOTES CATCHBASIN MANHOLE
	DENOTES SITE PLAN BLOCK BOUNDARY
—X—	DENOTES 1.5m HIGH CHAIN LINK FENCE
	DENOTES RETAINING WALL
RD	DENOTES LOTS/UNITS WITH FRONT YARD ROOF DOWNSPOUTS CONNECTED TO STORM SEWERS. (SEE NOTE 4c)
	DENOTES TRENCH PLUG





TYPICAL INSULATION DETAIL
N.T.S.

ROAD PAVEMENT STRUCTURE

COURSE	THICKNESS	OPS SPECIFICATIONS
ASPHALT SURFACE	40mm	HL3 SURFACE COURSE ASPHALT
ASPHALT BINDER	70mm	HL8 BINDING COURSE ASPHALT
GRANULAR BASE	150mm	19mm CRUSHER-RUN LIMESTONE BASE
GRANULAR SUB-BASE	450mm	50mm CRUSHER-RUN LIMESTONE SUB-BASE

BENCH MARKS
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

U.T.M. COORDINATES: ZONE 17 NAD 83

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH-EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH-EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.

6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER
H. O. TOZCU
OCT. 5, 2021
PROVINCE OF ONTARIO

CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN
PLAN AND PROFILE
LANE A - PART 1
STA. 0+000.00 TO STA. 0+140.00

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:500	VERT. 1:50	PROJECT NO.	4867
DESIGN M.K.	DRAWN G.B.	SHEET NO.	PP-1
REVIEWED H.T	DATE MARCH 2021		

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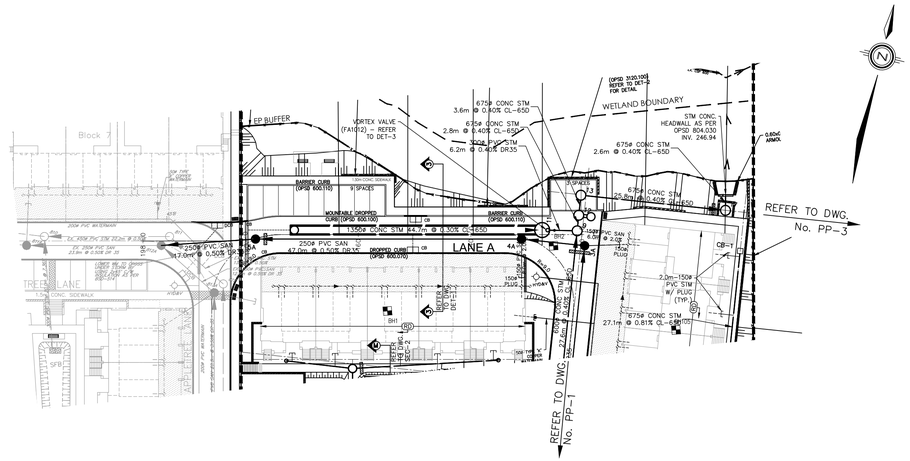

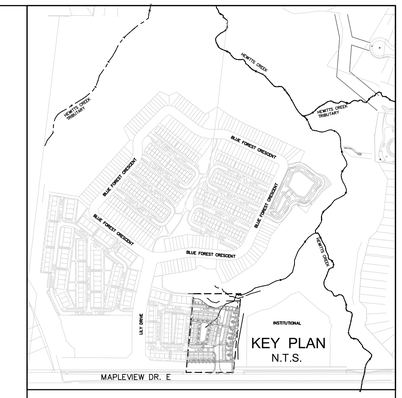

NOTES:

1. FOR GENERAL NOTES REFER TO DWG GN-1.
2. UNDERGROUND SERVICING CONTRACTOR SHALL INSTALL:
   a) 150ø PVC SANITARY CONNECTION OF EACH INDIVIDUAL BLOCK FROM SANITARY MANHOLE UP TO A PLUG SHOWN ON DRAWING.
   b) 50ø COPPER WATER CONNECTION OF EACH INDIVIDUAL BLOCK FROM WATERMAIN UP TO CURB STOP.
3. ANY REQUIRED DEWATERING OF SEWER TRENCHES SHALL BE AS PER SOILS REPORT.
4. ALL VERTICAL AND HORIZONTAL WATERMAIN'S BENDS LESS THAN 3.8° DEGREES SHALL BE ACHIEVED BY DEFLECTION (NOT TO EXCEED THE MANUFACTURER'S RECOMMENDED ANGLE) OF ONE OR MORE JOINTS OF THE PIPE. FOR LARGER BENDS STANDARD PREMANUFACTURED BENDS OF 5°, 11.25°, 22.50°, ETC. WILL BE USED. DEFLECTION OF PIPE IS NOT ALLOWED.
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LEGEND

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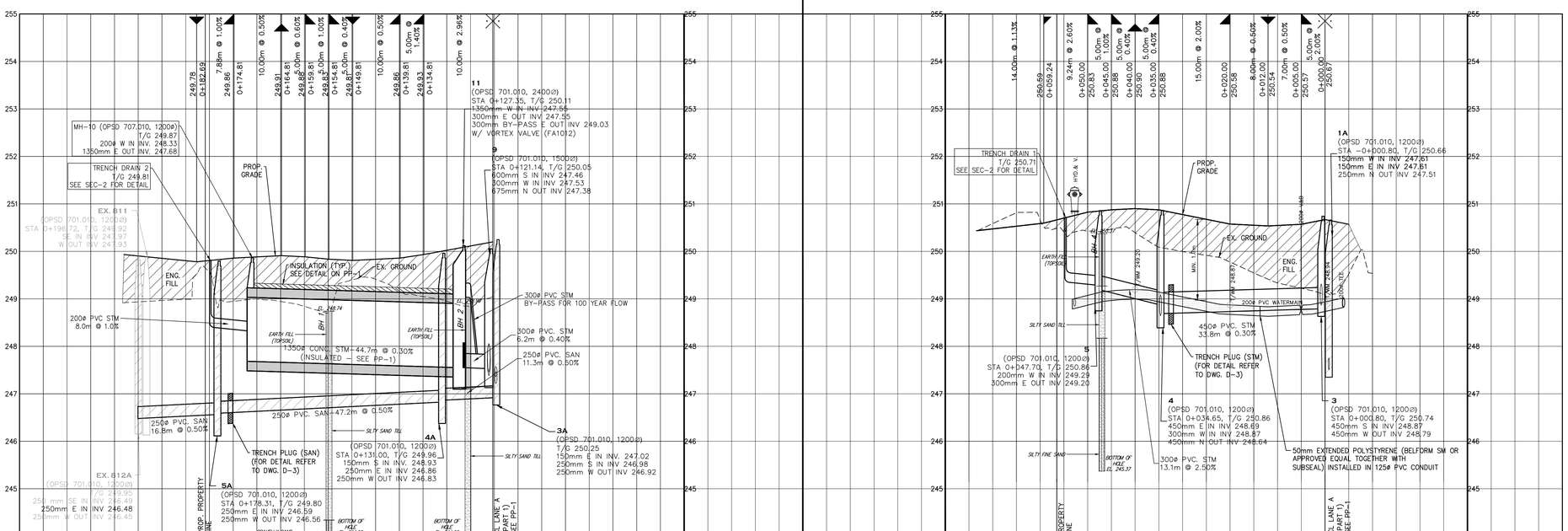
- DENOTES TRENCH PLUG



ROAD PAVEMENT STRUCTURE		
COURSE	*THICKNESS*	*OPS SPECIFICATIONS*
ASPHALT SURFACE	40mm	HL3 SURFACE COURSE ASPHALT
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BENCH MARKS
DISTANCE NOTE
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U.T.M. COORDINATES: ZONE 17 NAD 83

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
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NO.	REVISIONS	DATE	APPROVED

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REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2021 PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN
PLAN AND PROFILE
LANE A - PART 2
STA. 0+120.00 TO STA. 0+220.00
LANE B
STA. 0+000.00 TO STA. 0+080.00

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:500	VERT. 1:50	PROJECT NO.	4867
DESIGN M.K.	DRAWN G.B.	SHEET NO.	PP-2
REVIEWED H.T	DATE MARCH 2021		

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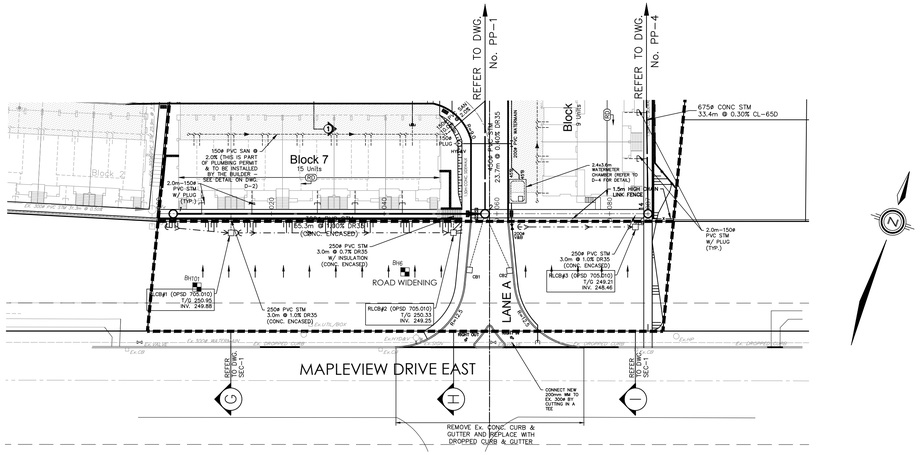

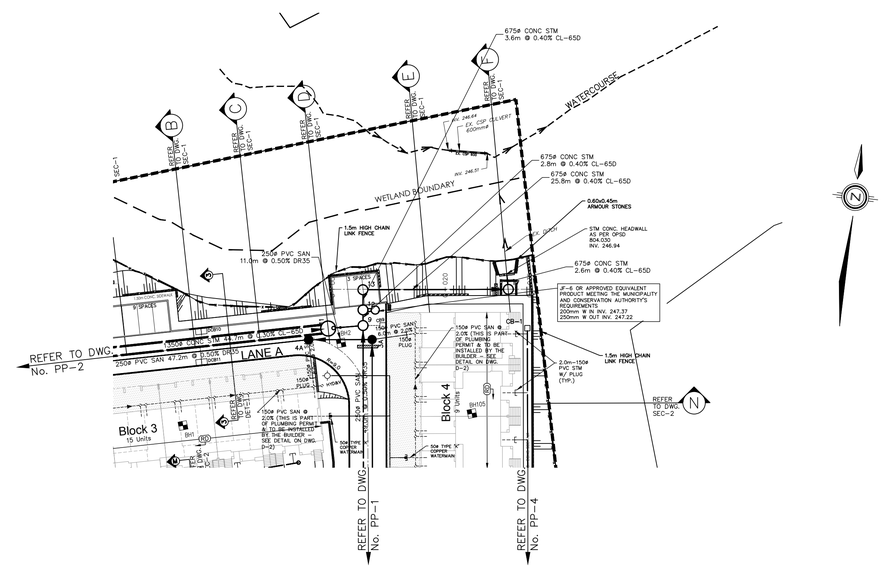

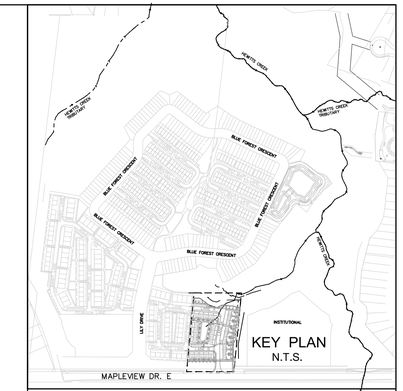

NOTES:

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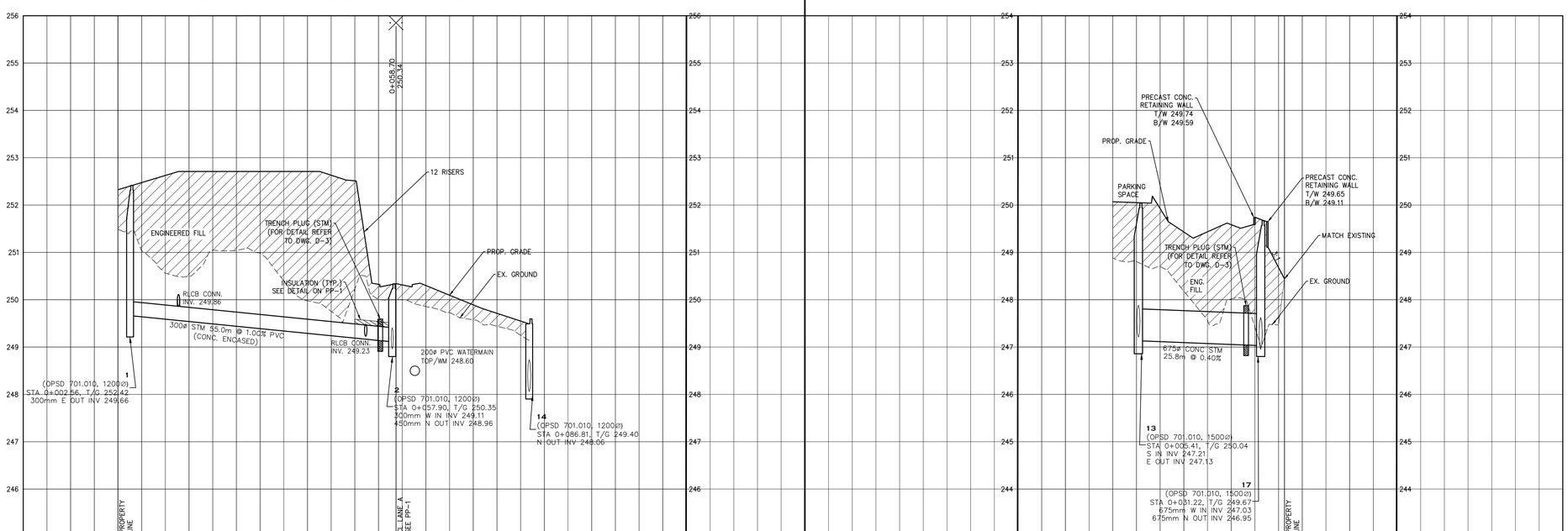
- DENOTES TRENCH PLUG

ALONG SOUTH SIDE OF TH BLOCK 7



EXISTING/PROPOSED ELEVATION	252.32 251.49		252.71 251.04		252.71 249.98		250.31 250.00		249.71 249.44								250.07 248.88		249.44 247.57						EXISTING/PROPOSED ELEVATION
CHAINAGE	0+000.00	0+020.00		0+040.00		0+060.00		0+080.00		0+100.00		0+120.00					0+000.00		0+020.00		0+040.00		0+060.00		CHAINAGE

ROAD PAVEMENT STRUCTURE

COURSE	THICKNESS	OPS SPECIFICATIONS
ASPHALT SURFACE	40mm	HL3 SURFACE COURSE ASPHALT
ASPHALT BINDER	70mm	HL8 BINDING COURSE ASPHALT
GRANULAR BASE	150mm	19mm CRUSHER-RUN LIMESTONE BASE
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BENCH MARKS
DISTANCE NOTE
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U.T.M. COORDINATES: ZONE 17 NAD 83

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
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NO.	REVISIONS	DATE	APPROVED

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REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT 5 2021 PROVINCE OF ONTARIO

CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN
PLAN AND PROFILE
MH-1 to MH-14
STA. 0+000.00 TO STA. 0+120.00
OUTFALL
STA. 0+000.00 TO STA. 0+060.00

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:500	VERT. 1:50	PROJECT NO.	4867
DESIGN M.K.	DRAWN G.B.	SHEET NO.	PP-3
REVIEWED H.T	DATE MARCH 2021		

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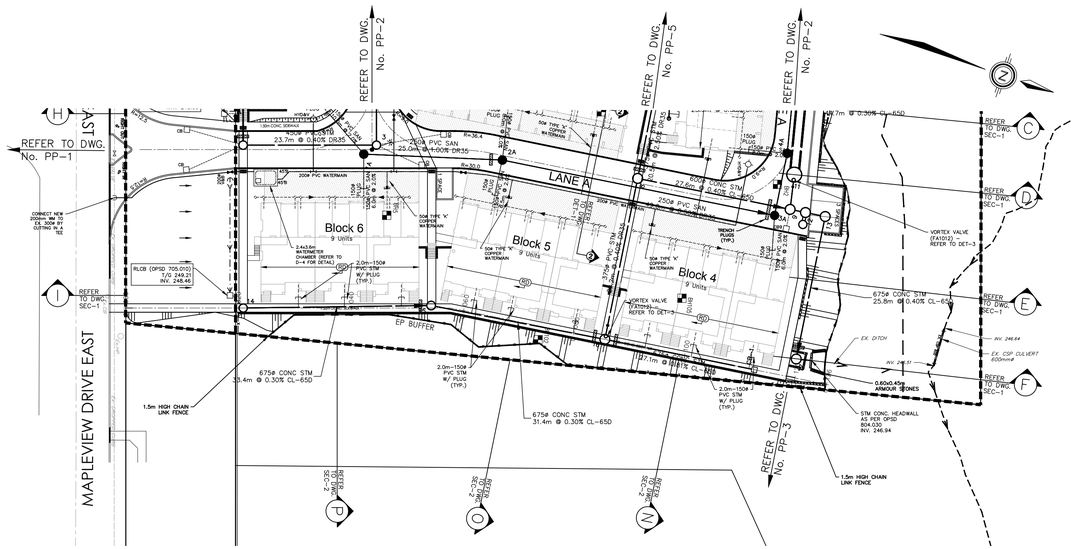
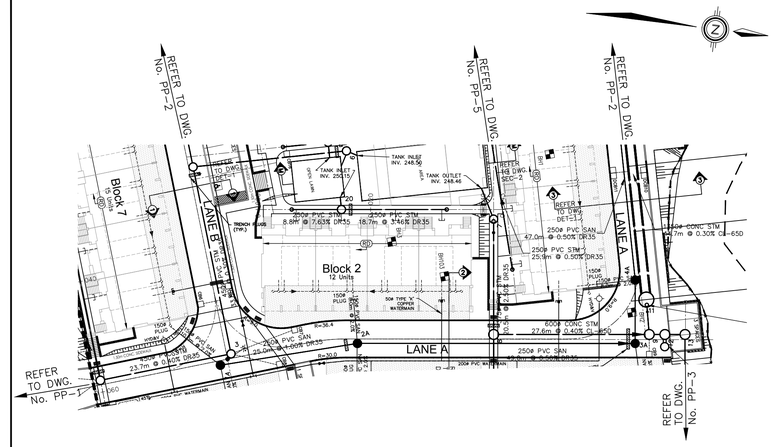
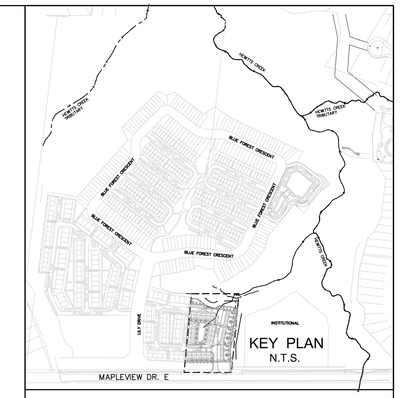


ALONG EAST PROPERTY LINE



ALONG WEST SIDE OF TH BLOCK 2



NOTES:

