

KEY PLAN NTS

CURB TO BE REMOVED
PROPOSED CURB
PROPOSED ASPHALT PAVEMENT

LEGEND
OVERLAND FLOW ROUTE
DIRECTION AND SLOPE OF SURFACE DRAINAGE

NOTE:
THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING 5 OF 8, NOTES & DETAILS PROJECT 12007

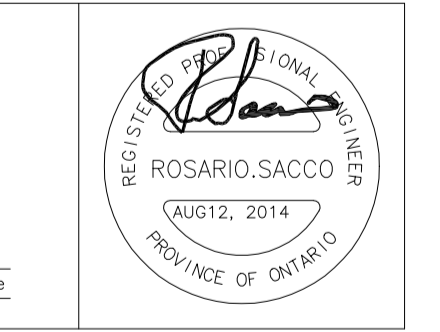
LOCAL BENCHMARK:
CUT CROSS IN CONCRETE TRAFFIC ISLAND AT THE NORTH-EAST CORNER OF EARL ARMSTRONG ROAD AND LIMEBANK ROAD AS ESTABLISHED BY ANNIS, O'SULLIVAN, VOLLEBECK LTD. O.L.S.

ELEVATION 92.87

No.	By	Date	Revision	Checked
5.	J.M.	Aug/21/14	SITE PLAN REVISION	
4.	J.M.	July 18/14	ISSUED FOR SECOND SUBMISSION	
3.	J.M.	May/14/14	SITE PLAN REVISION	
2.	J.M.	May 20/14	REVISED AS PER CITY COMMENTS	
1.	J.C.R.M.	Apr 9/14	ISSUED FOR SITE PLAN APPROVAL	

APPROVED AS TO FORM IN RELIANCE UPON THE PROFESSIONAL SKILL AND ABILITY OF URBAN ECOSYSTEMS LIMITED AS TO DESIGN AND SPECIFICATION.

Director of Engineering _____ Date _____



URBAN ECOSYSTEMS LIMITED
 7050 WESTON ROAD, SUITE 705
 WOODBRIDGE, ONTARIO L4L 8G7
 www.urbanecosystems.com
 T. (905)856-0629
 F. (905)856-0698

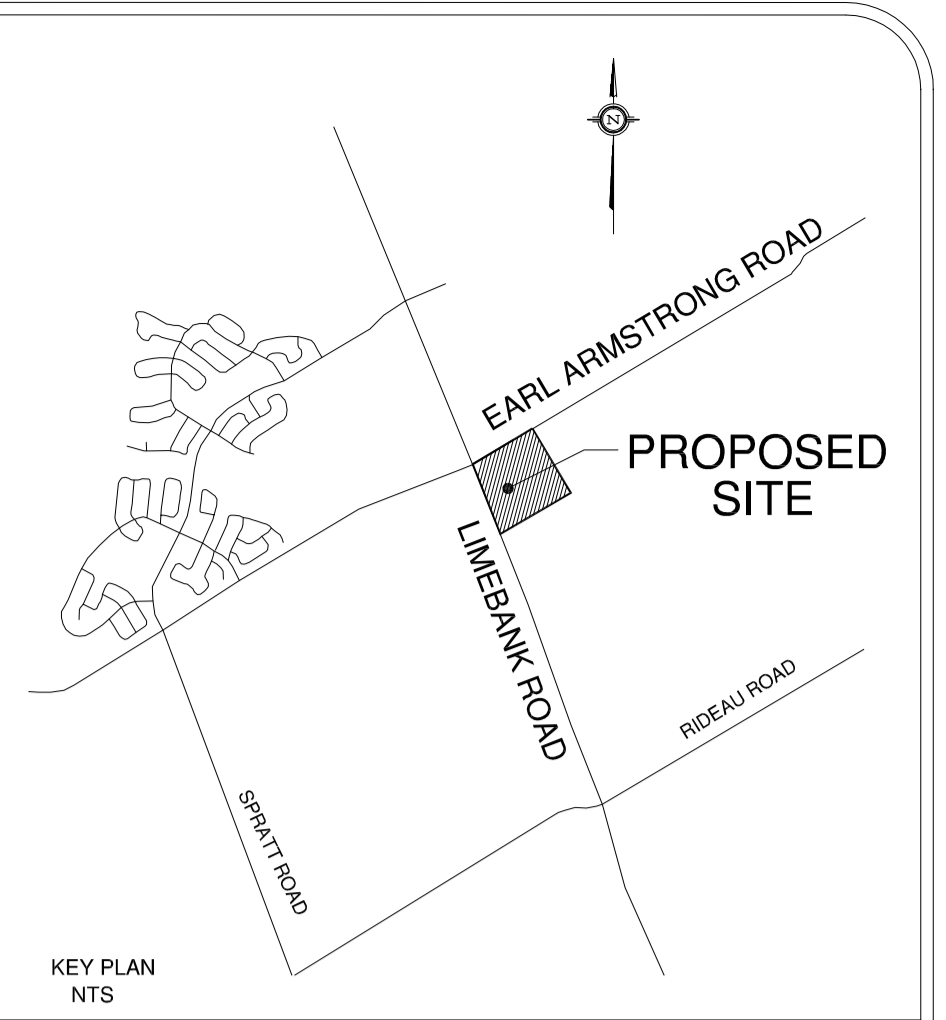
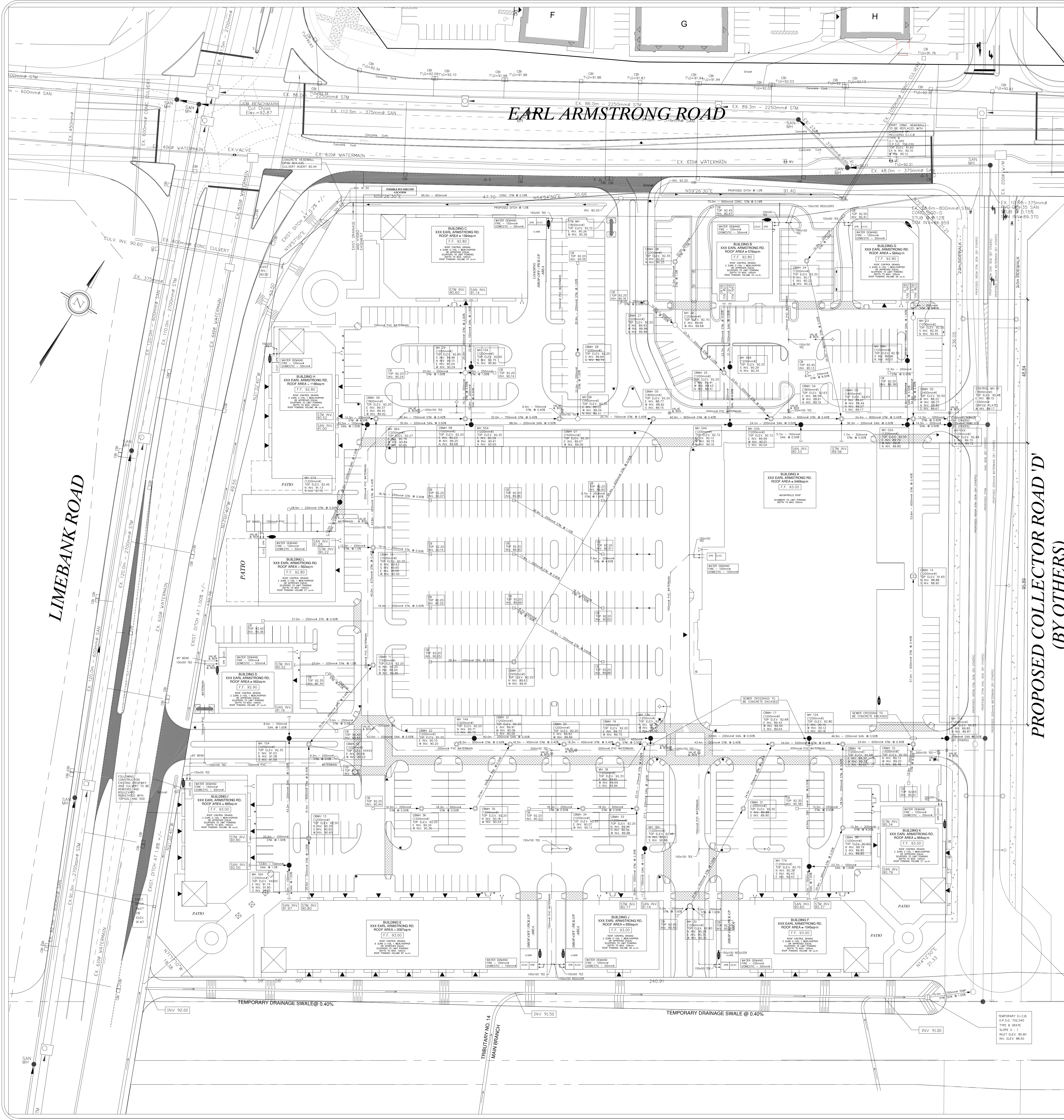


RIVERSIDE SOUTH RETAIL CENTER
 CITY OF OTTAWA

MORGUARD INVESTMENTS LTD.
 55 CITY CENTER DRIVE
 MISSISSAUGA, ONTARIO

FILE No D07-12-14-0067
GRADING PLAN

Designed By	XXX	Date	APR 2014	Checked By	R.S.
Drawn By	XXX	Project No.	12007	Approved By	
Scale:	1:500	Drawing No.	10f8		



- - - - - CURB TO BE REMOVED
 ——— PROPOSED CURB
 ■■■■■ PROPOSED ASPHALT PAVEMENT

NOTE:
 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING 5 OF 8, NOTES & DETAILS PROJECT 12007

LOCAL BENCHMARK:
 CUT CROSS IN CONCRETE TRAFFIC ISLAND AT THE NORTH-EAST CORNER OF EARL ARMSTRONG ROAD AND LIMEBANK ROAD AS ESTABLISHED BY ANNIS, O'SULLIVAN, VOLLEBEK LTD. O.L.S.

ELEVATION 92.87

No.	By	Date	Revision	Checked
5.	J.M.	Aug 12/14	SITE PLAN REVISION	
4.	J.M.	July 18/14	ISSUED FOR SECOND SUBMISSION	
3.	J.M.	July 14/14	SITE PLAN REVISION	
2.	J.M.	May 20/14	REVISED AS PER CITY COMMENTS	
1.	C.R.M.	Apr 9/14	ISSUED FOR SITE PLAN APPROVAL	

APPROVED AS TO FORM IN RELIANCE UPON THE PROFESSIONAL SKILL AND ABILITY OF URBAN ECOSYSTEMS LIMITED AS TO DESIGN AND SPECIFICATION.

