1. GRADE AND CROSSFALL ADJUSTEMENT OF MAINTENANCE HOLE AND CATCHBASIN FRAMES WILL BE MADE USING PRODUCTS SPECIFICALLY MANUFACTURED FOR THAT PURPOSE.
2. ADJUSTMENT UNITS MUST BE CERTIFIED TO MEET ALL PERTINENT OPS, CSA, ASTM AND MTO-DSM LISTS, OR OTHER INDUSTRY GUIDELINES FOR MATERIALS, PERFORMANCE AND USE AS APPLICABLE.
3. ADJUSTMENT UNITS AND JOINTS WILL BE SEALED AND OR PARGED IN COMPLIANCE WITH MANUFACTURERS SPECIFICATIONS AND GUIDELINES
4. 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.

Barrie STANDARD DETAIL	GENERAL NOTES ROADWORKS	REV No. 1	DATE: OCT 2017 SCALE: N.T.S.	APPROVED DATE Oct 23/17 DIRECTOR OF ENGINEERING
		BSD-N2		

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	4.	NOTE 'K' – SUMP PUMP DISCHARGE PIPING	B.R.	2003.01.07	APR'D: R.G.N.	DATE: 92.05.15	
GENERAL NOTES STORM SEWERS	3.	NOTE 'I' & 'G' – "DIRECTOR OF ENGINEERING"	B.R.	2002.10.28			
	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			
	NO.	REVISION	APR'D	DATE	BSD-N5		

GENERAL NOTES – SANITARY SEWER

SANITARY SEWERS

A. SANITARY SEWER TO BE LOCATED AT THE CENTRELINE OF THE ROAD, UNLESS OTHERWISE SPECIFIED .

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	4.	NOTE 'B' – "ENGINEERING"	B.R.	2002.10.28	APR'D: R.G.N.	DATE: 92.05.15	
GENERAL NOTES SANITARY SEWERS	3.	NOTE 'B' OPSD NUMBER REVISION	K.C.	2000.03.16			
	2.	NOTE 'F' 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			
	NO.	REVISION	APR'D	DATE	BSD-N3		

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	3.	3. NOTE: 3.E. REVISED & 3.I. ADDED	J.S.	05.01.10	APR'D: R.G.N.	DATE: 92.05.15	
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			
	NO.	REVISION	APR'D	DATE	BSD-N6		

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 3.0m PAST BACK OF CURB UNLESS NOTED OTHERWISE & 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 SADDLES IN STRICT ACCORDANCE TO MANUFACTURES GUIDELINES AND THE CITY'S APPROVED PRODUCT LIST.

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

CITY OF BARRIE STANDARD					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			
	NO.	REVISION	APR'D	DATE	BSD-N4-MOD		

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. WATERMAIN 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-CSS) 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 BSD-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 SCALE: N.T.S.	APPROVED DATE May 22/15 DIRECTOR OF ENGINEERING
		BSD-500		

EROSION CONTROL NOTES

1. ALL TEMPORARY SILT CONTROL AND EROSION PROTECTION DEVICES (I.E. SILT FENCING, DRAINAGE SWALES, ROCK CHECK DAMS, SEDIMENT BASIN, GRAVEL ACCESS PAD, ETC.) SHALL BE CONSTRUCTED PRIOR TO COMMENCEMENT OF SITE WORKS 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.
2. ALL SEDIMENTATION CONTROL MEASURES ARE TO BE INSPECTED REGULARLY (MINIMUM WEEKLY), AS WELL AS AFTER EVERY RAINFALL EVENT AND ANY DAMAGED SILT CONTROL AND EROSION PROTECTION DEVICES SHALL BE PROMPTLY REPAIRED OR REPLACED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE PREPARED FOR UNEXPECTED CONDITIONS AND ACCORDINGLY HAVE STOCKPILED MATERIALS ON SITE FOR NECESSARY REPAIRS AS A RESULT OF FAILED OR INADEQUATE CONTROL MEASURES.
4. AREAS WITHOUT STABLE GROUND COVER SHALL BE PROTECTED WITH SILTATION CONTROL FENCING, STRAW MULCH, ETC, AND MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BECOME ESTABLISHED IN THE SUBSEQUENT GROWING SEASON.
5. ALL DISTURBED GROUND LEFT INACTIVE FOR MORE THAN 30 DAYS SHALL BE STABILIZED BY SEEDING. (IF SEEDING IS APPROPRIATE DURING CURRENT SEASON)
7. ALL SITE DRAINAGE IS TO BE DIRECTED TO THE TEMPORARY SEDIMENT BASIN(S) AND OTHER CHECK DAMS VIA SHEET DRAINAGE, BERMS OR SWALES (AS NECESSARY) TO FACILITATE THE COMPLETION OF GRADING WORKS. THE CONTRACTOR SHALL CONSTRUCT ANY ADDITIONAL SWALES OR BERMS THAT MAY BE NECESSARY TO DIRECT RUN–OFF TO THE SEDIMENT BASINS.
8. ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE FROM PROPOSED CONSTRUCTION ACCESS VIA THE GRAVEL ACCESS PAD.
9. ANY DEWATERING WASTE SHALL BE DISCHARGED TO A VEGETATED AREA AT LEAST 30m FROM ANY WATERCOURSE AND FILTERED. FILTERING METHODS MUST BE APPROVED BY THE SITE INSPECTOR.
10. THE CONTRACTOR SHALL OBTAIN A CURRENT COPY AND BECOME FAMILIAR WITH OPSS 805; CONSTRUCTION SPECIFICATION FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, AS WELL AS APPLICABLE MUNICIPAL STANDARDS AND/OR APPROVAL AGENCY STANDARDS.
11. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES, SUCH MEASURES MUST BE PRESENTED IN WRITING FOR APPROVAL BY THE CONTRACT ADMINISTRATOR AND MUST BE APPROVED IN WRITING BY THE APPLICABLE APPROVAL AGENCIES.

GRADING NOTES

1. ALL DISTURBED AREAS TO BE RESTORED TO EXISTING CONDITIONS OR BETTER WITH A MIN. 200mm DEPTH OF TOPSOIL AND SOD IMMEDIATELY FOLLOWING COMPLETION OF GRADING.
2. ALL SLOPES SHALL BE RESTORED WITH A MIN. 200mm DEPTH OF TOPSOIL AND SOD IMMEDIATELY FOLLOWING COMPLETION OF GRADING.
3. ALL SLOPES ALONG BERMS AND DITCHES TO BE MAXIMUM SLOPES OF 3:1.

WATER SERVICING NOTES, AS REQUIRED BY THE CITY OF BARRIE

GENERAL

1. ALL REQUIRED PERMITS SHALL BE IN PLACE PRIOR TO INSTALLATION OF WATERMAIN AND SERVICES.
2. A ROAD OCCUPANCY PERMIT IS REQUIRED, AND CAN BE OBTAINED AT THE OPERATION CENTRE.
3. MINIMUM COVER OVER WATER MAIN TO BE 1.7m. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAIN AND SEWER TO BE 2.5m. WHERE WATER MAIN CONFLICTS WITH SEWER PIPE, DEFLECT WATER MAIN HORIZONTALLY OR VERTICALLY WHILE PROVIDING A MINIMUM OF 0.5m CLEARANCE BETWEEN WATER MAIN AND SEWERS, MAINTAIN MINIMUM DEPTH OF COVER AT ALL TIMES.
4. ALL BENDS AND TEE'S SHALL BE RESTRAINED IN ADDITION TO THRUST BLOCKS.
5. ALL DOMESTIC AND FIRE WATER SERVICES WILL REQUIRE BACKFLOW PREVENTION AS PER CITY OF BARRIE BYLAW 2010–102.
6. SERVICES INSTALLED UNDER FLOORS SHALL BE FULLY RESTRAINED.
7. HYDRANTS SHALL BE INSTALLED AS PER BSD–507. ON SITE HYDRANTS SHALL BE CONSIDERED PRIVATE (PAINTED RED), AND ARE TO BE MAINTAINED BY THE OWNER
8. ALL FIRE SERVICES SHALL CONFORM TO THE MOST CURRENT BUILDING CODE AND NATIONAL FIRE PROTECTION ACT. THE REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNERS. INFORMATION MAY BE OBTAINED FROM THE INSURANCE UNDERWRITER, CITY OF BARRIE PLANNING AND DEVELOPMENT AND THE CITY OF BARRIE FIRE DEPARTMENT.
9. ALL NEW CURB STOPS AND BOXES TO BE LOCATED OUT OF DRIVEWAYS AND SIDEWALKS.
10. COPPER WATER SERVICES 19mm TO 50mm IN DIAMETER SHALL BE EMBEDDED IN SAND 100mm ABOVE AND BELOW.
11. ALL COPPER WATER SERVICE FITTINGS SHALL BE COMPRESSION STYLE. IF A CONDITION ARISES WHERE A COPPER SERVICE MUST BE JOINED UNDER THE FLOOR, THE COPPER SHALL BE JOINTED BY SILVER SOLDER CONNECTION ONLY.
12. CONTRACTOR SHALL INFORM THE CITY OF BARRIE OPERATIONS DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF THEIR INTENTIONS TO WORK.
13. THE CITY WILL FLUSH THE NEW SERVICE AND CONTRACTOR WILL PERFORM PRESSURE TEST WITNESSED BY THE WATER FIELD COORDINATOR.
14. WATER WILL NOT BE AVAILABLE UNTIL SERVICES HAVE BEEN SAMPLED AND PASSES FOR BACTERIOLOGICAL COMPLIANCE, A CHECK VALVE SHALL BE INSTALLED FOR TEMPORARY WATER.
15. REFER TO DRAWING WM–1, FOR WATERMAIN TESTING AND DISINFECTION NOTES.
16. A FLAT RATE CONNECTION FEE ($2600.00) WILL BE REQUIRED FOR EACH OF THE 300mm WATER SERVICE CONNECTIONS.
17. AN ANNUAL CHARGE FOR EACH PRIVATE CONNECTION MADE TO THE MUNICIPAL WATER DISTRIBUTION SYSTEM WILL APPLY.
18. AN ANNUAL CHARGE FOR EACH PRIVATE FIRE HYDRANT SUPPLIED WITH WATER FROM THE MUNICIPAL WATER DISTRIBUTION SYSTEM WILL APPLY.
19. WATER SERVICES TO BE MECHANICALLY RESTRAINED. WATERMAIN TO BE MECHANICALLY RESTRAINED IN AREAS OF FILL.

100mm DOMESTIC AND 150mm FIRE SERVICES - BUILDINGS H1, H2, H3, H4, H5 AND H6

1. DOMESTIC AND FIRE SERVICE VALVES SHALL BE LOCATED IN THE BOULEVARD, UNLESS OTHERWISE NOTED.
2. DOMESTIC AND FIRE SERVICES SHALL BE MECHANICALLY RESTRAINED FROM THE TEE TO THE BUILDINGS.
3. DOMESTIC AND FIRE SERVICE RISERS ENTERING EACH BUILDING SHALL BE INSTALLED AS PER BSD–505.
4. DOMESTIC AND FIRE SERVICE TO BE HAND SWABBED OR A SWAB IS TO BE PLACED IN SERVICE AND REMOVED FROM RISERS.
5. THE 100mm DOMESTIC WATER SERVICE WILL REQUIRE A 100mm WATER METER (SUPPLIED AND INSTALLED BY THE OWNER) COMPLETE WITH A BYPASS ASSEMBLY AS PER BSD–533 AND SHALL BE LOCATED IN AN APPROPRIATELY SIZED MECHANICAL ROOM.
6. BACKFLOW PREVENTION SHALL BE PROVIDED ON ALL DOMESTIC AND FIRE SERVICES AS PER CITY OF BARRIE BYLAW 2017–121.

ENGINEERING NOTES

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

1. ALL MEASUREMENTS FOR THIS PROJECT ARE IN METERS, EXCEPT PIPE DIAMETERS WHICH IS IN MILLIMETRES, UNLESS OTHERWISE NOTED. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
2. ALL MECHANICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, RULES AND REGULATIONS, TO MEET THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION AND TO MEET THE DESIGN INTENT.
3. ALL WORK AND MATERIALS WITHIN THE PROPERTY BOUNDARIES SHALL CONFORM TO THE LATEST EDITION OF THE ONTARIO BUILDING CODE. WHERE THERE IS A CONFLICT BETWEEN THE FOLLOWING NOTES AND SPECIFICATIONS AND THE ONTARIO BUILDING CODE, THE DECISION OF THE CHIEF BUILDING OFFICIAL WILL GOVERN.
4. INFORMATION ON EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY UTILITY LOCATES PRIOR TO COMMENCING CONSTRUCTION.
5. ALL CORRUGATED STEEL PIPE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND AS PER O.P.S.D. 801.010, SQUARE ENDS AND O.P.S.D. 802.040, TYPE I. ALL CSP TO BE 2.0mm THICKNESS GAUGE.
6. CONTRACTOR SHALL INFORM THE SITE (PROJECT) MANAGER A MINIMUM 24 HOURS IN ADVANCE OF HIS INTENTION TO COMMENCE WORK. CONTRACTOR SHALL AT ALL TIMES, PROVIDE SUITABLE BARRICADES AND FLAGGING PROTECTION IN ACCORDANCE WITH THE MINISTRY OF LABOUR PRACTICES, AND OCCUPATIONAL HEALTH AND SAFETY ACT.
7. THESE NOTES ARE GENERAL IN NATURE; FOR SPECIFIC DETAILS REFER TO CITY OF BARRIE AND ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.
8. SEWER PIPE MATERIAL (IF APPLICABLE): –POLYVINYL CHLORIDE PIPE SHALL CONFORM TO CSA–B–182.1 AND CSA–B–182.2 WITH BELL AND SPIGOT RUBBER GASKETED JOINTS COMPLYING WITH CSA–B182.2 AND CSA–B182.3. SANITARY PIPE SHALL BE SDR–35 AND ALL SANITARY SERVICE LATERALS TO BE SDR–28.
9. SEWER BEDDING WILL CONFORM TO O.P.S.D. 802.030 FOR RIGID PIPE INSTALLATION AND O.P.S.D. 802.010 FOR FLEXIBLE PIPE INSTALLATION. NATIVE MATERIAL USED FOR BACKFILL SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
10. ALL TRENCHES ARE TO BE BACKFILLED WITH NATIVE MATERIAL AND COMPACTED TO AT LEAST 95% STANDARD PROCTOR DENSITY OR AS PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. IN ADDITION, ALL STRUCTURES WITHIN TRAVELLED PORTION OF THE ROAD & PARKING AREAS SHALL HAVE NATIVE 4:1 FROST TAPERS FROM FROST LINE TO SUBGRADE.
11. MAINTENANCE HOLES:
–STEPS SHALL BE ALUMINUM ALLOY O.P.S.D. 405.010 SOLID CIRCULAR ALUMINUM OR APPROVED EQUAL.
–FRAMES AND COVERS SHALL BE DOMINION WHEEL FOUNDRIES DESIGN STD. 579 OR APPROVED EQUAL AND SELF LEVELLING FRAME AND GRATE/COVER SHALL BE USED FOR ALL NEW MAINTENANCE HOLES WITHIN ASPHALT ROADWAYS AS PER BSD–41 (OCTOBER 2017) O.P.S.D. 401.010 TYPE 'A'.
–SANITARY MAINTENANCE HOLES ARE TO HAVE CORE AND SEAL GASKETS ON ALL PIPE CONNECTIONS. 1200 DIAMETER MAINTENANCE HOLES – O.P.S.D. 701.010
–MAINTENANCE HOLE BENCHING SHALL EXTEND TO PIPE OBVERT AND SHALL BE IN ACCORDANCE WITH DETAILS SHOWN AS PER OPSD 1004.010 –SAFETY PLATFORMS SHALL BE AS PER OPSD 404.020.
12.) TEMPORARY ACCESS ROAD MAKE–UP: (REFER TO GEOTECHNICAL INVESTIGATION REPORT)
–70mm HL8 BINDER ASPHALT
–150mm OPSS GRANULAR "A"
–400mm OPSS GRANULAR "B"
INTERNAL ROAD & PARKING MAKE–UP:
–40mm HL3 BINDER ASPHALT
–70mm HL8 BINDER ASPHALT
–150mm OPSS GRANULAR "A"
–450mm OPSS GRANULAR "B"
13.) BARRIER CURB TO COMPLY WITH OPSD 600.110.
14.) ALL PROPOSED CATCHBASIN AND DOUBLE CATCHBASIN STRUCTURES TO HAVE MIN. 900mm SUMP DEPTH PER OPSD 705.010 AND OPSD 705.020 RESPECTIVELY. ALL CATCHBASIN STRUCTURES TO BE FITTED WITH CATCHBASIN SHIELDS OR APPROVED EQUIVALENT. DETAIL PROVIDED ON DWG. No. DET–1.

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD, TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19cm TOP OF COPING. N4910788.889 E507324.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 150 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E507769 ELEV 230.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E507601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD. APPROXIMATELY 1.020m WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900880.257 E508733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
7	SITE PLAN AMENDMENT	21–03–08	DR
6	FIFTH SUBMISSION	19–11–13	DR
5	FOURTH SUBMISSION	19–08–30	DR
4	THIRD SUBMISSION	19–05–24	DR
3	SECOND SUBMISSION	19–01–11	DR

LICENSED PROFESSIONAL ENGINEER D. F. RICHARDSON 100112707 MAR 10/21 PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

GENERAL NOTES

JONES CONSULTING GROUP LTD. PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W6
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F. 705.734.1056

DESIGN JJH	SCALE: N/A	DATE JULY 2017	
DRAWN JJH	PROJECT PRA–17021	DWG. № N–1	
CHECKED DR			

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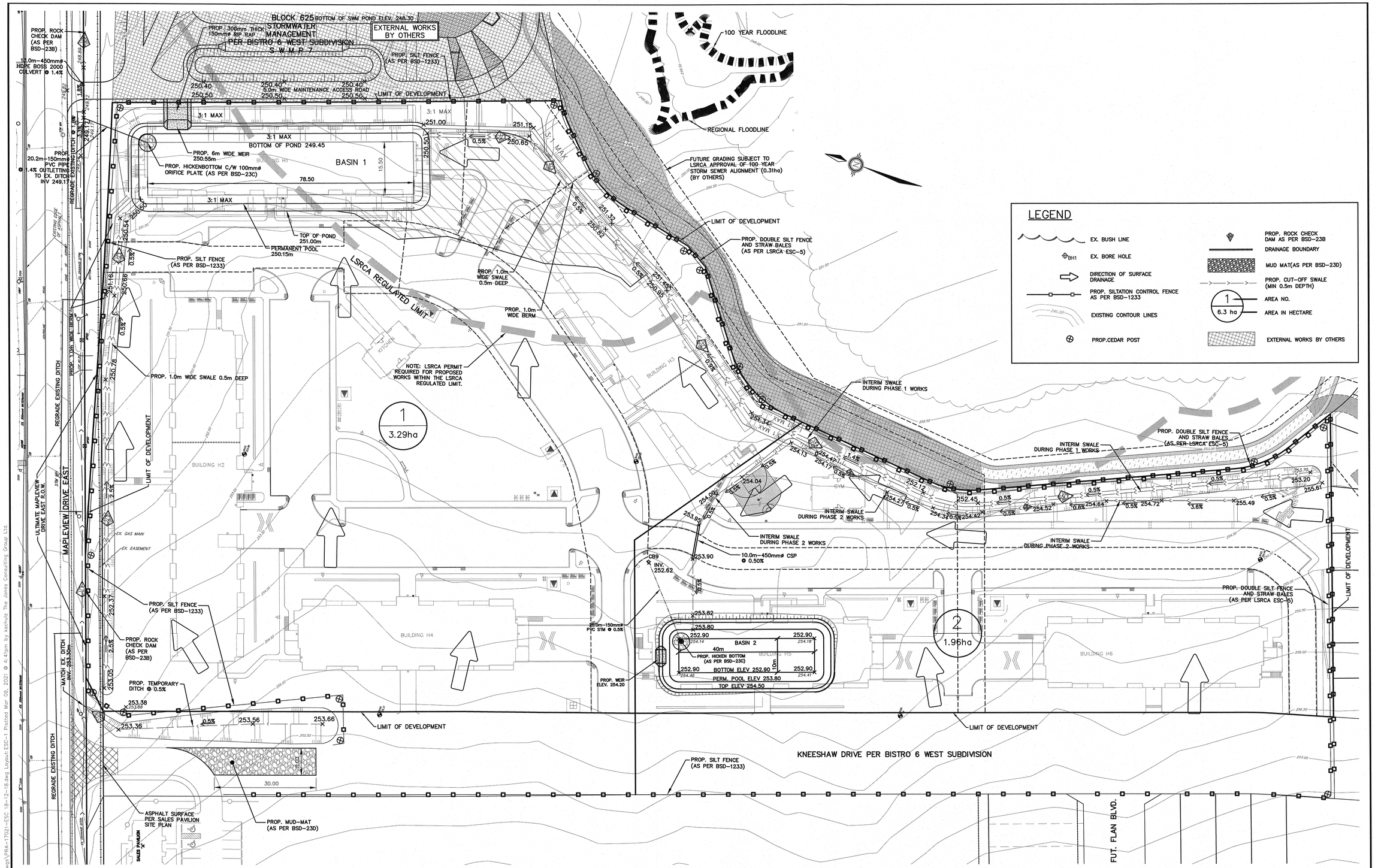

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.961

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080094 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910978.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD. APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4909970.257 E608733.580 ELEV 252.807

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3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

EROSION AND SEDIMENT CONTROL PLAN

JONES CONSULTING GROUP LTD.
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229 Mapleview Dr. E, Unit 1
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DESIGN JJH	SCALE: 1:500	DATE JULY 2017	
DRAWN JJH	PROJECT PRA-17021	DWG. № ESC-1	
CHECKED DR			

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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.