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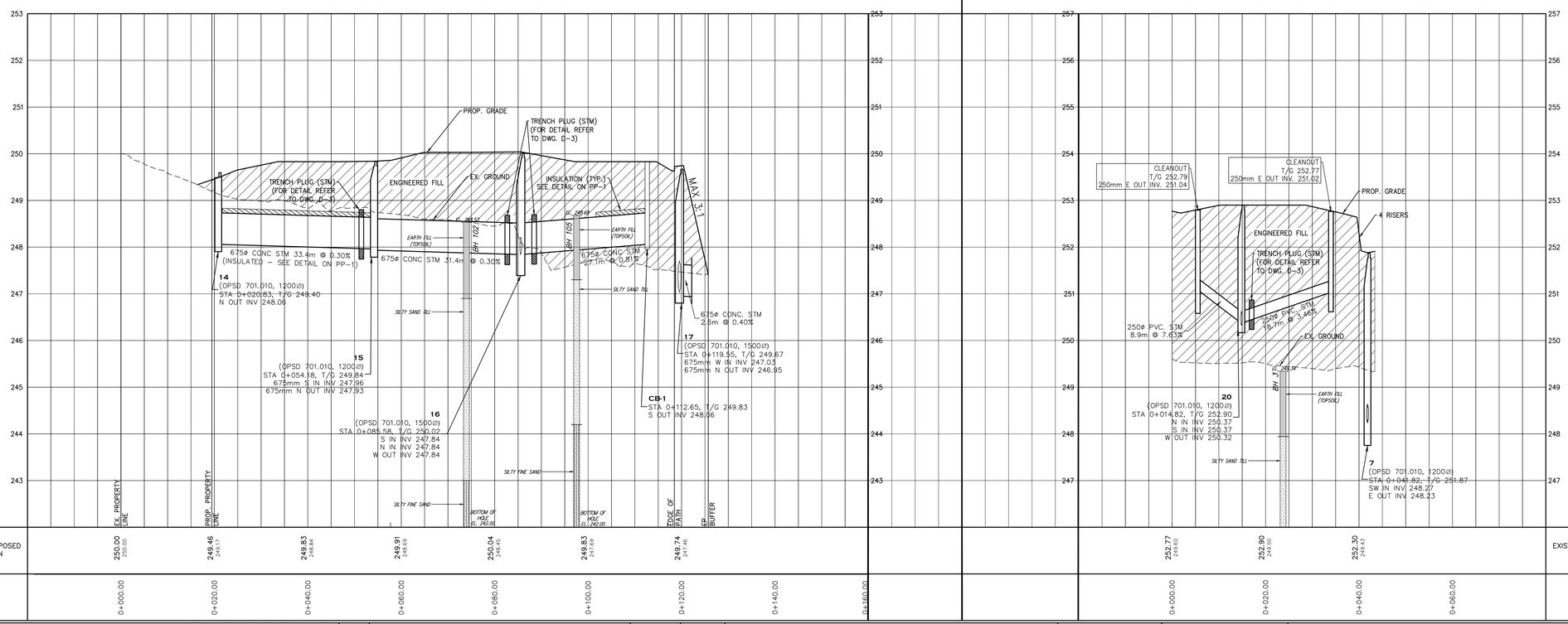

ROAD PAVEMENT STRUCTURE		
COURSE	THICKNESS	OPS SPECIFICATIONS
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BENCH MARKS U.T.M. COORDINATES: ZONE 17 NAD 83

DISTANCE NOTE
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REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2021 PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN
PLAN AND PROFILE
MH-14 to MH-17
STA. 0+000.00 TO STA. 0+160.00
MH-20
STA. 0+000.00 TO STA. 0+060.00

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:500	VERT. 1:50	PROJECT NO.	4867
DESIGN M.K.	DRAWN G.B.	SHEET NO.	PP-4
REVIEWED H.T	DATE MARCH 2021		

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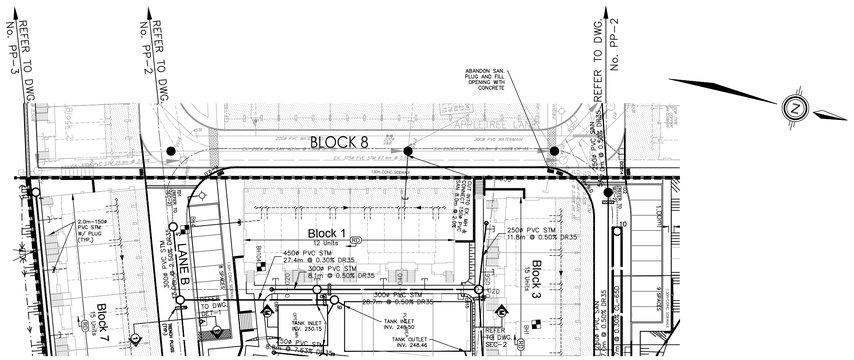
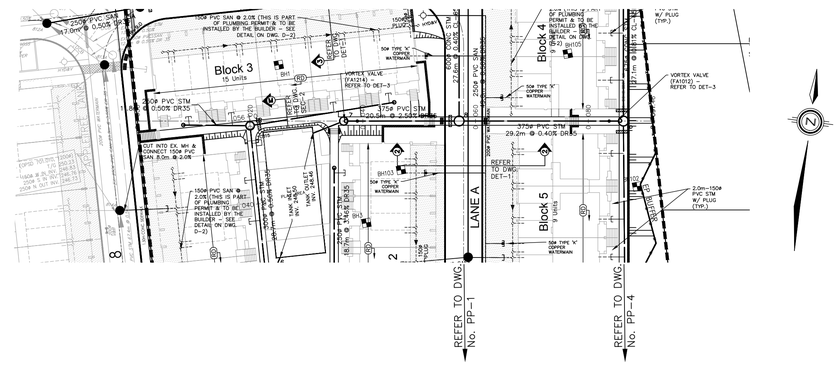
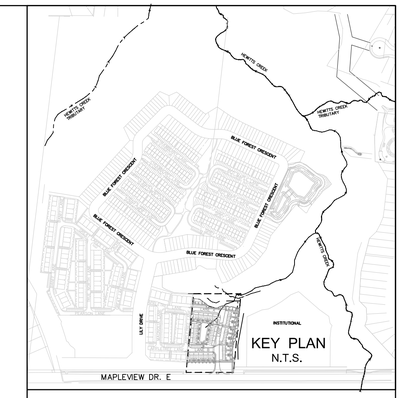






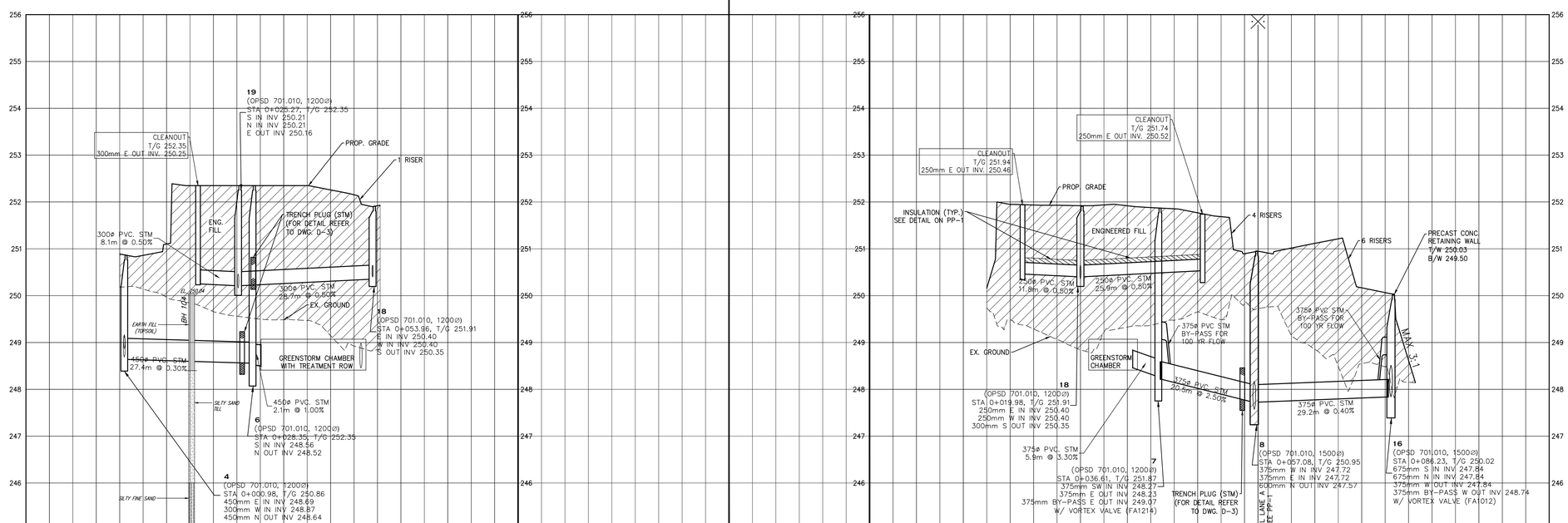
NOTES:

1. FOR GENERAL NOTES REFER TO DWG GN-1.
2. UNDERGROUND SERVICING CONTRACTOR SHALL INSTALL:
   a) 150Ø PVC SANITARY CONNECTION OF EACH INDIVIDUAL BLOCK FROM SANITARY MANHOLE UP TO A PLUG SHOWN ON DRAWING.
   b) 50Ø COPPER WATER CONNECTION OF EACH INDIVIDUAL BLOCK FROM WATERMAIN UP TO CURB STOP.
3. ANY REQUIRED DEWATERING OF SEWER TRENCHES SHALL BE AS PER SOILS REPORT.
4. ALL VERTICAL AND HORIZONTAL WATERMAIN'S BENDS LESS THAN 3.8° DEGREES SHALL BE ACHIEVED BY DEFLECTION (NOT TO EXCEED THE MANUFACTURER'S RECOMMENDED ANGLE) OF ONE OR MORE JOINTS OF THE PIPE. FOR LARGER BENDS STANDARD PREMANUFACTURED BENDS OF 5°, 11.25°, 22.50°, ETC. WILL BE USED. DEFLECTION OF PIPE IS NOT ALLOWED.
5. ALL STORM AND SANITARY SEWERS AND MANHOLE JOINTS SHOULD BE ADEQUATELY SEALED USING A WATERTIGHT RUBBERIZED ADHESIVE MEMBRANE OR EQUIVALENT.
6. ALL MAINTENANCE HOLES SHOULD HAVE SELF LEVELING LIDS AS PER BSD-41. REFER TO D-4 FOR DETAIL.

LEGEND

	DENOTES VALVE AND BOX
	DENOTES HYDRANTS
	DENOTES SINGLE OR DOUBLE CATCHBASIN
	DENOTES SINGLE OR DOUBLE CATCHBASIN WITH HEAVY DUTY HONEYCOMB GRATING BOLTED DOWN
	DENOTES SANITARY MANHOLE
	DENOTES STORM MANHOLE
	DENOTES CATCHBASIN MANHOLE
	DENOTES SITE PLAN BLOCK BOUNDARY
—— X ——	DENOTES 1.5m HIGH CHAIN LINK FENCE
	DENOTES RETAINING WALL
RD	DENOTES LOTS/UNITS WITH FRONT YARD ROOF DOWNSPOUTS CONNECTED TO STORM SEWERS. (SEE NOTE 4c)
	DENOTES TRENCH PLUG

ALONG EAST SIDE OF TH BLOCK 1



ROAD PAVEMENT STRUCTURE		
COURSE	*THICKNESS*	*OPS SPECIFICATIONS*
ASPHALT SURFACE	40mm	HL3 SURFACE COURSE ASPHALT
ASPHALT BINDER	70mm	HL8 BINDING COURSE ASPHALT
GRANULAR BASE	150mm	19mm CRUSHER-RUN LIMESTONE BASE
GRANULAR SUB-BASE	450mm	50mm CRUSHER-RUN LIMESTONE SUB-BASE

BENCH MARKS
DISTANCE NOTE
U.T.M. COORDINATES: ZONE 17 NAD 83
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884
MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.
MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WTH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)
MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH-EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH-EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2021 PROVINCE OF ONTARIO

CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN
PLAN AND PROFILE
MH-4 to MH-18
STA. 0+000.00 TO STA. 0+060.00
MH-7 to MH-16
STA. 0+000.00 TO STA. 0+100.00

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:500	VERT. 1:50	PROJECT NO.	4867
DESIGN M.K.	DRAWN G.B.	SHEET NO.	PP-5
REVIEWED H.T	DATE MARCH 2021		

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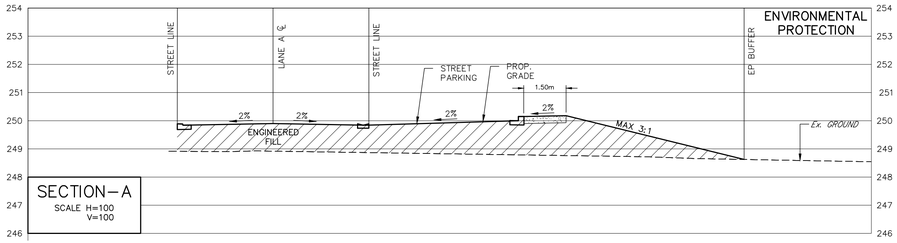

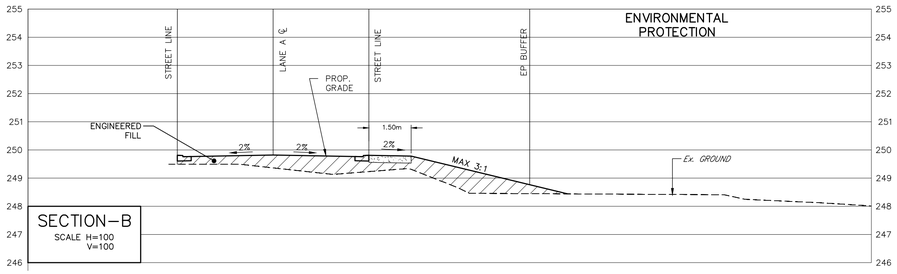

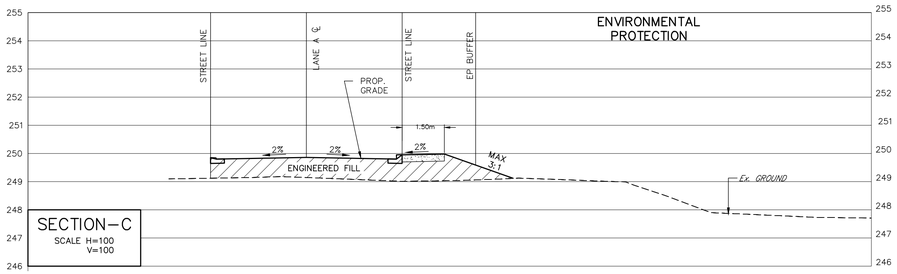

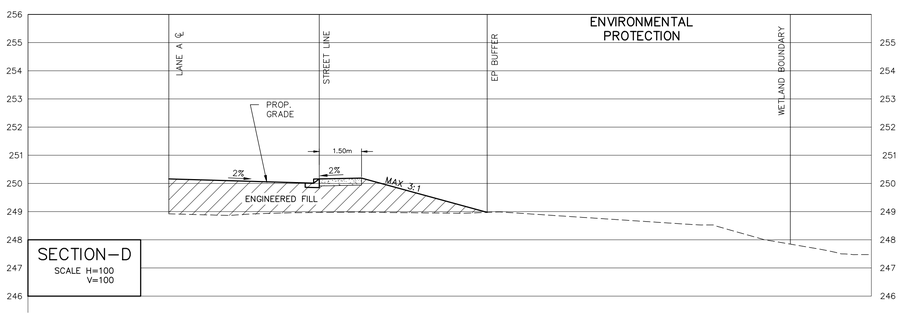

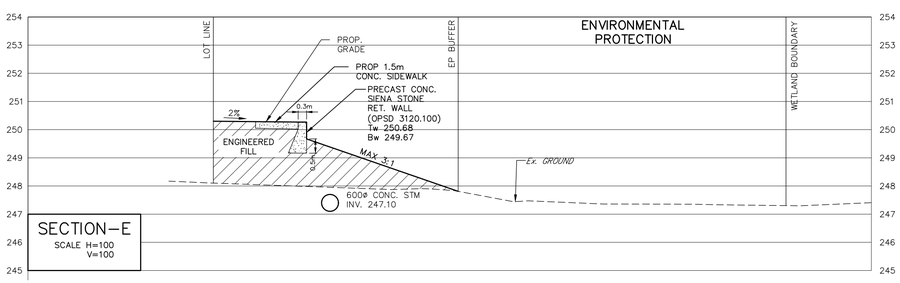

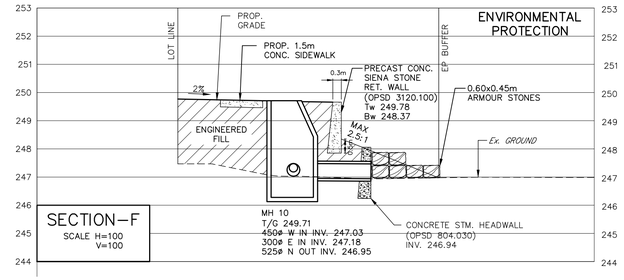

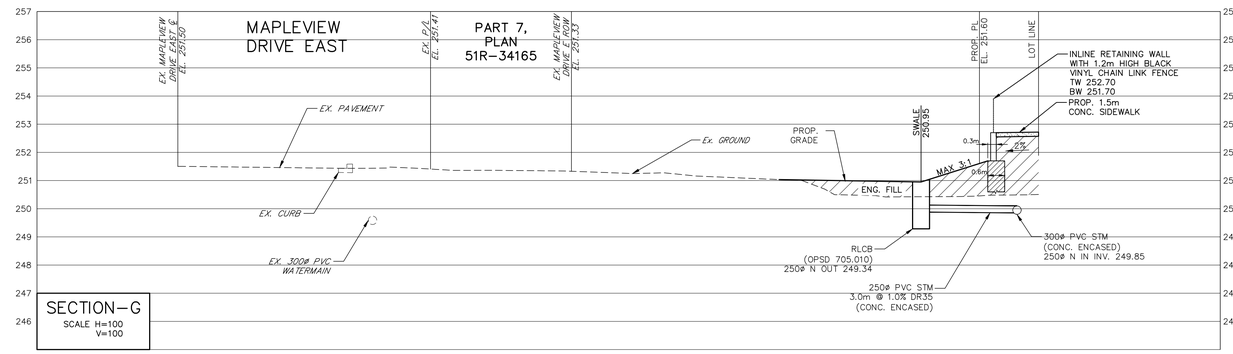

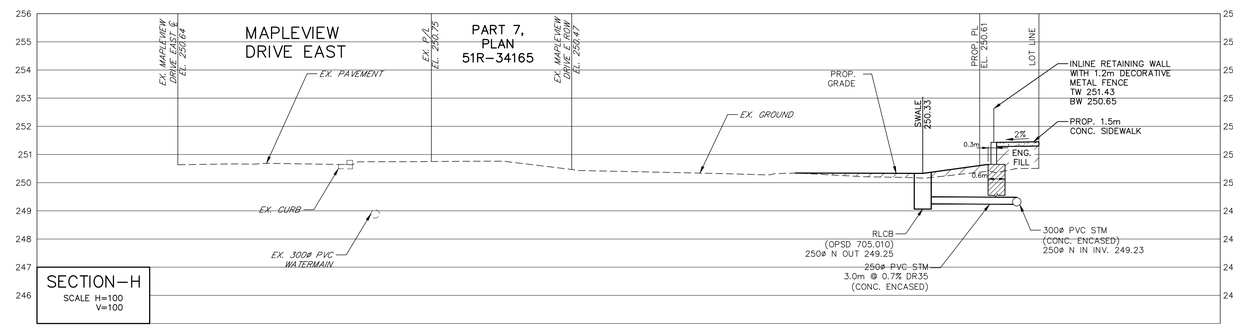

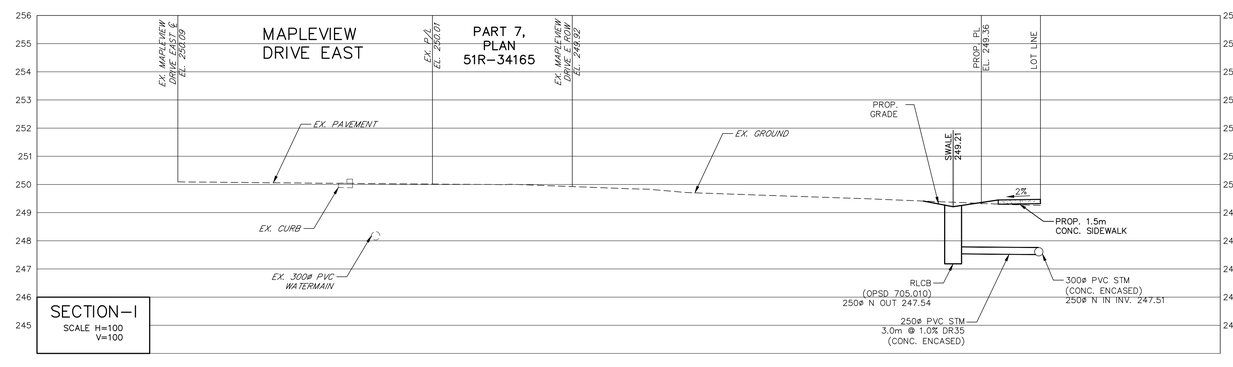

BENCH MARKS U.T.M. COORDINATES: ZONE 17 NAD 83

DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 0312008000B – BENCH MARK No: 0312008000B – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
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MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
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Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2021 PROVINCE OF ONTARIO

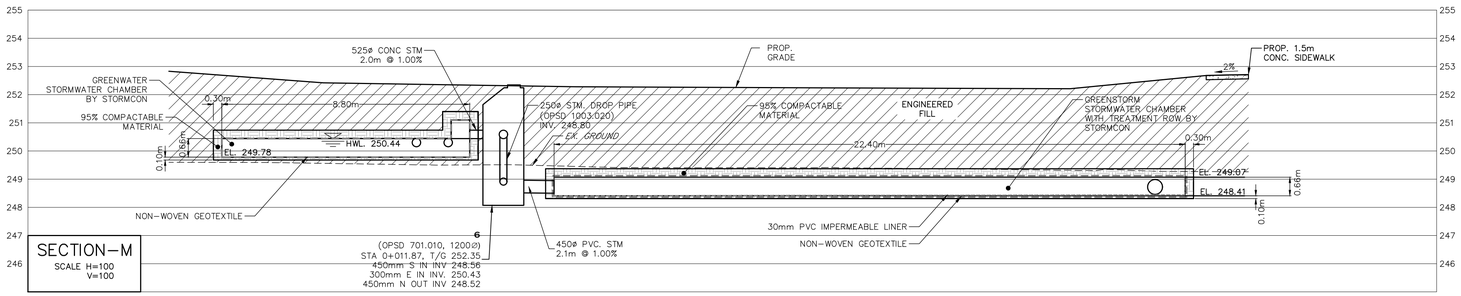
CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

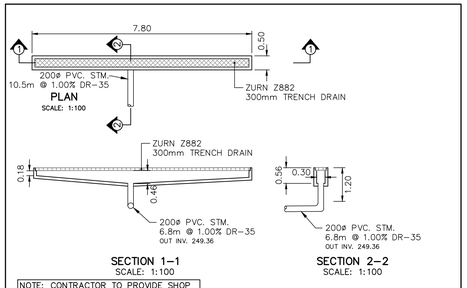
750 MAPLEVIEW DRIVE E.