Director of Engineering _____ Date _____

ROSARIO SACCOC
 AUG 12, 2014
 PROVINCE OF ONTARIO

URBAN ECOSYSTEMS LIMITED
 7050 WESTON ROAD, SUITE 705
 WOODBINE, ONTARIO L4L 8G7
 info@urbanecosystems.com
 t. (905)856-0629
 f. (905)856-0698

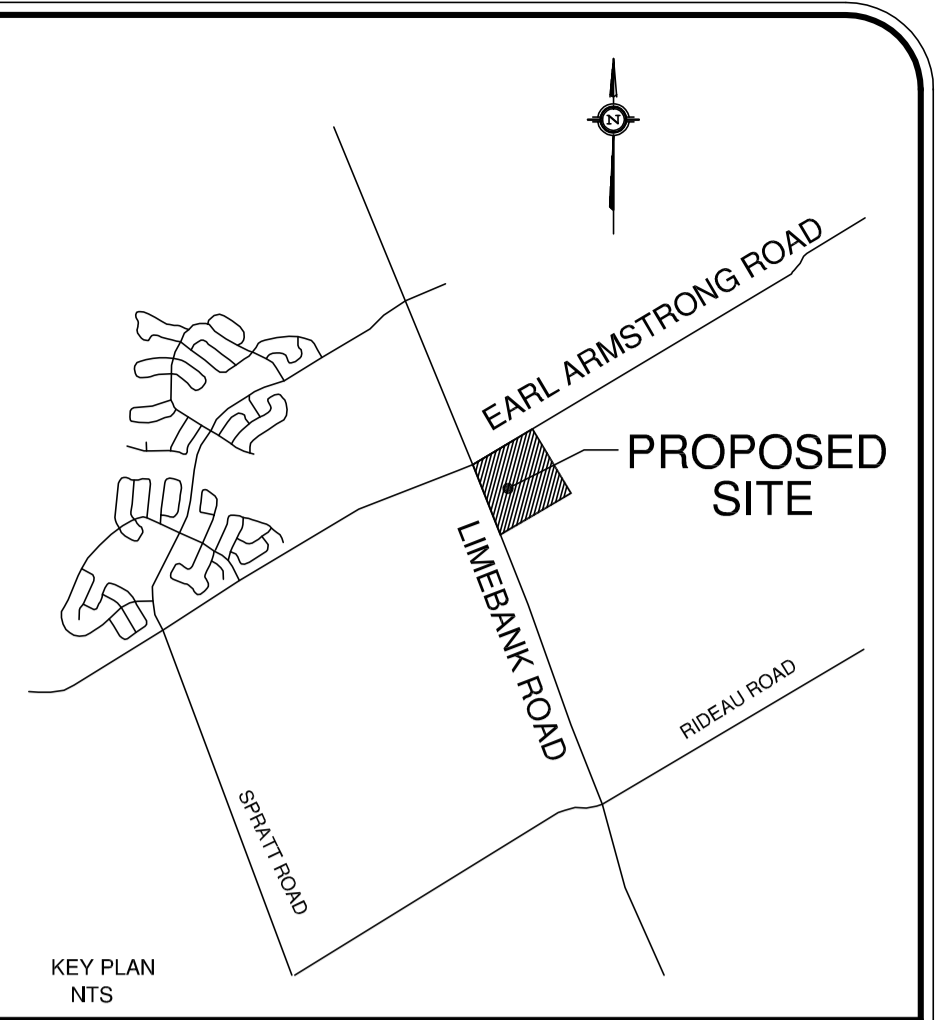
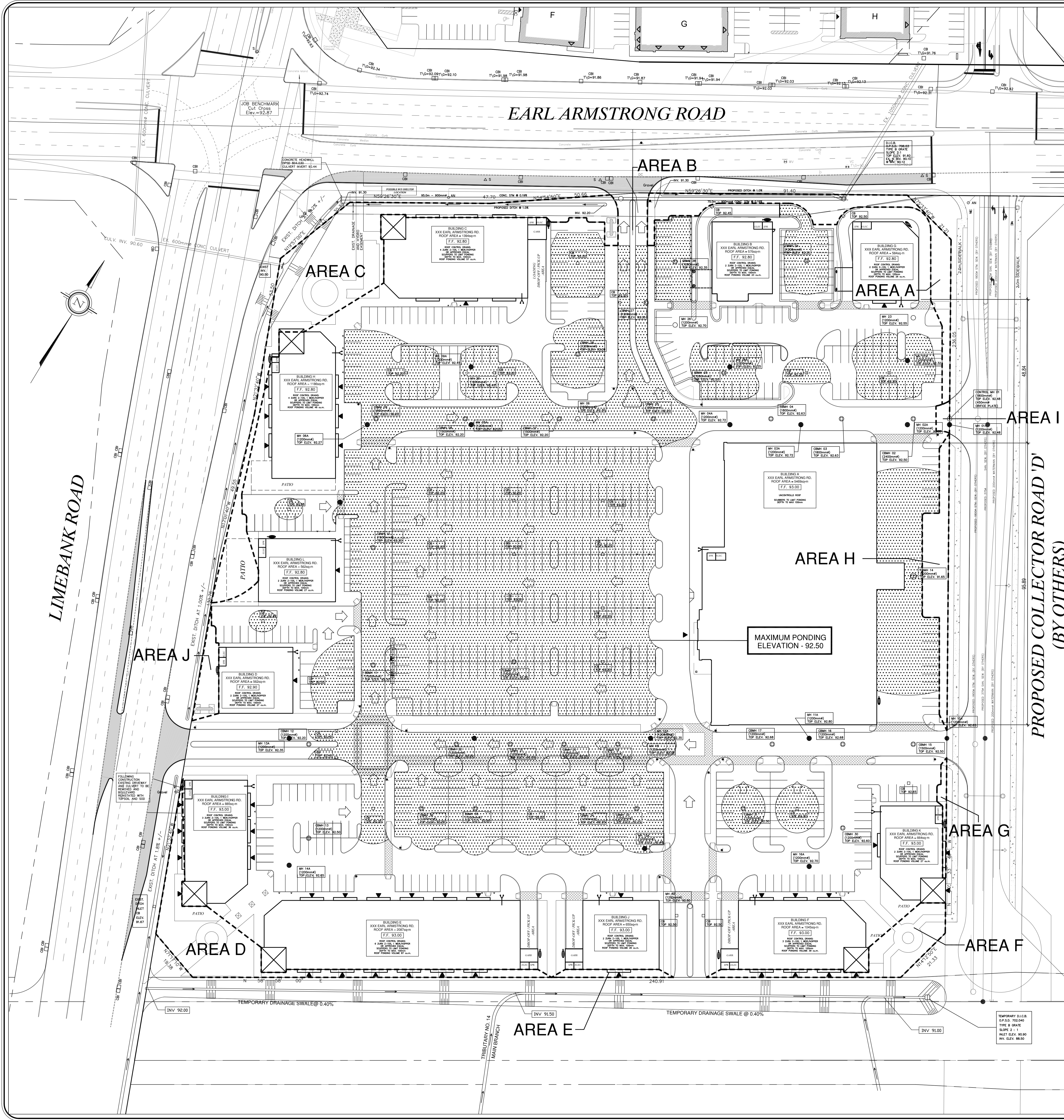
U.E.L.

RIVERSIDE SOUTH RETAIL CENTER
 CITY OF OTTAWA

MORGUARD INVESTMENTS LTD.
 55 CITY CENTER DRIVE
 MISSISSAUGA, ONTARIO

FILE No D07-12-14-0067
SERVICING PLAN

Designed By	XXX	Date	APR 2014	Checked By	R.S.
Drawn By	XXX	Project No.	12007	Approved By	
Scale:	1:500	Drawing No.	2of8		



AREA	SURFACE TYPE
A - 796 sq.m.	UNCONTROLLED LANDSCAPE
B - 183 sq.m.	UNCONTROLLED ASPHALT
C - 2,064 sq.m.	UNCONTROLLED LANDSCAPE
D - 1,063 sq.m.	UNCONTROLLED LANDSCAPE
E - 99 sq.m.	UNCONTROLLED LANDSCAPE
F - 539 sq.m.	UNCONTROLLED LANDSCAPE
G - 66 sq.m.	UNCONTROLLED LANDSCAPE
H - 436 sq.m.	CONTROLLED LANDSCAPE
I - 43 sq.m.	UNCONTROLLED ASPHALT
J - 192 sq.m.	UNCONTROLLED LANDSCAPE
49,854 sq.m.	CONTROLLED ASPHALT
10,005 sq.m.	CONTROLLED BUILDINGS
65,367 sq.m.	TOTAL SITE AREA

SURFACE PONDING VOLUME	
ELEV. 91.70 =	1 cu.m.
ELEV. 91.80 =	6 cu.m.
ELEV. 91.90 =	17 cu.m.
ELEV. 92.00 =	32 cu.m.
ELEV. 92.10 =	49 cu.m.
ELEV. 92.20 =	66 cu.m.
ELEV. 92.30 =	197 cu.m.
ELEV. 92.40 =	646 cu.m.
ELEV. 92.50 =	1,496 cu.m.
TOTAL STORAGE =	2,490 cu.m.

STORM WATER MANAGEMENT SUMMARY TABLE	
SITE AREA SUMMARY (sq.m.)	
PAVED	49,801
LANDSCAPED	496
ROOF	10,005
UNCONTROLLED PAVED	226
UNCONTROLLED LANDSCAPED	4,839
TOTAL SITE AREA	65,367
ROOF DRAINAGE SYSTEM	
TOTAL ROOF AREA	10,005 sq.m.
PEAK OUTFLOW RATE	48 l/s
TOTAL NO. OF WEIRS	32
REQUIRED ROOF STORAGE	402 cu.m.
AVAILABLE ROOF STORAGE	678 cu.m.
SITE DRAINAGE SYSTEM - 100 YEAR	
ORIFICE DIAMETER	450 mm
MAXIMUM PONDING ELEV.	98.50 m
MAXIMUM PONDING DEPTH	0.30 m
ORIFICE INVERT	88.15
ORIFICE RELEASE RATE	887.1 l/sec.
UNCONTROLLED RELEASE RATE	160.7 l/sec.
TOTAL RELEASE RATE	1047.8 l/sec.
ALLOWABLE RELEASE RATE	1327.0 l/sec.
REQUIRED SITE STORAGE	947 cu.m.
AVAILABLE SITE STORAGE	2,886 cu.m.

LOCAL BENCHMARK:			
CUT CROSS IN CONCRETE TRAFFIC ISLAND AT THE NORTH-EAST CORNER OF EARL ARMSTRONG ROAD AND LIMEBANK ROAD AS ESTABLISHED BY ANNIS, O'SULLIVAN, VOLLEBERG LTD. O.L.S.			
ELEVATION 92.87			
No.	Date	Revision	Checked
1.	10/12/14	ISSUED FOR PERMIT	
2.	11/12/14	REVISED AS PER CITY COMMENTS	
3.	12/12/14	ISSUED FOR PERMIT	
4.	01/15/15	ISSUED FOR PERMIT	
5.	02/15/15	ISSUED FOR PERMIT	

APPROVED AS TO FORM IN RELIANCE UPON THE PROFESSIONAL SKILL AND ABILITY OF URBAN ECOSYSTEMS LIMITED AS TO DESIGN AND SPECIFICATION.

Director of Engineering _____ Date _____

ROSARIO SACCO
REGISTERED PROFESSIONAL ENGINEER
AUG 12, 2014
PROVINCE OF ONTARIO

URBAN ECOSYSTEMS LIMITED
7050 WESTON ROAD, SUITE 705
WOODBRIDGE, ONTARIO L4L 8C7
www.urbanecosystems.com
1. (905)856-0679
1. (905)856-0698

U.E.L.