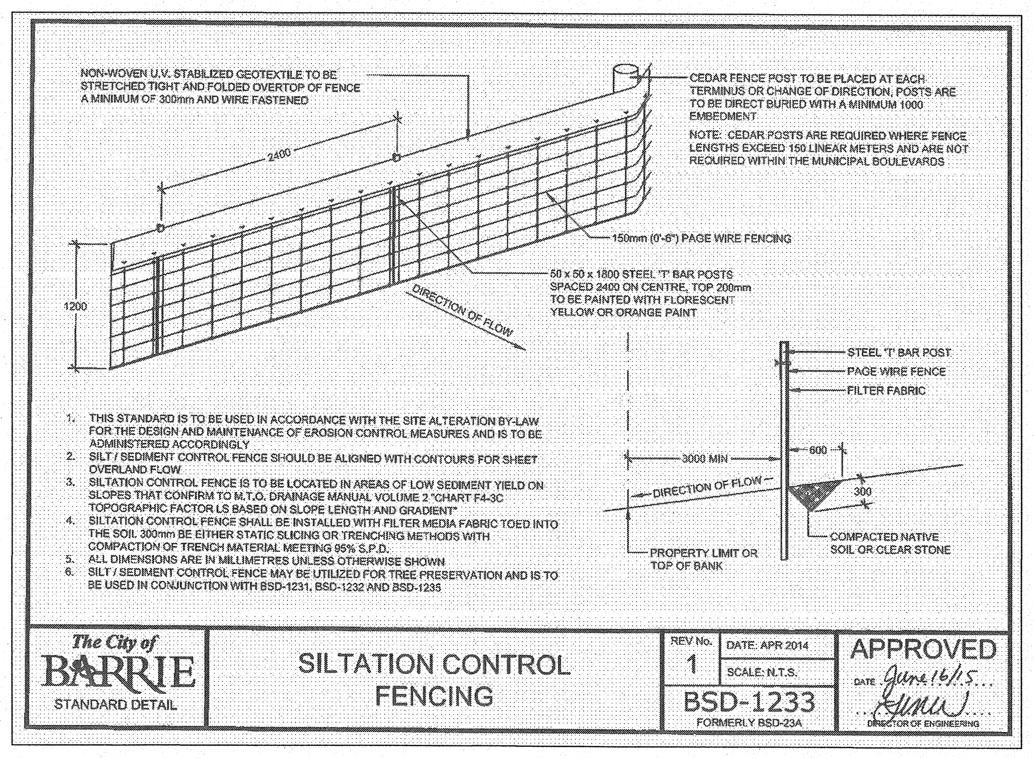
I. ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE CITY ENGINEERING DEPARTMENT.

CITY OF BARRIE STANDARD

GENERAL NOTES

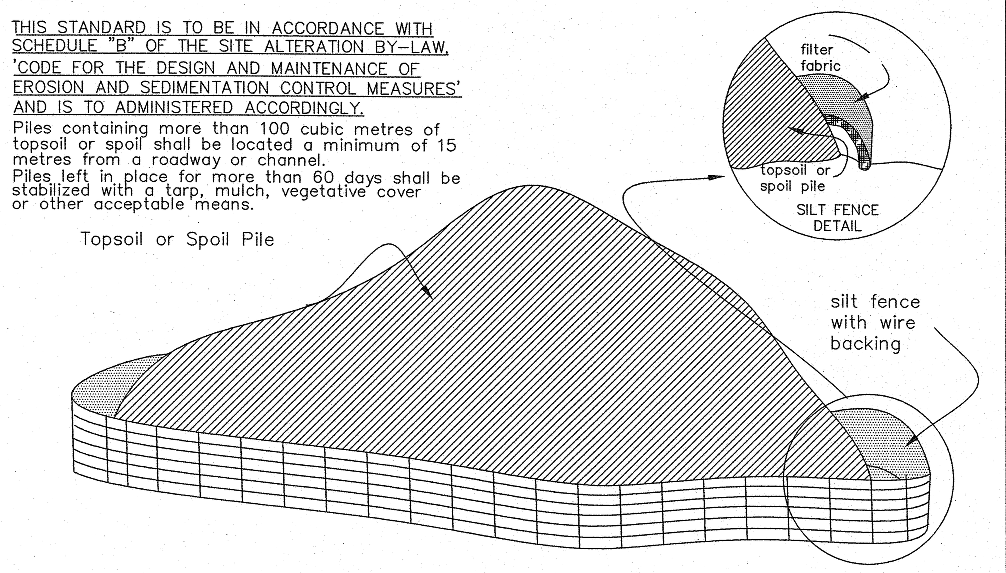
NO.	REVISION	APR'D	DATE
3.	3. NOTE: 3.E. REVISED & 3.I. ADDED	J.S.	05.01.10
2.	3.D. – "ENGINEERING DEPARTMENT"	B.R.	02.10.28
1.	3.E. TOPSOIL PERMIT		01.12.06

APR'D: R.G.N. DATE: 92.05.15 DRAWN: L.A.J. SCALE: N.T.S. **BSD-N6**



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 ADMINISTERED ACCORDINGLY.
2. Piles containing more than 100 cubic metres of topsoil or spoil shall be located a minimum of 15 metres from a roadway or channel.
3. Piles left in place for more than 60 days shall be stabilized with a tarp, mulch, vegetative cover or other acceptable means.



CITY OF BARRIE STANDARD

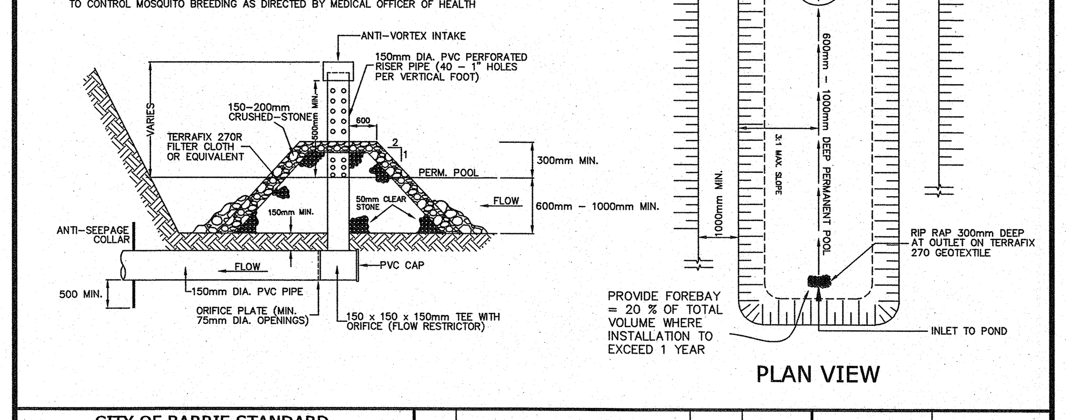
TOPSOIL OR SPOIL PILE SILTATION CONTROL

NO.	REVISION	APR'D	DATE

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

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. POND BERMS TO BE CONSTRUCTED USING IMPERVIOUS MATERIAL, COMPACTED TO 95% S.P.D, AND INSPECTED BY A PROFESSIONAL ENGINEER.
3. A 1500mm HIGH BARRIER FENCE SHALL BE ERECTED ALONG PERIMETER OF SEDIMENT BASIN. WARNING SIGNS SHALL BE ATTACHED TO THE FENCING STATING THE AREA IS OFF LIMITS TO THE GENERAL PUBLIC, AND ADVSING THAT THE BASIN IS USED FOR SEDIMENT CONTROL PURPOSES, AND THAT THE SUBJECT AREA IS SUBJECT TO FLASH FLOODING.
4. THE BASIN IS TO BE CONSTRUCTED ON THE BASIS OF A MIN. LENGTH TO WIDTH RATIO OF 4 TO 1.
5. APPROPRIATE PESTICIDE AND LAVICIDE CONTROLS SHOULD BE MAINTAINED TO CONTROL MOSQUITO BREEDING AS DIRECTED BY MEDICAL OFFICER OF HEALTH

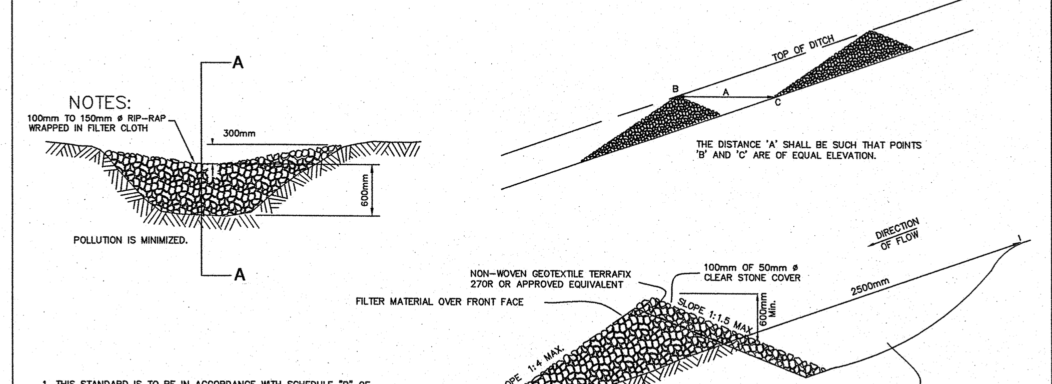


CITY OF BARRIE STANDARD

TEMPORARY SEDIMENT BASIN AND OUTLET DETAILS

NO.	REVISION	APR'D	DATE
1	MODIFICATIONS BY ENV. SER.		04.04.06

APR'D: R.G.N. DATE: 03.08.29 DRAWN: A.S.C SCALE: N.T.S **BSD-23C**



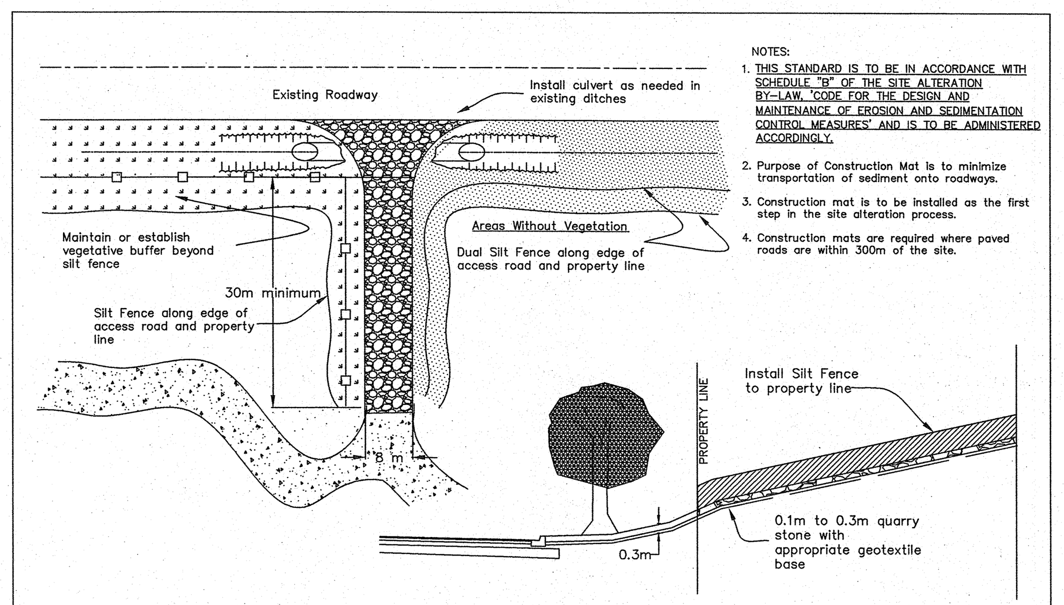
1. THIS STANDARD IS TO BE IN ACCORDANCE WITH SCHEDULE "B" OF THE SITE ALTERATION BY–LAW, 'CODE FOR THE DESIGN AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES' AND IS TO BE ADMINISTERED ACCORDINGLY.
2. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT 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. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

CITY OF BARRIE STANDARD

TYPICAL GRANULAR EROSION CONTROL DEVICE

NO.	REVISION	APR'D	DATE
2	MODIFICATIONS BY ENV. SER.		2004.04.06
1	TRENCH ADDED AND FABRIC EXTENDED INTO IT	B.R.	2003.02.19

APR'D: R.G.N. DATE: 04.03.16 DRAWN: L.A.J. SCALE: N.T.S. **BSD-23B**



NOTES:

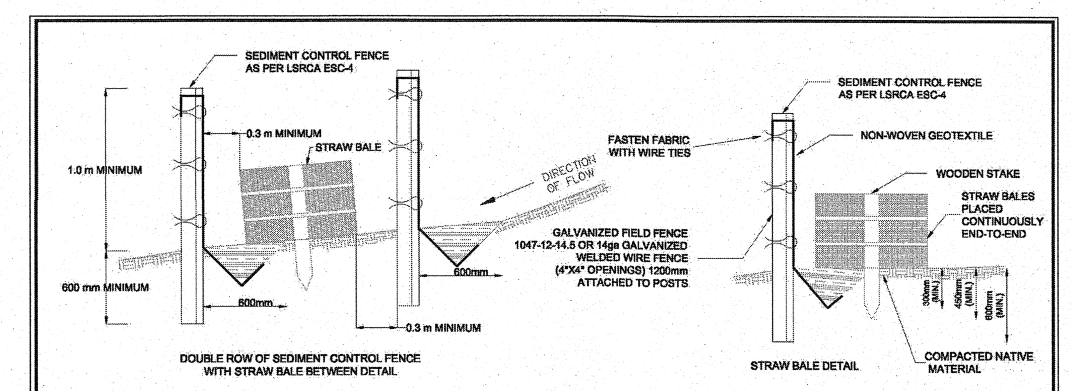
1. THIS STANDARD IS TO BE IN ACCORDANCE WITH SCHEDULE "B" OF THE SITE ALTERATION BY–LAW, 'CODE FOR THE DESIGN AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES' AND IS TO BE ADMINISTERED ACCORDINGLY.
2. Purpose of Construction Mat is to minimize transportation of sediment onto roadways.
3. 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

CONSTRUCTION ENTRANCE MAT

NO.	REVISION	APR'D	DATE
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**



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 LS 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**

EROSION CONTROL NOTES

1. THE ACCOMPANYING PLANS SET OUT THE MEASURES THAT WILL BE TAKEN BY THE DEVELOPER AND ITS CONTRACTORS TO CONTROL DOWNSTREAM SEDIMENT TO THE LOWEST LEVEL PRACTICALLY ACHIEVABLE. THE CONDITIONS AND TECHNIQUES SET OUT ARE TO BE FOLLOWED UNLESS APPROVED OTHERWISE BY THE CONTRACT ADMINISTRATOR, CONSERVATION AUTHORITY AND/OR MUNICIPALITY.
2. ALL TEMPORARY SILT CONTROL AND EROSION PROTECTION DEVICES (I.E. SILT FENCING, DRAINAGE SWALES, ROCK CHECK DAMS, SEDIMENT BASIN(S), GRAVEL ACCESS PAD, ETC.) SHALL BE CONSTRUCTED PRIOR TO COMMENCEMENT OF SITE WORKS 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.
3. ALL SEDIMENTATION CONTROL MEASURES ARE TO BE INSPECTED REGULARLY (MINIMUM WEEKLY), AS WELL AS AFTER EVERY RAINFALL EVENT AND ANY DAMAGED SILT CONTROL AND EROSION PROTECTION DEVICES SHALL BE PROMPTLY REPAIRED OR REPLACED BY THE CONTRACTOR.
4. THE CONTRACTOR MUST USE MATERIALS, CONSTRUCTION PRACTICES, AND MITIGATION TECHNIQUES IN ORDER TO PREVENT THE UNAUTHORIZED HARMFUL ALTERATION, DISRUPTION OR DESTRUCTION OF VEGETATION OR THE IMPAIRMENT OF WATER QUALITY.
5. THE CONTRACTOR SHALL BE PREPARED FOR UNEXPECTED CONDITIONS AND ACCORDINGLY HAVE STOCKPILED MATERIALS ON SITE FOR NECESSARY REPAIRS AS A RESULT OF FAILED OR INADEQUATE CONTROL MEASURES.
6. AREAS WITHOUT STABLE GROUND COVER SHALL BE PROTECTED WITH SILTATION CONTROL FENCING, STRAW MULCH, ETC, AND MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BECOME ESTABLISHED IN THE SUBSEQUENT GROWING SEASON.
7. ALL EXPOSED SOIL MUST BE GRADED TO A STABLE SLOPE AND TREATED AS QUICKLY AS POSSIBLE TO PREVENT EROSION AND SEDIMENT FROM LEAVING THE SITE. ALL AREA STRIPPED OF VEGETATIVE COVER FOR LONGER THAN 30 DAYS SHALL BE TOPSOILED AND SEEDED AT THE DIRECTION OF THE ENGINEER.
8. ALL SITE DRAINAGE TO BE DIRECTED TO THE TEMPORARY SEDIMENT BASINS AND OTHER CHECK DAMS VIA SHEET DRAINAGE, BERMS OR SWALES (AS NECESSARY) TO FACILITATE THE COMPLETION OF GRADING WORKS. THE CONTRACTOR SHALL CONSTRUCT ANY ADDITIONAL SWALES OR BERMS THAT MAY BE NECESSARY TO DIRECT RUN–OFF IN A CONTROLLED MANNER OF SUITABLE QUALITY.
9. ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE FROM PROPOSED CONSTRUCTION ACCESS VIA THE GRAVEL ACCESS PAD.
10. ANY DEWATERING WASTE SHALL BE DISCHARGED TO A VEGETATED AREA AT LEAST 30m FROM ANY WATERCOURSE AND FILTERED. FILTERING METHODS MUST BE APPROVED BY THE SITE INSPECTOR.
11. TECHNIQUES FOR EROSION AND SEDIMENT CONTROLS ARE TO ADHERE TO ACCEPTED ENGINEERING PRACTICE AND MUNICIPAL, CONSERVATION AUTHORITY AND ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS. THE CONTRACTOR SHALL OBTAIN A CURRENT COPY AND BECOME FAMILIAR WITH OPSS 805; CONSTRUCTION SPECIFICATION FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, AS WELL AS APPLICABLE MUNICIPAL STANDARDS AND/OR APPROVAL AGENCY STANDARDS.
12. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES, SUCH MEASURES MUST BE PRESENTED IN WRITING FOR APPROVAL BY THE CONTRACT ADMINISTRATOR AND MUST BE APPROVED IN WRITING BY THE APPLICABLE APPROVAL AGENCIES.