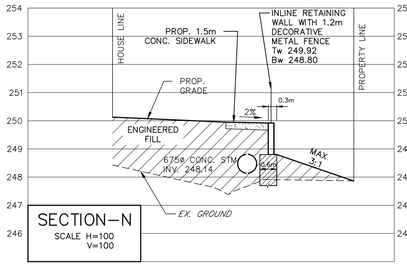
SECTIONS A-A TO I-I

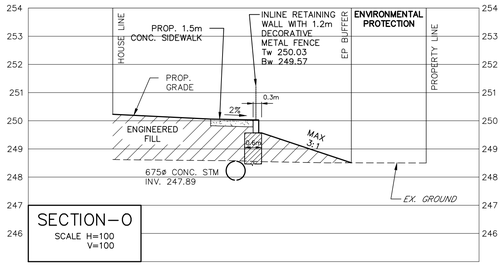
Barrie
ENGINEERING DEPARTMENT

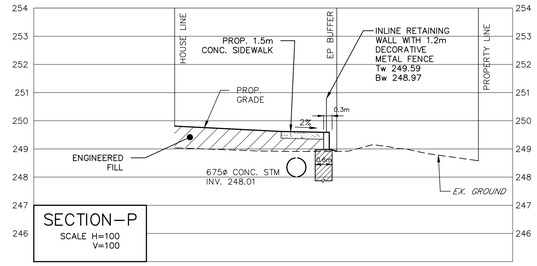
SCALE HOR.	1:100	VERT.	1:100	PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	SEC-1
REVIEWED	H.T.	DATE	MARCH 2021		

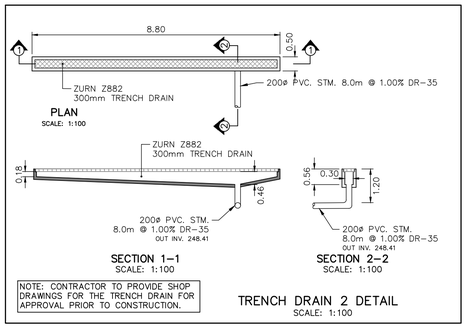


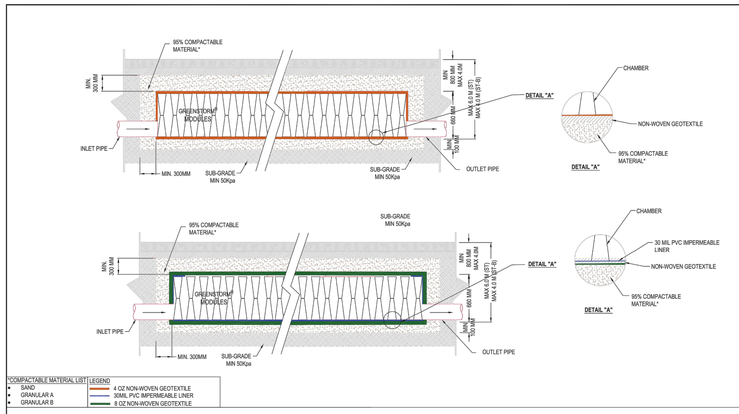








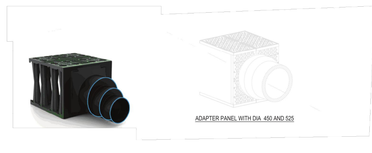




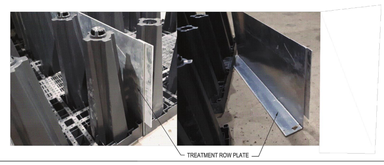
TYPICAL ONE LAYER GREENSTORM CROSS SECTION

STANDARD SIDE PANEL WITH DIRECT PIPE CUT

GREENSTORM ACCESS QUADRO DETAIL(WHERE APPLICABLE)



STANDARD ADAPTER PANEL WITH DIA 450 AND 525



STANDARD TREATMENT ROW DETAIL(WHERE APPLICABLE)

STANDARD GREENSTORM BLOCK DETAIL

BENCH MARKS
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

U.T.M. COORDINATES: ZONE 17 NAD 83

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
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MNR No: 01019860402 – BENCH MARK No: 01086040Z – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord,
Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail:
design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER
H. O. TOZCU
OCT. 5, 2021
PROVINCE OF ONTARIO

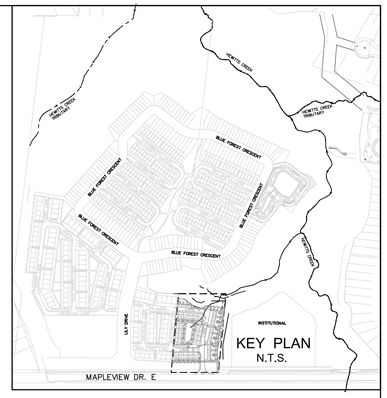
CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

SECTIONS M-M TO P-P
AND GREENSTORM
STORAGE SYSTEM
DETAILS

Barrie
ENGINEERING DEPARTMENT

SCALE HOR.	1:100	VERT.	1:100	PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	SEC-2
REVIEWED	H.T.	DATE	MARCH 2021		



NOTES:

1. FOR GENERAL AND SPECIAL NOTES REFER TO DWG. No. GN-1.
2. SIGNS & PAVING MARKINGS TO BE PLACED AS PER "ONTARIO TRAFFIC MANUAL".
3. MAXIMUM SEPARATION BETWEEN NO PARKING OR NO STOPPING SIGNS TO BE 50m.
4. 'NO PARKING' SIGNS TO BE INSTALLED PRIOR TO OCCUPANCY FOR AFFECTED STREETS.

SIGNAGE LEGEND

- (1) DENOTES SPEED REGULATOR SIGN (Rb-1) 50 km/h
- (2) DENOTES STOP SIGN (Ra-1)
- (3) DENOTES NO PARKING SIGN (Rb-51)
- (5a) DENOTES MODIFIED NO PARKING SIGN (Rb-51)
- (5b) DENOTES MODIFIED NO PARKING SIGN (Rb-51)
- (4) DENOTES DISABLED PARKING PERMIT SIGN (Rb-93)
- (5) DENOTES PEDESTRIAN AHEAD SIGN (Wc-7)
- (6) DENOTES PEDESTRIAN YIELD TO TRAFFIC SIGN (Wc-36)
- × DENOTES STREET NAME SIGN
- DENOTES SOLID WHITE 0.60m THICK STOP BAR
- DENOTES SOLID YELLOW 0.10 (15m ALONG ROADWAY CENTERLINE)
- DENOTES SOLID WHITE 0.10m THICK PAVEMENT MARKING (PEDESTRIAN CROSSING)
- DENOTES STREET LIGHT

BENCH MARKS U.T.M. COORDINATES: ZONE 17 NAD 83

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NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS
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REGISTERED PROFESSIONAL ENGINEER
H. O. TOZCU
OCT. 5, 2021
PROVINCE OF ONTARIO

CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

TRAFFIC CONTROL PLAN

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:400	VERT.	PROJECT NO.	4867
DESIGN M.K.	DRAWN G.B.	SHEET NO.	TC-1
REVIEWED H.T	DATE MARCH 2021		

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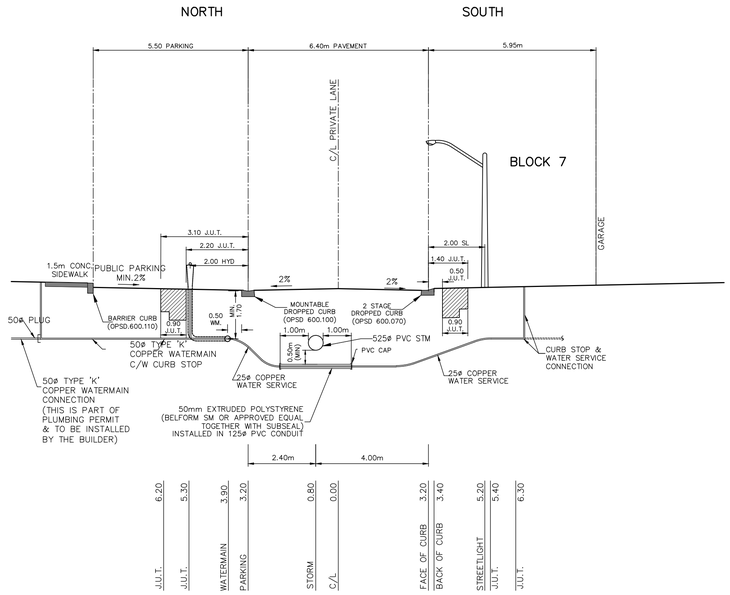
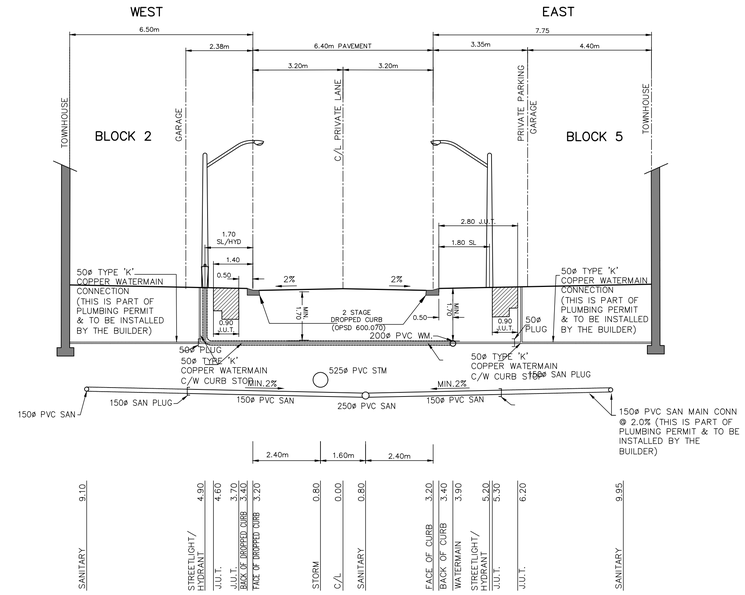
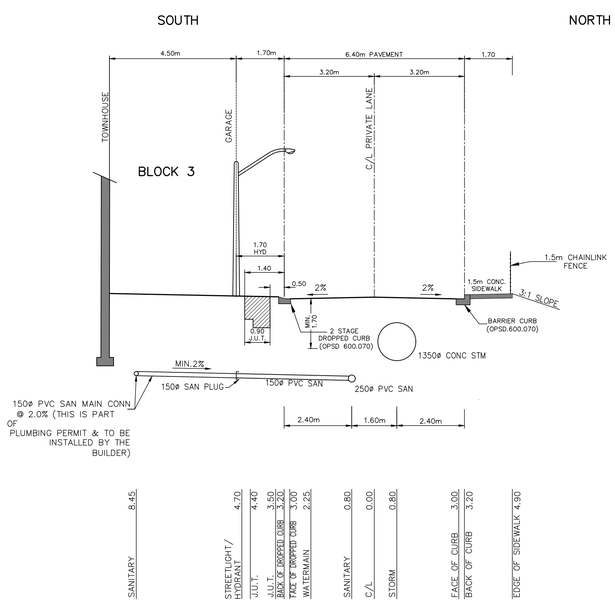


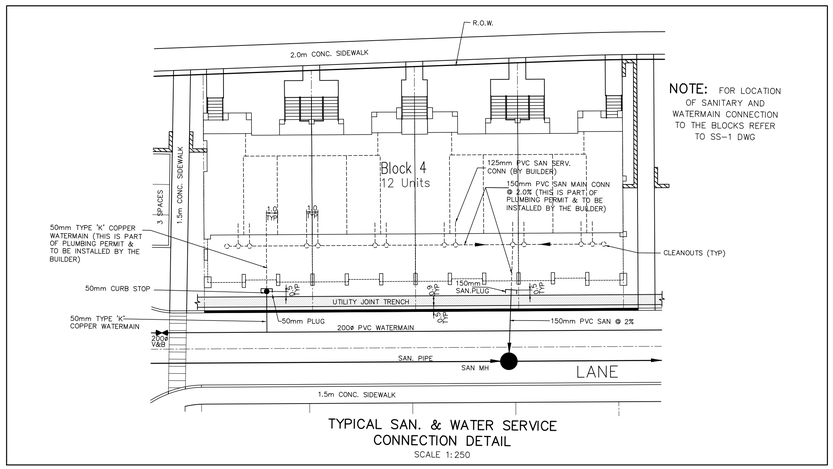
CROSS SECTION 1–1 LANE B
LOTS FRONTING ONE SIDE OF LANEWAY
SCALE 1:100



CROSS SECTION 2–2 LANE A
LOTS FRONTING BOTH SIDES OF LANEWAY
SCALE 1:100



CROSS SECTION 3–3 LANE A
LOTS FRONTING ONE SIDE OF LANEWAY
SCALE 1:100



TYPICAL SAN. & WATER SERVICE
CONNECTION DETAIL
SCALE 1:250

BENCH MARKS
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

U.T.M. COORDINATES: ZONE 17 NAD 83

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER
H. O. TOZCU
OCT. 5, 2020
PROVINCE OF ONTARIO

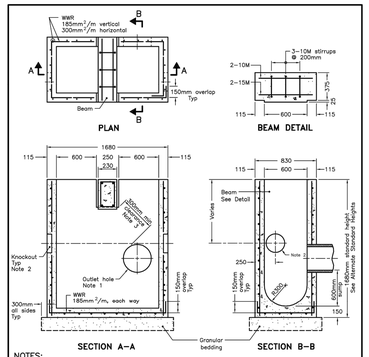
CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN
CROSS SECTIONS J-J TO L-L AND TYPICAL SAN & WATER SERVICE DETAILS

Barrie
ENGINEERING DEPARTMENT

SCALE HOR.	N.T.S.	VERT.		PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	DET-1
REVIEWED	H.T.	DATE	MARCH 2021		

F:\4867\4867 - Drawings\4867-DET.dwg, 2021-10-05 3:35:15 PM, gbustos



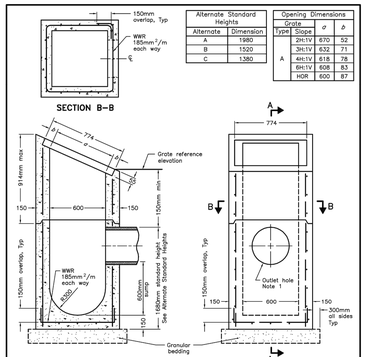
NOTES:
1 Outlet hole size 525mm diameter maximum, location as required.
2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
3 Minimum clearance between beam recess and hole for pipe shall be 300mm or minimum clearance can be 150mm with addition of two 15M size rebar on 45 degree diagonal.
A Centre reinforcing in base slab and walls ±20mm.
B Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
C Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
D Pipe support shall be according to OPSD 708.020.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

ALTERNATE STANDARD HEIGHTS	
ALTERNATIVE	DIMENSION
A	1980
B	1830
C	1680

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2014 | Rev 3

PRECAST CONCRETE TWIN INLET CATCH BASIN
600 x 1450mm

OPSD 705.020



Alternate Standard Heights	
Alternate	Dimension
A	1980
B	1520
C	1380

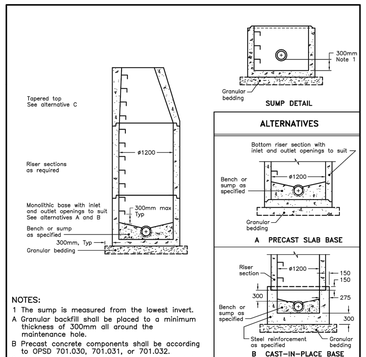
Opening Dimensions			
Grate Type	Slope	a	b
A	2H:1V	670	52
	3H:1V	632	71
	4H:1V	618	78
	6H:1V	608	83
	HOR	600	87

NOTES:
1 Outlet hole size 525mm maximum diameter, location as required.
A Where inlet is placed across ditch and is accessible to vehicular traffic, grating slope shall be 6H:1V or flatter.
B Center reinforcing in wall and slab ±25mm.
C Granular backfill shall be placed to a minimum thickness of 300mm all around the ditch inlet.
D Grating shall be according to OPSD 403.010.
E Pipe support shall be according to OPSD 708.020.
F All dimensions are nominal.
G All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2014 | Rev 3

PRECAST CONCRETE DITCH INLET
600 x 600mm

OPSD 705.030

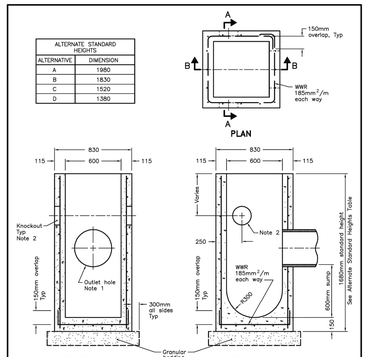


NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
D Pipe support according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2014 | Rev 5

PRECAST CONCRETE MAINTENANCE HOLE
1200mm DIAMETER

OPSD 701.010



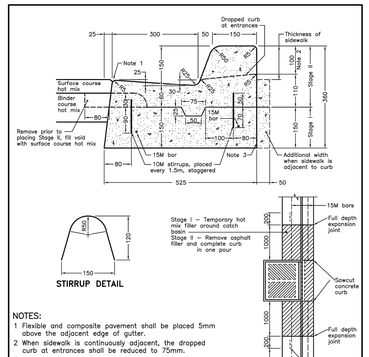
ALTERNATE STANDARD HEIGHTS	
ALTERNATIVE	DIMENSION
A	1980
B	1830
C	1520
D	1380

NOTES:
1 Outlet hole size 525mm diameter maximum, location as required.
2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
A Centre reinforcing in base slab and walls ±20mm.
B Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
C Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
D Pipe support shall be according to OPSD 708.020.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2014 | Rev 3

PRECAST CONCRETE CATCH BASIN
600x600mm

OPSD 705.040

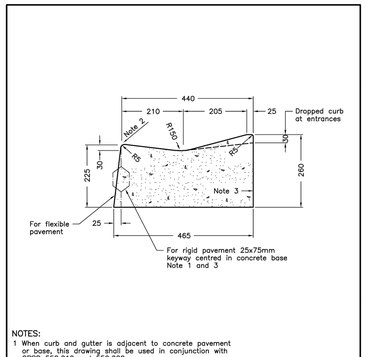


NOTES:
1 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.
2 When sidewalk is continuously adjacent, the dropped curb at entrances shall be reduced to 75mm.
3 For slipforming procedure a 5% batter is acceptable.
A Stage I surface shall be cleaned of foreign material prior to placement of Stage II material.
B Treatment at entrances shall be according to OPSD 351.010.
C Outlet treatment shall be according to the OPSD 610 Series.
D The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail, when it shall be according to the OPSD 900 Series.
E All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2012 | Rev 2

CONCRETE BARRIER CURB WITH STANDARD GUTTER
TWO STAGE CONSTRUCTION

OPSD – 600.070

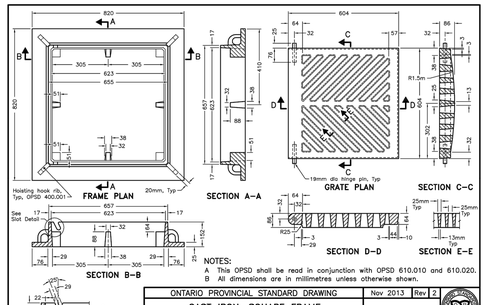


NOTES:
1 When curb and gutter is adjacent to concrete pavement or base, this drawing shall be used in conjunction with OPSD 552.010 and 552.020.
2 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.
3 For slipforming procedure a 5% batter is acceptable.
A Treatment at entrances shall be according to OPSD 351.010.
B Outlet treatment shall be according to the OPSD 610 Series.
C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2012 | Rev 2