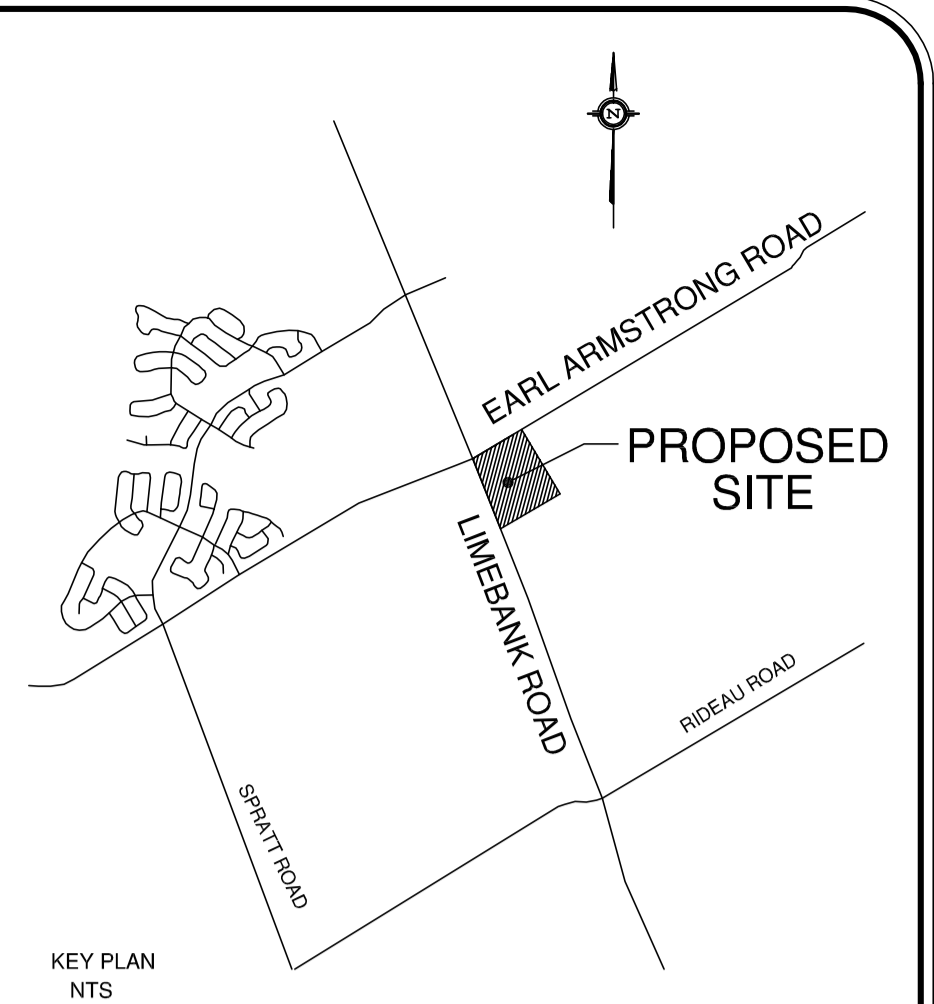
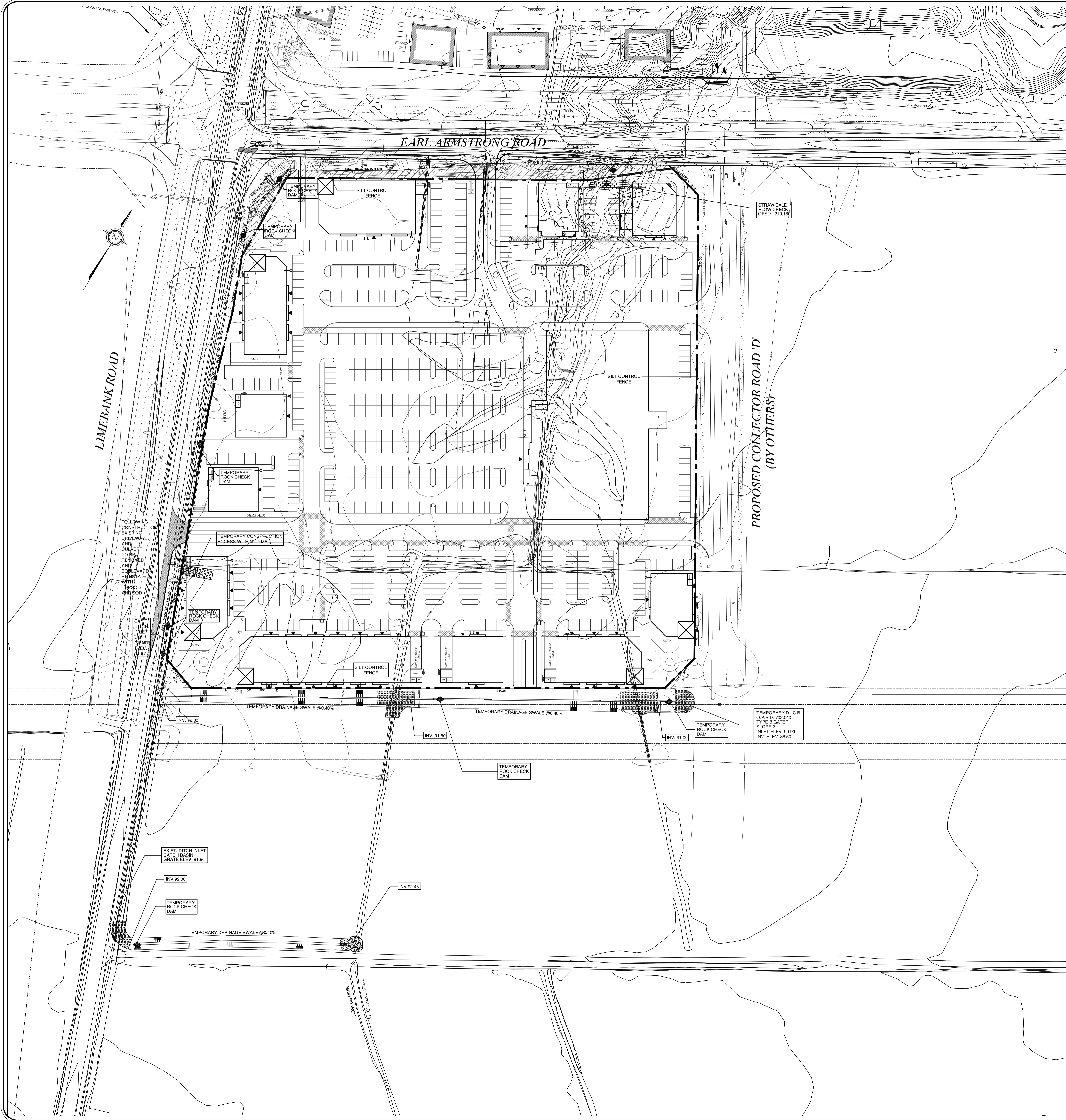
RIVERSIDE SOUTH RETAIL CENTER
CITY OF OTTAWA

MORGUARD INVESTMENTS LTD.
55 CITY CENTER DRIVE
MISSISSAUGA, ONTARIO

FILE No D07-12-14-0067

SWM DRAINAGE PLAN

Designed By	XXX	Date	APR 2014	Checked By	R.S.
Drawn By	XXX	Project No.	12007	Approved By	
Scale:	1:500	Drawing No.	3 of 8		



LEGEND

- SILT CONTROL FENCE
- TEMPORARY ROCK CHECK DAM
- MUD MAT
- RIP - RAP

NOTE:
THIS DRAWING SHALL BE READ
IN CONJUNCTION WITH DRAWING
5 OF 8, NOTES & DETAILS
PROJECT 12007

LOCAL BENCHMARK:
CUT CROSS IN CONCRETE TRAFFIC ISLAND AT THE NORTH-EAST
CORNER OF EARL ARMSTRONG ROAD AND LIMEBANK ROAD
AS ESTABLISHED BY ANNIS, O'SULLIVAN, VOLLEBERG LTD, O.L.S.

ELEVATION 92.87

No.	By	Date	Revision	Checked
4.	C.R.M.	12/14	SITE PLAN REVISION	
3.	J.H.	10/14	ISSUED FOR SECOND SUBMISSION	
2.	J.H.	05/14	REVISED AS PER CITY COMMENTS	
1.	C.R.M.	04/14	ISSUED FOR SITE PLAN APPROVAL	

APPROVED AS TO FORM IN RELIANCE UPON
THE PROFESSIONAL SKILL AND ABILITY OF
URBAN ECOSYSTEMS LIMITED AS TO DESIGN
AND SPECIFICATION.

Director of Engineering _____ Date _____

URBAN ECOSYSTEMS LIMITED
7050 WESTON ROAD, SUITE 705
WOODBRIDGE, ONTARIO L4L 8C7
info@urbanecosystems.com
T: (905)856-0679
F: (905)856-0698

RIVERSIDE SOUTH RETAIL CENTER
CITY OF OTTAWA

MORGUARD INVESTMENTS LTD.
55 CITY CENTER DRIVE
MISISSAUGA, ONTARIO

FILE No D07-12-14-0067

**EROSION & SEDIMENT
CONTROL PLAN**

Designed By	XXX	Date	APR 2014	Checked By	R.S.
Drawn By	XXX	Project No.	12007	Approved By	
Scale:	1:750	Project No.	12007	Drawing No.	4 of 8

GENERAL NOTES

- ALL MEASUREMENTS ARE IN METRES EXCEPT PIPE SIZES ARE IN MILLIMETRES, UNLESS OTHERWISE NOTED.
- THE DESIGN BY URBAN ECOSYSTEMS LIMITED IS RESTRICTED TO SITE GRADING, STORM SEWERS, SANITARY SEWERS AND WATER DISTRIBUTION SYSTEMS, INCLUDING APPURTENANCES, PLUMBING, DRAINS AND WATER SYSTEMS WITHIN THE BUILDING STRUCTURES ARE SPECIFICALLY EXCLUDED FROM THE DESIGN BY URBAN ECOSYSTEMS LIMITED. FOR THOSE WORKS, THE CONTRACTOR SHALL REFER TO ARCHITECTURAL AND MECHANICAL DESIGN DRAWINGS.
- THE LOCATION AND DIMENSIONS OF PROPOSED BUILDINGS, PARKING LOTS AND LANDSCAPE AREAS HAVE BEEN OBTAINED FROM THE SITE PLANS) PREPARED BY PETROFF PARTNERSHIP ARCHITECTS. FOR DIMENSIONS AND OTHER DETAILS, THE CONTRACTOR SHALL REFER TO THE ARCHITECTS SITE PLANS).
- ALL EXISTING TOPOGRAPHICAL INFORMATION HAS BEEN OBTAINED FROM A SURVEY BY ANNIS, O'SULLIVAN, VOLLEBEK LTD., O.L.S.
- ALL CONSTRUCTION WORK, INCLUDING TRENCHING, SHALL BE DONE IN STRICT ACCORDANCE WITH THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT.
- FOR DETAILS AND DIMENSIONS, THE CONTRACTOR SHALL REFER TO STANDARD DRAWINGS APPROVED BY THE CITY OF OTTAWA. FOR WORK NOT SPECIFICALLY COVERED BY APPROVED CITY SPECIFICATIONS, OPSD STANDARDS SHALL APPLY.
- THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE SITE AND SATISFY HIMSELF OF THE ACTUAL CONDITIONS TO BE ENCOUNTERED AND THE REQUIREMENTS OF THE WORK.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR OMISSIONS ON THE DRAWINGS.
- ALL TRAFFIC CONTROL AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE MTO TRAFFIC CONTROL MANUAL.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A DETAILED CONSTRUCTION SCHEDULE 48 HOURS PRIOR TO COMMENCING ANY WORK.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE CITY OF OTTAWA 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN A MUNICIPAL ROAD ALLOWANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE, PROTECT AND SUPPORT, AS NECESSARY, ALL EXISTING UTILITIES AND MUNICIPAL SERVICES.
- ANY TRENCH OR EXCAVATION WITHIN THE TRAVELED PORTION OF A ROAD ALLOWANCE SHALL BE BACKFILLED WITH UNSHRINKABLE FILL, UNLESS OTHERWISE NOTED.
- ALL AREAS WITHIN AN EXISTING ROAD ALLOWANCE, DISTURBED BY CONSTRUCTION, SHALL BE RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA.
- ALL EXISTING MANHOLES, CATCHBASINS, VALVE CHAMBERS, HYDRANTS, VALVES, ETC. ARE TO BE ADJUSTED TO FINAL GRADES TO THE SATISFACTION OF THE ENGINEER.
- WHEREVER PIPES, MANHOLES, CATCHBASINS, VALVE CHAMBERS OR APPURTENANCES ARE CONSTRUCTED IN FILL AREAS OR IN DISTURBED GROUND, THE TRENCH SHALL BE EXCAVATED TO UNDISTURBED GROUND AND BACKFILLED WITH GRANULAR "A" OR OTHER SUITABLE MATERIAL, APPROVED BY THE GEOTECHNICAL ENGINEER, AND COMPACTED TO 100 STANDARD PROCTOR DENSITY.
- PRIOR TO COMMENCING ANY WORK, ALL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE IN PLACE.
- ALL WORK SHALL COMPLY WITH STANDARD DRAWINGS AND SPECIFICATIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.
- ROAD OCCUPANCY OR ACCESS PERMITS MUST BE OBTAINED 48 HOURS PRIOR TO COMMENCING ANY WORKS WITHIN A MUNICIPAL ROAD ALLOWANCE.
- DUE TO STORM WATER MANAGEMENT CONTROL, FOUNDATION DRAINS SHALL NOT BE CONNECTED TO THE STORM SEWERS ON THIS SITE.
- UNLESS OTHERWISE NOTED, ALL BUILDINGS SHALL BE EQUIPPED WITH ROOF CONTROL DRAINS.
- SERVICE CONNECTIONS TO BUILDINGS SHALL TERMINATE 1.0 METRES FROM THE OUTSIDE BUILDING FACE, UNLESS OTHERWISE NOTED.
- ALL BUILDING SERVICE CONNECTIONS SHALL BE CAPPED AND MARKED WITH A "4X4" PAINTED GREEN (SANITARY), YELLOW (STORM) AND BLUE (WATER). THE "4X4" SHALL EXTEND 0.6 METRES ABOVE GRADE.