CONSTRUCTION SEQUENCE

THE FOLLOWING CONSTRUCTION SEQUENCE IS PROVIDED FOR CONTRACTOR GUIDANCE:

1. CONSTRUCT ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING SILT FENCE, TREE PRESERVATION FENCE, MUD MATS, CHECK DAMS, SWALES/BERMS, ETC.
2. CONSTRUCT TEMPORARY SEDIMENT BASINS. STRIPPING AND REMOVAL OF TOPSOIL. TOPSOIL TO BE REMOVED FROM SITE.
3. PROCEED WITH EARTH EXCAVATION AND PRE–GRADING. PROCEED WITH SEEDING OF RESTORATION OF ALL DISTURBED AREAS AS DIRECTED BY ENGINEER. ALL AREAS STRIPPED OF VEGETATIVE COVER FOR LONGER THAN 15 DAYS SHALL BE HYDROSEEDED AT THE DIRECTION OF THE ENGINEER. HYDROSEED WITH FIBRETAC AT 100KG/HA. HYDROSEED MIXTURE OF 48% ANNUAL RYE GRASS, 48% FALL RYE, 4% RED CLOVER WILL NEED TO BE APPLIED TO THE SIDE SLOPES OF THE SEDIMENT CONTROL PONDS AND ANY EXPOSED AREAS FOLLOWING TOPSOIL STRIPPING.
4. PROCEED WITH SITE WORKS I.E. SITE SERVICING AND SURFACE WORKS INSTALLATIONS. COMPLETE TEMPORARY CONNECTIONS FROM SEDIMENT BASINS TO INTERNAL STORM SEWERS.
2. RESTORATION OF DISTURBED AREAS.
3. REMOVAL OF SEDIMENT AND EROSION CONTROLS.

NOTE SILTATION AND EROSION CONTROL MEASURES ARE TO BE MONITORED AND MAINTAINED THROUGHOUT CONSTRUCTION AND NECESSARY REPAIRS TO BE PROMPTLY COMPLETED AS REQUIRED.

CONTINGENCY PLAN

IF UNFORESEEN EVENTS CAUSE THE STRATEGIES SET OUT IN THIS PLAN TO BE INSUFFICIENT OR INAPPROPRIATE TO MEET THE OBJECTIVE, THE CONTRACTOR IS EXPECTED TO RESPOND IN A TIMELY MANNER WITH ALL REASONABLE MEASURES CONSISTENT WITH SAFETY, TO PREVENT, COUNTERACT OR REMEDY DOWNSTREAM SEDIMENTATION AND EROSION.

IF A SPILL OCCURS IT SHALL BE REPORTED TO THE MINISTRY OF ENVIRONMENT & CLIMATE CHANGE & THE MINISTRY OF NATURAL RESOURCES AND FORESTRY. THE ON CALL CITY OF BARRIE ENVIRONMENTAL OFFICER SHOULD ALSO BE NOTIFIED VIA PAGER (705) 720–5056

IF APPROVAL AGENCIES DETERMINE THAT LONG TERM DAMAGE TO THE NATURAL ENVIRONMENT HAS OCCURRED DUE TO FAILURE OF THIS PLAN TO CONTROL SEDIMENTS, A RESTORATION PLAN WILL BE DEVELOPED BY THE CONTRACTOR IN CONSULTATION WITH AND APPROVAL FROM THE APPROPRIATE AGENCIES FOR IMPLEMENTATION BY THE CONTRACTOR.

SITE DATA	
OVERALL SITE AREA	5.25 Ha
EXISTING LAND USE	(VACANT) AGRICULTURAL FIELD
PREDOMINANT SOIL TYPE	SANDY LOAM
BASIN 1	
BOTTOM OF POND ELEVATION	249.45
PERMANENT POOL ELEVATION	250.15
ORIFICE DIAMETER	100mm
OVERFLOW WEIR ELEVATION	250.55
TOP OF POND ELEVATION	251.00
PERMANENT POOL VOLUME	$991m^3$
ACTIVE STORAGE VOLUME	$696m^3$
REQUIRED PERMANENT POOL VOLUME BASED ON $185m^3$ OF DRAINAGE AREA TO POND	$971m^3$
REQUIRED ACTIVE STORAGE VOLUME BASED ON $125m^3$ OF DRAINAGE AREA TO POND	$657m^3$
CATCHMENT AREA	5.25 Ha

SITE DATA	
OVERALL SITE AREA	5.25 Ha
EXISTING LAND USE	(VACANT) AGRICULTURAL FIELD
PREDOMINANT SOIL TYPE	SANDY LOAM
BASIN 2	
BOTTOM OF POND ELEVATION	252.90
PERMANENT POOL ELEVATION	253.80
ORIFICE DIAMETER	75mm
OVERFLOW WEIR ELEVATION	254.20
TOP OF POND ELEVATION	254.50
PERMANENT POOL VOLUME	$487m^3$
ACTIVE STORAGE VOLUME	$1054m^3$
REQUIRED PERMANENT POOL VOLUME BASED ON $185m^3$ OF DRAINAGE AREA TO POND	$363m^3$
REQUIRED ACTIVE STORAGE VOLUME BASED ON $125m^3$ OF DRAINAGE AREA TO POND	$245m^3$
CATCHMENT AREA	1.96 Ha

FINAL APPROVED PLAN
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EROSION AND SEDIMENT CONTROL DETAILS

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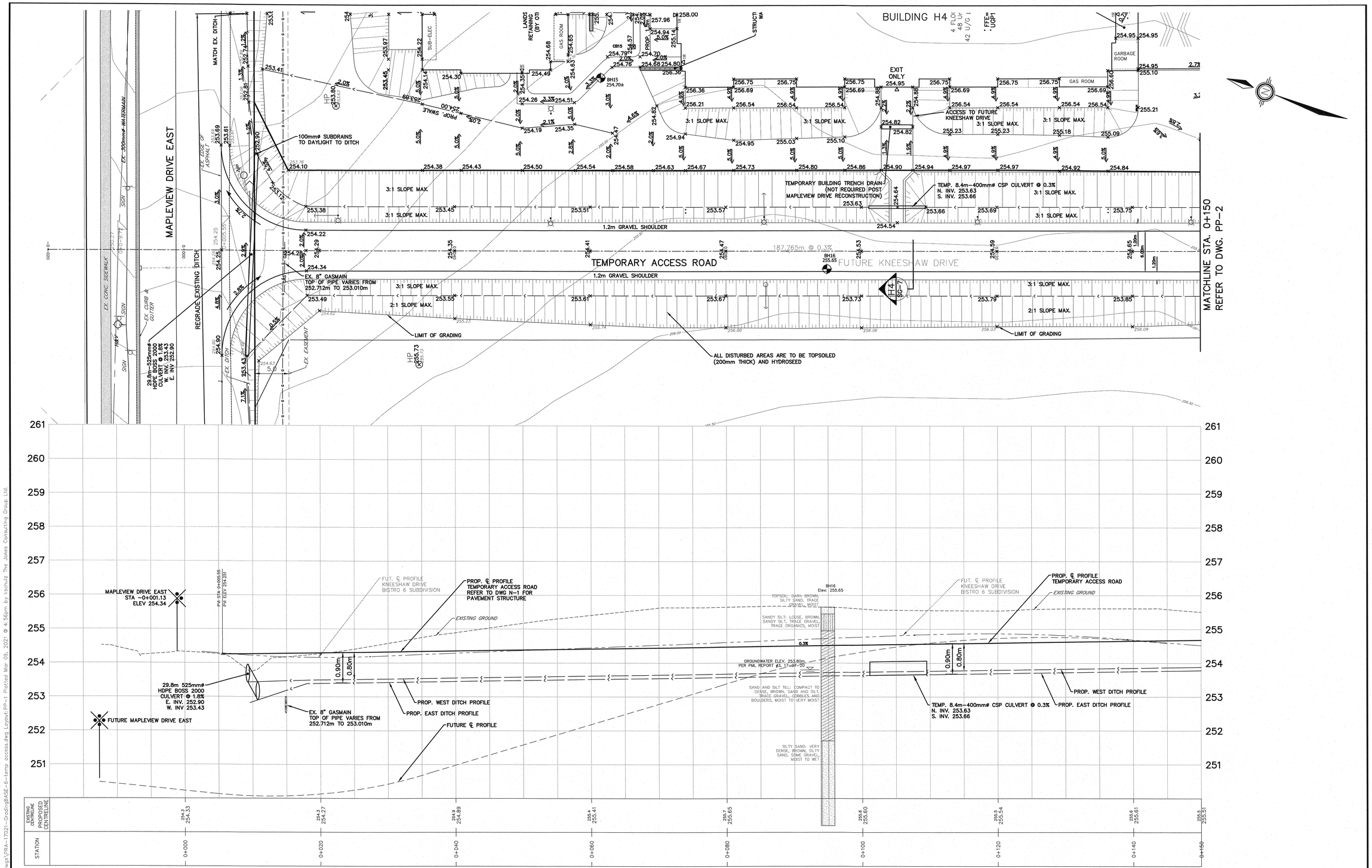

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File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.85KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 285M WEST OF THE NORTHEAST END OF BRIDGE, 190M TOP OF COPING. N4910788.889 E607264.100

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 11m EAST OF HURONIA ROAD. N4910875.122 E607001.052 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4809697.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

PLAN & PROFILE
TEMPORARY ACCESS ROAD
STA. 0+000 TO 0+150

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN JJH	SCALE: H=1:250 V=1:50	DATE NOVEMBER 2018	
DRAWN JJH	PROJECT PRA-17021	DWG. № PP-1	
CHECKED DR			

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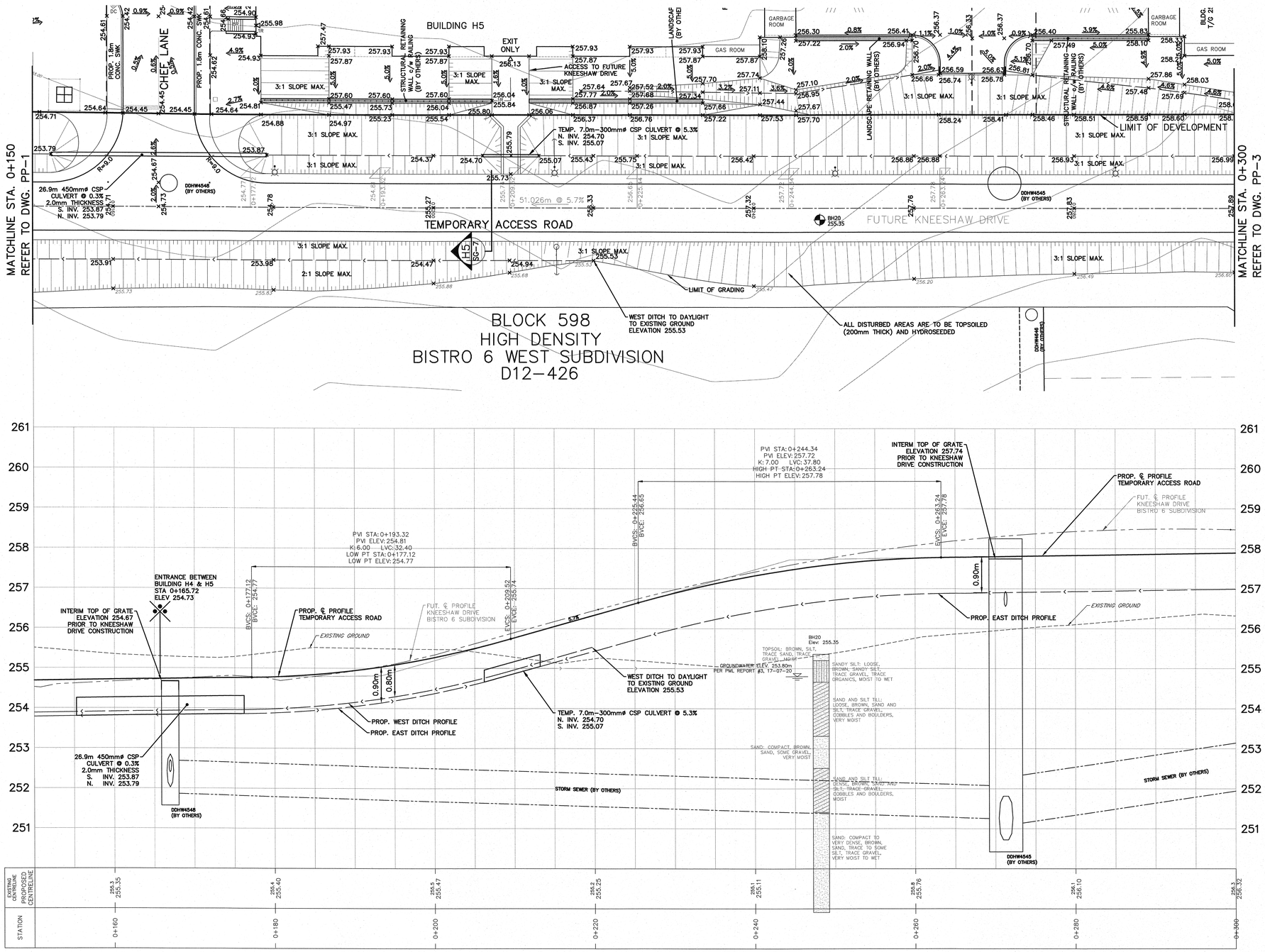

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01010865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.85KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 16CM TOP OF COPING. N4910788.889 E607284.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4916510 E607799 ELEV 230.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD. APPROXIMATELY 1.020m WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900987O.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21–03–08	DR
5	FOURTH SUBMISSION	19–08–30	DR
4	THIRD SUBMISSION	19–05–24	DR
3	SECOND SUBMISSION	19–01–11	DR
2	FIRST SUBMISSION	17–07–10	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

PLAN & PROFILE
TEMPORARY ACCESS ROAD
STA. 0+150 TO 0+300

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
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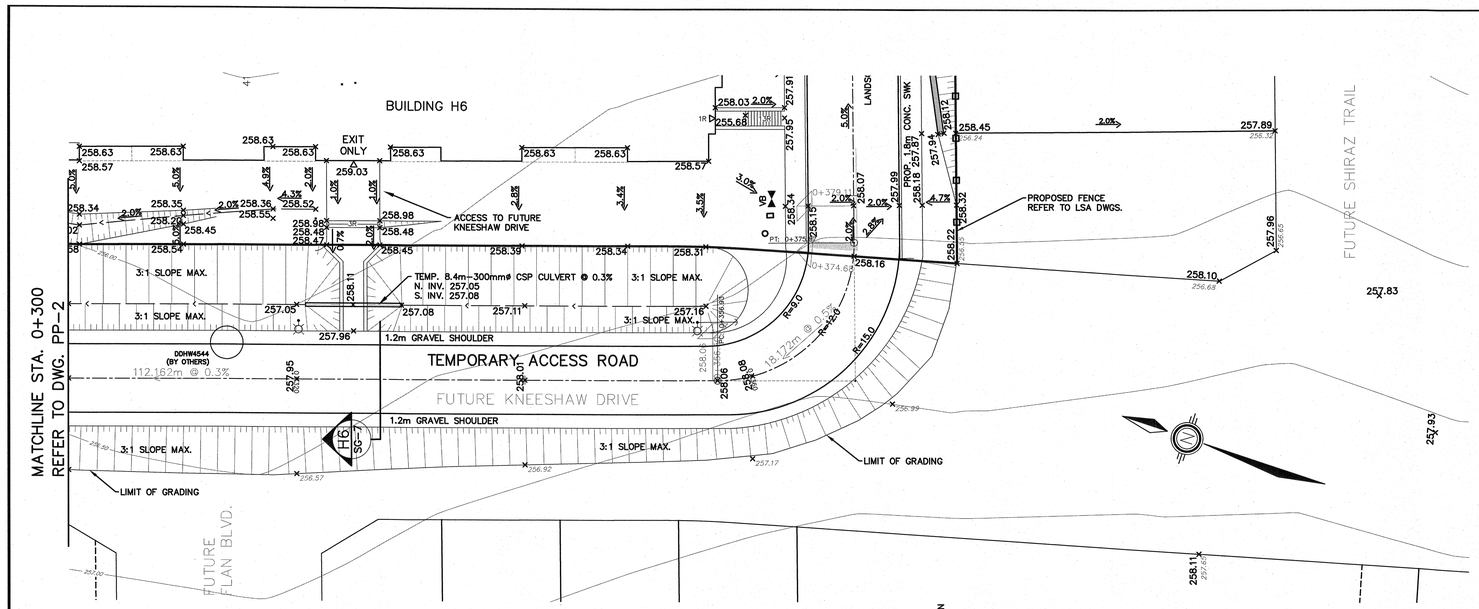
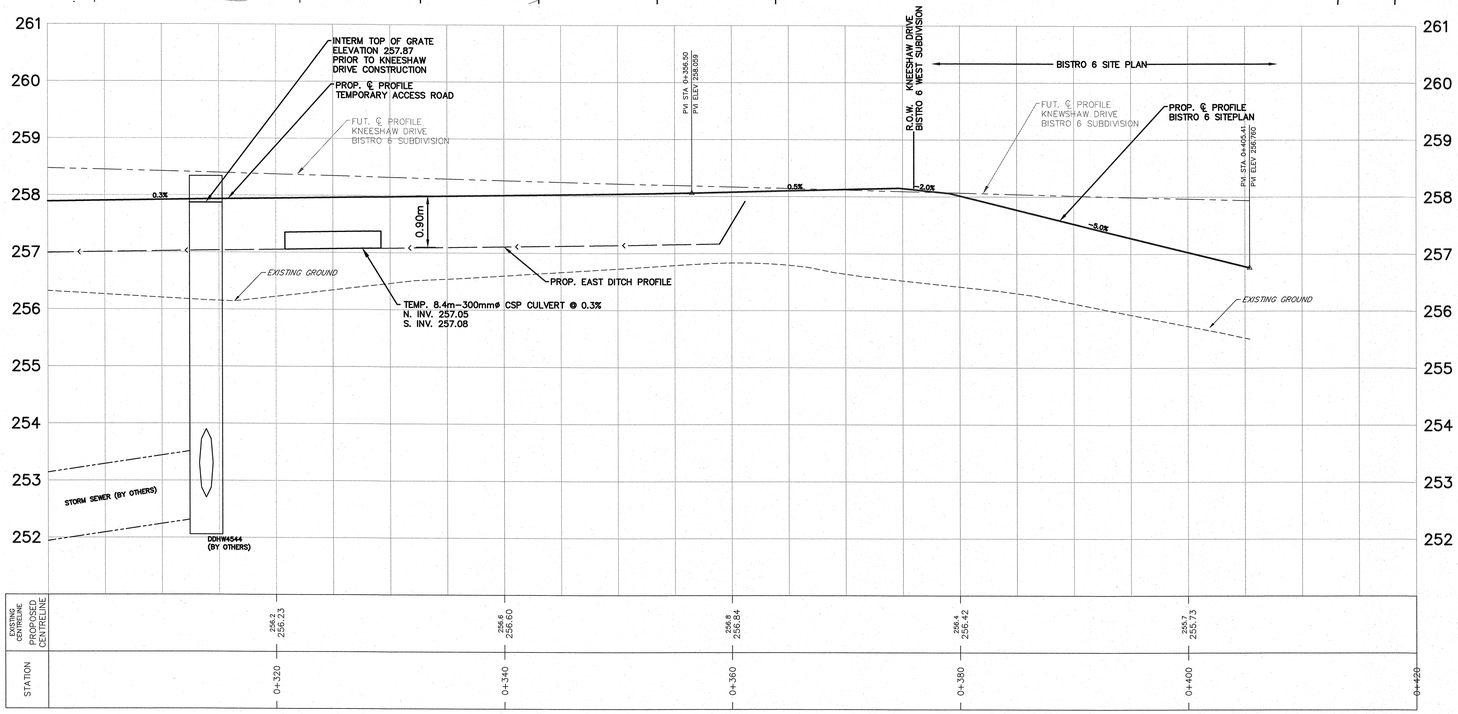
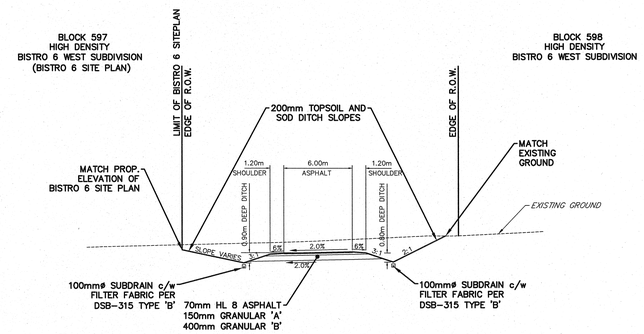
DESIGN JJH	SCALE: H=1:250 V=1:50	DATE NOVEMBER 2018	
DRAWN JJH	PROJECT PRA–17021	DWG. № PP–2	
CHECKED DR			

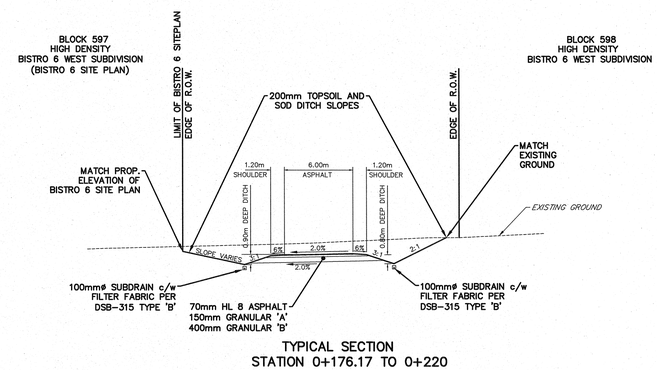
G:\Eng_3D\PRA-17021\Design Dwgs\PRA-17021-GradingBASE-6-temp access.dwg Layout:PP-2 Plotted Mar 09, 2021 @ 4:57pm by kschulz The Jones Consulting Group Ltd.