CONCRETE MOUNTABLE CURB WITH NARROW GUTTER

OPSD 600.100

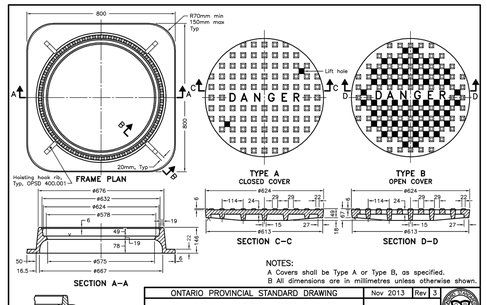


NOTES:
A This OPSD shall be read in conjunction with OPSD 610.010 and 610.020.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2013 | Rev 3

CAST IRON, SQUARE FRAME WITH SQUARE FLAT GRATE FOR CATCH BASINS, HERRING BONE OPENINGS

OPSD 400.020

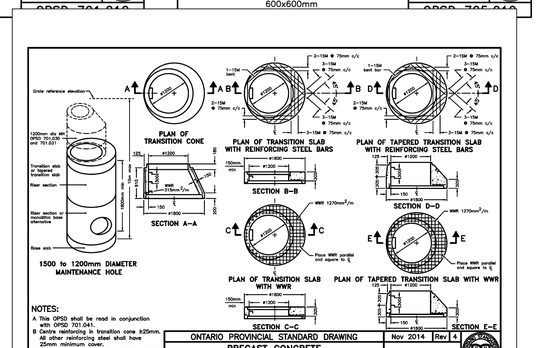


NOTES:
A Covers shall be Type A or Type B, as specified.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2013 | Rev 3

CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES

OPSD 401.010

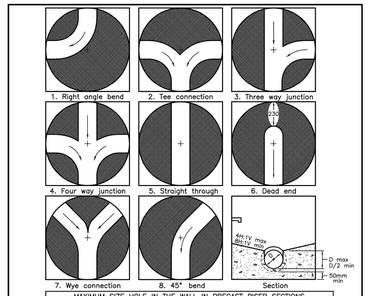


NOTES:
A This OPSD shall be read in conjunction with OPSD 701.041.
B Centre reinforcing in transition cone ±25mm. All other reinforcing steel shall have 25mm minimum cover.
C Steps shall be according to OPSD 405.010 or 405.020.
D All dimensions are nominal.
E All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2014 | Rev 4

PRECAST CONCRETE MAINTENANCE HOLE COMPONENTS
1500mm DIAMETER
TRANSITION CONE AND SLABS

OPSD 701.040



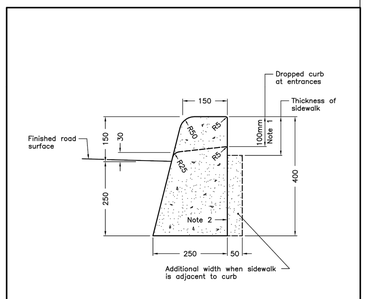
MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS					
	No. 7				
Maintenance Hole Diameter	No. 1–4	No. 5 and 6	No. 8	Inlet Hole	Outlet Hole
1200	700	860	780	700	860
1500	860	1220	960	860	1170
1800	1220	1485	1220	1220	1485
2400	1485	2020	1760	1485	2020
3000	1930	2450	2300	1930	2450
3600	2470	3085	2730	2470	3085

NOTES:
1 Slopes shall be maintained from the outlet hole opening for top of benching.
A Concrete for benching shall be 30MPa.
B When benching is hand-finished, it shall be given wood float finish, channel shall be given steel trowel finish.
C Benching slope and height shall be as specified.
D When specified, maintenance holes that are 1200mm in diameter with a uniform channel for 200 or 250mm pipe may be prebenched at the manufacturer with standardized benching slope and channel orientation.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2014 | Rev 4

MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES

OPSD 701.021

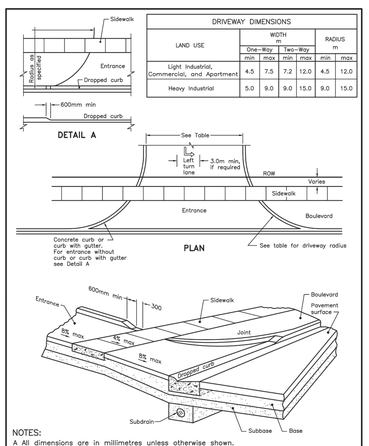


NOTES:
1 When sidewalk is continuously adjacent, the dropped curb at entrances shall be reduced to 75mm.
2 For slipforming procedure a 5% batter is acceptable.
A Treatment at entrances shall be according to OPSD 351.010.
B Outlet treatment shall be according to the OPSD 610 Series.
C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2012 | Rev 2

CONCRETE BARRIER CURB

OPSD 600.110



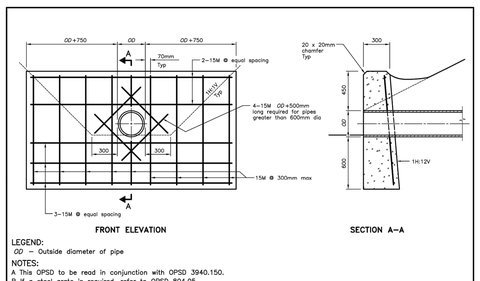
DRIVEWAY DIMENSIONS						
LAND USE	WIDTH m				RADIUS m	
	One-Way		Two-Way			
	min	max	min	max	min	max
Light Industrial, Commercial, and Apartment	4.5	7.5	7.2	12.0	4.5	12.0
Heavy Industrial	5.0	9.0	9.0	15.0	9.0	15.0

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

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2018 | Rev 2

URBAN INDUSTRIAL, COMMERCIAL, AND APARTMENT ENTRANCES

OPSD 350.010



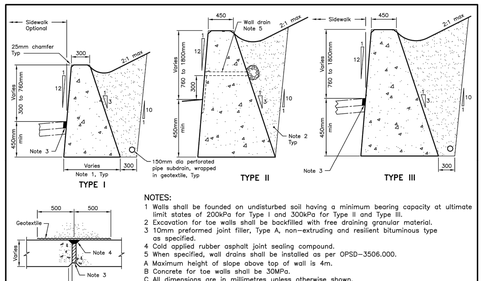
LEGEND:
OD – Outside diameter of pipe

NOTES:
A This OPSD to be read in conjunction with OPSD 3940.150.
B If a steel grate is required, refer to OPSD 804.05.
C Class of concrete: 30MPa.
D Cover to reinforcing bars 70mm ± 20mm.
E All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2017 | Rev 2

CONCRETE HEADWALL
FOR PIPE LESS THAN 900mm DIAMETER

OPSD 804.030

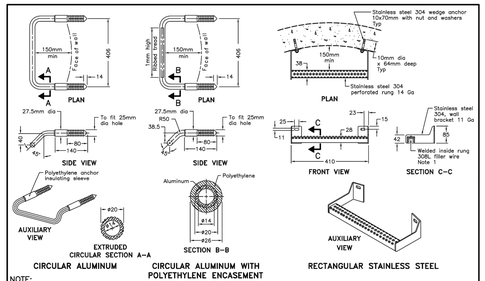


NOTES:
1 Walls shall be founded on undisturbed soil having a minimum bearing capacity at ultimate limit states of 200kPa for Type I and 300kPa for Type II and Type III.
2 Excavation for toe walls shall be backfilled with free draining granular material.
3 10mm preformed joint filler, Type A, non-extruding and resilient bituminous type as specified.
4 Cold applied rubber asphalt joint sealing compound.
5 When specified, wall drains shall be installed as per OPSD–3506.000.
A Maximum height of slope above top of wall is 4m.
B Concrete for toe walls shall be 30MPa.
C All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2004 | Rev 0

WALLS RETAINING CONCRETE TOE WALL DETAILS

OPSD – 3120.100

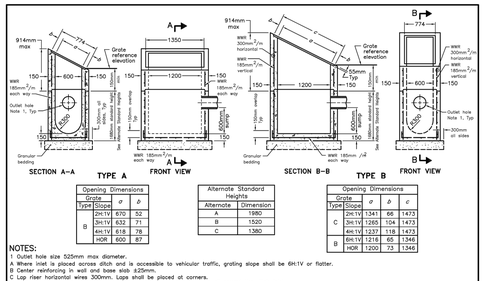


NOTE:
1 The company undertaking welded fabrication shall be certified according to CSA W47.1. All welding shall be according to CSA W59.
A All aluminium components shall be 6000 series structural aluminum.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2013 | Rev 3

MAINTENANCE HOLE STEPS
HOLLOW

OPSD 405.010



Opening Dimensions			
Grate Type	Slope	a	b
B	2H:1V	670	52
	3H:1V	632	71
	4H:1V	618	78
	HOR	600	87

Alternate Standard Heights	
Alternate	Dimension
A	1980
B	1520
C	1380

Opening Dimensions			
Grate Type	Slope	a	b
C	2H:1V	1341	66
	3H:1V	1265	104
	4H:1V	1237	118
	6H:1V	1216	65
	HOR	1200	73

NOTES:
1 Outlet hole size 525mm max diameter.
A Where inlet is placed across ditch and is accessible to vehicular traffic, grating slope shall be 6H:1V or flatter.
B Center reinforcing in wall and base slab ±25mm.
C Lap rear horizontal wires 300mm. Laps shall be placed at corners.
D Granular backfill shall be placed to a minimum thickness of 300mm all around the ditch inlet.
E Grating shall be according to OPSD 403.010.
F Pipe support shall be according to OPSD 708.020.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2014 | Rev 3

PRECAST CONCRETE DITCH INLETS
600 x 1200mm

OPSD 705.040

BENCH MARKS
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

U.T.M. COORDINATES: ZONE 17 NAD 83

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 01086040 2 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH-EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH-EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.

6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2020 PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN

STANDARD OPSD DETAILS

Barrie
ENGINEERING DEPARTMENT

SCALE HOR.	N.T.S.	VERT.		PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	DET-2
REVIEWED	H.T.	DATE	MARCH 2021		

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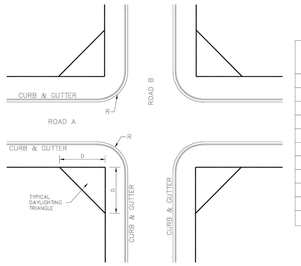


INTERSECTION TYPE ROAD "A" TO ROAD "B"	CURB R	D
LOCAL TO LOCAL	10.0	–
LOCAL TO MINOR COLLECTOR	10.0	3
MINOR COLLECTOR TO MINOR COLLECTOR	12.5	3
MINOR COLLECTOR TO MAJOR COLLECTOR	12.5	5
INDUSTRIAL TO INDUSTRIAL	18.0	10
MINOR COLLECTOR TO ARTERIAL	12.5	5
INDUSTRIAL TO MAJOR COLLECTOR	18.0	10
INDUSTRIAL TO ARTERIAL	18.0	10
MAJOR COLLECTOR TO MAJOR COLLECTOR	12.5	5
MAJOR COLLECTOR TO ARTERIAL	12.5	10
ARTERIAL TO ARTERIAL	15.0	10

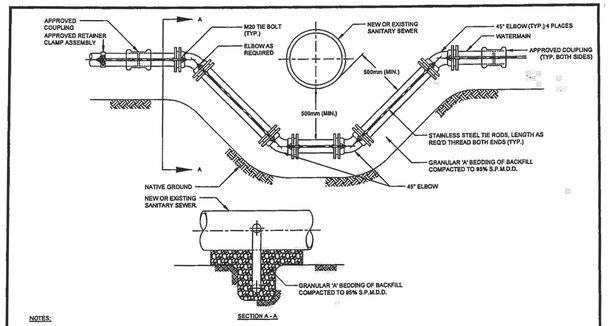
NOTES:
1. NUMEROUS OTHER DESIGN CRITERIA TO CONFORM WTH MTO DOCUMENT GEOMETRIC DESIGN STANDARDS FOR ONTARIO HIGHWAYS (METRIC).
2. ALL ROADS TO INTERSECT AT 90°.
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.

CITY OF BARRIE STANDARD

TYPICAL INTERSECTION REQUIREMENTS

NO.	REVISION	APR'D	DATE

APR'D: R.G.N. DATE: 92.05.15
DRAWN: L.A.J. SCALE: N.T.S.
BSD-12



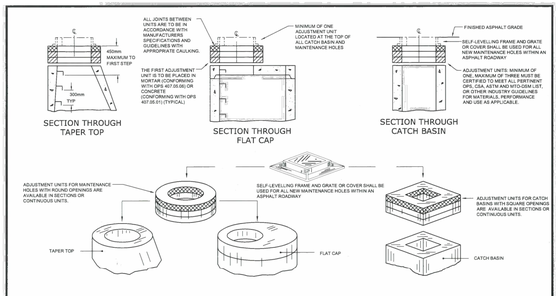
NOTES:
1. MATERIAL FOR LOWERING SHALL BE DUCTILE IRON IF EXISTING MATERIAL IS METALLIC.
2. UNITS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. ALL JOINTS TO BE MECHANICALLY RESTRAINED, INCLUDING JOINTS ON EXISTING WATERMAIN.

City of BARRIE STANDARD DETAIL

LOWERING DETAIL AT NEW OR EXIST. WATERMAIN CROSSING OF NEW OR EXIST. SANITARY SEWER

REV No. 1 DATE: FEB 2015 SCALE: N.T.S. BSD-518

APPROVED DATE 6 Feb 2015 DIRECTOR of ENGINEERING



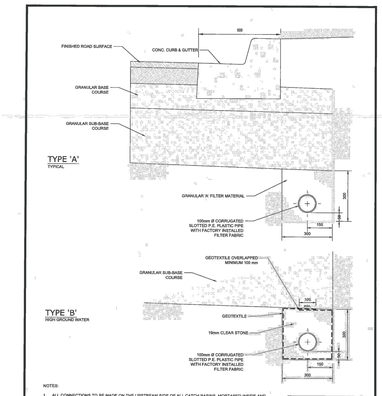
NOTES:
1. ADJUSTMENT UNITS SHALL NOT EXTEND BEYOND THE OUTSIDE EDGE OF THE STRUCTURE.
2. MAINTENANCE HOLE TOPS (FRAMES) ARE TO BE SET IN BASE ASPHALT GRADE AND THEN ADJUSTED TO FINAL GRADE WHEN TOP LIFT OF ASPHALT IS PLACED.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
4. IF A STEP IS REQUIRED IN AN ADJUSTMENT UNIT, THEN THE ADJUSTMENT UNIT SHALL BE OF THE TYPE MANUFACTURED WITH A STEP IN PLACE.

Barrie STANDARD DETAIL

MAINTENANCE HOLE AND CATCH BASIN ADJUSTMENT UNITS

REV No. 2 DATE: OCT 2017 SCALE: N.T.S. BSD-41

APPROVED DATE Oct 26/17 DIRECTOR of ENGINEERING



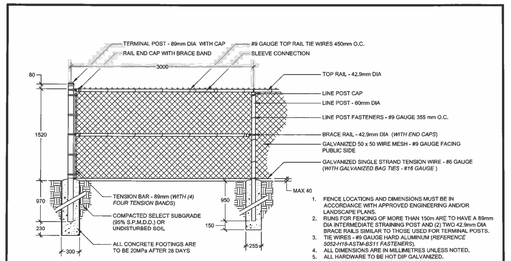
NOTES:
1. ALL CONNECTIONS TO BE MADE ON THE UPSTREAM SIDE OF ALL CATCH BASINS, MORTARED INSIDE AND OUTSIDE.
2. ALL PIPES TO BE PLUGGED AT THE HIGH END WITH A MANUFACTURED PLUG.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
4. FOR SELECTION OF TYPE 'A' AND TYPE 'B' SUBDRAINS REFER TO CITY OF BARRIE TRANSPORTATION DESIGN MANUAL.
5. TYPE 'B' - THE SUBDRAIN TRENCH SHALL BE LINED WITH CLASS II, NON-WOVEN GEOTEXTILE, WITH AN F.O.S. OF 75-100 µm AND A MINIMUM THICKNESS OF 1 mm.

APPROVED DATE Oct 26/17 DIRECTOR of ENGINEERING

Barrie STANDARD DETAIL

TYPICAL 100mm SUBDRAIN DETAIL

REV No. 1 DATE: OCT 2017 SCALE: N.T.S. BSD-315



1. FENCE LOCATIONS AND DIMENSIONS MUST BE IN ACCORDANCE WITH APPROVED ENGINEERING AND/OR LANDSCAPE PLANS.
2. RUNS FOR FENCING OF MORE THAN 150m ARE TO HAVE A 89mm DIA INTERMEDIATE STRAINING POST AND (2) TWO 42.9mm DIA STRAINING POSTS IN ADDITION TO THE POSTS FOR TERMINAL POSTS.
3. TIE WIRES - #9 GAUGE HARD ALUMINUM (REFERENCE 5052-H18-ASTM-B211 FASTENERS).
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED.
5. ALL HARDWARE TO BE HOT DIP GALVANIZED.
6. NO GATES ARE PERMITTED FROM PROPERTY.
7. ONLY USE SCHEDULE 40 GALVANIZED PIPE.
8. FENCING TO BE INSTALLED SOLELY ON MUNICIPAL PROPERTY WITH AN INSET OF 150 TO FENCE CENTRE LINE.
9. THE TOP OF WIRE MESH SHALL BE KNUCKLED OVER SUCH THAT NO SHARP PROJECTIONS ARE VISIBLE OVER THE TOP RAIL.

The City of BARRIE STANDARD DETAIL

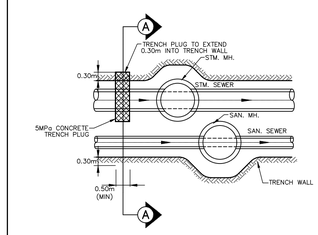
1.52m CHAIN LINK PARK FENCING

REV No. 1 DATE: JUNE 2015 SCALE: N.T.S. BSD-1210 FORMERLY BSD-21

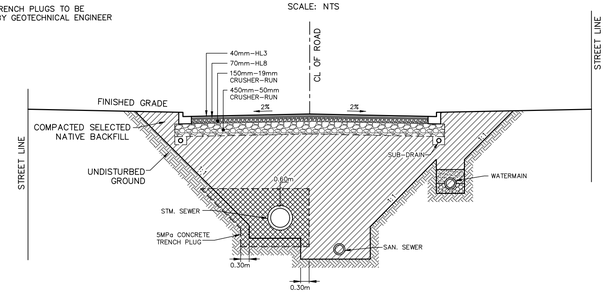
APPROVED DATE June 11/15 DIRECTOR of ENGINEERING

PLAN VIEW
SCALE: NTS

NOTE:
EXACT LOCATION OF TRENCH PLUGS TO BE DETERMINED ON SITE BY GEOTECHNICAL ENGINEER

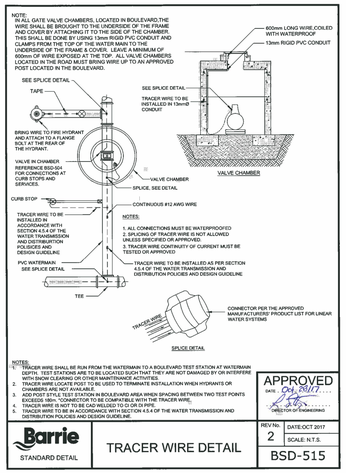


SECTION A–A
SCALE: NTS



TRENCH PLUG – TYPICAL DETAIL
STORM SEWER TRENCH (DEWATERING AREAS)

NOTE:
IN ALL GATE VALVE CHAMBERS, LOCATED IN BOULEVARD,THE WIRE SHALL BE BROUGHT TO THE UNDERSIDE OF THE FRAME AND COVER, AT THE HIGHEST POINT IN THE VALVE CHAMBER AND SHALL BE CONTAINED IN A 13mm RIGID PVC CONDUIT AND CLAMPS FROM THE TOP OF THE WATER MAIN TO THE UNDERSIDE OF THE FRAME & COVER. LEAVE A MINIMUM OF 600mm OF WIRE EXPOSED AT THE TOP. ALL VALVE CHAMBERS LOCATED IN THE ROAD MUST BRING WIRE UP TO AN APPROVED POST LOCATED IN THE BOULEVARD.