SANITARY SEWERS AND APPURTENANCES

- ALL SANITARY SEWER WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPROVED CITY OF OTTAWA AND ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS.
- ALL SANITARY SEWERS, MANHOLES AND APPURTENANCES SHALL CONFORM TO THE CITY OF OTTAWA "SEWER MATERIAL SPECIFICATIONS".
- ALL SANITARY SEWERS SHALL BE PVC SDR 35, MEETING CSA 182.2-02. FITTINGS FOR PVC SANITARY SEWER PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH A.S.T.M. SPECIFICATION D 03034. JOINTS SHALL BE BELL AND SPIGOT WITH RUBBER GASKETS.
- BEDDING FOR SANITARY SEWERS SHALL BE CLASS "B" OR AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.
- WHERE SANITARY SEWERS CROSS OTHER UTILITIES, THE MINIMUM CLEARANCE BETWEEN OUTSIDE OF PIPE WALLS SHALL BE 0.3 METRES, UNLESS OTHERWISE NOTED.
- "MODULOC" OR OTHER APPROVED PRE-CAST MANHOLE ADJUSTING UNITS, SHALL BE USED, PARGED ON THE OUTSIDE ONLY.
- THE CONTRACTOR SHALL CCTV CAMERA INSPECT ALL SANITARY SEWERS PRIOR TO ASPHALT PLACEMENT AND AGAIN PRIOR TO EXPIRATION OF THE MAINTENANCE PERIOD. ALL SEWERS SHALL BE FLUSHED PRIOR TO CAMERA INSPECTION.
- ALL SANITARY MANHOLES SHALL BE BENCHMARKED TO THE CROWN OF ALL PIPES ON A VERTICAL PROJECTION FROM SPRINGLINE, UNLESS OTHERWISE NOTED.

STORM SEWERS AND APPURTENANCES

- ALL STORM SEWER WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPROVED CITY OF OTTAWA AND ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS.
- ALL STORM SEWERS, MANHOLES, CATCHBASINS, CATCHBASIN MANHOLES AND APPURTENANCES SHALL CONFORM TO THE CITY OF OTTAWA "SEWER MATERIAL SPECIFICATIONS".
- ALL STORM SEWERS, 450 mm DIAMETER AND SMALLER, SHALL BE PVC SDR 35, MEETING CSA 182.2-02. FITTINGS FOR PVC STORM SEWER PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH A.S.T.M. SPECIFICATION D 03034. JOINTS SHALL BE BELL AND SPIGOT WITH RUBBER GASKETS.
- ALL STORM SEWERS, 525 mm DIAMETER AND LARGER, SHALL BE CONCRETE, RUBBER GASKET, CONFORMING TO CSA SPECIFICATION A 297.2, CLASS 65-D, UNLESS OTHERWISE NOTED.
- BEDDING FOR STORM SEWERS SHALL BE CLASS "B" OR AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.
- ALL CATCHBASIN LEADS SHALL BE 250 mm DIAMETER, UNLESS OTHERWISE NOTED.
- WHERE STORM SEWERS CROSS OTHER UTILITIES, THE MINIMUM CLEARANCE BETWEEN OUTSIDE OF PIPE WALLS SHALL BE 0.3 METRES.
- "MODULOC" OR OTHER APPROVED PRE-CAST MANHOLE AND CATCHBASIN ADJUSTING UNITS, SHALL BE USED, PARGED ON THE OUTSIDE ONLY.
- THE CONTRACTOR SHALL CCTV CAMERA INSPECT ALL STORM SEWERS PRIOR TO ASPHALT PLACEMENT AND AGAIN PRIOR TO EXPIRATION OF THE MAINTENANCE PERIOD. ALL SEWERS SHALL BE FLUSHED PRIOR TO CAMERA INSPECTION.
- ALL STORM MANHOLES SHALL BE BENCHMARKED TO THE CROWN OF ALL PIPES ON A VERTICAL PROJECTION FROM SPRINGLINE, UNLESS OTHERWISE NOTED.
- ALL CATCHBASINS AND CATCHBASIN MANHOLES SHALL BE ENCIRCLED WITH A 100 mm DIAMETER PERFORATED SUBDRAIN COMPLETE WITH FILTER SOCK AND STONE SURROUND AS SHOWN ON DRAWING 5 OF 5.

SURFACE WORKS

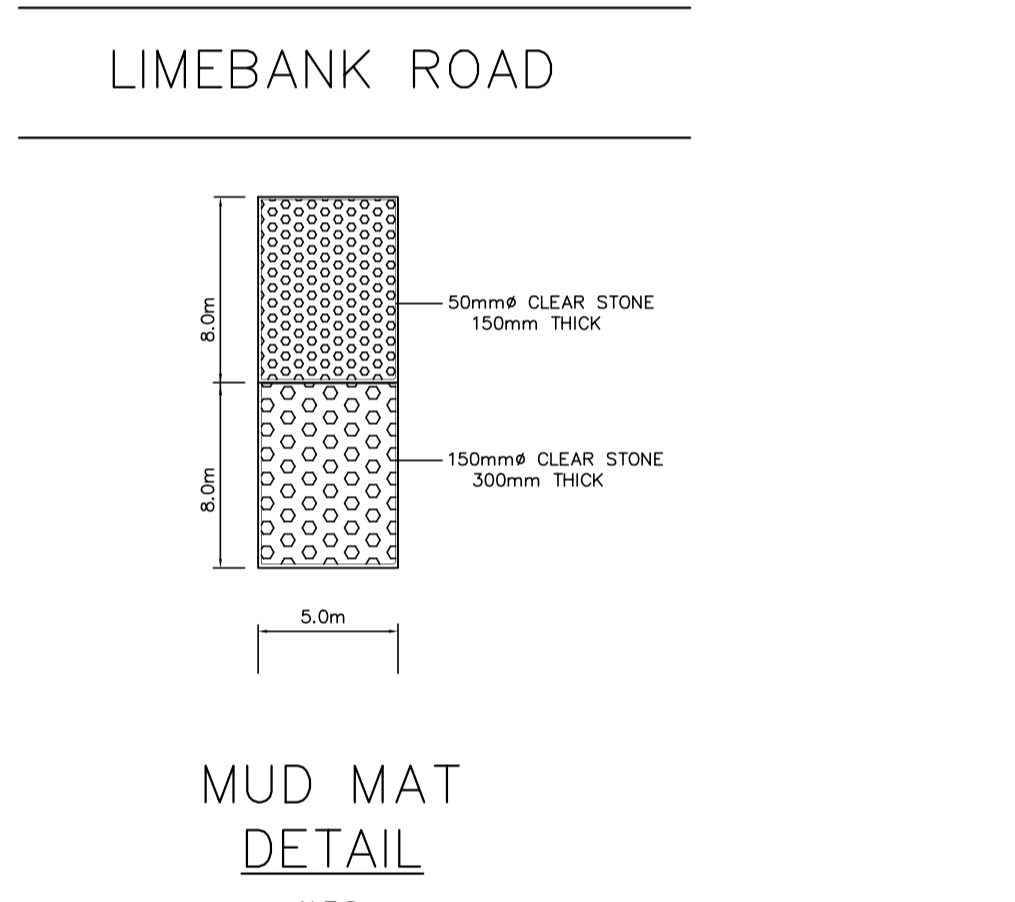
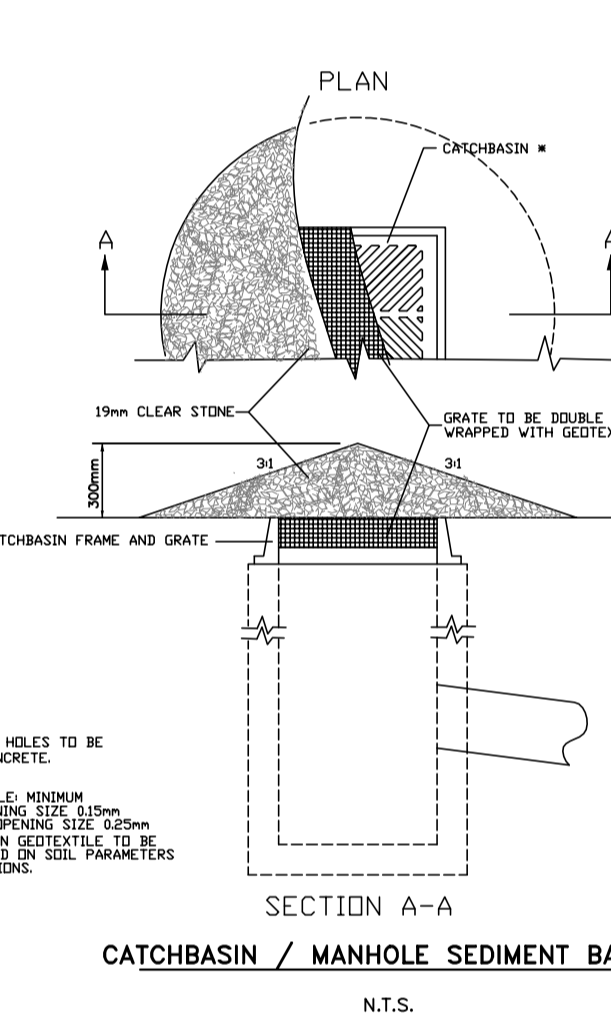
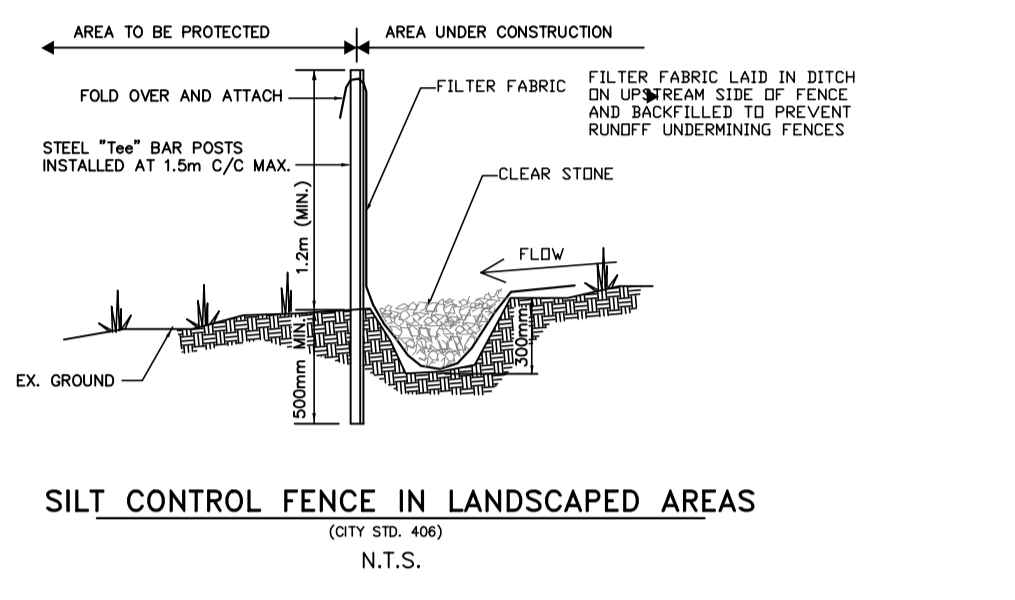
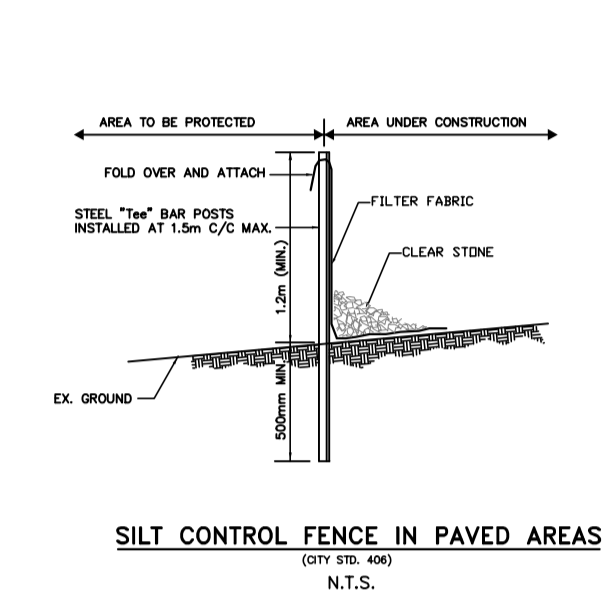
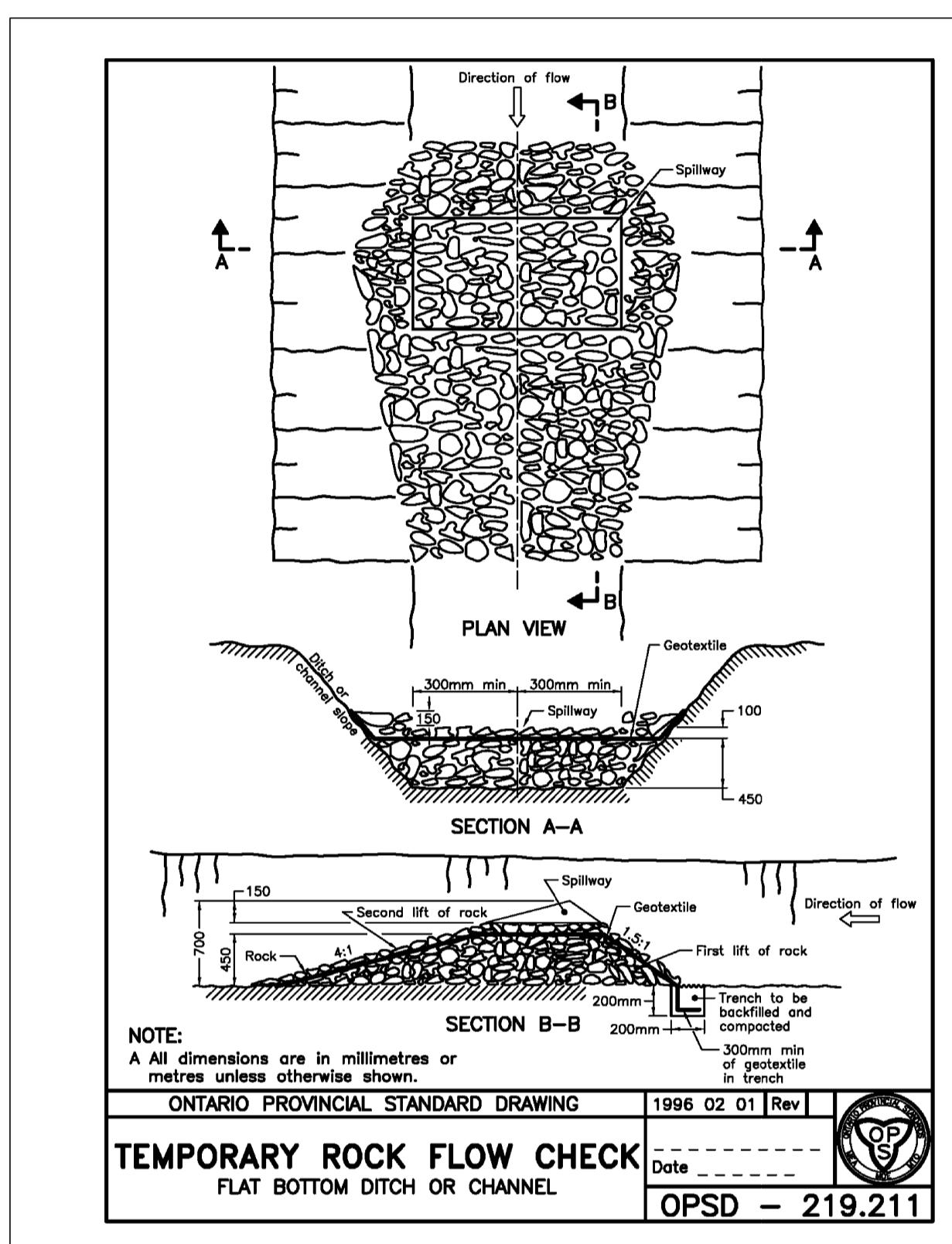
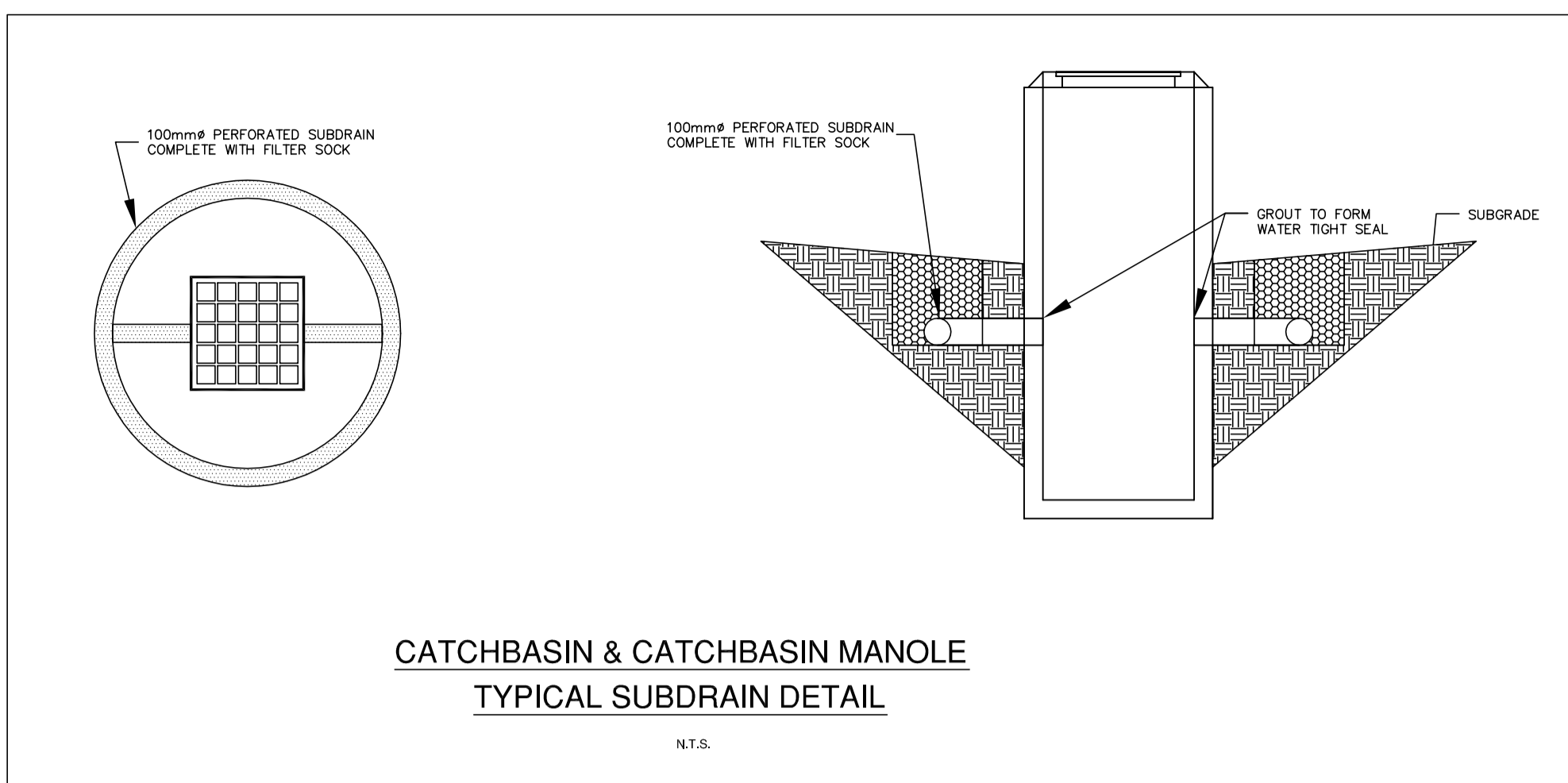
- ALL CONCRETE CURBS SHALL CONFORM TO THE CITY OF OTTAWA STANDARD DRAWINGS SC 1.1 AND SC 1.4 AS APPLICABLE.
- ALL SIDEWALKS SHALL CONFORM TO THE CITY OF OTTAWA STANDARD DRAWINGS SC 4 AND SC 5.
- ALL ASPHALT PAVEMENTS SHALL BE CONSTRUCTED AS SHOWN ON THE ARCHITECTS SITE PLANS) AND AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.
- ALL LANDSCAPED AREA SHALL BE GRADED AND CONSTRUCTED AS SPECIFIED ON THE LANDSCAPE ARCHITECTS DRAWINGS AND SPECIFICATIONS.