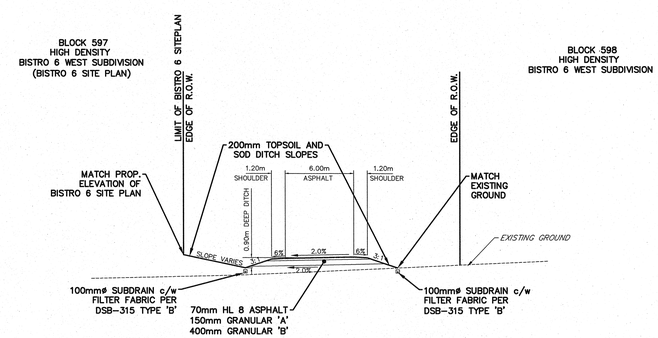




TYPICAL SECTION
STATION 0+005 TO 0+176.17



TYPICAL SECTION
STATION 0+176.17 TO 0+220



TYPICAL SECTION
STATION 0+220 TO 0+376

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 0101965454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607284.100

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.505

BENCHMARK NO: 03120035005A LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD. APPROXIMATELY 1.02m WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900987O.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
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4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP LTD.
BISTRO 6
CITY OF BARRIE

PLAN & PROFILE
TEMPORARY ACCESS ROAD
STA. 0+300 TO 0+405.41

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
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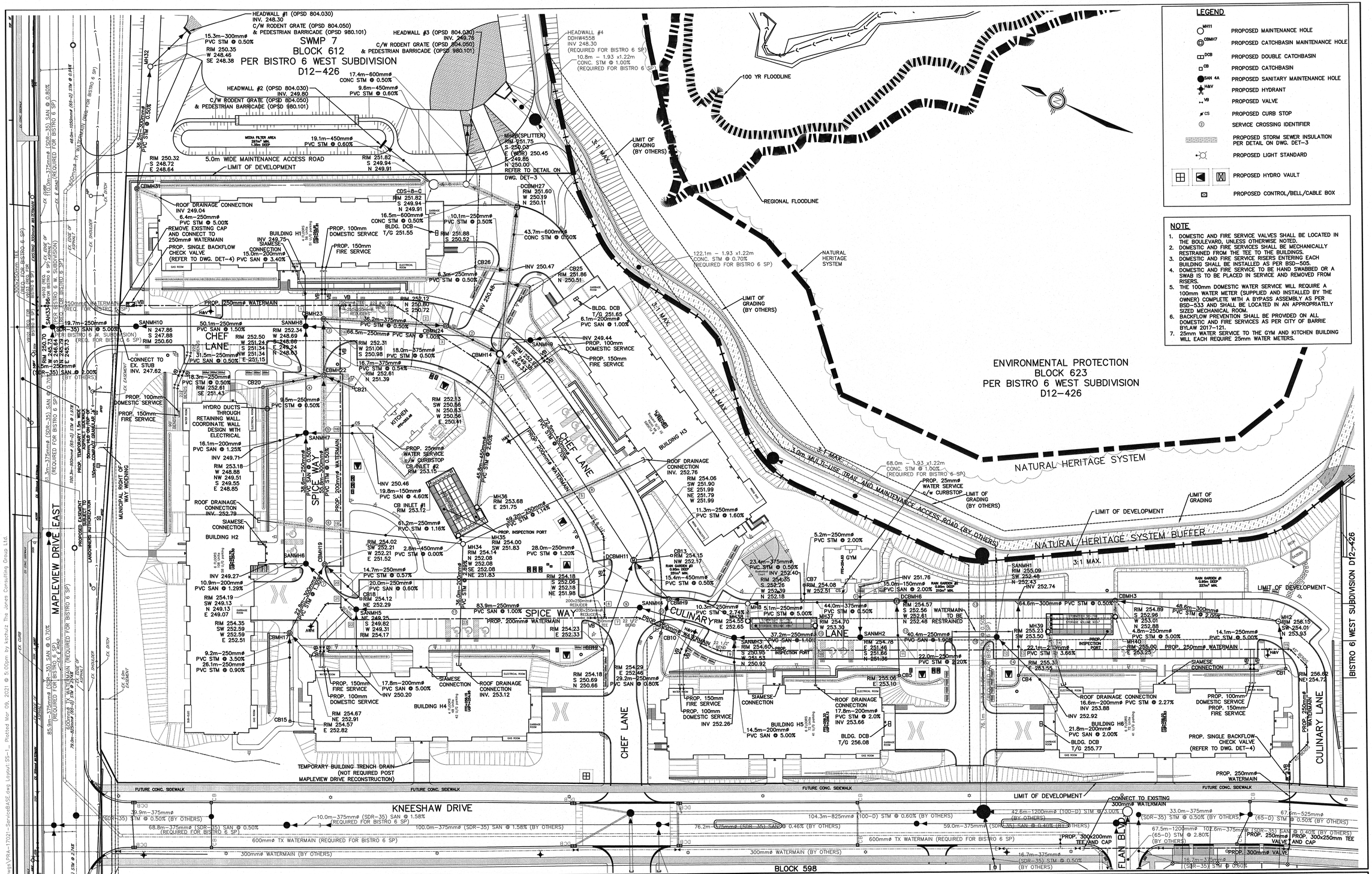
F. 705.734.1056

DESIGN JJH	SCALE: H=1:250 V=1:50	DATE NOVEMBER 2018	
DRAWN JJH	PROJECT PRA-17021	DWG. № PP-3	
CHECKED DR			

G:\Eng_3D\PRA-17021\Design Dwgs\PRA-17021-GradingBASE-6-temp access.dwg Layout:PP-3 Plotted Mar 09, 2021 @ 4:57pm by kschultz The Jones Consulting Group Ltd.



FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E. OVER LUNDY'S CREEK, 0.85M EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.661

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.020m WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4909870.257 E608733.560 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

SITE SERVICING PLAN
WITH SUBDIVISION AND
ULTIMATE MAPLEVIEW DRIVE EAST

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
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P. 705.734.2538
F. 705.734.1056

DESIGN JJH	SCALE: 1:500	DATE APR 2017
DRAWN CG	PROJECT PRA-17021	DWG. № SS-1
CHECKED MF		

Bistro 6 - Site Plan
5yr Storm Sewer Design Sheet

CLIENT: Pratt Hansen Group Inc.

PROJECT: Bistro 6 Site Plan

FILE: PRA-17021 (50)

DATE: August 29, 2019

DESIGN: MG

CHECKED: DR

5 Year Storm Sewer Sizing

AREAS	MANHOLE FROM	MANHOLE TO	LENGTH (m)	INCREMENT C	INCREMENT A	INCREMENT CA	TOTAL CA	FLOW TIME (min) TO	FLOW TIME (min) IN	I (mm/h)	TOTAL Q (cms)	S (%)	D (mm)	Q FULL (cms)	V FULL (m/s)	% FULL
101	CB1	MH2	14.1	0.10	0.02	0.002	0.002	10.00	0.09	109	0.000	5.00	250	0.133	2.7	**0.4**
	MH2	CBMH3	48.6				0.002	10.09	0.42	108	0.000	2.00	300	0.137	1.9	**0.4**
102	CBMH3	TEE1	28.7	0.69	0.25	0.173	0.175	10.51	0.49	106	0.052	0.50	300	0.068	1.0	**75.4**
103	CB4	TEE1	22.1	0.10	0.03	0.003	0.003	10.00	0.16	109	0.001	3.66	250	0.114	2.3	**0.8**
	TEE1	DCBMH6	35.9				0.178	11.00	0.62	104	0.051	0.50	300	0.068	1.0	**74.8**
104	CB5	DCBMH6	22.0	0.10	0.03	0.003	0.003	10.00	0.20	109	0.001	2.20	250	0.088	1.8	**1.1**
105	DCBMH6	TEE2	28.2	0.60	0.34	0.207	0.388	11.62	0.42	101	0.108	0.50	375	0.124	1.1	**87.3**
106	CB7	TEE2	5.2	0.59	0.03	0.018	0.018	10.00	0.05	109	0.006	2.00	250	0.084	1.7	**6.6**
	TEE2	MH8	15.8				0.406	12.04	0.23	99	0.111	0.50	375	0.124	1.1	**89.7**
	MH8	CBMH9	23.4				0.406	12.27	0.35	98	0.110	0.50	375	0.124	1.1	**88.8**
107	CB10	CBMH9	10.3	0.10	0.02	0.002	0.002	10.00	0.09	109	0.001	2.74	250	0.098	2.0	**0.7**
108	CBMH9	DCBMH11	15.4	0.81	0.17	0.141	0.550	12.62	0.20	96	0.147	0.50	450	0.202	1.3	**72.8**
109	CB12	DCBMH11	28.0	0.10	0.04	0.004	0.004	10.00	0.35	109	0.001	1.20	250	0.065	1.3	**1.7**
110	CB13	DCBMH11	11.3	0.13	0.05	0.007	0.007	10.00	0.12	109	0.002	1.60	250	0.075	1.5	**2.9**
111	DCBMH11	CBMH14	72.5	0.74	0.24	0.175	0.736	12.82	0.52	95	0.195	1.70	450	0.372	2.3	**52.3**
112	CB15	CBMH17	26.1	0.30	0.02	0.005	0.005	10.00	0.38	109	0.001	0.90	250	0.056	1.1	**2.6**
113	CB16	CBMH17	9.2	0.10	0.02	0.002	0.002	10.00	0.07	109	0.001	3.50	250	0.111	2.3	**0.6**
114	CBMH17	CBMH19	22.8	0.24	0.02	0.006	0.013	10.38	0.24	107	0.004	1.30	300	0.110	1.6	**3.4**
115	CB18	CBMH19	14.7	0.84	0.12	0.101	0.101	10.00	0.29	109	0.031	0.50	250	0.042	0.9	**72.6**
116	CBMH19	CBMH22	55.8	0.77	0.07	0.054	0.168	10.62	0.96	106	0.049	0.50	300	0.068	1.0	**71.9**
117	CB20	CBMH22	18.3	0.10	0.01	0.001	0.001	10.00	0.36	109	0.000	0.50	250	0.042	0.9	**1.0**
118	CB21	CBMH22	9.5	0.21	0.02	0.003	0.003	10.00	0.18	109	0.001	0.50	250	0.042	0.9	**2.3**
119	CBMH22	CBMH23	16.7	0.85	0.14	0.122	0.294	11.58	0.25	101	0.082	0.50	375	0.124	1.1	**66.4**
120	CBMH23	CBMH24	36.2	0.86	0.05	0.042	0.336	11.83	0.54	100	0.093	0.50	375	0.124	1.1	**75.0**
121	CBMH24	CBMH14	18.0	0.77	0.10	0.078	0.414	12.37	0.27	97	0.112	0.50	375	0.124	1.1	**90.2**

Bistro 6 - Site Plan
5yr Storm Sewer Design Sheet

CLIENT: Pratt Hansen Group Inc.

PROJECT: Bistro 6 Site Plan

FILE: PRA-17021 (50)

DATE: August 29, 2019

DESIGN: MG

CHECKED: DR

5 Year Storm Sewer Sizing

AREAS	MANHOLE FROM	MANHOLE TO	LENGTH (m)	INCREMENT C	INCREMENT A	INCREMENT CA	TOTAL CA	FLOW TIME (min) TO	FLOW TIME (min) IN	I (mm/h)	TOTAL Q (cms)	S (%)	D (mm)	Q FULL (cms)	V FULL (m/s)	% FULL
122	CBMH14	TEE3	20.9	0.89	0.18	0.158	1.308	13.34	0.23	93	0.338	0.50	600	0.434	1.5	**77.9**
123	CB25	TEE3	6.3	0.12	0.04	0.004	0.004	10.00	0.12	109	0.001	0.50	250	0.042	0.9	**3.2**
	TEE3	TEE4	3.8				1.312	13.57	0.04	92	0.336	0.50	600	0.434	1.5	**77.4**
124	CB26	TEE4	10.1	0.12	0.04	0.005	0.005	10.00	0.20	109	0.002	0.50	250	0.042	0.9	**3.7**
	TEE4	DCBMH27	19.0				1.318	13.61	0.21	92	0.337	0.50	600	0.434	1.5	**77.6**
125	DCBMH27	MH28	16.5	0.68	0.16	0.111	1.428	13.81	0.18	91	0.362	0.50	600	0.434	1.5	**83.4**
	MH28	SWMF7HW#3	17.4				1.428	13.99	0.19	91	0.360	0.50	600	0.434	1.5	**82.8**
	MH28	CDS-8-C*	9.6					14.18	0.12	90	0.210	0.60	450	0.221	1.4	**95.1**
	CDS-8-C	BIOFILTERHW#2*	19.1					14.30	0.23	89	0.210	0.60	450	0.221	1.4	**95.1**
301	BLD H1	CBMH31	6.4	0.95	0.16	0.150	0.150	10.00	0.04	109	0.045	5.00	250	0.133	2.7	**34.1**
302	CBMH31	MH32	36.2	0.42	0.07	0.028	0.178	10.04	0.62	109	0.054	0.50	300	0.068	1.0	**78.6**
	MH32	SWMF7HW#1	15.3				0.178	10.66	0.26	105	0.052	0.50	300	0.068	1.0	**76.2**

Q= 0.0028*C*I*A (cms); C=RUNOFF COEFFICIENT; I-RAINFALL INTENSITY (5 Year) =853.608/(T.C. + 4.699)^0.766; A=AREA (ha)

*Total flow to the Biofilter from MH 26 splitter was determined to be 0.21 cms based on PCSWMM modeling.

Barrie

SANITARY SEWER DESIGN
Development Details Basis - BISTRO 6 - Site Plan

DESIGN SHEET 1 of 1
FILE NO PRA-17021
CONTRACT / PROJECT Bistro 6

n ≥ 0.013
M = 5/P^0.2 Babbit
M=1+[14/(4+P^0.5)] Harmon
Q_p = P*q*M/86.4
Q_i = I*A
$Q_{tot} = Q_p + Q_i$

Numbers in blue or text in red are equations
(Harmon or Babbitt peaking factor where; M ≥ 2), the greater of the two is used in the spreadsheet. Please refer to Section 3.3.1.1 of the Barrie Sanitary Design Guidelines for additional guidance on which peaking factor to use.