NOTES:
1. ALL CONNECTIONS MUST BE WATERPROOFED
2. SPLICING OF TRACER WIRE IS NOT ALLOWED UNLESS SPECIFIED OR APPROVED.
3. TRACER WIRE CONTINUITY OF CURRENT MUST BE TESTED ON APPROVED
4. TRACER WIRE TO BE INSTALLED AS PER SECTION 4.5.4 OF THE WATER TRANSMISSION AND DISTRIBUTION POLICIES AND DESIGN GUIDELINE.

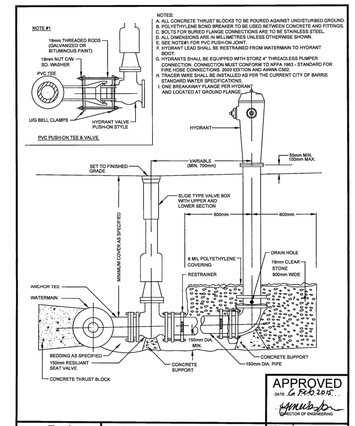
NOTES:
1. TRACER WIRE SHALL BE RUN FROM THE WATERMAIN TO A BOULEVARD TEST STATION AT WATERMAIN DEPTH. TEST STATIONS ARE TO BE LOCATED SUCH THAT THEY ARE NOT DAMAGED BY OR INTERFERE WITH SNOW CLEARING OR OTHER MAINTENANCE ACTIVITIES.
2. TRACER WIRE LOCATE POST TO BE USED TO TERMINATE INSTALLATION WHEN HYDRANTS OR CHAMBERS ARE NOT AVAILABLE.
3. ADD POST STYLE TEST STATION IN BOULEVARD AREA WHEN SPACING BETWEEN TWO TEST POINTS EXCEEDS 180m. *CONNECTOR TO BE COMPATIBLE WITH THE TRACER WIRE.
4. TRACER WIRE TO BE INSTALLED ON TOP OF WATER MAIN PIPE
5. TRACER WIRE TO BE INSTALLED AS PER SECTION 4.5.4 OF THE WATER TRANSMISSION AND DISTRIBUTION POLICIES AND DESIGN GUIDELINE.

APPROVED DATE Oct 26/17 DIRECTOR of ENGINEERING

Barrie STANDARD DETAIL

TRACER WIRE DETAIL

REV No. 2 DATE: OCT 2017 SCALE: N.T.S. BSD-515



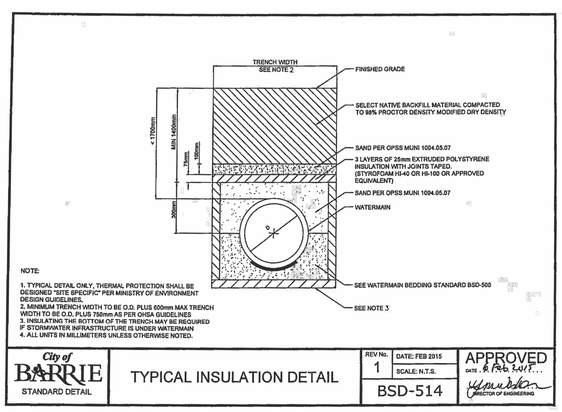
NOTES:
A. ALL CONCRETE: THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED GROUND.
B. POLYETHYLENE BOND BREAKER TO BE USED BETWEEN CONCRETE AND FITTINGS.
C. BOLTS FOR BURIED FLANGE CONNECTIONS ARE TO BE STAINLESS STEEL.
D. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
E. SEE NOTE#1 FOR PVC PUSH-ON JOINT.
F. HYDRANT LEAD SHALL BE RESTRAINED FROM WATERMAIN TO HYDRANT BOOT.
G. HYDRANTS SHALL BE EQUIPPED WITH STORZ 4" FIREHOSE COUPLER (CONNECTION TYPE STORZ COUPLER INSERT CONFORM TO NFPA 1963 STANDARD FOR FIRE HOSE CONNECTIONS, 2003 EDITION AND AWWA C602.
H. TRACER WIRE SHALL BE INSTALLED AS PER THE CURRENT CITY OF BARRIE STANDARD WATER SPECIFICATIONS.
I. ONE BREAKAWAY FLANGE PER HYDRANT AND LOCATED AT GROUND FLANGE.

APPROVED DATE 6 Feb 2015 DIRECTOR of ENGINEERING

City of BARRIE STANDARD DETAIL

STANDARD HYDRANT AND VALVE INSTALLATION

REV No. 1 DATE: FEB 2015 SCALE: N.T.S. BSD-507 (PREVIOUSLY BSD-50)



NOTE:
1. TYPICAL DETAIL ONLY. THERMAL PROTECTION SHALL BE DESIGNED "SITE SPECIFIC" PER MINISTRY OF ENVIRONMENT DESIGN GUIDELINES.
2. MINIMUM TRENCH WIDTH TO BE O.D. PLUS 600mm MAX TRENCH WIDTH TO BE O.D. PLUS 750mm AS PER OHSA GUIDELINES
3. INSULATING THE BOTTOM OF THE TRENCH MAY BE REQUIRED IF STORMWATER INFRASTRUCTURE IS UNDER WATERMAIN
4. ALL UNITS IN MILLIMETERS UNLESS OTHERWISE NOTED.

City of BARRIE STANDARD DETAIL

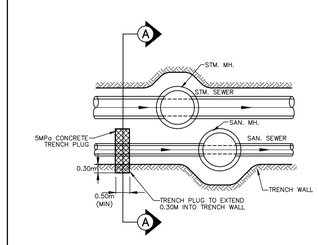
TYPICAL INSULATION DETAIL

REV No. 1 DATE: FEB 2015 SCALE: N.T.S. BSD-514

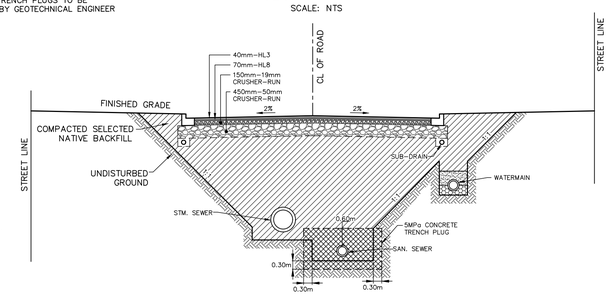
APPROVED DATE 6 Feb 2015 DIRECTOR of ENGINEERING

PLAN VIEW
SCALE: NTS

NOTE:
EXACT LOCATION OF TRENCH PLUGS TO BE DETERMINED ON SITE BY GEOTECHNICAL ENGINEER



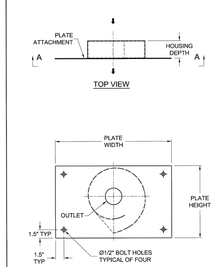
SECTION A–A
SCALE: NTS



TRENCH PLUG – TYPICAL DETAIL
SANITARY SEWER TRENCH (DEWATERING AREAS)

NOTES
1. FLUIDIC-AMP SIZES VARY BASED ON SITE REQUIREMENTS (SEE FLOW CHARTS)
2. ATTACHMENT PLATE WIDTH AND HEIGHT VARIES BASED ON CONCRETE OPENING SIZE
3. ATTACHMENT MAY BE MADE BY A PLATE (AS SHOWN), A SLEEVE OR A BOLTING FLANGE
4. OUTLET SIZE VARIES BASED ON DESIRED OUTFLOW RATES (Ø3" MINIMUM)
5. ALL WELDS CONTINUOUS UNLESS NOTED OTHERWISE

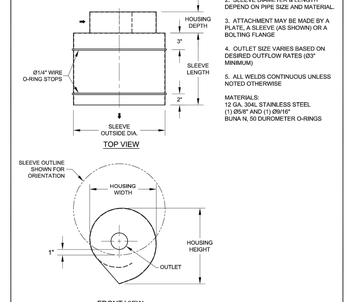
MATERIALS:
12 GA. 304L STAINLESS STEEL



The CONTECH Stormwater Solutions Group (CSG) is by the sole purpose of providing information that control devices to be furnished by CONTECH Stormwater Solutions and may only be installed or other documents exactly as provided by CONTECH Stormwater Solutions. "Site specific information, including but not limited to, plans, specifications, calculations, shop drawings and other documents, is provided to the recipient or specifier only for review and approval thereof. Products to be part of the CSG! We without prior coordination with CONTECH Stormwater

CONTECH STORMWATER SOLUTIONS contechstormwater.com

TYPICAL DETAIL
FLUIDIC-AMP™ HYDROBRAKE
WITH PLATE ATTACHMENT
NOT INTENDED FOR CONSTRUCTION PURPOSES
DATE: 4/1/08 SCALE: NONE FILE NAME: TYPFAPLT DRAWN: JBB CHECKED: MDD



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CONTECH STORMWATER SOLUTIONS contechstormwater.com

TYPICAL DETAIL
FLUIDIC-AMP™ HYDROBRAKE
WITH SLEEVE ATTACHMENT
NOT INTENDED FOR CONSTRUCTION PURPOSES
DATE: 4/1/08 SCALE: NONE FILE NAME: TYPFAWLL DRAWN: JBB CHECKED: MDD

BENCH MARKS
U.T.M. COORDINATES: ZONE 17 NAD 83
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 01086402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2021 PROVINCE OF ONTARIO

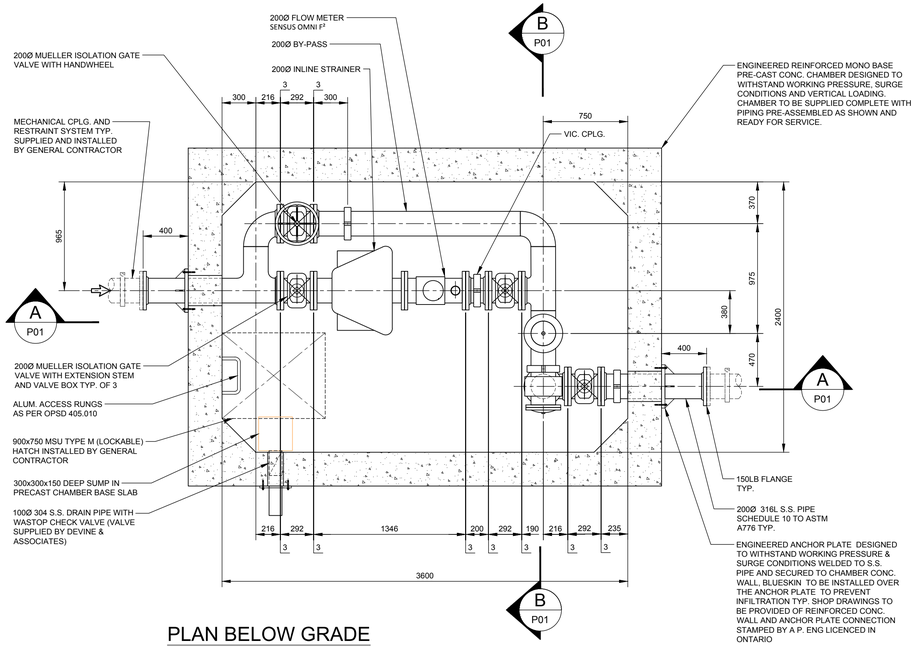
CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN

STANDARD CITY OF BARRIE DETAILS
TYPICAL TRENCH PLUG DETAILS
TYPICAL VORTEX VALVE DETAILS

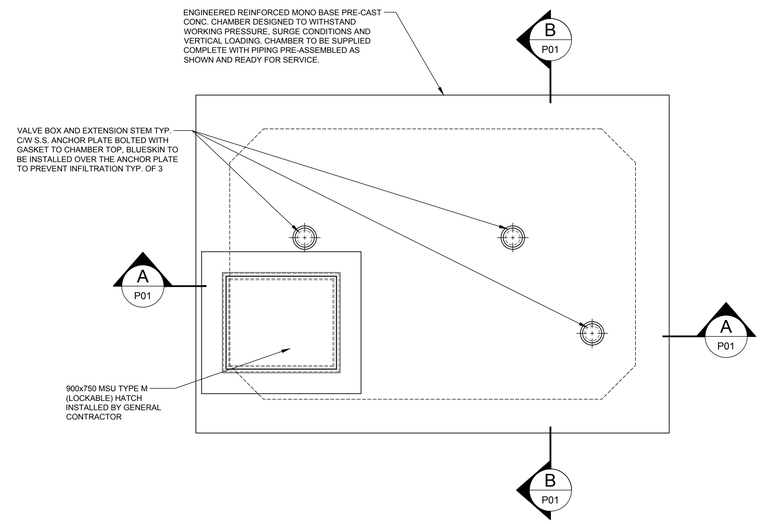
Barrie
ENGINEERING DEPARTMENT

SCALE HOR.	N.T.S.	VERT.		PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	DET-3
REVIEWED	H.T.	DATE	MARCH 2021		



PLAN BELOW GRADE

1:25

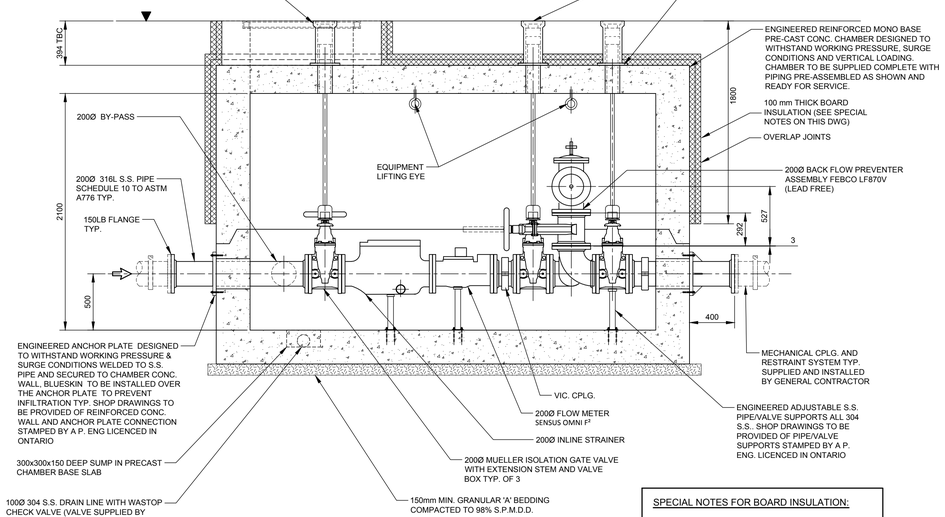


PLAN AT GRADE

1:25

NOTE:

1. FOR GENERAL NOTES REFER TO DWG. GN-1.
2. WHEN CHAMBER IS INSTALLED ON SITE CONTRACTOR IS TO APPLY BLUESKIN WATERPROOFING TO THE EXTERIOR SURFACES OF THE CHAMBER AND THEN APPLY INSULATION BOARD TO THE TOP AND SIDES OF THE CHAMBER (TO SIDES AT LEAST 1.8 METERS BELOW GRADE).
3. CHAMBER CEILING TO BE CORED WHERE REQUIRED TO SUIT VALVE EXTENSION STEMS. VALVE BOXES TO BE SUPPLIED AND INSTALLED SUCH THAT THEY PREVENT GROUND WATER INFILTRATION AND ARE ADJUSTABLE TO SUIT FINISHED GRADE. ASSEMBLY TO INCLUDE S.S. FLANGED SPOOL, WITH GASKET, BOLTED TO CHAMBER ROOF AND THEN BLUESKINNED. FERNCO COUPLER TO CONNECT TO ABOVE S.S. SPOOL AND TO VALVE BOX. HOSE CLAMPS ON FERNCO TO SECURE ITEMS IN POSITION.
4. FLOW METER: SENSUS OMNI F2 WATER METER WITH STRAINER. UL/FM APPROVED. PER CITY OF BARRIE STANDARDS.
5. BACKFLOW PREVENTER: WATTS, FEBCO LF870V N-PATTERN DOUBLE CHECK VALVE ASSEMBLY. EPOXY COATED DUCTILE IRON BODY, OSY RESILIENT WEDGE GATE VALVES.
6. GATE VALVES - MUELLER A-2362 RESILIENT WEDGE GATE VALVES, ANSI B16.1 CLASS 125 FLANGED ENDS, DUCTILE IRON BODY, FUSION BOND EPOXY COATED IN/OUT. AWWA C509 COMPLIANT.
7. EXTENSION STEMS TO BE WELDED CONSTRUCTION AND INCLUDE 50mm MALE & FEMALE OPERATING NUTS AND 38mm SOLID ROUND BAR. ALL COMPONENTS TO BE MANUFACTURED FROM 304 S.S.
8. ALL BOLTS AND NUTS TO BE 304 S.S. NC HEX HEAD.
9. PRE-ASSEMBLED CHAMBER SUPPLIER TO BE RESPONSIBLE FOR FUNCTIONAL PERFORMANCE OF ALL ITEMS WITHIN THE CHAMBER. SUPPLIER TO HAVE SUPPLIED MINIMUM OF FIVE (5) PRE-ASSEMBLED VALVE CHAMBERS IN ONTARIO.
10. PRE-ASSEMBLED VALVE CHAMBER TO BE SUPPLIED BY DEVINE & ASSOCIATES LIMITED OR APPROVED EQUIVALENT.
11. ALL PIPING TO BE PRESSURE TESTED, FLUSHED AND CHLORINATED & TESTED ACCORDING TO AWWA STANDARD C651-14 DISINFECTING WATER MAINS. AWWA STANDARD C655-09 SHALL BE USED WHEN DE-CHLORINATION OF CHLORINATED WATER IS REQUIRED.
12. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR THE CHAMBER AND MAJOR COMPONENTS OF THE CHAMBER FOR APPROVAL PRIOR TO CONSTRUCTION.
13. EXTERNAL COUPLINGS AND RESTRAINTS TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR
14. THE CONTRACTOR TO BE RESPONSIBLE FOR START-UP AND COMMISSIONING OF ALL ITEMS WITHIN THE CHAMBER. THIS INCLUDES CERTIFICATION OF THE FEBCO LF870V BACKFLOW PREVENTER, CONFIRMATION THAT THE SENSUS OMNI F2 FLOW METER IS FUNCTIONING CORRECTLY AND FUNCTIONAL TESTING OF THE REMAINING CHAMBER VALVES. ALSO, THE CONTRACTOR TO PROVIDE A TRAINING SESSION TO CITY OF BARRIE STAFF.

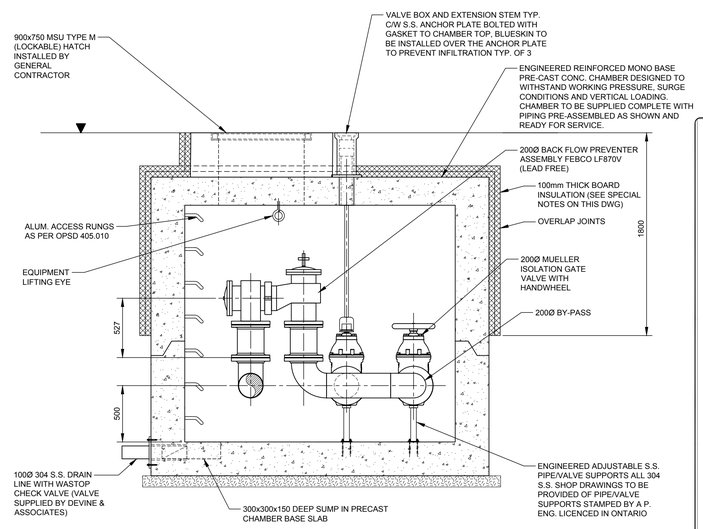


SECTION A

1:25

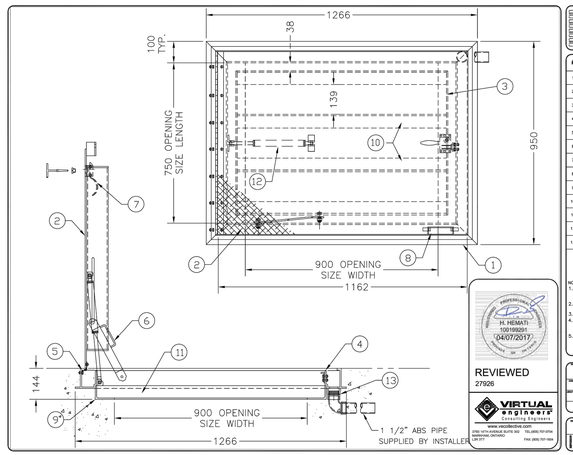
SPECIAL NOTES FOR BOARD INSULATION:

1. 100mm THICK INSULATION TO BE PROVIDED AS TWO LAYERS OF 50mm STYROFOAM SM. (DOW HI-40) OR EQUIVALENT.
2. STAGGER INSULATION JOINTS
3. BOARD INSULATION TO BE INSTALLED AFTER THE APPLICATION OF BLUESKIN WATERPROOFING OR APPROVED EQUAL.