WATERMANS AND APPURTENANCES

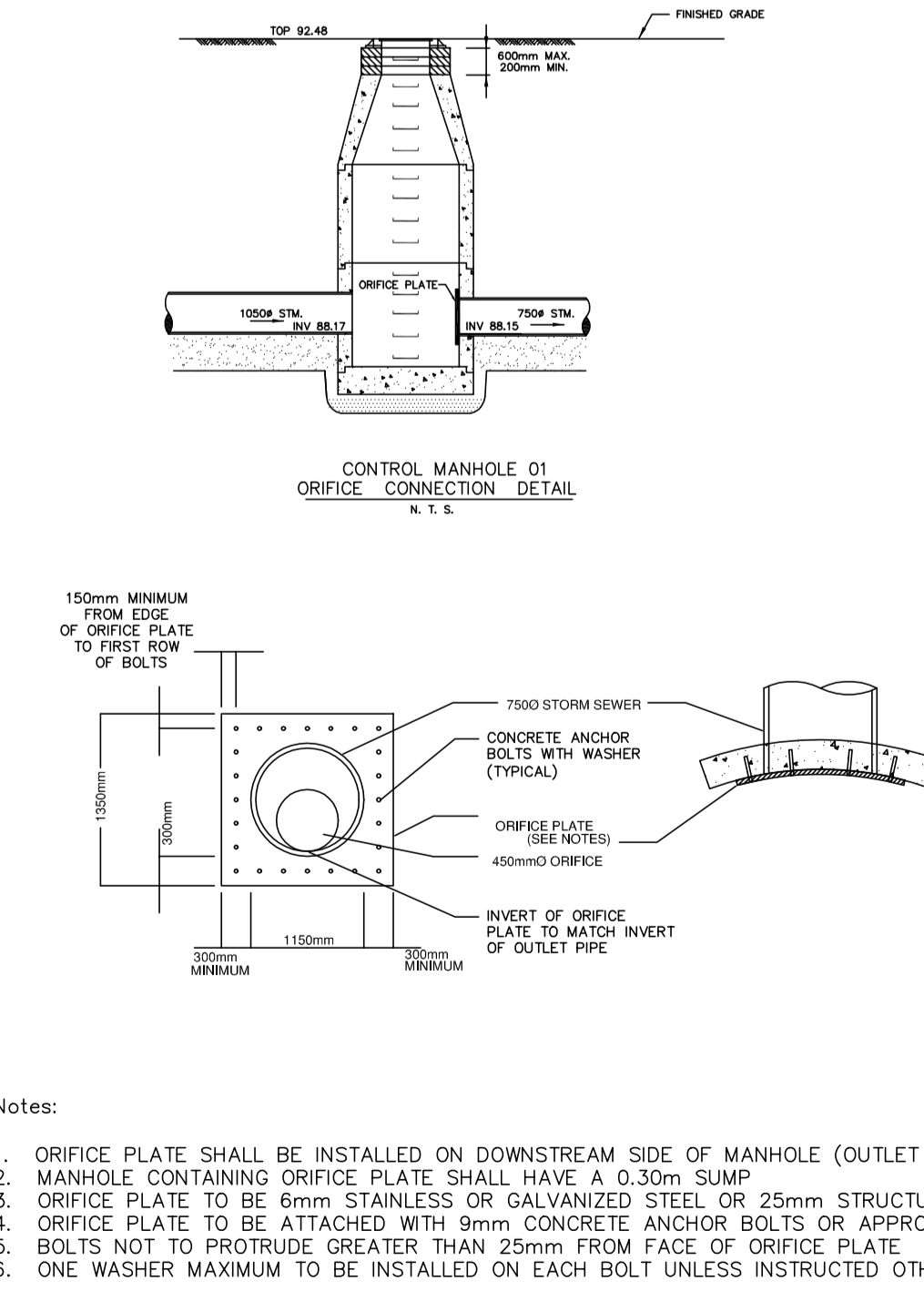
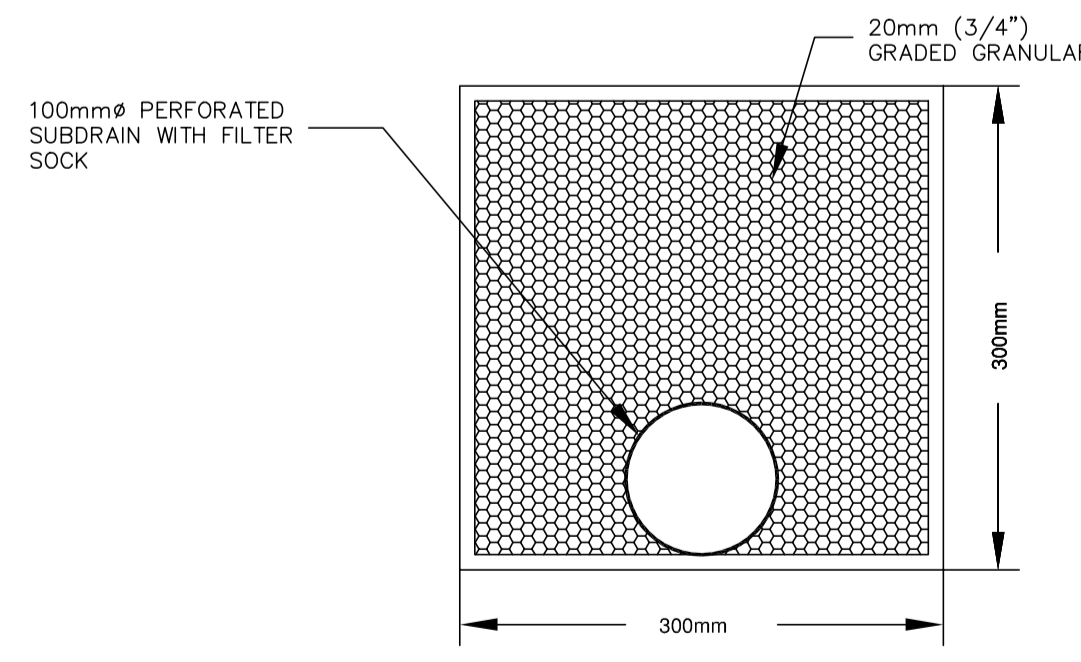
- ALL WATERMAIN MATERIAL, INCLUDING APPURTENANCES SHALL CONFORM TO THE CITY OF OTTAWA "WATERMAIN MATERIAL SPECIFICATIONS".
- ALL WATERMANS FROM 100 mm TO 300 mm DIAMETER SHALL BE PVC CL-150 CONFORMING TO CSA B137.3 AND AWWAC900 AND INSTALLED WITH 14 GAGE TRACER WIRE. THE PIPE JOINTS SHALL BE APPROVED PUSH ON, MECHANICAL OR FLANGED AS REQUIRED FOR 1,000 KPA RATED PRESSURE. ALL WATERMANS 50 mm DIAMETER AND SMALLER SHALL BE TYPE K COPPER.
- ALL WATERMANS SHALL HAVE A MINIMUM COVER OF 2.4 METRES TO THE TOP OF PIPE.
- THRUST BLOCKING SHALL CONFORM TO THE CITY OF OTTAWA SPECIFICATIONS.
- PIPE BEDDING SHALL CONFORM TO THE CITY OF OTTAWA SPECIFICATIONS.
- ALL CONSTRUCTION METHODS SHALL CONFORM TO CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- 50 mm DIAMETER BLOW OFFS SHALL BE INSTALLED AT ALL DEAD ENDED WATERMANS FOR BLEEDING OFF, CHARGING AND FLUSHING THE WATER SYSTEM.
- UPON COMPLETION OF CONSTRUCTION OF THE WATERMANS, THE CONTRACTOR SHALL FLUSH, PRESSURE TEST AND DISINFECT THE ENTIRE WATER DISTRIBUTION SYSTEM AS DIRECTED BY THE ENGINEER AND THE CITY OF OTTAWA.
- WATERMANS SHALL BE INSTALLED TO LINES AND GRADES AS SHOWN ON THE APPROVED SITE SERVING PLANS. A COPY OF ALL GRADE SHEETS SHALL BE SUPPLIED TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.
- WATERMANS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 0.30 METRES OVER AND 0.50 METRES UNDER CROSSING SEWERS AND OTHER UTILITIES.
- ALL WATERMANS SHALL HAVE A MINIMUM OF 1.2 METRE HORIZONTAL CLEARANCE FROM MANHOLES, CATCHBASINS AND ALL UTILITIES.
- PROVISIONS FOR FLUSHING THE WATERMANS PRIOR TO TESTING SHALL BE PROVIDED WITH A LEAST A 50 mm DIAMETER OUTLET ON 100 mm DIAMETER AND LARGER MAINS. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE LINE. THE FLUSHING POINTS MUST ALSO BE HOSED OR PIPED TO ALLOW THE WATER TO BE DISCHARGED TO A DRAIN. ON FIRE LINES, THE FLUSHING OUTLET IS TO BE 100 mm DIAMETER MINIMUM ON A HYDRANT.
- THE PROPOSED WATER DISTRIBUTION SYSTEM MUST BE ISOLATED FROM EXISTING WATERMANS TO ALLOW INDEPENDENT TESTING AND CHLORINATING FROM THE EXISTING SYSTEMS.
- ALL LIVE TAPPING AND OPERATION OF THE CITY OF OTTAWA WATER VALVES SHALL BE ARRANGED THROUGH THE CITY.
- CATHODIC PROTECTION OF THE WATER DISTRIBUTION SYSTEM SHALL BE PROVIDED IN CONFORMITY WITH THE CITY OF OTTAWA SPECIFICATIONS.
- ALL BUILDING SERVICE CONNECTIONS SHALL TERMINATE WITH A CAPPED VALVE, SET 1.0 METRES FROM THE FACE OF THE BUILDING, UNLESS OTHERWISE NOTED, AND MUST BE MECHANICALLY RESTRAINED FOR A MINIMUM DISTANCE OF 12 METRES BACK FROM THE VALVE.
- FIRE HYDRANTS SHALL BE FLOW TESTED AND COLOUR CODED IN CONFORMANCE WITH THE CITY OF OTTAWA AND THE FIRE DEPARTMENT REQUIREMENTS.