(Peak population flow where; q = 225 L/day/person; P = population in thousands) 225 litres/person/day
(Peak extraneous flow: I= 0.1L/s/ha over development area)
(Total peak flow as the sum of peak population flow and peak extraneous flow)

STREET / AREA	MAINTENANCE HOLE FROM	MAINTENANCE HOLE TO	DWELL UNITS	DWELL (ACC) UNITS	DENSITY P.P.U.	POP. (P)	POP. (ACC)	M PEAKING FACTOR BABBIT	M PEAKING FACTOR HARMON	Max PEAKING FACTOR	Q_p (l/s)	AREA (ha)	AREA (ACC) (ha)	Q_i (l/s)	Q_{tot} (l/s)	L (m)	D (mm)	S (%)	Qf FULL (l/s)	d/D[3]	d/D[3] >0.5 or >0.85	Velocity FULL (m/s)	Velocity Partial[1] (m/s)	Velocity[4] > 0.6 (m/s)
BUILDING H6	STUB	SANMH1	72	72	1.67	120	120	7.638	4.221	7.638	2.392	0.00	0.00	0.000	2.392	21.8	200	2.00%	46.384	0.154	Ok	1.476	0.775	Ok
Area 1 & 2	SANMH1	SANMH2	0	72		0	120	7.638	4.221	7.638	2.392	0.76	0.76	0.076	2.468	40.4	250	1.90%	81.970	0.119	Ok	1.670	0.740	Ok
Area 3	GYM STUB	SANMH2	1	1	3.13	3	3	15.844	4.452	15.844	0.129	0.02	0.02	0.002	0.131	15.0	150	2.00%	21.538	0.055	Ok	1.219	0.333	Check
Area 4	SANMH2	SANMH3	0	73		0	123	7.599	4.217	7.599	2.441	0.22	1.00	0.100	2.541	37.2	250	1.10%	62.370	0.137	Ok	1.271	0.615	Ok
BUILDING H5	STUB	SANMH3	72	72	1.67	120	120	7.638	4.221	7.638	2.392	0.00	0.00	0.000	2.392	14.5	200	5.00%	73.340	0.123	Ok	2.334	1.087	Ok
Area 5	SANMH3	SANMH4	0	145		0	244	6.632	4.116	6.632	4.207	0.25	1.25	0.125	4.332	29.2	250	0.80%	53.189	0.192	Ok	1.084	0.646	Ok
Area 6	SANMH4	SANMH5	0	145		0	244	6.632	4.116	6.632	4.207	0.39	1.64	0.164	4.371	83.9	250	1.00%	59.468	0.183	Ok	1.211	0.700	Ok
BUILDING H4	STUB	SANMH5	48	48	1.67	80	80	8.283	4.269	8.283	1.729	0.00	0.00	0.000	1.729	17.8	200	5.00%	73.340	0.105	Ok	2.334	0.966	Ok
Area 7	SANMH5	SANMH6	0	193		0	324	6.265	4.064	6.265	5.282	0.24	1.88	0.188	5.470	20.0	250	0.60%	46.063	0.232	Ok	0.938	0.623	Ok
BUILDING H2-SOUTH	STUB	SANMH6	54	54	1.67	90	90	8.090	4.256	8.090	1.900	0.00	0.00	0.000	1.900	10.9	200	1.29%	37.252	0.153	Ok	1.186	0.620	Ok
Area 8	SANMH6	SANMH7	0	247		0	414	5.965	4.015	5.965	6.430	0.44	2.32	0.232	6.662	38.6	250	0.50%	42.050	0.269	Ok	0.857	0.619	Ok
BUILDING H2 - NORTH	STUB	SANMH7	54	54	1.67	90	90	8.090	4.256	8.090	1.900	0.00	0.00	0.000	1.900	16.1	200	1.25%	36.670	0.154	Ok	1.167	0.613	Ok
Area 9	KITCHEN	SANMH7	1	1	3.13	3	3	15.844	4.452	15.844	0.129	0.07	0.07	0.007	0.136	19.8	150	4.60%	32.663	0.046	Ok	1.848	0.443	Check
Area 10	SANMH7	SANMH8	0	302		0	507	5.727	3.971	5.727	7.565	0.08	2.47	0.247	7.812	31.5	250	0.50%	42.050	0.291	Ok	0.857	0.649	Ok
BUILDING H3	STUB	SANMH9	84	84	1.67	140	140	7.408	4.200	7.408	2.705	0.00	0.00	0.000	2.705	6.1	200	1.00%	32.798	0.194	Ok	1.044	0.631	Ok
Area 11 & 12	SANMH9	SANMH8	0	84		0	140	7.408	4.200	7.408	2.705	0.77	0.77	0.077	2.782	66.5	250	1.00%	59.468	0.147	Ok	1.211	0.613	Ok
BUILDING H1	STUB	SANMH8	56	56	1.67	94	94	8.031	4.251	8.031	1.956	0.00	0.00	0.000	1.956	15.0	200	3.40%	60.477	0.123	Ok	1.925	0.880	Ok
Area 13	SANMH8	SANMH10	0	442		0	741	5.309	3.880	5.309	10.245	0.12	3.24	0.324	10.569	50.1	250	1.50%	72.833	0.257	Ok	1.484	1.047	Ok
	SANMH10	SAN33496	0	442		0	741	5.309	3.880	5.309	10.245	0.00	3.24	0.324	10.569	24.4	250	5.00%	132.973	0.190	Ok	2.709	1.601	Ok

DATE: 19-08-29 CALCULATED BY: MF CHECKED BY: DR

(1) without extraneous flow
(2) with extraneous flow
(3) d/D>0.5 for pipes 375 and less, d/D>0.85 for pipes greater than 375
(4) Velocity check based on the lesser of full flow or partial velocity

Watermain Interference Table

Crossing No.	PIPE 1	PIPE 1	Clearance
1	WM BOTTOM 250.41	SAN TOP 249.64	0.77m
2	WM TOP 250.33	STM BOTTOM 250.83	0.50m
3	WM BOTTOM 250.26	SAN TOP 249.31	0.95m
4	WM TOP 250.35	STM BOTTOM 250.85	0.50m
5	WM TOP 251.89	STM BOTTOM 252.39	0.50m
6	WM BOTTOM 252.34	SAN TOP 250.80	1.54m
7	WM TOP 251.71	STM BOTTOM 252.21	0.50m
8	WM TOP 251.91	STM BOTTOM 252.41	0.50m
9	WM BOTTOM 252.65	SAN TOP 251.93	0.72m
10	WM TOP 252.67	STM BOTTOM 253.17	0.50m
11	WM TOP 252.44	STM BOTTOM 252.94	0.50m
12	WM BOTTOM 253.29	SAN TOP 252.79	0.50m
13	WM TOP 252.77	STM BOTTOM 253.27	0.50m
14	WM TOP 253.17	STM BOTTOM 253.67	0.50m
15	WM TOP 253.93	STM BOTTOM 254.43	0.50m
16	WM BOTTOM 250.41	SAN TOP 249.01	1.40m
17	WM TOP 250.87	STM BOTTOM 251.37	0.50m
18	WM BOTTOM 251.22	SAN TOP 250.17	1.05m
19	WM TOP 251.90	STM BOTTOM 252.40	0.50m
20	WM TOP 251.75	STM BOTTOM 252.25	0.50m
21	WM BOTTOM 252.19	SAN TOP 249.46	2.73m
22	WM BOTTOM 252.34	SAN TOP 249.66	2.68m
23	WM TOP 252.14	STM BOTTOM 252.64	0.50m

Pipe Interference Table

Crossing No.	PIPE 1	PIPE 2	Clearance
1	STM Bottom 250.34	SAN Top 249.50	0.84m
2	STM Bottom 250.68	SAN Top 249.39	1.29m
3	STM Bottom 251.13	SAN Top 248.97	2.16m
4	STM Bottom 251.36	SAN Top 249.03	2.33m
5	STM Bottom 251.32	SAN Top 249.95	1.37m
6	STM Bottom 252.46	STM Top 251.77	0.69m
7	STM Bottom 252.25	SAN Top 249.42	2.84m
8	STM Bottom 252.44	STM Top 251.86	0.59m
9	STM Bottom 252.16	SAN Top 250.85	1.31m
10	STM Bottom 252.31	SAN Top 251.01	1.30m
11	STM Bottom 252.42	SAN Top 251.83	0.59m
12	STM Bottom 252.84	SAN Top 252.13	0.71m
13	STM Bottom 252.68	100yr STM Top 251.78	0.90m
14	STM Bottom 253.37	SAN Top 252.87	0.50m
15	STM Bottom 253.06	SAN Top 251.42	1.64m
16	STM Bottom 252.55	SAN Top 249.27	3.28m
17	STM Bottom 252.52	SAN Top 250.39	2.14m
18	SAN Bottom 252.34	100yr STM Top 251.83	0.51m

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.981

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120090054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.998

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900969670.257 E606733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21–03–08	DR
5	FOURTH SUBMISSION	19–08–30	DR
4	THIRD SUBMISSION	19–05–24	DR
3	SECOND SUBMISSION	19–01–11	DR
2	FIRST SUBMISSION	17–07–10	DR

LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

SEWER DESIGN SHEETS
AND
PIPE CLEARANCE TABLE

JONES CONSULTING GROUP LTD.
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F. 705.734.1056

DESIGN JJH	SCALE: 1:500	DATE APR 2017	
DRAWN CG	PROJECT PRA–17021	DWG. № SS–2	
CHECKED MF			

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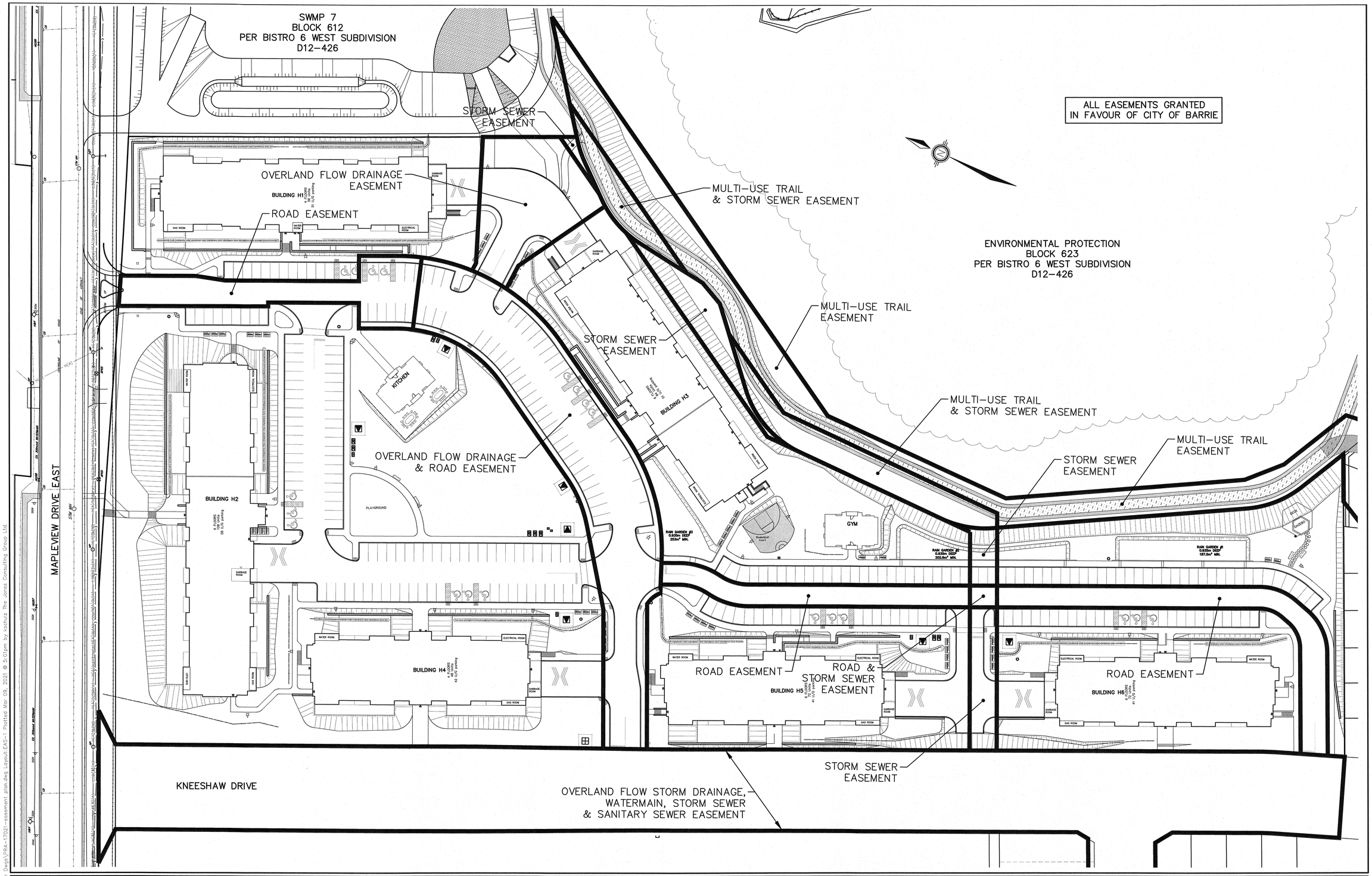

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FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.85KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.49M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.899 E607284.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910578.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4800809.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
2	SITE PLAN AMENDMENT	21–03–08	DR
1	FOURTH SUBMISSION	19–08–30	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
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PRATT HANSEN GROUP INC.
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CITY OF BARRIE

COMPREHENSIVE
EASEMENT PLAN

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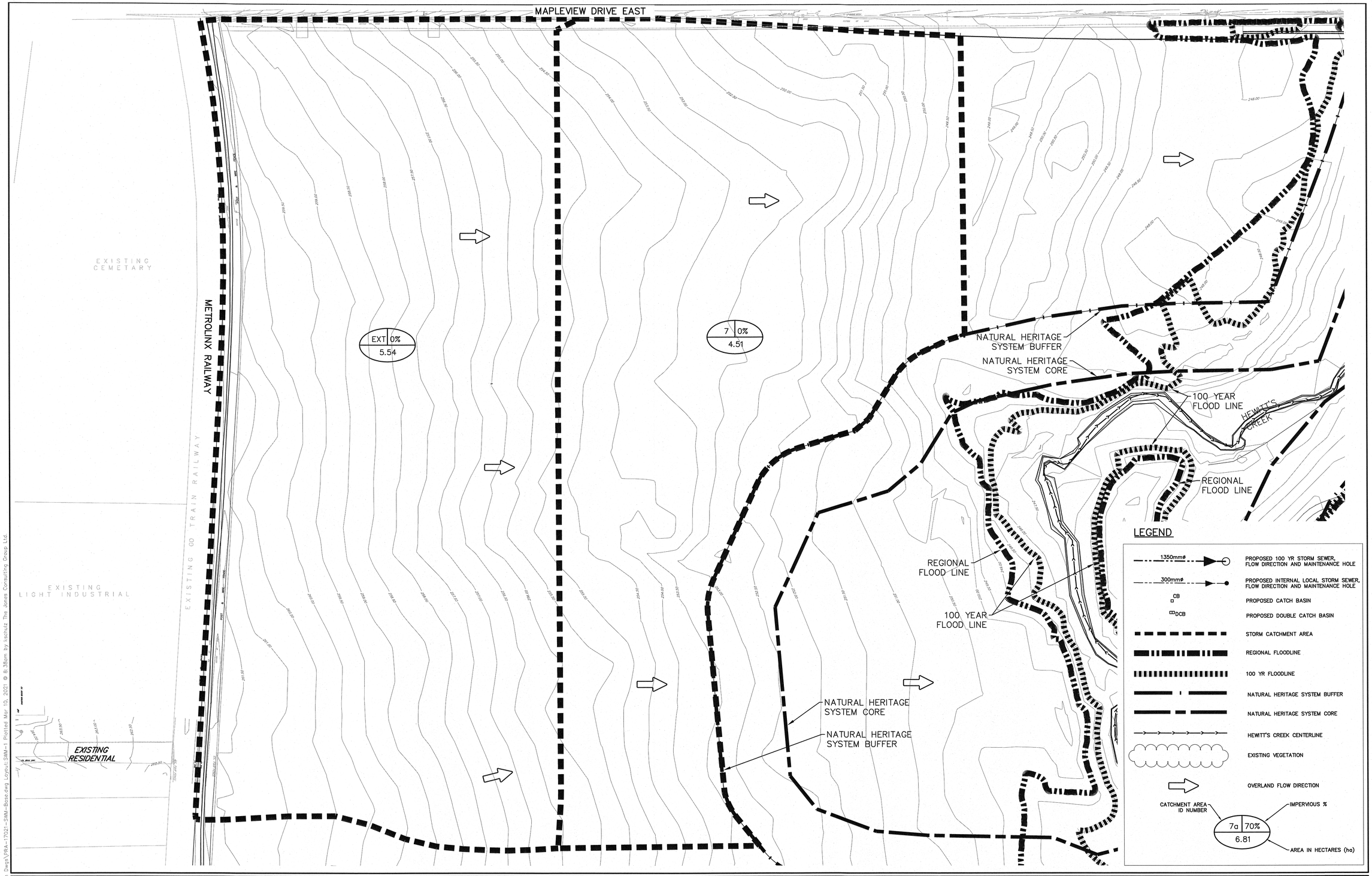
DESIGN JJH	SCALE: 1:500	DATE AUGUST 2019	
DRAWN KS	PROJECT PRA–17021	DWG. № EAS–1	
CHECKED MF			



FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.650M EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 282M WEST OF THE NORTHEAST END OF BRIDGE, 190M TOP OF COPING. N4910788.889 E607264.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911810 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD. APPROXIMATELY 1.020m WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4909870.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
MAR. 19/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

STORMWATER MANAGEMENT PLAN
PRE-DEVELOPMENT CONDITIONS

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DESIGN JJH	SCALE: 1:750	DATE APR 2017	
DRAWN FD	PROJECT PRA-17021	DWG. № SWM-1	
CHECKED MF			

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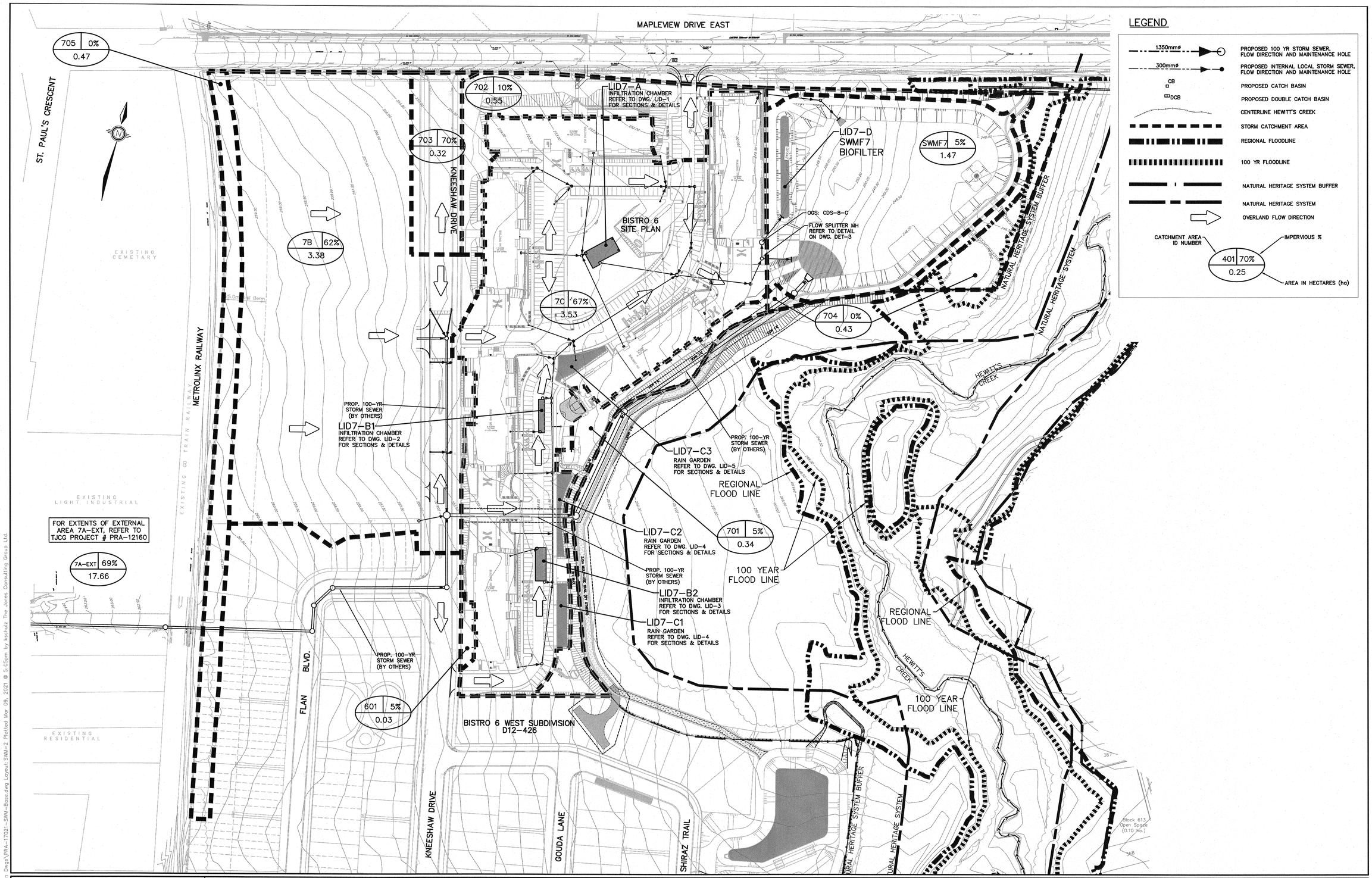

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVE'S CREEK, 0.650M EAST OF HURONIA ROAD, TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.505

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02m WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900987O.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D. R. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

STORMWATER MANAGEMENT PLAN
PEAK FLOW MODEL
CATCHMENT AREAS

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
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DESIGN JJH	SCALE: 1:1000	DATE JULY 2017	
DRAWN FD	PROJECT PRA-17021	DWG. № SWM-2	
CHECKED MF			