SECTION B

1:25



REVIEWED
27926

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CERTIFICATE OF AUTHORIZATION
www.virtualengineers.com
1255 NORTH SERVITE RD. SUITE 400 Hollywood, Florida 33021 USA
TEL: (855) 701-0104
FAX: (855) 701-1104

MSU
MISSISSAUGA LTD.
PHONE: (905) 823-4340
FAX: (905) 823-4847
WATTS: (866) 360-0336

#	QTY.	MATERIAL	DESCRIPTION
1	4	ALUMINUM 6061-T6	FRAME EXTRUSION #PS750-1
2	1	ALUMINUM 6061-T6	1/4 " TREAD PLATE
3	2	ALUMINUM 6061-T6	10 X 127MM FLAT BAR REINFORCING
4	1	BLACK CORD NEOPRENE	PERIMETER SEALING GASKET
5	1	STAINLESS STEEL, 316	CONTINUOUS FORMED HINGE C/W 1/4" SNAPERPROOF FASTENERS
6	1	STAINLESS STEEL, 316	90 DEG. HOLD OPEN ARM C/W 1/4"X ROD FORMED HANDLE
7	1	STAINLESS STEEL, 316	SLAM LOCK C/W ALUM. REMOVABLE SEALING PLUG AND OPENING TOOL
8	1	ALUMINUM 6061-T6	PLUSH LIFT HANDLE
9	2	ALUMINUM 6061-T6	ANGLE 89 X 64 X 6
10	4	ALUMINUM 6061-T6	C-CHANNEL 127 X 64 X 6.4 X 9.5
11	1	ALUMINUM 6061-T6	6 X 64MM FLAT BAR
12	1	STAINLESS STEEL, 316	GAS SPRING ASSIST CYLINDER C/W ALUM. MOUNTING BRACKETS
13	1	ALUMINUM 6061-T6	1 1/2" NOM. PIPE HALF-COUPLING C/W 1 1/2" ABS ADAPTER/ELBOW

NOTES:
1. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL RECEIVE 2 COATS OF BITUMINOUS PAINT.
2. WELDING SHALL CONFORM TO CSA STD. W59 AND W47.1.
3. WELDED SIZES REMAIN AS WELDED.
4. HATCH IS DESIGNED TO SUPPORT AASHTO H20 (14,000) WHEEL LOAD WITH MAX. DEFLECTION OF 1/150TH OF THE SPAN.
5. MSU ACCEPTS NO RESPONSIBILITY FOR THE DESIGN OF THE CONCRETE HOUSING THE HATCH.

PROJECT: CORMORANT & OSPREY BIO014 WWPS UPGRADES
CONTRACTOR: ALBIERICI CONSTRUCTORS
DISCIPLINE: ENGINEER
DR. 1 CHECK No. #

MSU MH20 ACCESS HATCH

No.	DATE	BY	REVISION	DATE	BY	CHECK	SCALE
0			ISSUED FOR REVIEW	04/07/17	HTS	HT	1:45/32

DWG. No. 900x750MH20

DEVINE & ASSOCIATES LTD.
1 VALLEYWOOD DR. SUITE 101, MARKHAM, ONTARIO L3R 5L9
PHONE: 905.479.2130
FAX: 905.479.9870
www.devineassoc.com

BENCH MARKS — U.T.M. COORDINATES: ZONE 17 NAD 83

DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER — H. O. TOZCU — OCT. 5, 2020 — PROVINCE OF ONTARIO

CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.
SITE PLAN

BULK WATER METER AND BACK FLOW PREVENTER CHAMBER

Barrie
ENGINEERING DEPARTMENT

SCALE HOR.	N.T.S.	VERT.		PROJECT NO.	4867
DESIGN	M.K.	DRAWN	G.B.	SHEET NO.	DET-4
REVIEWED	H.T.	DATE	MARCH 2021		

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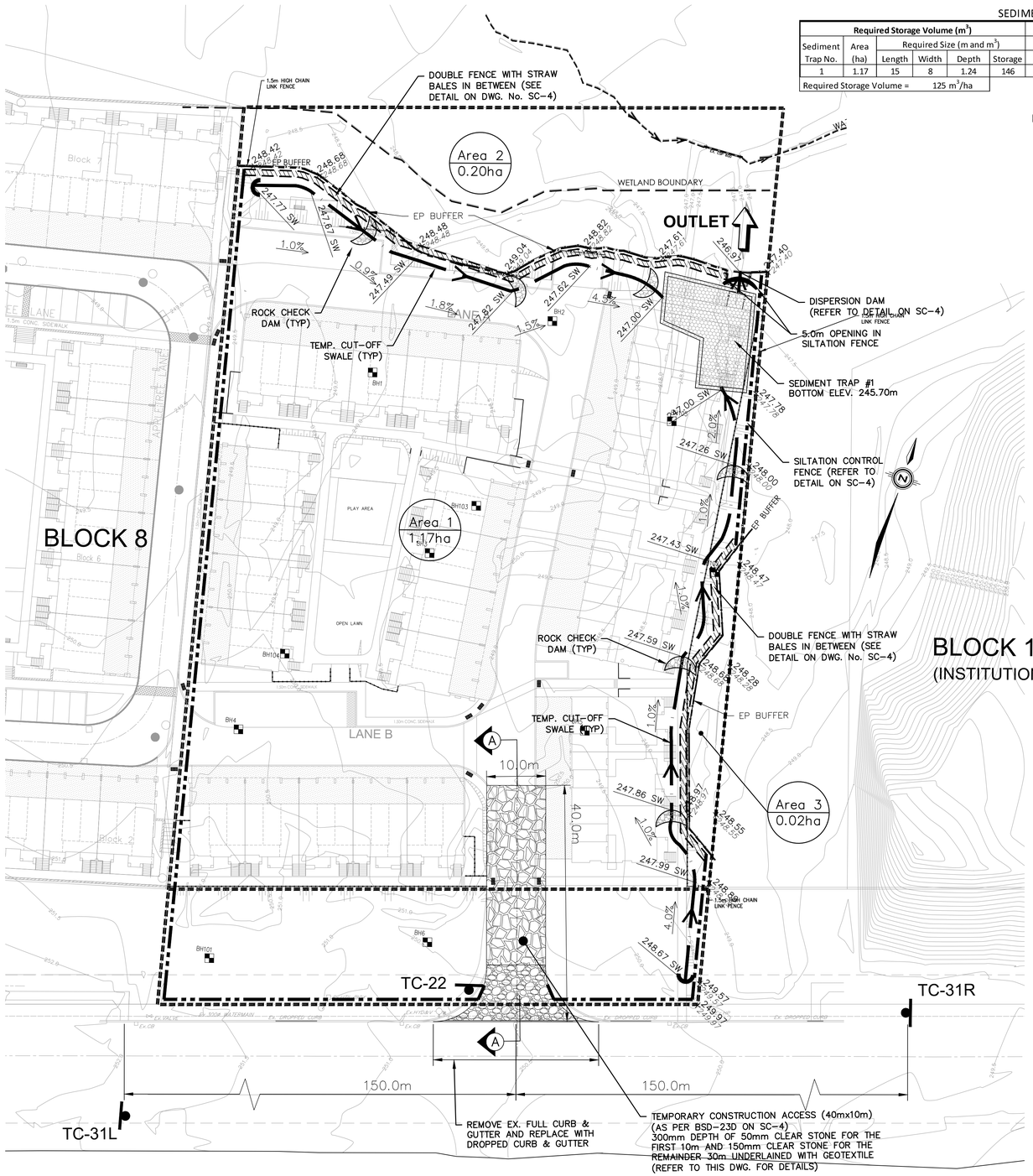


SEDIMENT TRAP SIZING

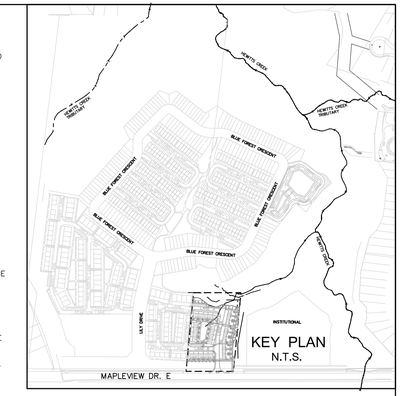
Sediment Trap No.	Area (ha)	Required Storage Volume (m^3)				Proposed Sized and Provided Storage Volume (m^3)							
		Required Size (m and m^3)				Length (m)			Width (m)			Depth	Storage
		Length	Width	Depth	Storage	Top	Bottom	Average	Top	Bottom	Average	(m)	(m^3)
1	1.17	15	8	1.24	146	16.2	15.0	15.6	8.7	7.5	8.1	1.2	151.6
Required Storage Volume = 125 m^3/ha													

EROSION AND SEDIMENT CONTROL PHASING NOTES:

1. INSPECT THE EXISTING SEDIMENT CONTROL MEASURES AND REPAIR/REPLACE THE DAMAGED PARTS
2. CONSTRUCT THE MUD MAT SHOWN ON DRAWING SC-1 ACCORDING TO DETAILS ON DRAWING SC-4
3. CONSTRUCT THE PROPOSED SEDIMENT TRAP(S), CUT OFF SWALES WITH ASSOCIATED ROCK CHECK DAMS AS SHOWN ON DRAWINGS SC-1 AND SC-2
4. CHECK WEATHER FORECAST AND SCHEDULE THE TOPSOIL STRIPPING OPERATIONS DURING DRY WEATHER
5. IF GROUNDWATER SEEPAGE TO SURFACE AND/OR OTHER GROUNDWATER FLOWING CONDITIONS ARE OBSERVED/ENCOUNTERED DURING TOPSOIL STRIPPING AND ROUGH GRADING OPERATIONS, WORKS TO CEASE UNTIL SUCH TIME AS THE SITUATION HAS BEEN RESOLVED AND/OR DESIGN WORKS ARE ALTERED TO ACCOMMODATE THE EXISTING CONDITIONS, ALL TO THE SATISFACTION OF LSRCA.
6. COMPLETE TOPSOIL STRIPPING OPERATIONS UNDER DRY WEATHER CONDITIONS AT PHASED MANNER TO LIMIT THE EXTENT OF DISTURBANCE.
7. STABILIZE THE DISTURBED AREAS WITH SEEDING, BLANKETS, DIRT GLUE, POLYMER OR SILT STOP POLYMER IF LEFT UNWORKED WITHIN 30 DAYS
8. THROUGHOUT AND SUBSEQUENT TO THE CONSTRUCTION PERIOD, EROSION AND SEDIMENT CONTROL MEASURES TO BE MONITORED/INSPECTED WEEKLY, MAINTAINED AND REPAIRED IMMEDIATELY TO ENSURE PROPER TREATMENT AND PERFORMANCE.
9. COMPLETE ROUGH GRADING OPERATIONS DURING DRY WEATHER IN A PHASED MANNER.
10. STABILIZE THE DISTURBED AREAS AFTER ROUGH GRADING OPERATIONS ARE COMPLETED. STABILIZE THE DISTURBED AREAS WITH SEEDING, BLANKETS, DIRT GLUE, POLYMER OR SILT STOP POLYMER IF LEFT UNWORKED WITHIN 30 DAYS

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL SEDIMENT CONTROL MEASURES SUCH AS SEDIMENT CONTROL FENCE, CONSTRUCTION ACCESS MATS, SEDIMENT TRAPS, SWALES AND CHECK DAMS MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE WORKS.
2. SEDIMENT CONTROLS SHOULD BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT. REPAIRS TO ESC MEASURES MUST BE COMPLETED IN A TIMELY MANNER TO PREVENT SEDIMENT MIGRATION.
3. ADDITIONAL MATERIALS SUCH AS CLEAR STONE, FILTER FABRIC, PUMPS, HOSES AND SILTSOXX TO BE KEPT ONSITE AT ALL TIMES FOR CONDUCTING REPAIRS TO SEDIMENT CONTROL MEASURES.
4. ALL DISTURBED AREAS LEFT INACTIVE FOR MORE THAN THIRTY DAYS ARE TO BE STABILIZED.
5. NATIVE AND NON-INVASIVE SEED MIXTURE TO BE USED FOR STABILIZATION OF DISTURBED AREAS. A NURSE COVER CROP OF ANNUAL RYE OR EATS SHOULD BE PROVIDED AT THE SAME APPLICATION RATE.
6. THE STABILIZATION SEED MIXTURE IS TO BE APPLIED AT A MINIMUM RATE OF 25 kg/ha.
7. ENGINEERED CHANGES TO THE ESC MEASURES MAY BE NEEDED AS SITE CONDITIONS CHANGE THROUGHOUT THE CONSTRUCTION PROCESS. THESE UPDATES MUST REFLECT BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENT AND EROSION ONSITE AND SHOULD BE COMPLETED BASED ON DIRECTION FROM THE SITE ENGINEER. ADDITIONAL MEASURES MAY BE REQUIRED AS DIRECTED BY AN ENGINEER THROUGHOUT THE CONSTRUCTION PROCESS.
8. THE CONSTRUCTION ENTRANCE MAT IS TO BE INSTALLED AS THE FIRST STEP IN THE SITE ALTERATION PROCESS.
9. THE EXISTING DOUBLE ROW SEDIMENT CONTROL FENCES TO BE INSPECTED PRIOR TO STARTING ANY CONSTRUCTION WORK. DAMAGED PARTS TO BE REPAIRED/REPLACED BEFORE STARTING ANY CONSTRUCTION WORK.
10. SEDIMENT CONTROL FENCE IS TO BE INSTALLED DOWN SLOPE OF ALL DISTURBED AREAS. A DOUBLE ROW OF SEDIMENT CONTROL FENCE IS TO BE INSTALLED SURROUNDING ALL NATURAL HERITAGE AREAS AND AS DIRECTED BY THE SITE ENGINEER. SEDIMENT CONTROL FENCE IS TO BE AS PER LRSCA STANDARD ESC-4 OR ESC-5 AS A MINIMUM. LIGHT DUTY SEDIMENT CONTROL FENCE IS NOT ACCEPTABLE.
11. CUT-OFF SWALES OR DITCHES ARE TO BE INSTALLED AS SHOWN ON THE ESC PLANS AND AS NECESSARY BASED ON CHANGING SITE CONDITIONS TO DIRECT OVERLAND FLOW TO THE APPROPRIATE SEDIMENT TRAP.
12. CHECK DAMS ARE TO BE INSTALLED IN ALL SWALES AND DITCHES IN ACCORDANCE WITH DRAWING LSRCA ESC-2, AS A MINIMUM
13. TEMPORARY SEDIMENT TRAP(S) ARE TO BE CONSTRUCTED AT THE BEGINNING OF SITE GRADING AND IF THE SITE DRAINAGE CHANGES DURING CONSTRUCTION. IT MAY BE NECESSARY FOR TEMPORARY SWALES TO BE CONSTRUCTED TO DIRECT SITE FLOWS TO THE TEMPORARY SEDIMENT TRAP(S) DURING ROUGH GRADING AND AS CONSTRUCTION PROGRESSES.
14. FILTREXX SILTSOXX OR APPROVED EQUIVALENT TO BE INSTALLED DOWNSTREAM FROM SEDIMENT TRAP TO A MINIMUM HEIGHT OF 300mm.
15. IF STOCKPILES ARE USED ON-SITE FOR THE STORAGE OF EXCESS MATERIAL, THEY ARE TO BE IN ACCORDANCE WITH DETAIL DRAWING LSRCA ESC-6.
16. ANY DEWATERING OCCURRING ONSITE MUST BE IN ACCORDANCE WITH AN APPROVED DEWATERING PLAN. ADDITIONAL DEWATERING REQUIREMENTS MAY BE DEEMED NECESSARY AND SHALL BE IMPLEMENTED AS DIRECTED BY THE ENGINEER, CONTRACT ADMINISTRATOR OR LOCAL MUNICIPALITY.
17. REFUELING IS TO TAKE PLACE A MINIMUM OF THIRTY METRES FROM ANY WATERCOURSE OR ENVIRONMENTALLY SENSITIVE AREA
18. AN APPROVED SPILLS MANAGEMENT PLAN IS TO BE KEPT ONSITE.
19. SPILL CLEANUP EQUIPMENT SUCH AS ABSORPTIVE MEDIA IS TO BE MAINTAINED ONSITE FOR IMMEDIATE USE IN THE EVENT OF A SPILL
20. SPILLS ARE TO BE REPORTED IMMEDIATELY TO THE MOECC SPILLS ACTION CENTRE AT 1-800-268-6060
21. THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEAN-UP AND RESTORATION, INCLUDING ALL COSTS, DUE TO THE RELEASE OF SEDIMENT FROM THE SITE.
22. LOW IMPACT DEVELOPMENT (LID) MEASURES ARE NOT TO BE USED AS SEDIMENT CONTROL DEVICES.
23. ADDITIONAL SEDIMENT CONTROL DEVICES MAY BE DEEMED NECESSARY AND AS SITE CONDITIONS CHANGE AND SHALL BE INSTALLED AS DIRECTED BY THE SITE ENGINEER. CONTRACTOR, ADMINISTRATOR OR LOCAL MUNICIPALITY.
24. A FLOAT PUMP WITH MAXIMUM 20L/S DISCHARGE. THE INLETTING PIPE OF PUMP SHALL BE LOCATED NEAR THE SURFACE OF WATER. THE PUMP SHOULD DISCHARGE TO THE STRAW BALES BETWEEN THE DOUBLE ROW SILT FENCE.
25. THE FINAL PORTION OF THIS TREATMENT TRAIN IS TO BE INSPECTED DAILY. NO TURBIDITY ON VISUAL ASSESSMENT SHOULD BE ENCOUNTERED. IF THE TURBIDITY IS ENCOUNTERED, ENGINEER AND ENVIRONMENTAL SPECIALIST SHOULD BE CONTACTED TO INSTALL ADDITIONAL MEASURES INTO THE TREATMENT TRAIN TO ENSURE OUTLETTING FLOWS ARE CLEAR.

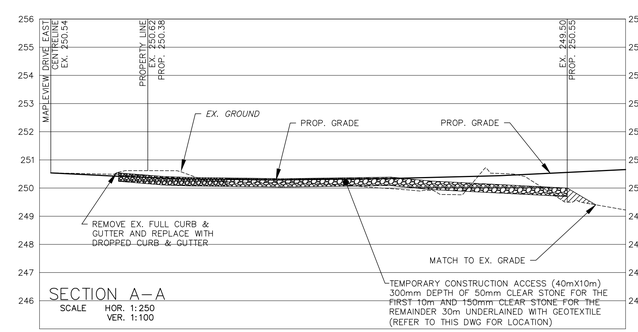


NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DWG's SC-1 TO SC-4.
2. THE CONTRACTOR SHALL PREVENT MUD TRUCKING ONTO EXISTING RIGHT-OF-WAYS AND SHALL PROVIDE FOR CLEANUP AT HIS OWN EXPENSE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE TO CONTROL DUST IN THE PROJECT AND HE SHALL PROVIDE, AT HIS OWN EXPENSE, CONTROLLING MEASURES AS DIRECTED BY THE ENGINEER.
3. ALL TOPSOIL TO BE DISPOSED OFFSITE.
4. THE ENTIRE DISTURBED AREA IS TO BE STABILIZED AND SEEDED IMMEDIATELY UPON COMPLETION OF THE ROUGH GRADING
5. UPON COMPLETION OF CONSTRUCTION WORKS AND STABILIZATION OF THE SITE, SILTATION CONTROL MEASURES SHALL BE REMOVED AS DIRECTED BY THE TOWN ENGINEER.
6. PREGRADE ELEVATIONS BELOW THE PROPOSED GRADES ARE: FOR LOTS & BLOCKS 0.75m, FOR OPEN SPACES 0.30m AND FOR ROADS 0.55m.

LEGEND:

- 221.05 → DENOTES TEMPORARY CUT-OFF SWALE AND ELEVATION DURING CONSTRUCTION
- DENOTES STANDARD SILTATION CONTROL FENCE (As per LSRCA TECHNICAL GUIDELINES)
- DENOTES TREE PROTECTION/HEAVY DUTY SILTATION CONTROL FENCE
- DENOTES DRAINAGE AREA BOUNDARY
- DENOTES LIMIT OF SUBDIVISION
- DENOTES DOUBLE FENCE WITH STRAW BALES IN BETWEEN
- Area 2 / 1.14ha — DENOTES DRAINAGE AREA NUMBER; DENOTES DRAINAGE AREA IN HECTARES
- 295.5 — DENOTES EXISTING CONTOUR ELEVATION
- DENOTES ROCK CHECK DAM
- DENOTES ROCK CHECK DAM AND FILTREXX®SILTSOXX™
- DENOTES EXISTING TREES
- DENOTES EXISTING EDGE OF TREELINE
- S.T.4 — DENOTES SILT TRAP
- DENOTES 3:1 MAX SLOPE
- TC-31L — DENOTES TRUCK ENTRANCE SIGN
- TC-22 — DENOTES STOP SIGN
- DENOTES CATCHBASIN INLET PROTECTION FILTREXX®SILTSOXX™ (SEE DETAIL ON SC-4)



"I HAVE REVIEWED THE PLANS FOR THE CONSTRUCTION OF SEDIMENT CONTROL LOCATED AT 750 MAPLEVIEW DRIVE E. AND HAVE PREPARED THIS PLAN TO INDICATE THE COMPATIBILITY OF THE PROPOSAL TO EXISTING ADJACENT PROPERTIES AND MUNICIPAL SERVICES. IT IS MY BELIEF THAT ADHERENCE TO THE PROPOSED GRADES AS SHOWN WILL PRODUCE ADEQUATE SURFACE DRAINAGE AND PROPER FACILITY OF MUNICIPAL SERVICES WITHOUT ANY DETRIMENTAL EFFECT TO THE EXISTING DRAINAGE PATTERNS OR ADJACENT PROPERTIES".