EROSION AND SILT CONTROL NOTES

- ALL SEDIMENT CONTROL WORKS SHALL BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION.
- ALL SILT CONTROL FENCING, MUD MATS, ROCK CHECK DAMS AND OTHER SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED DAILY AS WELL AS IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFALL EVENT AND MAINTAINED OR CLEANED AS REQUIRED.
- IF IT IS DETERMINED THAT THE EROSION AND SEDIMENT CONTROL MEASURES ARE NOT ADEQUATELY PREVENTING THE RELEASE OF SEDIMENT TO THE EXISTING STORM SEWERS OR SWALES, ADDITIONAL MEASURES SHALL IMMEDIATELY BE PUT IN PLACE, AS DIRECTED BY THE ENGINEER.
- ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE AT A DESIGNATED POINT. PROVIDED WITH MUD MATS AS SPECIFIED ON THE DRAWINGS, TO ENSURE THAT MATERIAL IS NOT TRACKED OFF THE SITE ONTO ADJACENT ROADS.
- THE CONTRACTOR SHALL AT HIS EXPENSE, CLEAN THE ADJACENT ROADS AS REQUIRED.
- THE CONTRACTOR SHALL INSTALL ROCK CHECK DAMS AS MAY BE REQUIRED, OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE DRAWINGS OR ANY UNUSUAL CONDITIONS ENCOUNTERED DURING THE WORK.
- ADDITIONAL SILT CONTROL FENCING SHALL BE INSTALLED AS REQUIRED AROUND ALL STOCKPILES OF EXCAVATED MATERIAL.
- ANY EXTERNAL AREAS DISTURBED DUE TO CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SEDIMENT AND EROSION CONTROL WORKS FOR THE DURATION OF THE CONSTRUCTION PERIOD, TO THE SATISFACTION OF THE ENGINEER.
- LOCATION OF ADDITIONAL SILT CONTROL FENCE OR OTHER MEASURES MAY BE REQUIRED AND WILL BE REVIEWED AND APPROVED BY THE ENGINEER AS THE WORK PROGRESSES.
- THE CONTRACTOR SHALL USE APPROPRIATE CONSTRUCTION METHODS TO ELIMINATE ANY TRENCH WATER, MUD, DEBRIS, SILT ETC. FROM ENTERING EXISTING STORM SEWER SYSTEMS, CULVERTS OR DRAINAGE CHANNEL.
- HALF BULK HEADS SHALL BE INSTALLED IN ALL NEW STORM MANHOLES AND MAINTAINED UNTIL THEIR REMOVAL IS APPROVED BY THE ENGINEER. THE BULK HEADS SHALL BE INSPECTED ON A REGULAR BASIS AND ANY SILT BUILD-UP SHALL BE REMOVED AS REQUIRED.
- ALL DISTURBED AREAS SHALL BE REINSTATED AS SOON AS PRACTICAL, FOLLOWING COMPLETION OF THE WORK.
- ONCE THE CATCHBASINS HAVE BEEN INSTALLED AND CONNECTED TO THE STORM SEWER SYSTEM, SEDIMENT BARRIERS SHALL BE INSTALLED.
- ALL CATCHBASIN SUMPS SHALL BE INSPECTED FREQUENTLY, AND CLEANED AS REQUIRED.
- ALL DISTURBED AREAS WITHIN THE SITE THAT ARE NOT OCCUPIED BY BUILDINGS, ROADWAY OR DRIVEWAYS SHALL BE TOPSOILED AND SODDED OR SEEDED IMMEDIATELY FOLLOWING COMPLETION OF FINAL GRADING OPERATIONS.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MATERIALS INCLUDING SILT FENCE, STRAW BALES, CLEAR STONES ETC. ARE TO BE KEPT ON SITE FOR EMERGENCIES AND REPAIRS.
- AN AFTER HOURS CONTACT PHONE NUMBER IS TO BE VISIBLY POSTED ON THE SITE FOR EMERGENCIES.
- ANY SPILL FROM THE SITE SHALL BE REPORTED TO MINISTRY OF THE ENVIRONMENT, SPILL ACTION CENTRE, AT 1-800-268-6060 AND TO THE ENGINEER.
- THE EROSION AND SEDIMENT CONTROL METHODS SHALL HAVE REGARD TO APPLICATION WORKS DESIGN A SEDIMENT CONTROL PLAN ON RMCOC CONSTRUCTION PROJECT" (1998) AND "EROSION & SEDIMENT CONTROL GUIDELINES FOR URBAN CONSTRUCTION" (2006).

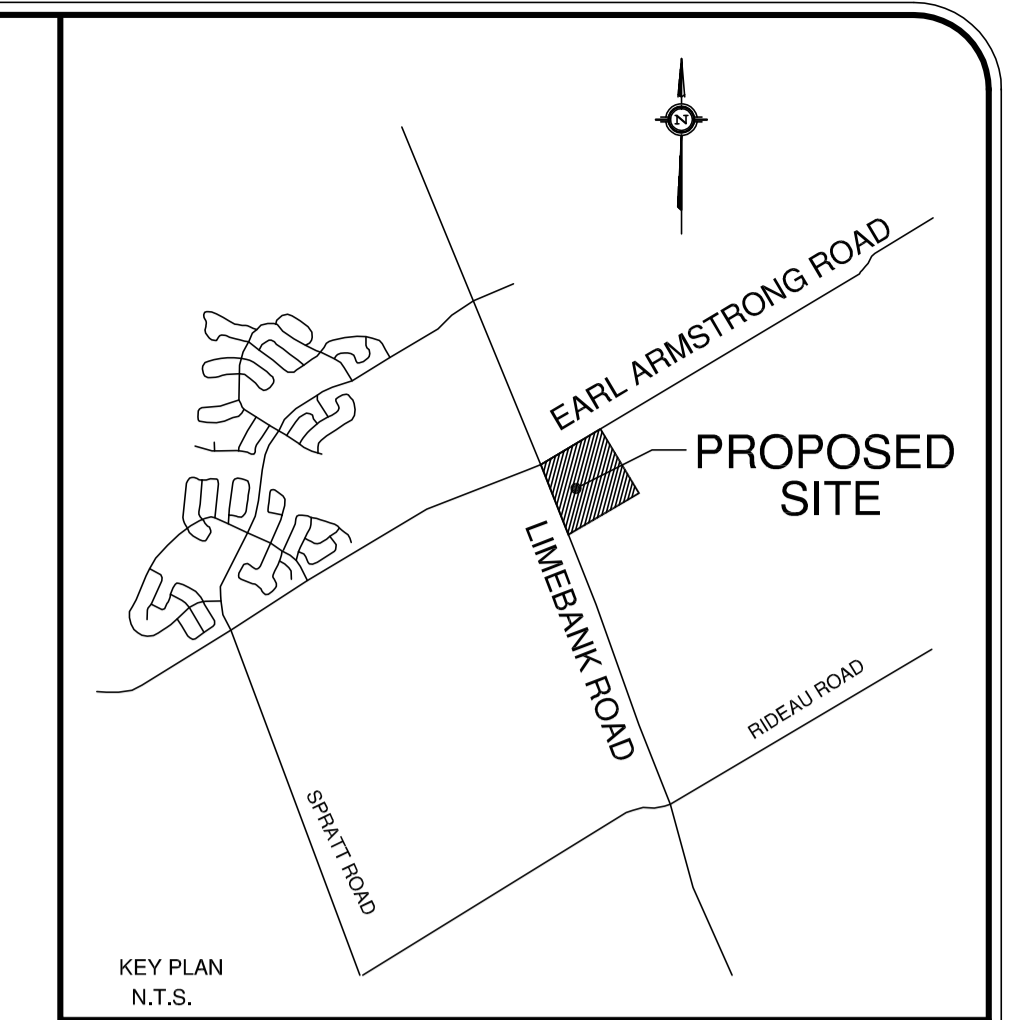


EROSION CONTROL MEASURES



- Notes:
- ORIFICE PLATE SHALL BE INSTALLED ON DOWNSTREAM SIDE OF MANHOLE (OUTLET PIPE)
 - MANHOLE CONTAINING ORIFICE PLATE SHALL HAVE A 0.30m SUMP
 - ORIFICE PLATE TO BE 6mm STAINLESS STEEL OR GALVANIZED STEEL OR 25mm STRUCTURAL POLYETHYLENE
 - ORIFICE PLATE TO BE ATTACHED WITH 30mm CONCRETE ANCHOR BOLTS OR APPROVED EQUIVALENT
 - BOLTS NOT TO PROTRUDE GREATER THAN 25mm FROM FACE OF ORIFICE PLATE
 - ONE WASHER MAXIMUM TO BE INSTALLED ON EACH BOLT UNLESS INSTRUCTED OTHERWISE

DETAIL OF ORIFICE PLATE AT CONTROL MH 01



LOCAL BENCHMARK:
CUT CROSS IN CONCRETE TRAFFIC ISLAND AT THE NORTH-EAST CORNER OF EARL ARMSTRONG ROAD AND LIMEBANK ROAD AS ESTABLISHED BY ANNIS, O'SULLIVAN, VOLLEBEK LTD. O.L.S.