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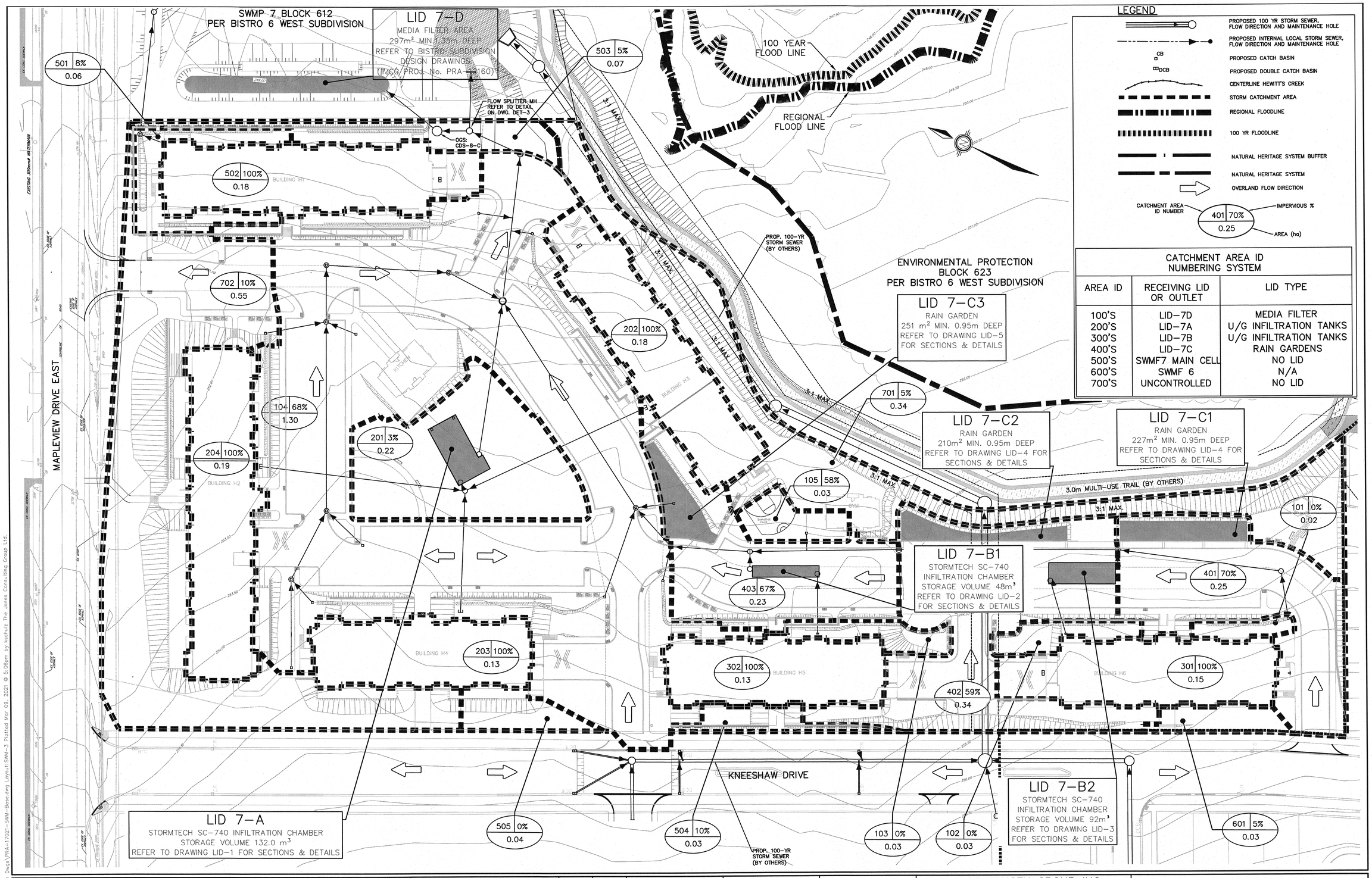

CATCHMENT AREA ID NUMBERING SYSTEM

AREA ID	RECEIVING LID OR OUTLET	LID TYPE
100'S	LID-7D	MEDIA FILTER
200'S	LID-7A	U/G INFILTRATION TANKS
300'S	LID-7B	U/G INFILTRATION TANKS
400'S	LID-7C	RAIN GARDENS
500'S	SWMF7 MAIN CELL	NO LID
600'S	SWMF 6	N/A
700'S	UNCONTROLLED	NO LID

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910786.889 E607284.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 16m EAST OF HURONIA ROAD. N4910878.122 E607601.052 ELEV 248.998

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900870.257 E606733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
MAR 19/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

STORMWATER MANAGEMENT PLAN
LID MODEL CATCHMENT AREAS

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
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DESIGN JJH	SCALE: 1:500	DATE APR 2017	
DRAWN FD	PROJECT PRA-17021	DWG. № SWM-3	
CHECKED MF			

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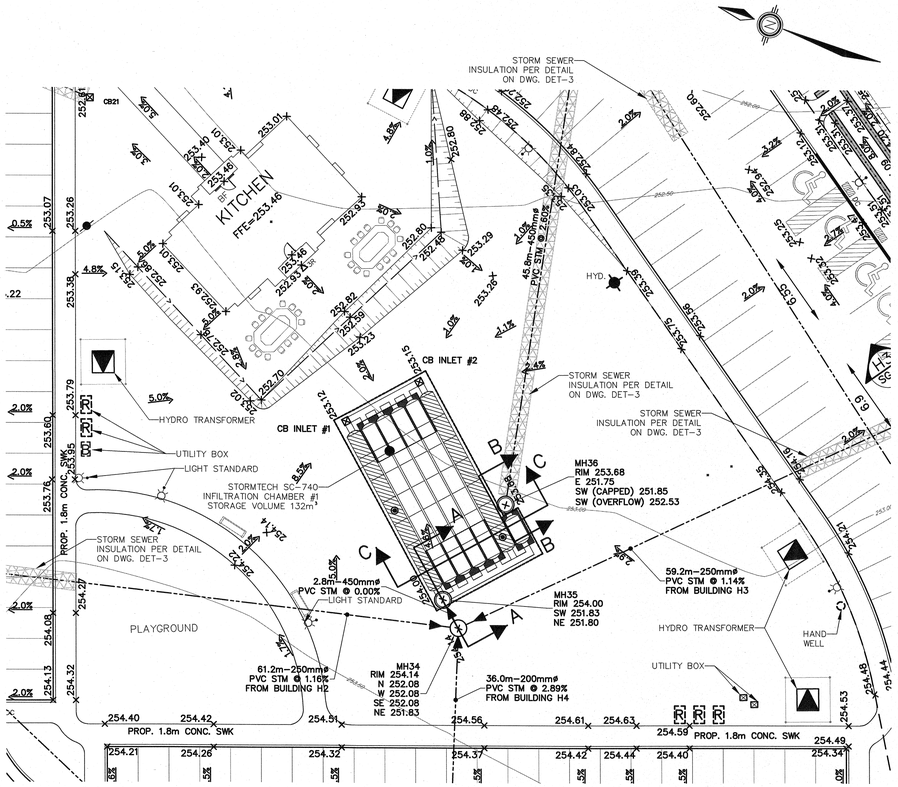
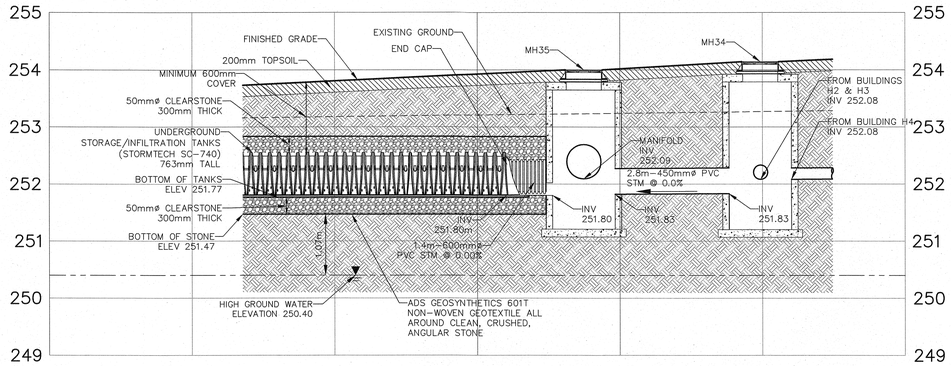


PLAN VIEW

1:250



SECTION A–A

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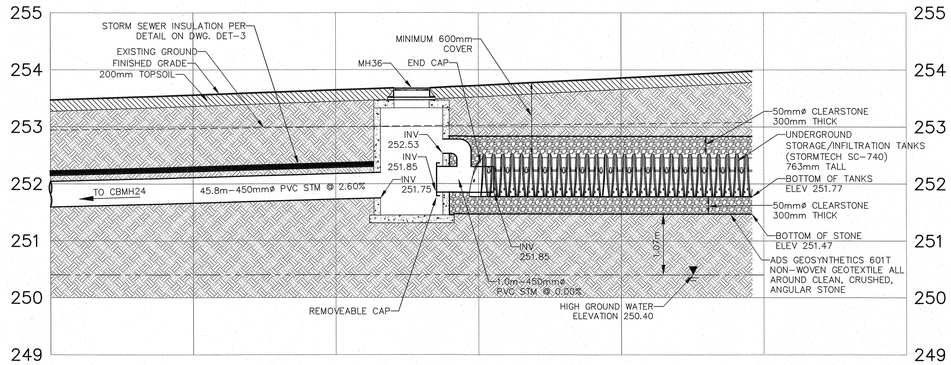

SECTION B–B

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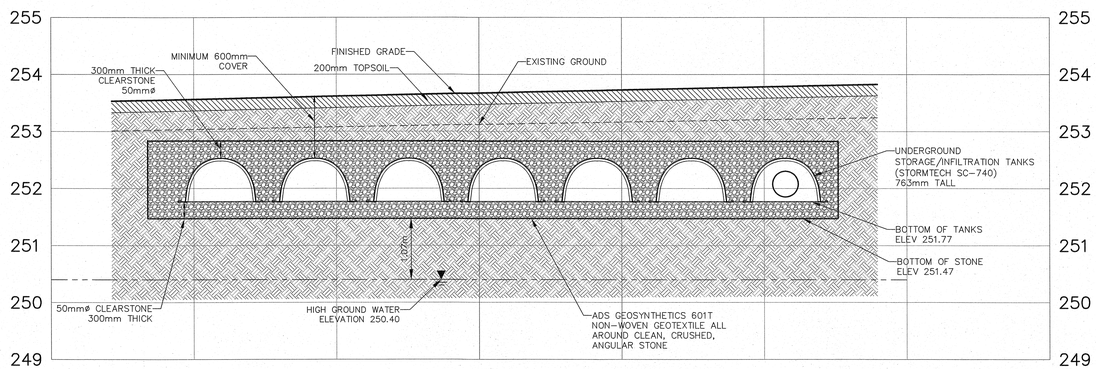

SECTION C–C

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FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD, TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910876.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD. APPROXIMATELY 1.02m WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4909870.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR

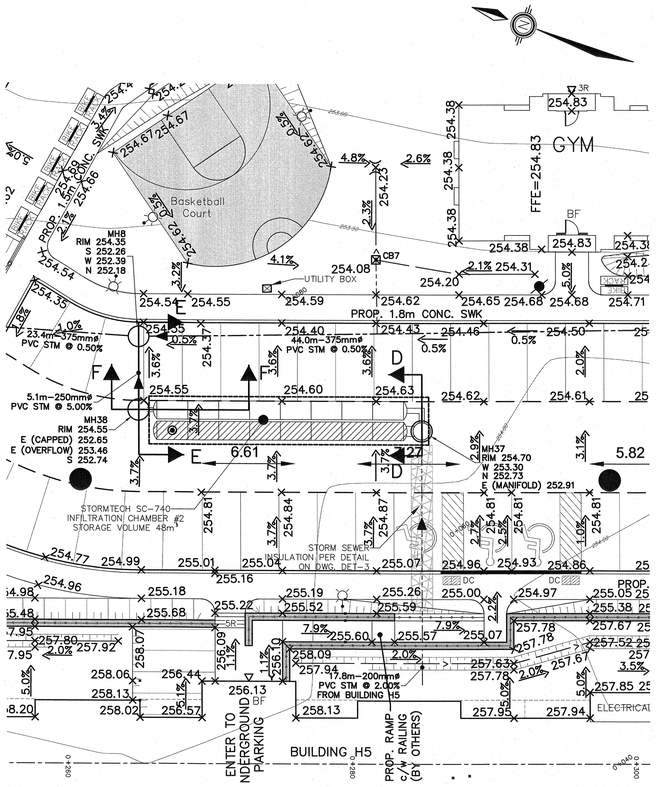
LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
MAR. 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

PARK INFILTRATION GALLERY
LID SECTIONS & DETAILS

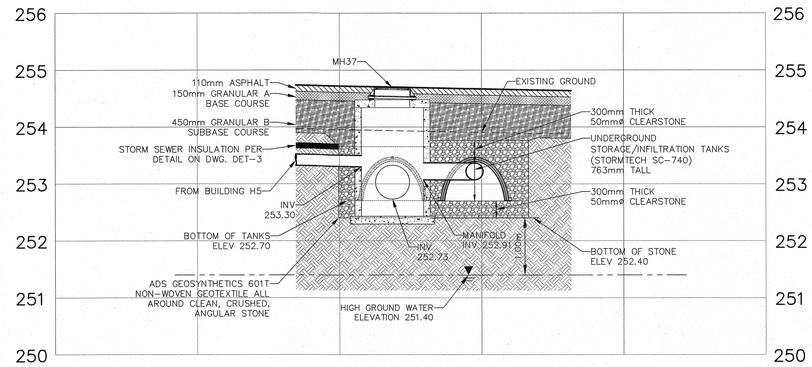
JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN MF/JB	SCALE: AS NOTED	DATE JAN 2019	
DRAWN MG/JJH	PROJECT PRA-17021	DWG. № LID-1	
CHECKED DR			



PLAN VIEW

1:200



SECTION D–D

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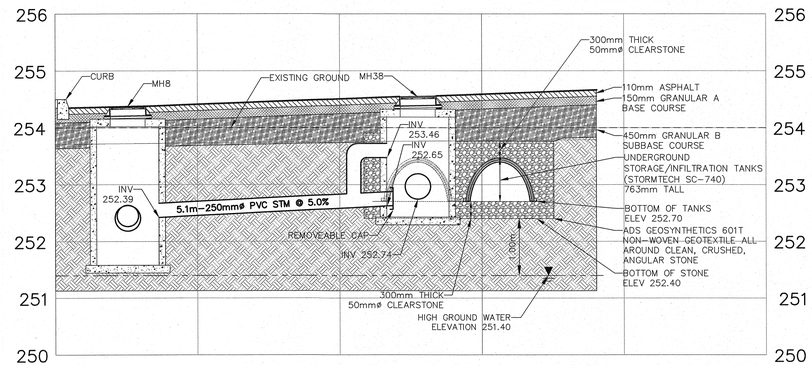

SECTION E–E

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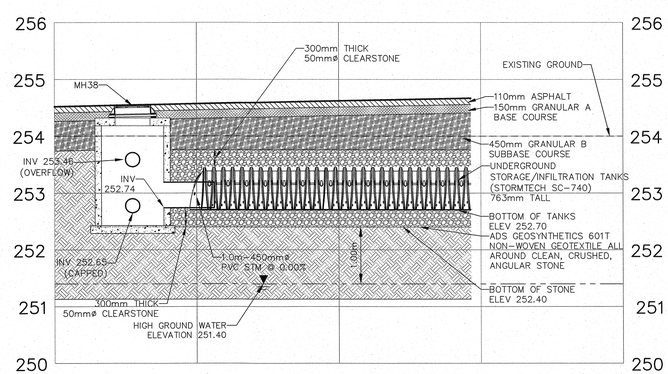


SECTION F–F

1:50

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE. 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD. APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4920089870.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21–03–08	DR
5	FOURTH SUBMISSION	19–08–30	DR
4	THIRD SUBMISSION	19–05–24	DR
3	SECOND SUBMISSION	19–01–11	DR

LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
MAR. 10/21
PROVINCE OF ONTARIO

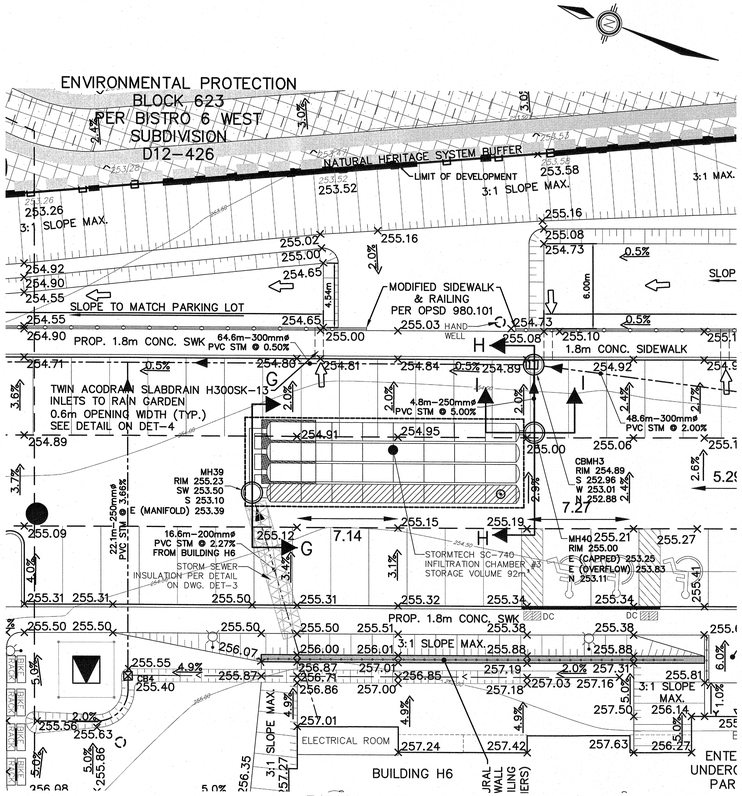
PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

BUILDING H5
LID SECTIONS & DETAILS

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2638
F. 705.734.1056

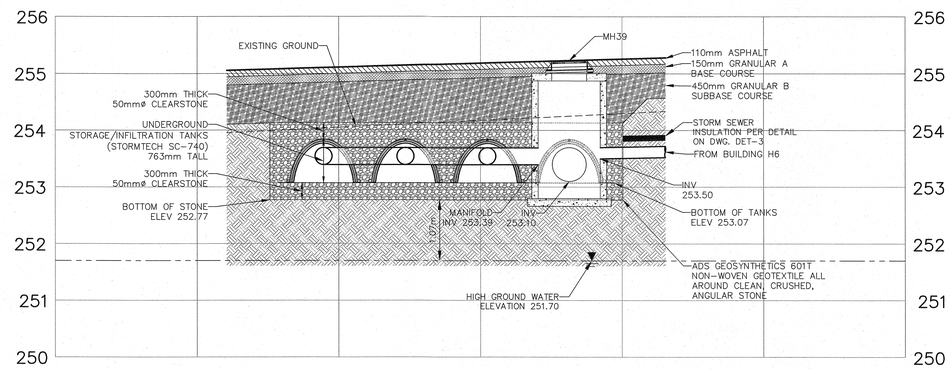
DESIGN MF/JB	SCALE: AS NOTED	DATE JAN 2019	
DRAWN MG/JJH	PROJECT PRA–17021	DWG. № LID–2	
CHECKED DR			

G:\Eng_3D\PRA-17021\Production DWGS\PRA-17021-LID DETAILS-01.dwg Layout:LID-2 Plotted Mar 09, 2021 @ 5:20pm by kashura The Jones Consulting Group Ltd.