REGISTERED PROFESSIONAL ENGINEER — H. O. TOZCU — OCT. 5, 2021 — PROVINCE OF ONTARIO

BENCH MARKS — U.T.M. COORDINATES: ZONE 17 NAD 83

DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.86m EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
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NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER — H. O. TOZCU — OCT. 5, 2021 — PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

SEDIMENT CONTROL PLAN DURING TOPSOIL REMOVAL

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:400	VERT.	PROJECT NO.	4867
DESIGN G.B.	DRAWN G.B.	SHEET NO.	SC-1
REVIEWED H.T	DATE MARCH 2021		

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EROSION AND SEDIMENT CONTROL NOTES:

1. ALL SEDIMENT CONTROL MEASURES SUCH AS SEDIMENT CONTROL FENCE, CONSTRUCTION ACCESS MATS, SEDIMENT TRAPS, SWALES AND CHECK DAMS MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE WORKS.
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12. CHECK DAMS ARE TO BE INSTALLED IN ALL SWALES AND DITCHES IN ACCORDANCE WITH DRAWING LSRCA ESC-2, AS A MINIMUM
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EROSION AND SEDIMENT CONTROL PHASING NOTES:

1. INSPECT THE EXISTING SEDIMENT CONTROL MEASURES AND REPAIR/REPLACE THE DAMAGED PARTS
2. CONSTRUCT THE MUD MAT SHOWN ON DRAWING SC-1 ACCORDING TO DETAILS ON DRAWING SC-4
3. CONSTRUCT THE PROPOSED SEDIMENT TRAP(S), CUT OFF SWALES WITH ASSOCIATED ROCK CHECK DAMS AS SHOWN ON DRAWINGS SC-1 AND SC-2
4. CHECK WEATHER FORECAST AND SCHEDULE THE TOPSOIL STRIPPING OPERATIONS DURING DRY WEATHER
5. IF GROUNDWATER SEEPAGE TO SURFACE AND/OR OTHER GROUNDWATER FLOWING CONDITIONS ARE OBSERVED/ENCOUNTERED DURING TOPSOIL STRIPPING AND ROUGH GRADING OPERATIONS, WORKS TO CEASE UNTIL SUCH TIME AS THE SITUATION HAS BEEN RESOLVED AND/OR DESIGN WORKS ARE ALTERED TO ACCOMMODATE THE EXISTING CONDITIONS, ALL TO THE SATISFACTION OF LSRCA.
6. COMPLETE TOPSOIL STRIPPING OPERATIONS UNDER DRY WEATHER CONDITIONS AT PHASED MANNER TO LIMIT THE EXTENT OF DISTURBANCE.
7. STABILIZE THE DISTURBED AREAS WITH SEEDING, BLANKETS, DIRT GLUE, POLYMER OR SILT STOP POLYMER IF LEFT UNWORKED WITHIN 30 DAYS
8. THROUGHOUT AND SUBSEQUENT TO THE CONSTRUCTION PERIOD, EROSION AND SEDIMENT CONTROL MEASURES TO BE MONITORED/INSPECTED WEEKLY, MAINTAINED AND REPAIRED IMMEDIATELY TO ENSURE PROPER TREATMENT AND PERFORMANCE.
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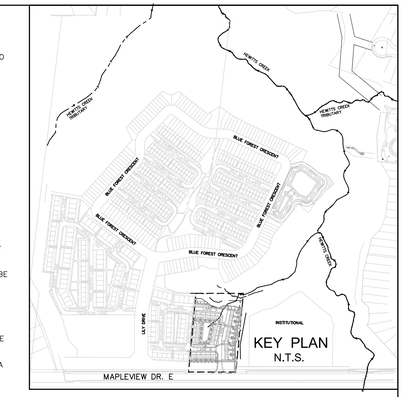

NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DWG's SC-1 TO SC-4.
2. THE CONTRACTOR SHALL PREVENT MUD TRUCKING ONTO EXISTING RIGHT-OF-WAYS AND SHALL PROVIDE FOR CLEANUP AT HIS OWN EXPENSE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE TO CONTROL DUST IN THE PROJECT AND HE SHALL PROVIDE, AT HIS OWN EXPENSE, CONTROLLING MEASURES AS DIRECTED BY THE ENGINEER.
3. ALL TOPSOIL TO BE DISPOSED OFFSITE.
4. THE ENTIRE DISTURBED AREA IS TO BE STABILIZED AND SEEDED IMMEDIATELY UPON COMPLETION OF THE ROUGH GRADING
5. UPON COMPLETION OF CONSTRUCTION WORKS AND STABILIZATION OF THE SITE, SILTATION CONTROL MEASURES SHALL BE REMOVED AS DIRECTED BY THE TOWN ENGINEER.
6. PREGRADE ELEVATIONS BELOW THE PROPOSED GRADES ARE: FOR LOTS & BLOCKS 0.75m, FOR OPEN SPACES 0.30m AND FOR ROADS 0.55m.

LEGEND:

- 221.00 — DENOTES TEMPORARY CUT-OFF SWALE AND ELEVATION DURING CONSTRUCTION
- DENOTES STANDARD SILTATION CONTROL FENCE (As per LSRCA TECHNICAL GUIDELINES)
- DENOTES TREE PROTECTION/HEAVY DUTY SILTATION CONTROL FENCE
- DENOTES DRAINAGE AREA BOUNDARY
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- Area 2 / 1.14ha — DENOTES DRAINAGE AREA NUMBER; DENOTES DRAINAGE AREA IN HECTARES
- 295.6 — DENOTES EXISTING CONTOUR ELEVATION
- DENOTES ROCK CHECK DAM
- DENOTES ROCK CHECK DAM AND FILTREXX®SILTSOXX™
- DENOTES EXISTING TREES
- DENOTES EXISTING EDGE OF TREELINE
- S.T.4 — DENOTES SILT TRAP
- DENOTES 3:1 MAX SLOPE
- TC-31L — DENOTES TRUCK ENTRANCE SIGN
- TC-22 — DENOTES STOP SIGN
- DENOTES CATCHBASIN INLET PROTECTION FILTREXX®SILTSOXX™ (SEE DETAIL ON SC-4)

"I HAVE REVIEWED THE PLANS FOR THE CONSTRUCTION OF SEDIMENT CONTROL LOCATED AT 750 MAPLEVIEW DRIVE E. AND HAVE PREPARED THIS PLAN TO INDICATE THE COMPATIBILITY OF THE PROPOSAL TO EXISTING ADJACENT PROPERTIES AND MUNICIPAL SERVICES. IT IS MY BELIEF THAT ADHERENCE TO THE PROPOSED GRADES AS SHOWN WILL PRODUCE ADEQUATE SURFACE DRAINAGE AND PROPER FACILITY OF MUNICIPAL SERVICES WITHOUT ANY DETRIMENTAL EFFECT TO THE EXISTING DRAINAGE PATTERNS OR ADJACENT PROPERTIES".

REGISTERED PROFESSIONAL ENGINEER — H. O. TOZCU — OCT. 5, 2021 — PROVINCE OF ONTARIO

BENCH MARKS
U.T.M. COORDINATES: ZONE 17 NAD 83
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.

MNR No: 01019860402 – BENCH MARK No: 01080402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH-EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH-EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.

6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER — H. O. TOZCU — OCT. 5, 2021 — PROVINCE OF ONTARIO

CITY OF BARRIE
ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

SEDIMENT CONTROL PLAN AFTER ROUGH GRADING

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:400	VERT.	PROJECT NO.	4867
DESIGN G.B.	DRAWN G.B.	SHEET NO.	SC-2
REVIEWED H.T	DATE MARCH 2021		

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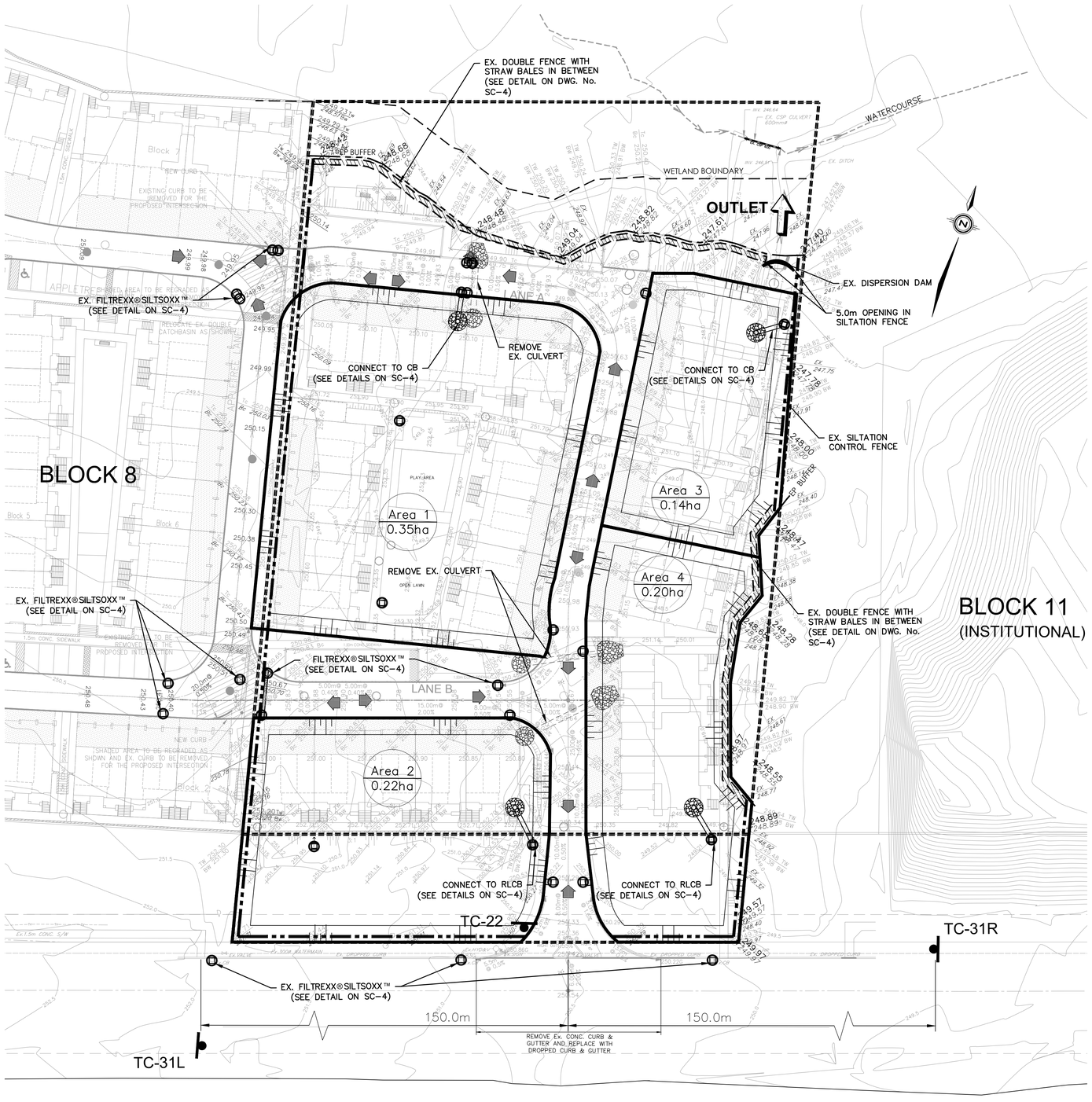
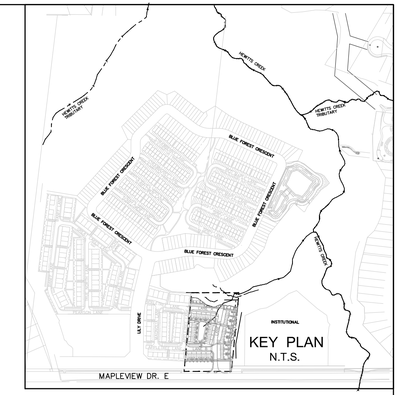


EROSION AND SEDIMENT CONTROL NOTES:

1. ALL SEDIMENT CONTROL MEASURES SUCH AS SEDIMENT CONTROL FENCE, CONSTRUCTION ACCESS MATS, SEDIMENT TRAPS, SWALES AND CHECK DAMS MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE WORKS.
2. SEDIMENT CONTROLS SHOULD BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT. REPAIRS TO ESC MEASURES MUST BE COMPLETED IN A TIMELY MANNER TO PREVENT SEDIMENT MIGRATION.
3. ADDITIONAL MATERIALS SUCH AS CLEAR STONE, FILTER FABRIC, PUMPS, HOSES AND SILTSOXX TO BE KEPT ONSITE AT ALL TIMES FOR CONDUCTING REPAIRS TO SEDIMENT CONTROL MEASURES.
4. ALL DISTURBED AREAS LEFT INACTIVE FOR MORE THAN THIRTY DAYS ARE TO BE STABILIZED.
5. NATIVE AND NON-INVASIVE SEED MIXTURE TO BE USED FOR STABILIZATION OF DISTURBED AREAS. A NURSE COVER CROP OF ANNUAL RYE OR EATS SHOULD BE PROVIDED AT THE SAME APPLICATION RATE.
6. THE STABILIZATION SEED MIXTURE IS TO BE APPLIED AT A MINIMUM RATE OF 25 kg/ha.
7. ENGINEERED CHANGES TO THE ESC MEASURES MAY BE NEEDED AS SITE CONDITIONS CHANGE THROUGHOUT THE CONSTRUCTION PROCESS. THESE UPDATES MUST REFLECT BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENT AND EROSION ONSITE AND SHOULD BE COMPLETED BASED ON DIRECTION FROM THE SITE ENGINEER. ADDITIONAL MEASURES MAY BE REQUIRED AS DIRECTED BY AN ENGINEER THROUGHOUT THE CONSTRUCTION PROCESS.
8. THE CONSTRUCTION ENTRANCE MAT IS TO BE INSTALLED AS THE FIRST STEP IN THE SITE ALTERATION PROCESS.
9. SEDIMENT CONTROL FENCE IS TO BE INSTALLED DOWN SLOPE OF ALL DISTURBED AREAS. A DOUBLE ROW OF SEDIMENT CONTROL FENCE IS TO BE INSTALLED SURROUNDING ALL NATURAL HERITAGE FEATURES AND AS DIRECTED BY THE SITE ENGINEER. SEDIMENT CONTROL FENCE IS TO BE AS PER LRSCA STANDARD ESC-4 OR ESC-5 AS A MINIMUM. LIGHT DUTY SEDIMENT CONTROL FENCE IS NOT ACCEPTABLE.
10. THE DOUBLE ROW SEDIMENT CONTROL FENCES TO BE INSPECTED PRIOR TO STARTING ANY CONSTRUCTION WORK. DAMAGED PARTS TO BE REPAIRED/REPLACED BEFORE STARTING ANY CONSTRUCTION WORK.
11. CUT-OFF SWALES OR DITCHES ARE TO BE INSTALLED AS SHOWN ON THE ESC PLANS AND AS NECESSARY BASED ON CHANGING SITE CONDITIONS TO DIRECT OVERLAND FLOW TO THE APPROPRIATE SEDIMENT TRAP.
12. CHECK DAMS ARE TO BE INSTALLED IN ALL SWALES AND DITCHES IN ACCORDANCE WITH DRAWING LSRCA ESC-2, AS A MINIMUM
13. TEMPORARY SEDIMENT TRAP(S) ARE TO BE CONSTRUCTED AT THE BEGINNING OF SITE GRADING AND IF THE SITE DRAINAGE CHANGES DURING CONSTRUCTION, IT MAY BE NECESSARY FOR TEMPORARY SWALES TO BE CONSTRUCTED TO DIRECT SITE FLOWS TO THE TEMPORARY SEDIMENT TRAP(S) DURING ROUGH GRADING AND AS CONSTRUCTION PROGRESSES.
14. FILTREXX SILTSOXX OR APPROVED EQUIVALENT TO BE INSTALLED DOWNSTREAM FROM SEDIMENT TRAP TO A MINIMUM HEIGHT OF 300mm.
15. IF STOCKPILES ARE USED ON-SITE FOR THE STORAGE OF EXCESS MATERIAL, THEY ARE TO BE IN ACCORDANCE WITH DETAIL DRAWING LSRCA ESC-6.
16. ANY DEWATERING OCCURRING ONSITE MUST BE IN ACCORDANCE WITH AN APPROVED DEWATERING PLAN. ADDITIONAL DEWATERING REQUIREMENTS MAY BE DEEMED NECESSARY AND SHALL BE IMPLEMENTED AS DIRECTED BY THE ENGINEER, CONTRACT ADMINISTRATOR OR LOCAL MUNICIPALITY.
17. REFUELING IS TO TAKE PLACE A MINIMUM OF THIRTY METRES FROM ANY WATERCOURSE OR ENVIRONMENTALLY SENSITIVE AREA
18. AN APPROVED SPILLS MANAGEMENT PLAN IS TO BE KEPT ONSITE.
19. SPILL CLEANUP EQUIPMENT SUCH AS ABSORPTIVE MEDIA IS TO BE MAINTAINED ONSITE FOR IMMEDIATE USE IN THE EVENT OF A SPILL
20. SPILLS ARE TO BE REPORTED IMMEDIATELY TO THE MOECC SPILLS ACTION CENTRE AT 1-800-268-6060
21. THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEAN-UP AND RESTORATION, INCLUDING ALL COSTS, DUE TO THE RELEASE OF SEDIMENT FROM THE SITE.
22. LOW IMPACT DEVELOPMENT (LID) MEASURES ARE NOT TO BE USED AS SEDIMENT CONTROL DEVICES.
23. ADDITIONAL SEDIMENT CONTROL DEVICES MAY BE DEEMED NECESSARY AND AS SITE CONDITIONS CHANGE AND SHALL BE INSTALLED AS DIRECTED BY THE SITE ENGINEER. CONTRACTOR, ADMINISTRATOR OR LOCAL MUNICIPALITY.



NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DWG's SC-1 TO SC-4.
2. THE CONTRACTOR SHALL PREVENT MUD TRUCKING ONTO EXISTING RIGHT-OF-WAYS AND SHALL PROVIDE FOR CLEANUP AT HIS OWN EXPENSE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE TO CONTROL DUST IN THE PROJECT AND HE SHALL PROVIDE, AT HIS OWN EXPENSE, CONTROLLING MEASURES AS DIRECTED BY THE ENGINEER.
3. ALL TOPSOIL TO BE DISPOSED OFFSITE.
4. THE ENTIRE DISTURBED AREA IS TO BE STABILIZED AND SEEDED IMMEDIATELY UPON COMPLETION OF THE ROUGH GRADING
5. UPON COMPLETION OF CONSTRUCTION WORKS AND STABILIZATION OF THE SITE, SILTATION CONTROL MEASURES SHALL BE REMOVED AS DIRECTED BY THE TOWN ENGINEER.
6. PREGRADE ELEVATIONS BELOW THE PROPOSED GRADES ARE: FOR LOTS & BLOCKS 0.75m, FOR OPEN SPACES 0.30m AND FOR ROADS 0.55m.