ELEVATION 92.87

No.	By	Date	Revision	Checked
2	J.H.	Apr 18/14	ISSUED FOR SECOND SUBMISSION	
3	J.H.	May 20/14	REVISED AS PER CITY COMMENTS	
1	C.R.M.	Apr 9/14	ISSUED FOR SITE PLAN APPROVAL	

APPROVED AS TO FORM IN RELIANCE UPON THE PROFESSIONAL SKILL AND ABILITY OF URBAN ECOSYSTEMS LIMITED AS TO DESIGN AND SPECIFICATION.

Director of Engineering _____ Date _____

URBAN ECOSYSTEMS LIMITED
7050 WESTON ROAD, SUITE 705
NOC/CORNBURG, ONTARIO L4L 8C7
info@urbanecosystems.com
t. (905)856-0629
f. (905)856-0678

ROSARIO SACCO
REGISTERED PROFESSIONAL ENGINEER
JULY 18, 2014
PROVINCE OF ONTARIO

RIVERSIDE SOUTH RETAIL CENTER
CITY OF OTTAWA

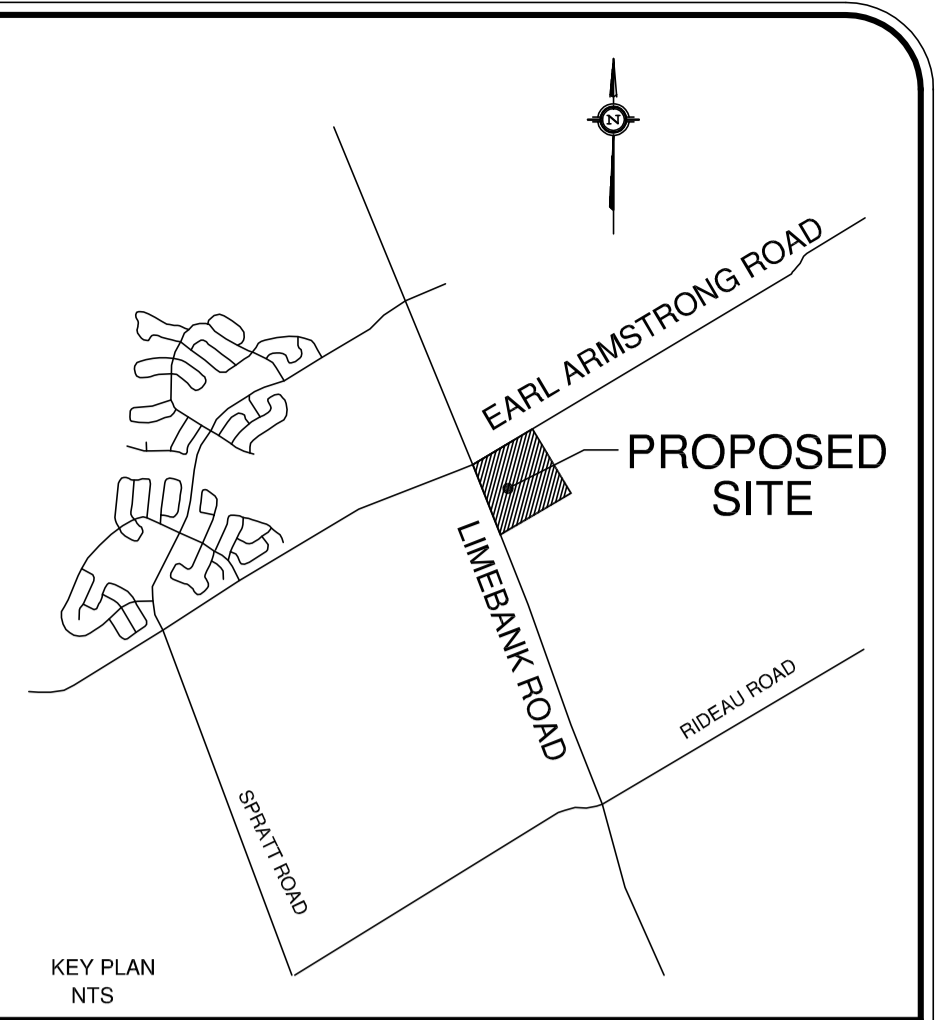
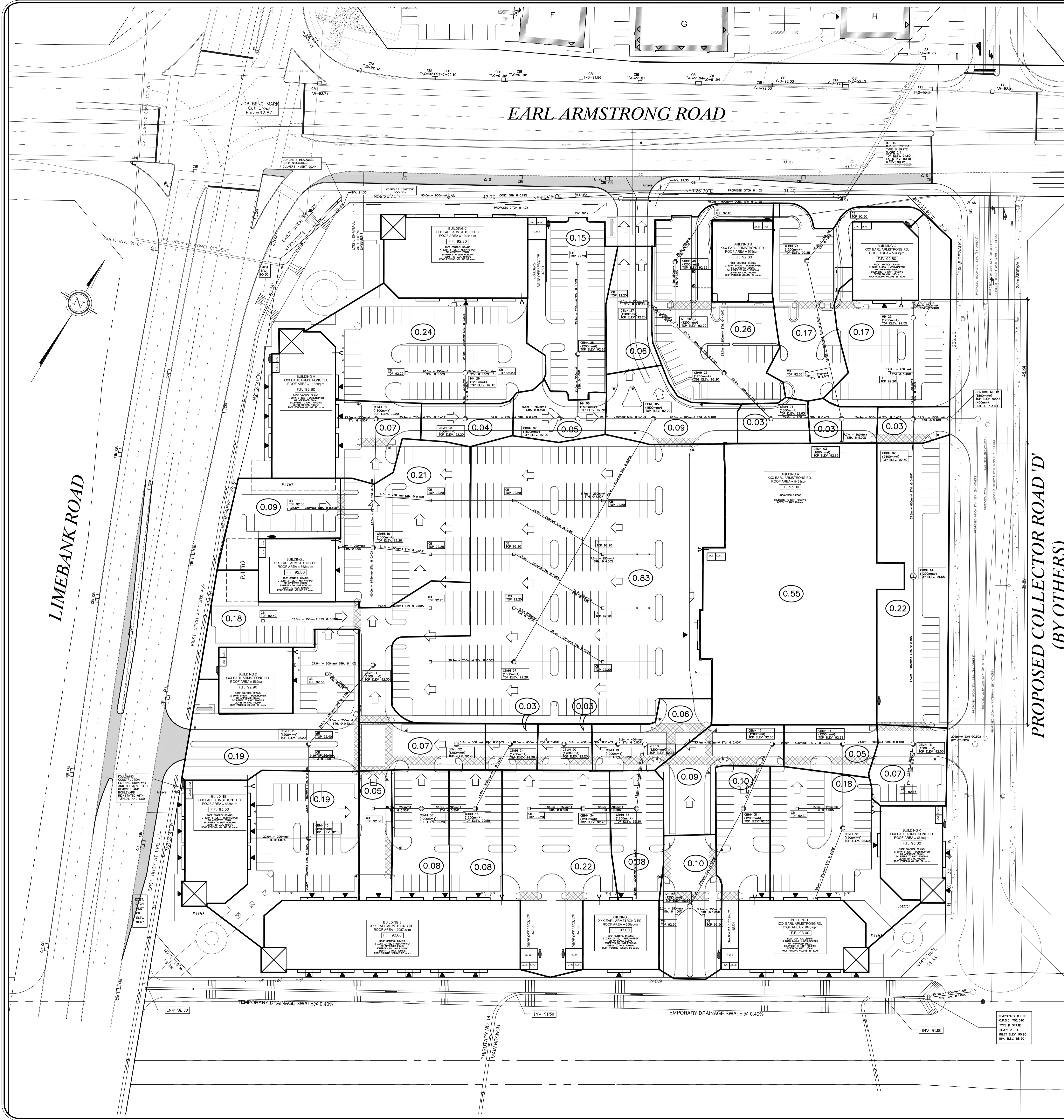
MORGUARD INVESTMENTS LTD.
55 CITY CENTER DRIVE
MISSISSAUGA, ONTARIO

FILE No D07-12-14-0067

NOTES & DETAILS

Designed By	Date	Checked By	R.S.
XXX	APR 2014	XXX	

Scale:	Project No.	Drawing No.	5 of 8
1:500	12007		



- CURB TO BE REMOVED
- PROPOSED CURB
- PROPOSED ASPHALT PAVEMENT

0.83 CONTRIBUTING DRAINAGE AREA IN Ha

NOTE:
THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING 5 OF 8, NOTES & DETAILS PROJECT 12007

LOCAL BENCHMARK:
CUT CROSS IN CONCRETE TRAFFIC ISLAND AT THE NORTH-EAST CORNER OF EARL ARMSTRONG ROAD AND LIMEBANK ROAD AS ESTABLISHED BY ANNIS, O'SULLIVAN, VOLLEBERK LTD. O.L.S.

ELEVATION 92.87

No.	Date	Revision	Checked
1.	J.H. 12/14	1	
2.	J.H. 12/14	2	
3.	J.H. 12/14	3	

APPROVED AS TO FORM IN RELIANCE UPON THE PROFESSIONAL SKILL AND ABILITY OF URBAN ECOSYSTEMS LIMITED AS TO DESIGN AND SPECIFICATION.

Director of Engineering _____ Date _____

ROSARIO SACCO
REGISTERED PROFESSIONAL ENGINEER
AUG 12, 2014
PROVINCE OF ONTARIO

URBAN ECOSYSTEMS LIMITED
7050 WESTON ROAD, SUITE 705
WOODBRIDGE, ONTARIO L4L 8C7
www.urbanecosystems.com
t. (905)856-0679
f. (905)856-0698

U.E.L.