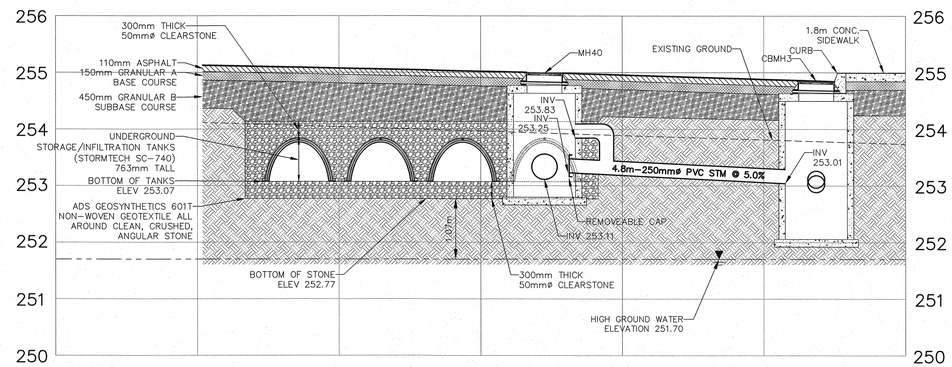
PLAN VIEW

1:200



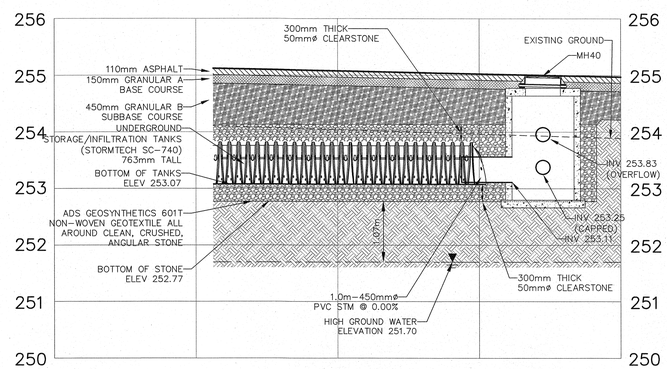
SECTION G-G

1:50



SECTION H-H

1:50



SECTION I-I

1:50

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FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.43M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900987O.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

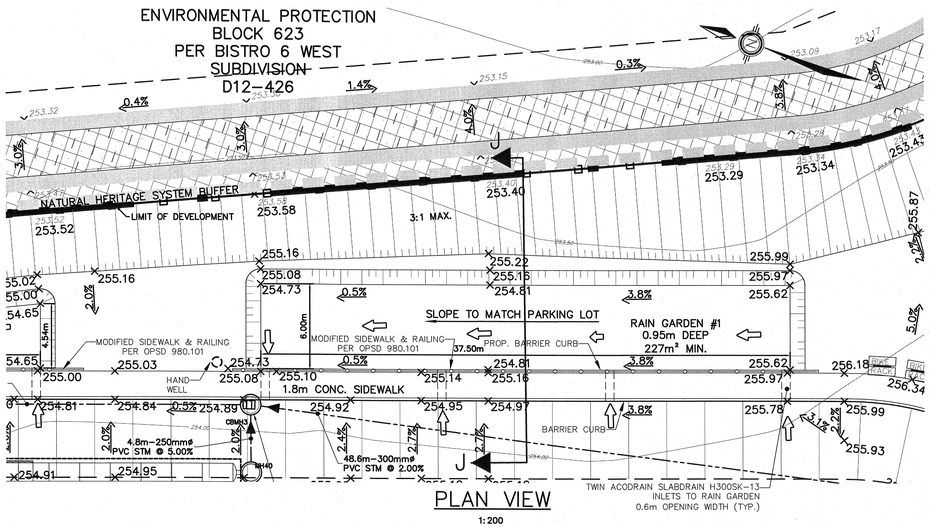
PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

BUILDING H6
LID SECTIONS & DETAILS

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN MF/JB	SCALE: AS NOTED	DATE JAN 2019	
DRAWN MG/JJH	PROJECT PRA-17021	DWG. Nº LID-3	
CHECKED DR			

RAIN GARDEN #1



PLAN VIEW

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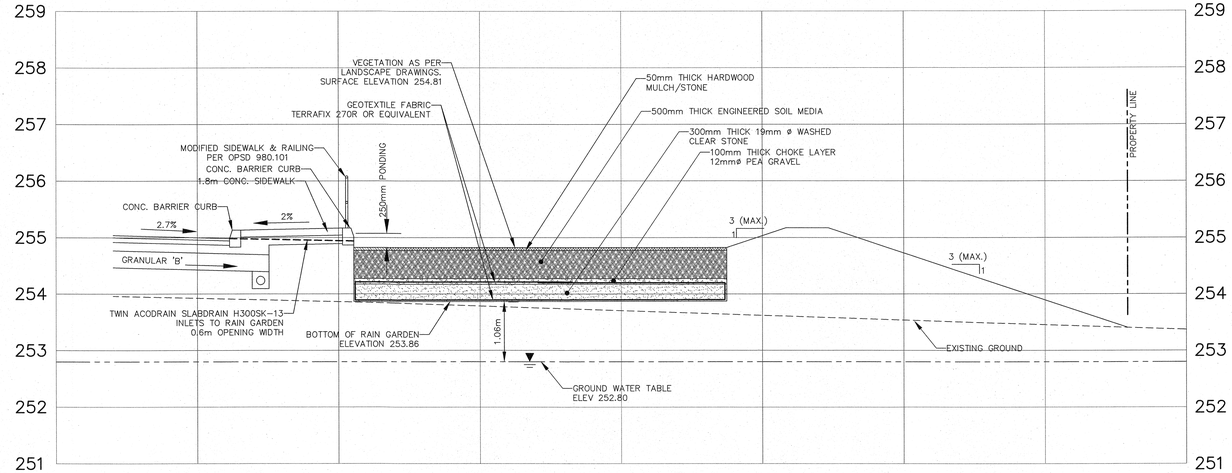
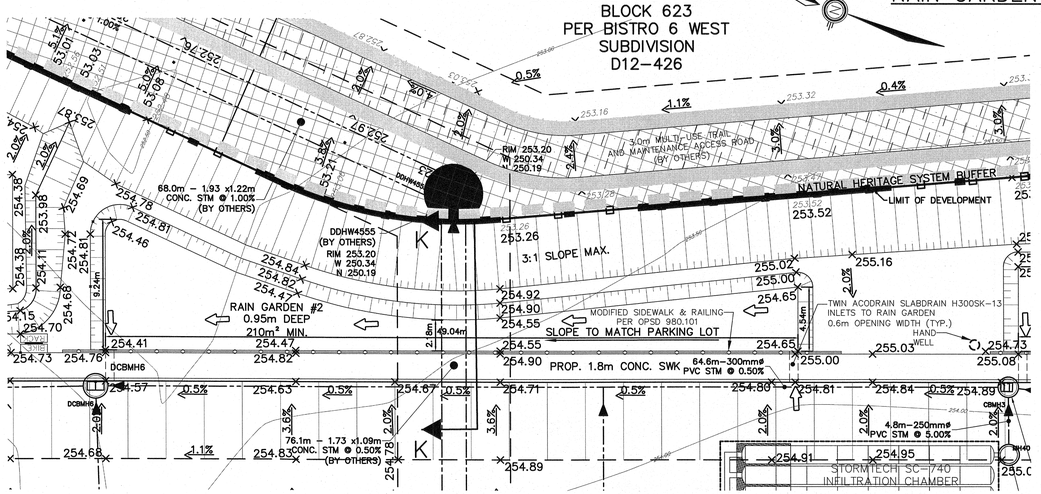


SECTION J–J

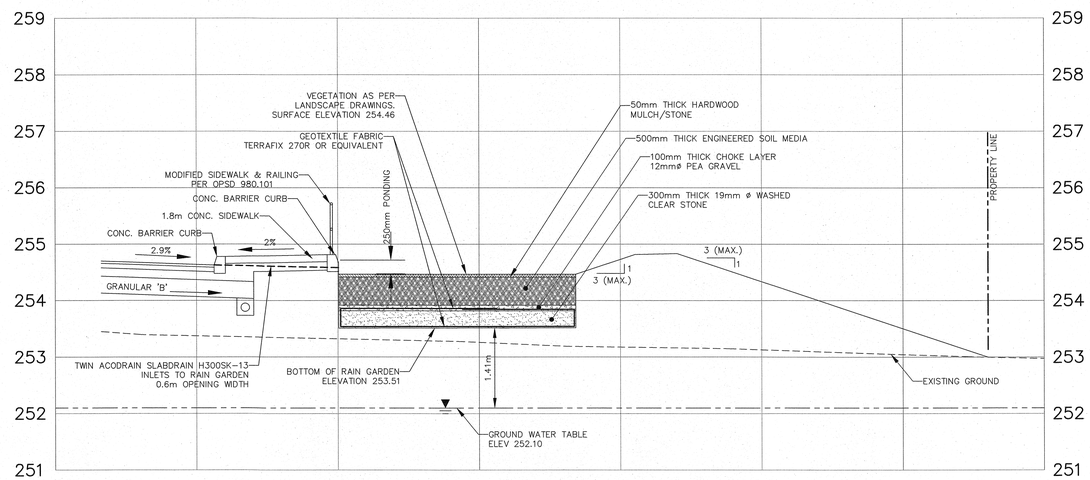
1:50

RAIN GARDEN #2



PLAN VIEW

1:200



SECTION K–K

1:50

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N49009870.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21–03–08	DR
5	FOURTH SUBMISSION	19–08–30	DR
4	THIRD SUBMISSION	19–05–24	DR
3	SECOND SUBMISSION	19–01–11	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
AUG 10/21
PROVINCE OF ONTARIO

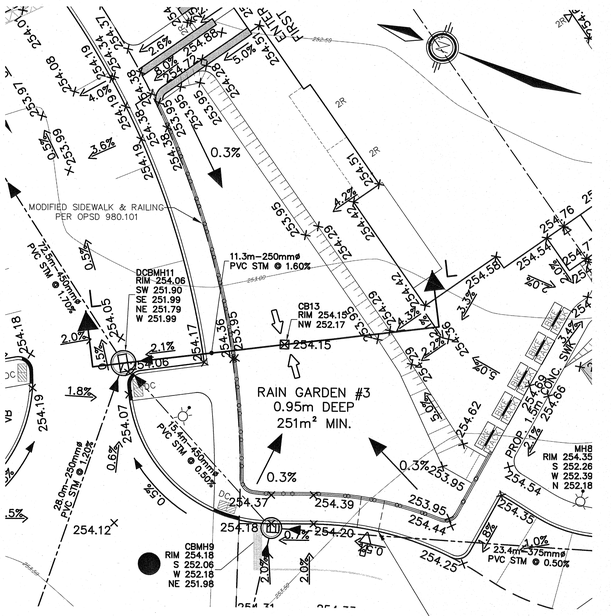
PRATT HANSEN GROUP INC.
BISTRO 6 SITE PLAN
CITY OF BARRIE

RAIN GARDEN #1 AND #2
LID SECTIONS & DETAILS

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN MF/JB	SCALE: AS NOTED	DATE JAN 2019	
DRAWN MG/JJH	PROJECT PRA–17021	DWG. № LID–4	
CHECKED DR			

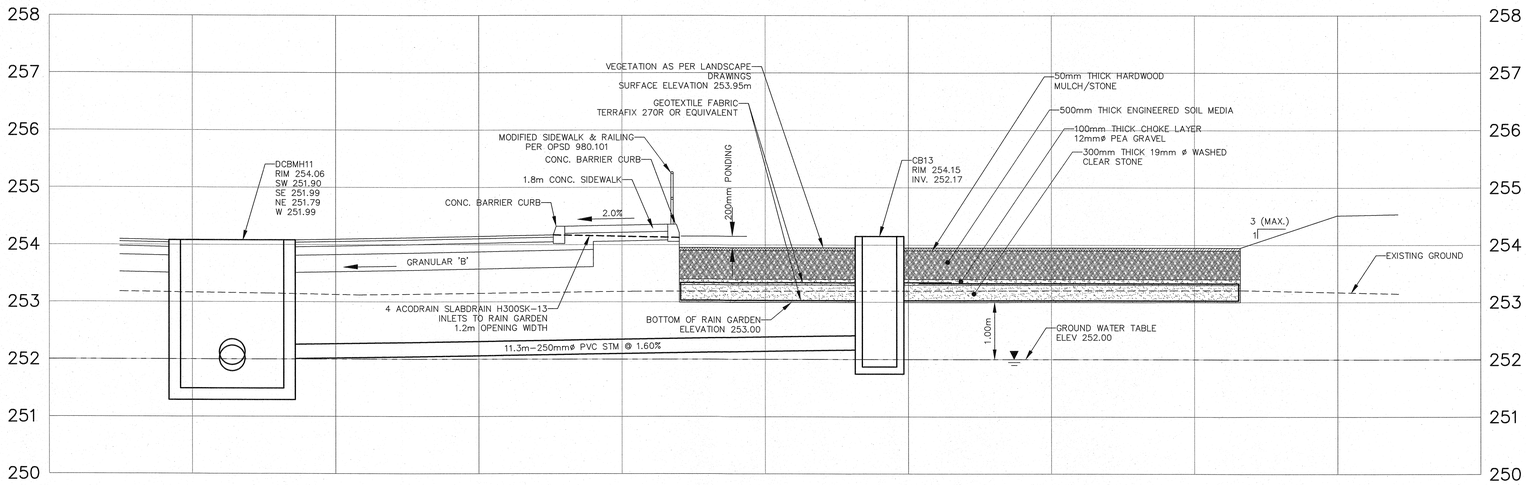
© J:\Eng_3D\PRA-17021\Production DWGS\PRA-17021-LID DETAILS-01.dwg Layout:LID-4 Plotted Mar 09, 2021 @ 5:31pm by kschulz The Jones Consulting Group Ltd.



PLAN VIEW

1:200

RAIN GARDEN #3



SECTION L–L

1:50

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE, 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD. APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900987O.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21–03–08	DR
5	FOURTH SUBMISSION	19–08–30	DR
4	THIRD SUBMISSION	19–05–24	DR
3	SECOND SUBMISSION	19–01–11	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
MAR 17/21
PROVINCE OF ONTARIO

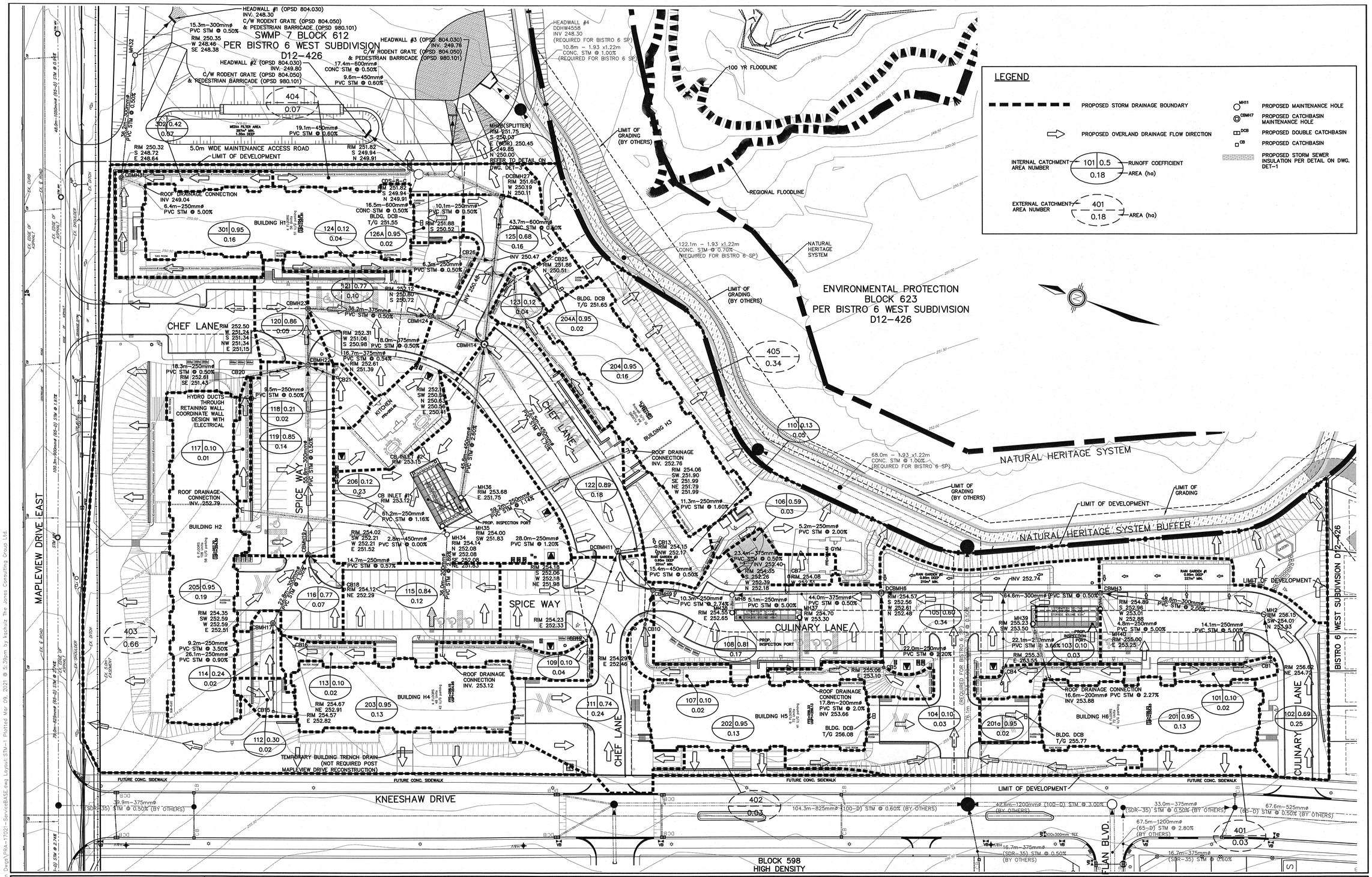
PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

RAIN GARDEN #3
LID SECTIONS & DETAILS

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN MF/JB	SCALE: AS NOTED	DATE JAN 2019	
DRAWN MG/JJH	PROJECT PRA–17021	DWG. № LID–5	
CHECKED DR			

G:\Eng_30\PRA-17021\Production DWGS\PRA-17021-LID DETAILS-01.dwg Layout:LID-5 Plotted Mar 09, 2021 @ 5:34pm by kschulz The Jones Consulting Group Ltd.



FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01D19865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.60KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 190M TOP OF COPING. N491088.899 E607264.100 ELEV 241.661

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL - 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N491810 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N491087.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N490909870.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
MAR. 19/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

STORM DRAINAGE PLAN

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN JJH	SCALE: 1:500	DATE MARCH 2017	
DRAWN JJH	PROJECT PRA-17021	DWG. № STM-1	
CHECKED DR			

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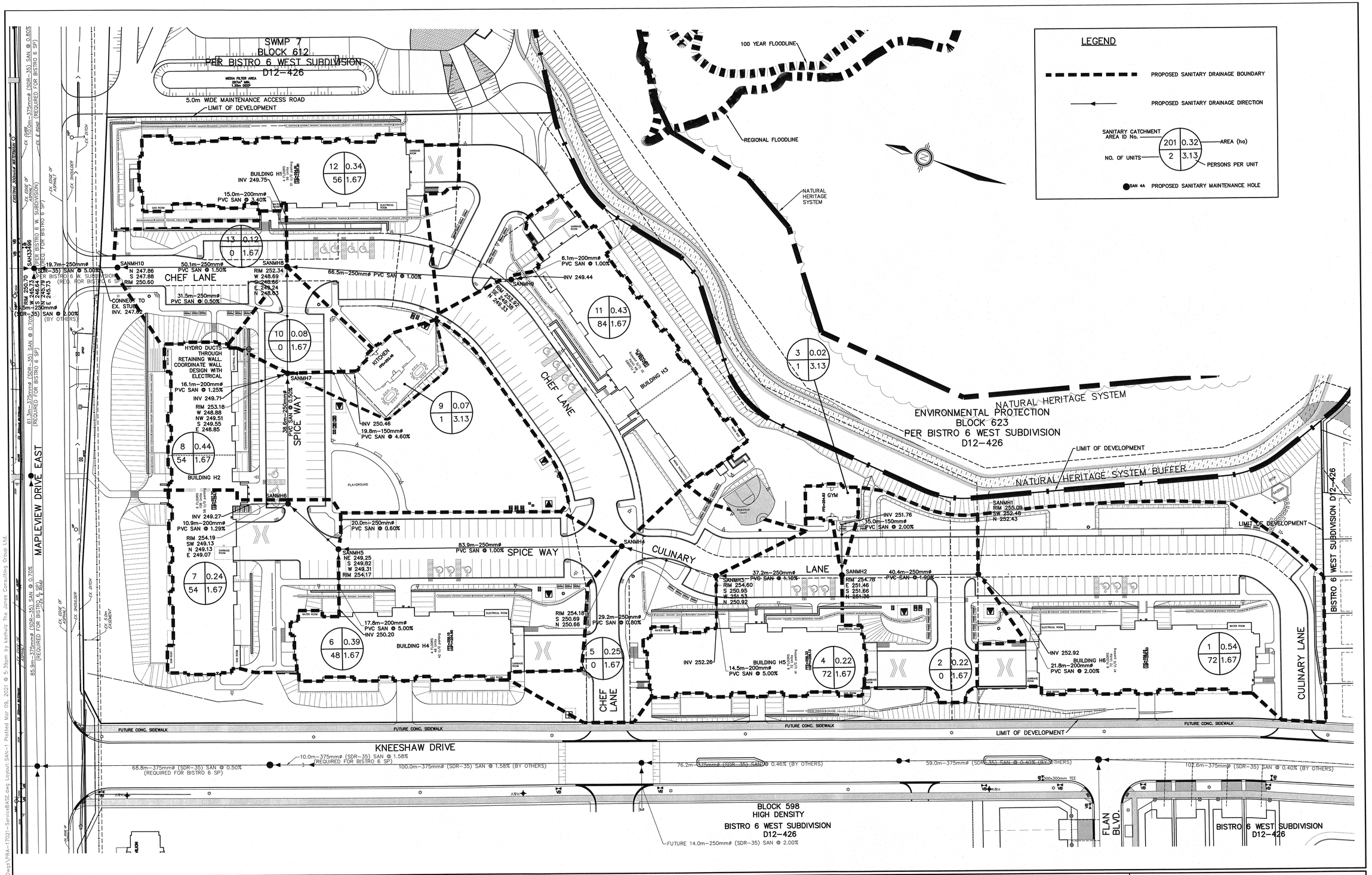

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 5.45M NORTH OF CENTRELINE OF ROAD, 285M WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.881

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE. 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910876.122 E607601.062 ELEV 248.996

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4902667.257 E606733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
MAR 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

SANITARY DRAINAGE PLAN

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN JJH	SCALE: 1:500	DATE MARCH 2017	
DRAWN JJH	PROJECT PRA-17021	DWG. № SAN-1	
CHECKED DR			

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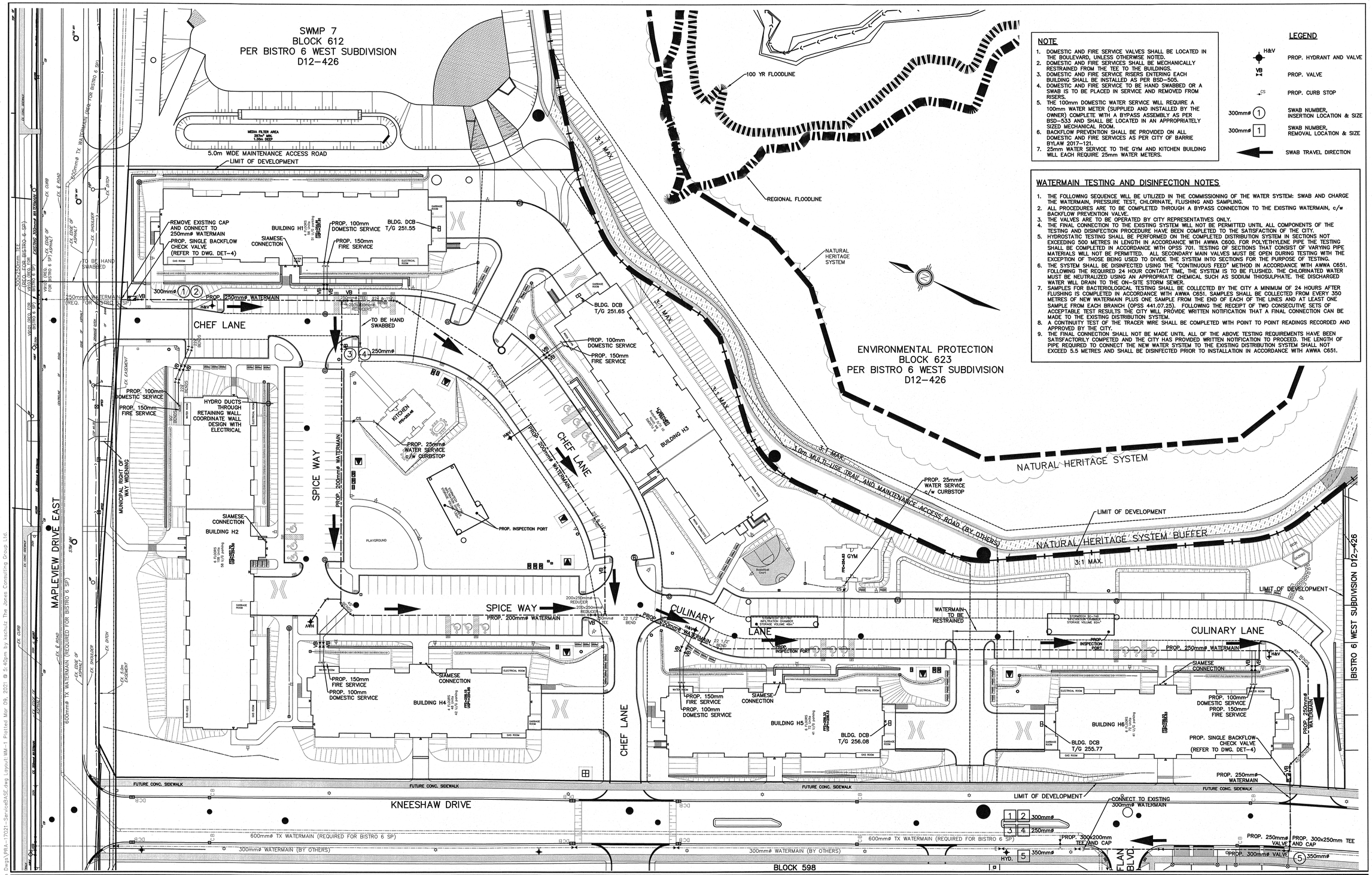

NOTE

1. DOMESTIC AND FIRE SERVICE VALVES SHALL BE LOCATED IN THE BOULEVARD, UNLESS OTHERWISE NOTED.
2. DOMESTIC AND FIRE SERVICES SHALL BE MECHANICALLY RESTRAINED FROM THE TEE TO THE BUILDINGS.
3. DOMESTIC AND FIRE SERVICE RISERS ENTERING EACH BUILDING SHALL BE INSTALLED AS PER BSD-505.
4. DOMESTIC AND FIRE SERVICE TO BE HAND SWABBED OR A SWAB IS TO BE PLACED IN SERVICE AND REMOVED FROM RISERS.
5. THE 100mm DOMESTIC WATER SERVICE WILL REQUIRE A 100mm WATER METER (SUPPLIED AND INSTALLED BY THE OWNER) COMPLETE WITH A BYPASS ASSEMBLY AS PER BSD-533 AND SHALL BE LOCATED IN AN APPROPRIATELY SIZED MECHANICAL ROOM.
6. BACKFLOW PREVENTION SHALL BE PROVIDED ON ALL DOMESTIC AND FIRE SERVICES AS PER CITY OF BARRIE BYLAW 2017-121.
7. 25mm WATER SERVICE TO THE GYM AND KITCHEN BUILDING WILL EACH REQUIRE 25mm WATER METERS.

LEGEND

- H&V — PROP. HYDRANT AND VALVE
- VB — PROP. VALVE
- CS — PROP. CURB STOP
- 300mmø (1) — SWAB NUMBER, INSERTION LOCATION & SIZE
- 300mmø [1] — SWAB NUMBER, REMOVAL LOCATION & SIZE
- SWAB TRAVEL DIRECTION

WATERMAIN TESTING AND DISINFECTION NOTES

1. THE FOLLOWING SEQUENCE WILL BE UTILIZED IN THE COMMISSIONING OF THE WATER SYSTEM: SWAB AND CHARGE THE WATERMAIN, PRESSURE TEST, CHLORINATE, FLUSHING AND SAMPLING.
2. ALL PROCEDURES ARE TO BE COMPLETED THROUGH A BYPASS CONNECTION TO THE EXISTING WATERMAIN, c/w BACKFLOW PREVENTION VALVE.
3. THE VALVES ARE TO BE OPERATED BY CITY REPRESENTATIVES ONLY.
4. THE FINAL CONNECTION TO THE EXISTING SYSTEM WILL NOT BE PERMITTED UNTIL ALL COMPONENTS OF THE TESTING AND DISINFECTION PROCEDURE HAVE BEEN COMPLETED TO THE SATISFACTION OF THE CITY.
5. HYDROSTATIC TESTING SHALL BE PERFORMED ON THE COMPLETED DISTRIBUTION SYSTEM IN SECTIONS NOT EXCEEDING 500 METRES IN LENGTH IN ACCORDANCE WITH AWWA C600. FOR POLYETHYLENE PIPE THE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 701. TESTING OF SECTIONS THAT CONSIST OF VARYING PIPE MATERIALS WILL NOT BE PERMITTED. ALL SECONDARY MAIN VALVES MUST BE OPEN DURING TESTING WITH THE EXCEPTION OF THOSE BEING USED TO DIVIDE THE SYSTEM INTO SECTIONS FOR THE PURPOSE OF TESTING.
6. THE SYSTEM SHALL BE DISINFECTED USING THE "CONTINUOUS FEED" METHOD IN ACCORDANCE WITH AWWA C651. FOLLOWING THE REQUIRED 24 HOUR CONTACT TIME, THE SYSTEM IS TO BE FLUSHED. THE CHLORINATED WATER MUST BE NEUTRALIZED USING AN APPROPRIATE CHEMICAL SUCH AS SODIUM THIOSULPHATE. THE DISCHARGED WATER WILL DRAIN TO THE ON-SITE STORM SEWER.
7. SAMPLES FOR BACTERIOLOGICAL TESTING SHALL BE COLLECTED BY THE CITY A MINIMUM OF 24 HOURS AFTER FLUSHING IS COMPLETED IN ACCORDANCE WITH AWWA C651. SAMPLES SHALL BE COLLECTED FROM EVERY 350 METRES OF NEW WATERMAIN PLUS ONE SAMPLE FROM THE END OF EACH OF THE LINES AND AT LEAST ONE SAMPLE FROM EACH BRANCH (OPSS 441.07.25). FOLLOWING THE RECEIPT OF TWO CONSECUTIVE SETS OF ACCEPTABLE TEST RESULTS THE CITY WILL PROVIDE WRITTEN NOTIFICATION THAT A FINAL CONNECTION CAN BE MADE TO THE EXISTING DISTRIBUTION SYSTEM.
8. A CONTINUITY TEST OF THE TRACER WIRE SHALL BE COMPLETED WITH POINT TO POINT READINGS RECORDED AND APPROVED BY THE CITY.
9. THE FINAL CONNECTION SHALL NOT BE MADE UNTIL ALL OF THE ABOVE TESTING REQUIREMENTS HAVE BEEN SATISFACTORILY COMPETED AND THE CITY HAS PROVIDED WRITTEN NOTIFICATION TO PROCEED. THE LENGTH OF PIPE REQUIRED TO CONNECT THE NEW WATER SYSTEM TO THE EXISTING DISTRIBUTION SYSTEM SHALL NOT EXCEED 5.5 METRES AND SHALL BE DISINFECTED PRIOR TO INSTALLATION IN ACCORDANCE WITH AWWA C651.

FINAL APPROVED PLAN
File: D11-017-2017
Date: August 12, 2021
Barrie No. of Pages: 1

BENCHMARK:

BENCHMARK NO: 01019865454 LOCATED ON CONCRETE BRIDGE CARRYING MAPLEVIEW DRIVE E OVER LOVER'S CREEK, 0.65KM EAST OF HURONIA ROAD. TABLET IS SET HORIZONTALLY IN THE NORTH FACE, 9.45M NORTH OF CENTRELINE OF ROAD, 28CM WEST OF THE NORTHEAST END OF BRIDGE, 19CM TOP OF COPING. N4910788.889 E607264.100 ELEV 241.861

BENCHMARK NO: 03120030029 MAPLEVIEW HEIGHTS ELEMENTARY SCHOOL – 180 ESTHER DR. THE VERTICAL MONUMENT IS SET FLUSH IN CONCRETE FLAGPOLE BASE. 4.7m SOUTH FROM THE SOUTHEAST CORNER OF THE MAIN ENTRANCE TO SCHOOL AND TABLET IS ON THE SOUTHSIDE OF THE FLAGPOLE BASE. N4911610 E607799 ELEV 250.508

BENCHMARK NO: 03120080054 LOCATED ON THE SOUTH LIMIT OF MAPLEVIEW DRIVE WEST APPROXIMATELY 1km EAST OF HURONIA ROAD. N4910878.122 E607601.062 ELEV 248.998

BENCHMARK NO: 03120110013 LOCATED ON LOCKHART ROAD ON THE NORTH SIDE OF THE BOULEVARD, APPROXIMATELY 1.02km WEST OF THE YONGE STREET AND HURONIA ROAD INTERSECTION N4900989.257 E608733.580 ELEV 252.807

NO.	REVISIONS	DATE	INITIAL
6	SITE PLAN AMENDMENT	21-03-08	DR
5	FOURTH SUBMISSION	19-08-30	DR
4	THIRD SUBMISSION	19-05-24	DR
3	SECOND SUBMISSION	19-01-11	DR
2	FIRST SUBMISSION	17-07-10	DR

LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
MAR 19/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

WATERMAIN SWABBING PLAN

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN JJH	SCALE: 1:500	DATE DEC 2018	
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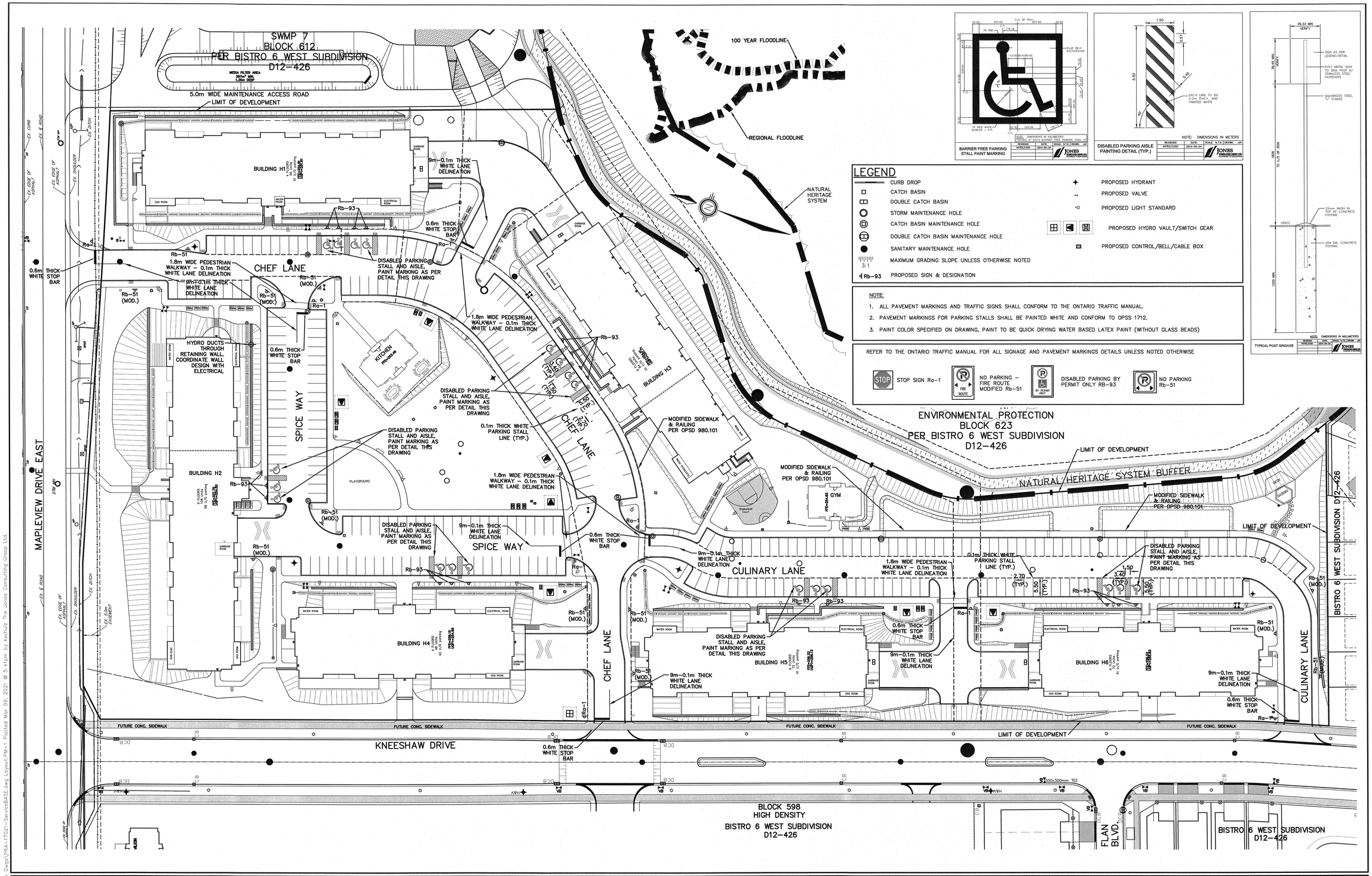

LEGEND

- CURB DROP
- CATCH BASIN
- DOUBLE CATCH BASIN
- STORM MAINTENANCE HOLE
- CATCH BASIN MAINTENANCE HOLE
- DOUBLE CATCH BASIN MAINTENANCE HOLE
- SANITARY MAINTENANCE HOLE
- 3:1 MAXIMUM GRADING SLOPE UNLESS OTHERWISE NOTED
- Rb-93 PROPOSED SIGN & DESIGNATION
- PROPOSED HYDRANT
- PROPOSED VALVE
- PROPOSED LIGHT STANDARD
- PROPOSED HYDRO VAULT/SWITCH GEAR
- PROPOSED CONTROL/BELL/CABLE BOX

NOTE:

1. ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL CONFORM TO THE ONTARIO TRAFFIC MANUAL.
2. PAVEMENT MARKINGS FOR PARKING STALLS SHALL BE PAINTED WHITE AND CONFORM TO OPSS 1712.
3. PAINT COLOR SPECIFIED ON DRAWING, PAINT TO BE QUICK DRYING WATER BASED LATEX PAINT (WITHOUT GLASS BEADS)

REFER TO THE ONTARIO TRAFFIC MANUAL FOR ALL SIGNAGE AND PAVEMENT MARKINGS DETAILS UNLESS NOTED OTHERWISE

STOP — STOP SIGN Ra-1

FIRE ROUTE — NO PARKING – FIRE ROUTE MODIFIED Rb-51

BY PERMIT ONLY — DISABLED PARKING BY PERMIT ONLY RB-93

NO PARKING Rb-51

FINAL APPROVED PLAN
File: D11-017-2017
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MAR. 10/21
PROVINCE OF ONTARIO

PRATT HANSEN GROUP INC.
BISTRO 6
CITY OF BARRIE

PAVEMENT MARKING AND SIGNAGE PLAN

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DRAWN JJH	PROJECT PRA–17021	DWG. № PM–1	
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