LEGEND:

- 23.00 → DENOTES TEMPORARY CUT-OFF SWALE AND ELEVATION DURING CONSTRUCTION
- DENOTES STANDARD SILTATION CONTROL FENCE (As per LSRCA TECHNICAL GUIDELINES)
- DENOTES TREE PROTECTION/HEAVY DUTY SILTATION CONTROL FENCE
- DENOTES DRAINAGE AREA BOUNDARY
- DENOTES LIMIT OF SUBDIVISION
- DENOTES DOUBLE FENCE WITH STRAW BALES IN BETWEEN
- Area 2 / 1.14ha — DENOTES DRAINAGE AREA NUMBER; DENOTES DRAINAGE AREA IN HECTARES
- 250.0 — DENOTES EXISTING CONTOUR ELEVATION
- DENOTES ROCK CHECK DAM
- DENOTES ROCK CHECK DAM AND FILTREXX®SILTSOXX™
- DENOTES EXISTING TREES
- DENOTES EXISTING EDGE OF TREELINE
- S.T.4 — DENOTES SILT TRAP
- DENOTES 3:1 MAX SLOPE
- TC-31L — DENOTES TRUCK ENTRANCE SIGN
- TC-22 — DENOTES STOP SIGN
- DENOTES CATCHBASIN INLET PROTECTION FILTREXX®SILTSOXX™ (SEE DETAIL ON SC-4)

"I HAVE REVIEWED THE PLANS FOR THE CONSTRUCTION OF SEDIMENT CONTROL LOCATED AT 750 MAPLEVIEW DRIVE E, AND HAVE PREPARED THIS PLAN TO INDICATE THE COMPATIBILITY OF THE PROPOSAL TO EXISTING ADJACENT PROPERTIES AND MUNICIPAL SERVICES. IT IS MY BELIEF THAT ADHERENCE TO THE PROPOSED GRADES AS SHOWN WILL PRODUCE ADEQUATE SURFACE DRAINAGE AND PROPER FACILITY OF MUNICIPAL SERVICES WITHOUT ANY DETRIMENTAL EFFECT TO THE EXISTING DRAINAGE PATTERNS OR ADJACENT PROPERTIES".

REGISTERED PROFESSIONAL ENGINEER — H. O. TOZCU — OCT. 5, 2021 — PROVINCE OF ONTARIO

BENCH MARKS — U.T.M. COORDINATES: ZONE 17 NAD 83

DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884

MNR No: 03120080008 – BENCH MARK No: 03120080008 – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
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MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)

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BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH-EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH-EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER — H. O. TOZCU — OCT. 5, 2021 — PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

SEDIMENT CONTROL PLAN DURING CONSTRUCTION OF SERVICES AND HOUSES

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:400	VERT.	PROJECT NO.	4867
DESIGN G.B.	DRAWN G.B.	SHEET NO.	SC-3
REVIEWED H.T	DATE MARCH 2021		

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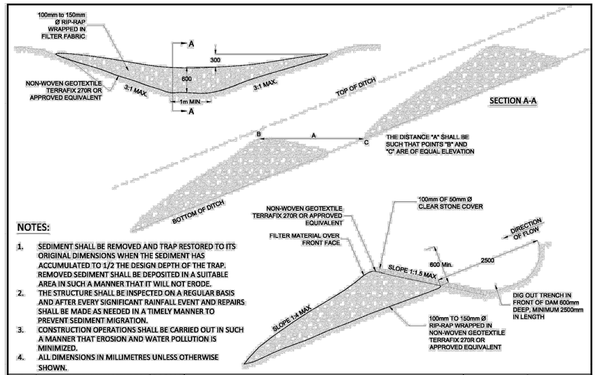


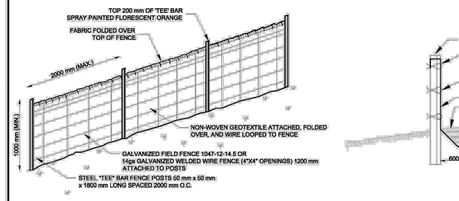
NOTES:

1. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA IN SUCH A MANNER THAT IT WILL NOT ERODE.
2. THE STRUCTURE SHALL BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT AND REPAIRS SHALL BE MADE AS NEEDED IN A TIMELY MANNER TO PREVENT SEDIMENT MIGRATION.
3. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.

NO.	REVISION	DATE
1	SWM GUIDELINES UPDATE	06.2016

SWALE AND ROCK CHECK DAM

DATE: 06.2016
SCALE: NTS
LSRCA ESC-2



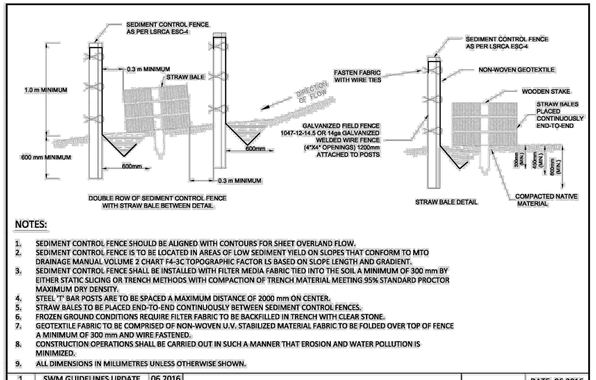
NOTES:

1. SEDIMENT CONTROL FENCE SHOULD BE ALIGNED WITH CONTOURS FOR SHEET OVERLAND FLOW.
2. SEDIMENT CONTROL FENCE IS TO BE LOCATED IN AREAS OF LOW SEDIMENT YIELD ON SLOPES THAT CONFORM TO MTO DRAINAGE MANUAL VOLUME 2 CHART F4-3C TOPOGRAPHIC FACTOR IS BASED ON SLOPE LENGTH AND GRADIENT.
3. SEDIMENT CONTROL FENCE SHALL BE INSTALLED WITH FILTER MEDIA FABRIC TIED INTO THE SOIL A MINIMUM OF 300 mm BY EITHER STATIC SLICING OR TRENCH METHODS WITH COMPACTION OF TRENCH MATERIAL MEETING 95% STANDARD PROCTOR DENSITY.
4. STEEL "T" BAR POSTS ARE TO BE SPACED A MAXIMUM DISTANCE OF 2000 mm ON CENTER.
5. FROZEN GROUND CONDITIONS REQUIRE FILTER FABRIC TO BE BACKFILLED IN TRENCH WITH CLEAR STONE.
6. GEOTEXTILE FABRIC TO BE COMPRISED OF NON-WOVEN U.V. STABILIZED MATERIAL FABRIC TO BE FOLDED OVER TOP OF FENCE A MINIMUM OF 300 mm AND WIRE FASTENED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.

NO.	REVISION	DATE
1	SWM GUIDELINES UPDATE	06.2016

SEDIMENT CONTROL FENCE

DATE: 06.2016
SCALE: NTS
LSRCA ESC-4



NOTES:

1. SEDIMENT CONTROL FENCE SHOULD BE ALIGNED WITH CONTOURS FOR SHEET OVERLAND FLOW.
2. SEDIMENT CONTROL FENCE IS TO BE LOCATED IN AREAS OF LOW SEDIMENT YIELD ON SLOPES THAT CONFORM TO MTO DRAINAGE MANUAL VOLUME 2 CHART F4-3C TOPOGRAPHIC FACTOR IS BASED ON SLOPE LENGTH AND GRADIENT.
3. SEDIMENT CONTROL FENCE SHALL BE INSTALLED WITH FILTER MEDIA FABRIC TIED INTO THE SOIL A MINIMUM OF 300 mm BY EITHER STATIC SLICING OR TRENCH METHODS WITH COMPACTION OF TRENCH MATERIAL MEETING 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
4. STEEL "T" BAR POSTS ARE TO BE SPACED A MAXIMUM DISTANCE OF 2000 mm ON CENTER.
5. STRAW BALES TO BE PLACED END-TO-END CONTINUOUSLY BETWEEN SEDIMENT CONTROL FENCES.
6. FROZEN GROUND CONDITIONS REQUIRE FILTER FABRIC TO BE BACKFILLED IN TRENCH WITH CLEAR STONE.
7. GEOTEXTILE FABRIC TO BE COMPRISED OF NON-WOVEN U.V. STABILIZED MATERIAL FABRIC TO BE FOLDED OVER TOP OF FENCE A MINIMUM OF 300 mm AND WIRE FASTENED.
8. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
9. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.

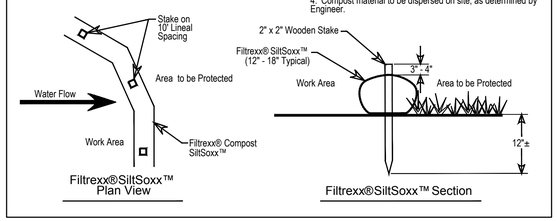
NO.	REVISION	DATE
1	SWM GUIDELINES UPDATE	06.2016

DOUBLE ROW SEDIMENT CONTROL FENCE

DATE: 06.2016
SCALE: NTS
LSRCA ESC-5

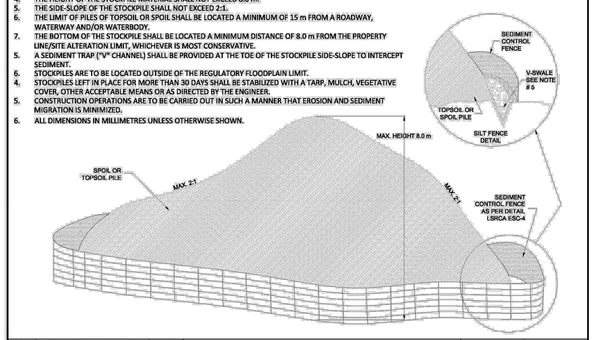
Filtrexx®SiltSoxx™ Details

Notes:
1. All material to meet Filtrexx® specifications
2. SiltSoxx™ compost/ysoil/rock/seed fill to meet application requirements.
3. SiltSoxx™ depicted is for minimum slopes. Greater slopes may require larger socks per the Engineer.
4. Compost material to be dispersed on site, as determined by Engineer.



NOTES:

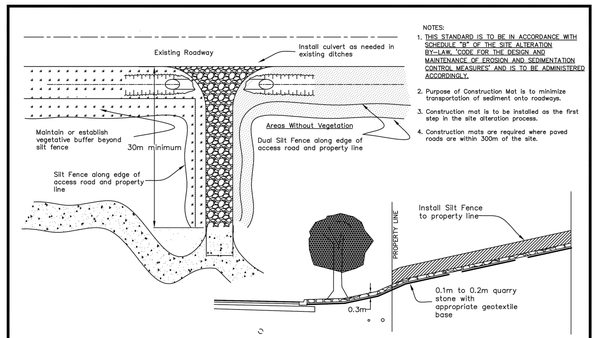
4. THE HEIGHT OF THE STOCKPILE MATERIAL SHALL NOT EXCEED 8.0 m.
5. THE SIDE-SLOPE OF THE STOCKPILE SHALL NOT EXCEED 2:1.
6. THE LIMIT OF PILES OF TOPSOIL OR SPOIL SHALL BE LOCATED A MINIMUM OF 15 m FROM A ROADWAY, WATERWAY AND/OR WATERBODY.
7. THE BOTTOM OF THE STOCKPILE SHALL BE LOCATED A MINIMUM DISTANCE OF 8.0 m FROM THE PROPERTY LINE/SITE ALTERATION LIMIT, WHICHEVER IS MOST CONSERVATIVE.
5. A SEDIMENT TRAP ("V" CHANNEL) SHALL BE PROVIDED AT THE TOE OF THE STOCKPILE SIDE-SLOPE TO INTERCEPT SEDIMENT.
6. STOCKPILES ARE TO BE LOCATED OUTSIDE OF THE REGULATORY FLOODPLAIN LIMIT.
4. STOCKPILES LEFT IN PLACE FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH A TARP, MULCH, VEGETATIVE COVER, OTHER ACCEPTABLE MEANS OR AS DIRECTED BY THE ENGINEER.
5. CONSTRUCTION OPERATIONS ARE TO BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT MIGRATION IS MINIMIZED.
6. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.



NO.	REVISION	DATE
1	SWM GUIDELINES UPDATE	06.2016

STOCKPILE SILTATION CONTROL

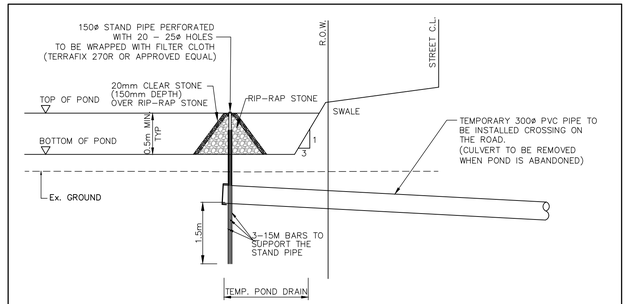
DATE: 06.2016
SCALE: NTS
LSRCA ESC-6



NOTES:
1. THIS STANDARD IS TO BE IN ACCORDANCE WITH SCHEDULE "B" OF THE SITE ALTERATION BY-LAW, "CODE FOR THE DESIGN AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES" AND IS TO BE ADMINISTERED ACCORDINGLY.
2. Purpose of Construction Mat is to minimize transportation of sediment onto roadways.
3. Construction mat is to be installed as the first step in the site alteration process.
4. Construction mats are required where paved roads are within 300m of the site.

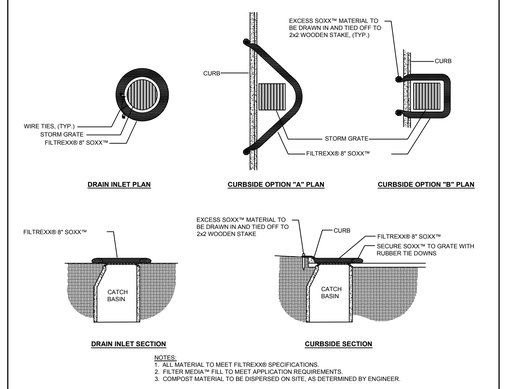
CITY OF BARRIE STANDARD	NO.	REVISION	APR'D	DATE
CONSTRUCTION ENTRANCE MAT	1.	Standardized Dimension Text	J.S.	05.10.28

APR'D: R.G.N. DATE: 04.03.16
DRAWN: A.S.C SCALE: N.T.S
BSD-23D



TYPICAL TEMP. OUTLET CONNECTION TO A 300ø CULVERT

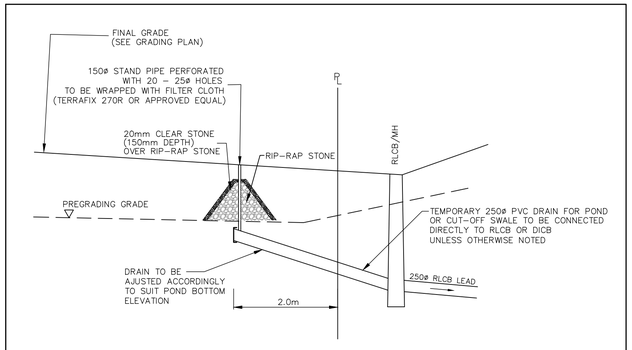
SCALE: N.T.S.



NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

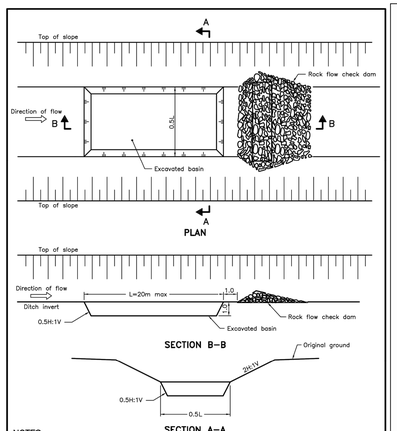
FILTREXX® INLET PROTECTION
NTS

SEDIMENT TRAP DETAIL FOR ROAD CB & RLCB



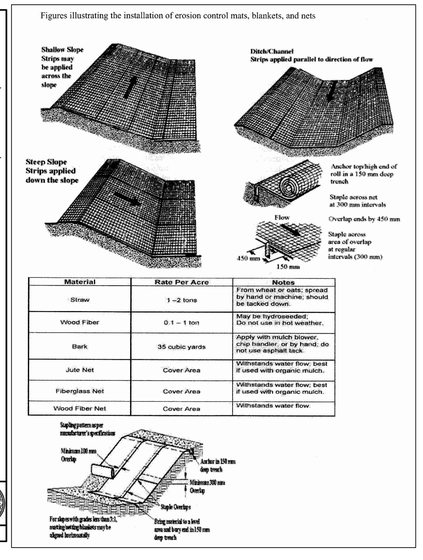
TYPICAL TEMP. OUTLET CONNECTION TO RLCB OR DICB

SCALE: N.T.S.

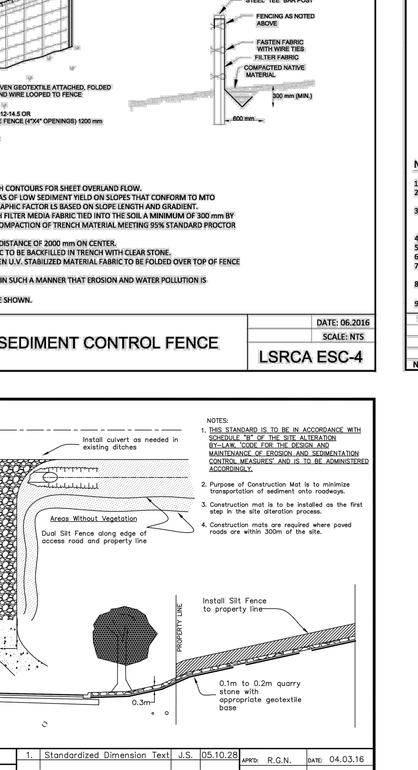


NOTES:
A Ditch cross-section upstream or downstream of sediment trap may be flat bottom or V-shaped. Flat bottom shown.
B This OPSD shall be read in conjuction with OPSD 219.210 or 219.211.
C All dimensions are in metres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 2
SEDIMENT TRAP IN DITCH		
	OPSD 219.220	



Material	Rate Per Acre	Notes
Straw	1 –2 tons	From wheat or oats; spread by hand or machine; should be tackled down.
Wood Fiber	0.1 – 1 ton	May be hydroseeded; Do not use in hot weather.
Bark	35 cubic yards	Apply with mulch blower, chip transfer, or by hand; do not use asphalt tack.
Jute Net	Cover Area	Withstands water flow; best if used with organic mulch.
Fiberglass Net	Cover Area	Withstands water flow; best if used with organic mulch.
Wood Fiber Net	Cover Area	Withstands water flow



"I HAVE REVIEWED THE PLANS FOR THE CONSTRUCTION OF SEDIMENT CONTROL LOCATED AT 750 MAPLEVIEW DRIVE E. AND HAVE PREPARED THIS PLAN TO INDICATE THE COMPATIBILITY OF THE PROPOSAL TO EXISTING ADJACENT PROPERTIES AND MUNICIPAL SERVICES. IT IS MY BELIEF THAT ADHERENCE TO THE PROPOSED GRADES AS SHOWN WILL PRODUCE ADEQUATE SURFACE DRAINAGE AND PROPER FACILITY OF MUNICIPAL SERVICES WITHOUT ANY DETRIMENTAL EFFECT TO THE EXISTING DRAINAGE PATTERNS OR ADJACENT PROPERTIES".

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2021 PROVINCE OF ONTARIO

BENCH MARKS U.T.M. COORDINATES: ZONE 17 NAD 83
DISTANCE NOTE
DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996884
MNR No: 0312008000B – BENCH MARK No: 03120080000B – HORIZONTAL & VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET LOCATED ON THE NORTH SIDE OF MAPLEVIEW DRIVE EAST (12TH CONCESSION ROAD), APPROXIMATELY 0.8Km EAST OF YONGE STREET (HWY #11) AND APPROXIMATELY 10.0m NORTH OF MAPLEVIEW OF THE DRIVE EAST CENTERLINE.(2ND ORDER)
A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP.
MNR No: 01019860402 – BENCH MARK No: 010860402 – HORIZONTAL CONTROL MONUMENT RECORD
R.I.B. WITH BRASS CAP LOCATED ON THE EAST SIDE OF ST. PAUL'S CRESCENT AT THE NORTH END WHERE INTERSECTS YONGE STREET. (2ND ORDER)
MNR No: 0011931U460S – BENCH MARK No: 31U460S – VERTICAL CONTROL MONUMENT RECORD
BRASS TABLET – G.S.C. LOCATED ON THE SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLE SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH–EAST CORNER (TOWER) 15.2m WEST OF BELL POLE AND 9.2m SOUTH–EAST OF "V" IN TWIN BIRCH TREES 15cm BELOW BRICK

NO.	REVISIONS	DATE	APPROVED

SCHAEFFERS CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

REGISTERED PROFESSIONAL ENGINEER H. O. TOZCU OCT. 5, 2021 PROVINCE OF ONTARIO

CITY OF BARRIE ACCEPTED
DATE. . . . . .
. . . . . .
DIRECTOR OF ENGINEERING

750 MAPLEVIEW DRIVE E.

EROSION AND SEDIMENT CONTROL DETAILS

Barrie
ENGINEERING DEPARTMENT

SCALE HOR. 1:400	VERT.		PROJECT NO. 4867
DESIGN G.B.	DRAWN G.B.		SHEET NO. SC-4
REVIEWED H.T	DATE MARCH 2021		