RIVERSIDE SOUTH RETAIL CENTER
CITY OF OTTAWA

MORGUARD INVESTMENTS LTD.
55 CITY CENTER DRIVE
MISSISSAUGA, ONTARIO

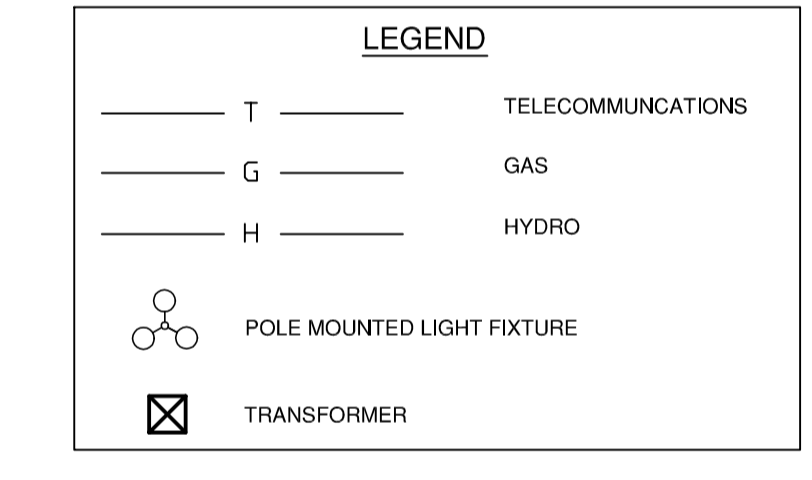
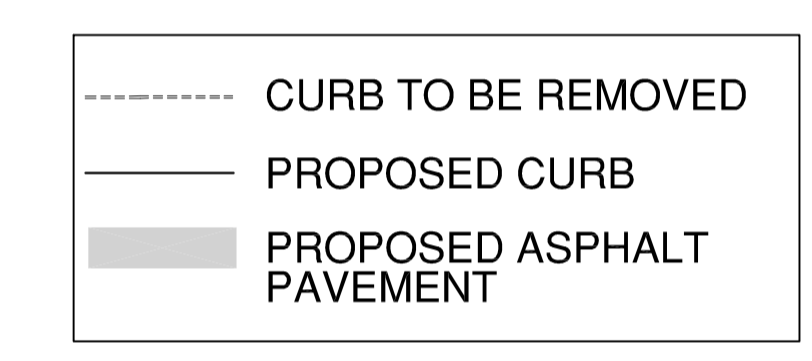
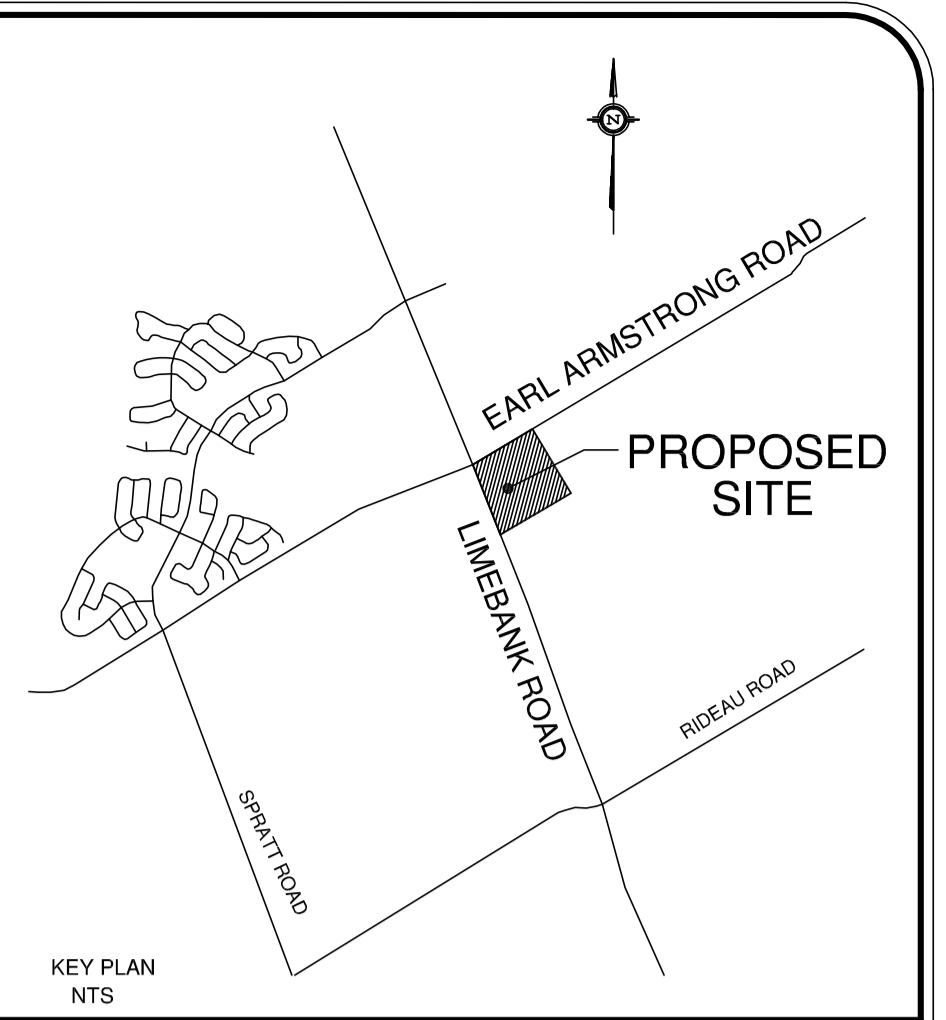
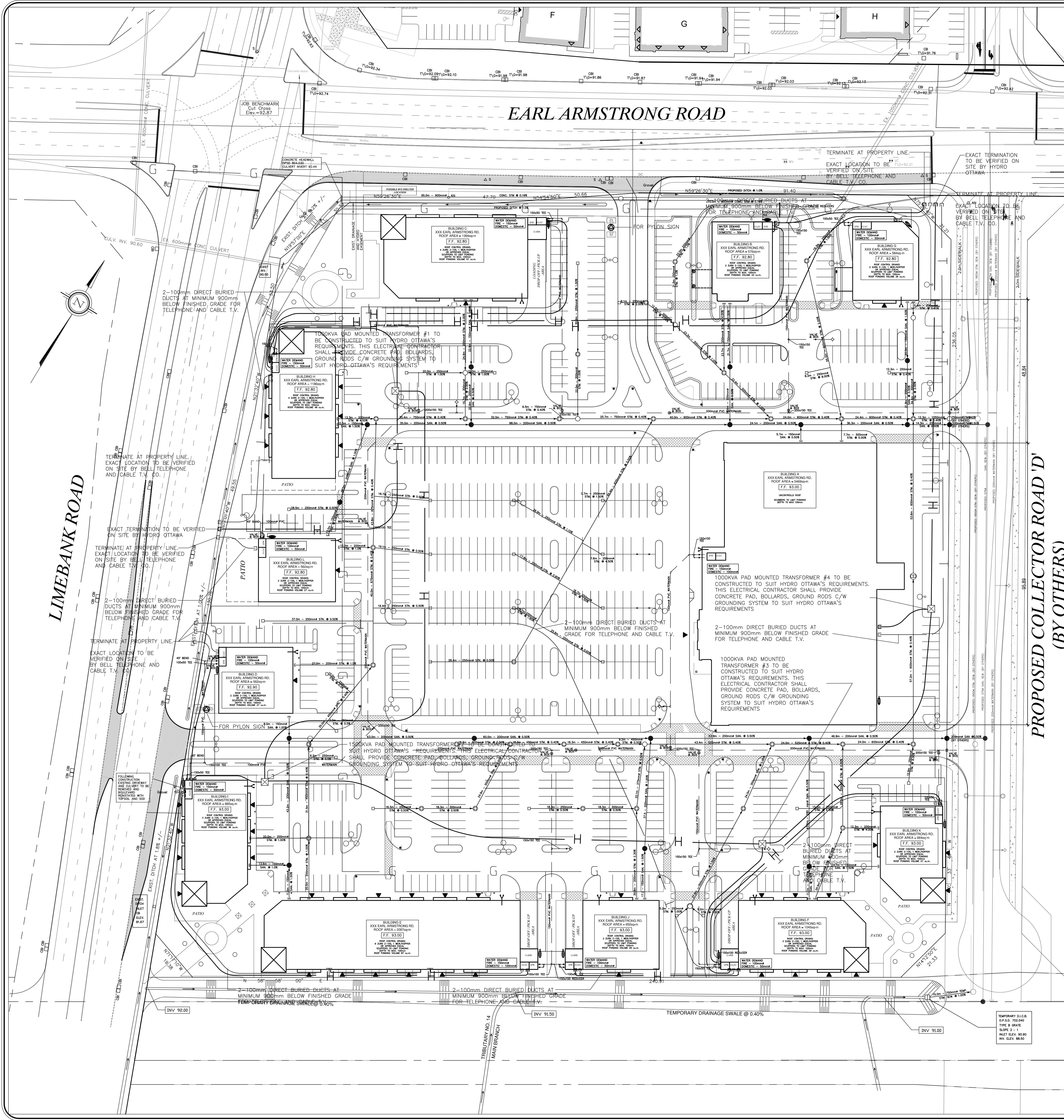
FILE No D-07-12-14-0067
STORM DRAINAGE AREA PLAN

Designed By XXX	Date APR 2014	Checked By R.S.
Drawn By XXX	Project No. 12007	Approved By
Scale: 1:500	Project No. 12007	Drawing No. 6 of 8

LIMEBANK ROAD

EARL ARMSTRONG ROAD

PROPOSED COLLECTOR ROAD 'D'
(BY OTHERS)



NOTE:
 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING 5 OF 8, NOTES & DETAILS PROJECT 12007

LOCAL BENCHMARK:
 CUT CROSS IN CONCRETE TRAFFIC ISLAND AT THE NORTH-EAST CORNER OF EARL ARMSTRONG ROAD AND LIMEBANK ROAD AS ESTABLISHED BY ANNIS, O'SULLIVAN, VOLLEBERG LTD. O.L.S.

ELEVATION 92.87

3. J.H. AUG 12/14 SITE PLAN REVISION	
2. J.H. MAY 20/14 REVISED AS PER CITY COMMENTS	
1. C.R.M. APR 9/14 ISSUED FOR SITE PLAN APPROVAL	
No. By Date Revision	Checked

APPROVED AS TO FORM IN RELIANCE UPON THE PROFESSIONAL SKILL AND ABILITY OF URBAN ECOSYSTEMS LIMITED AS TO DESIGN AND SPECIFICATION.

Director of Engineering _____ Date _____

ROSARIO SACCO
 REG. PROFESSIONAL ENGINEER
 CIVIL 12, 2014
 PROVINCE OF ONTARIO

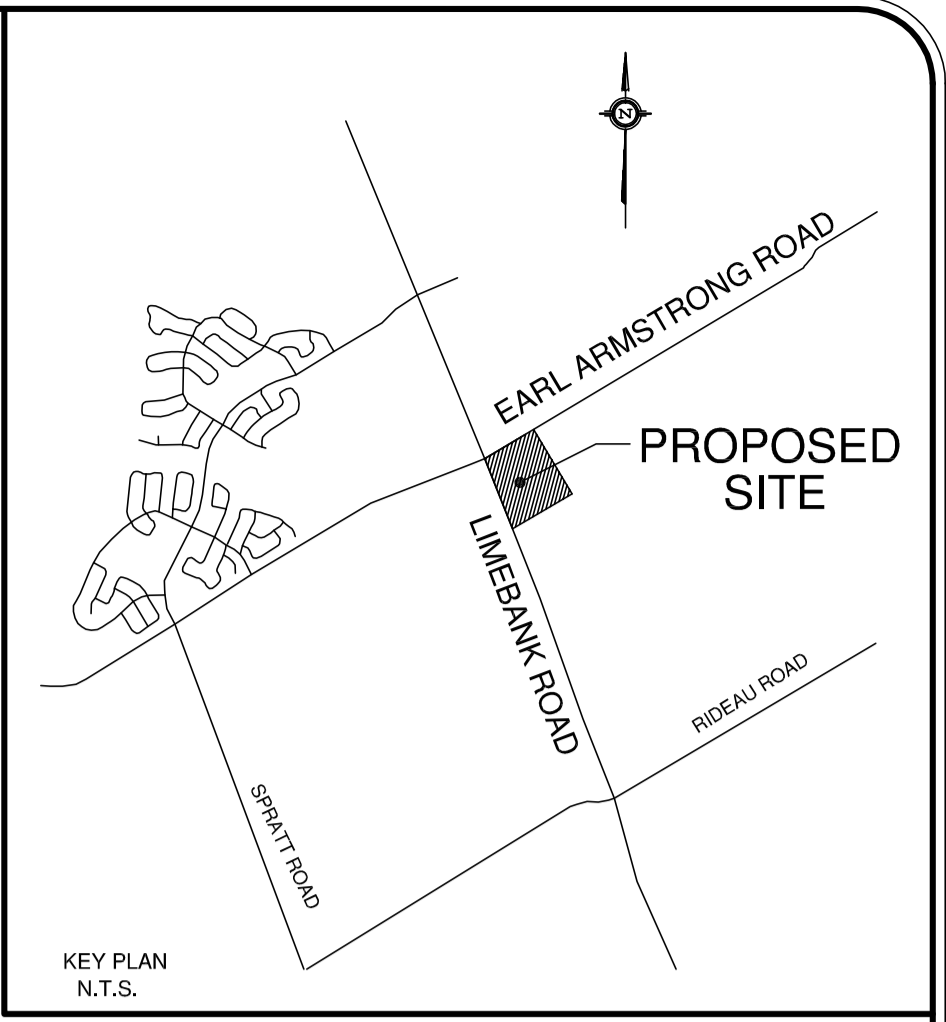
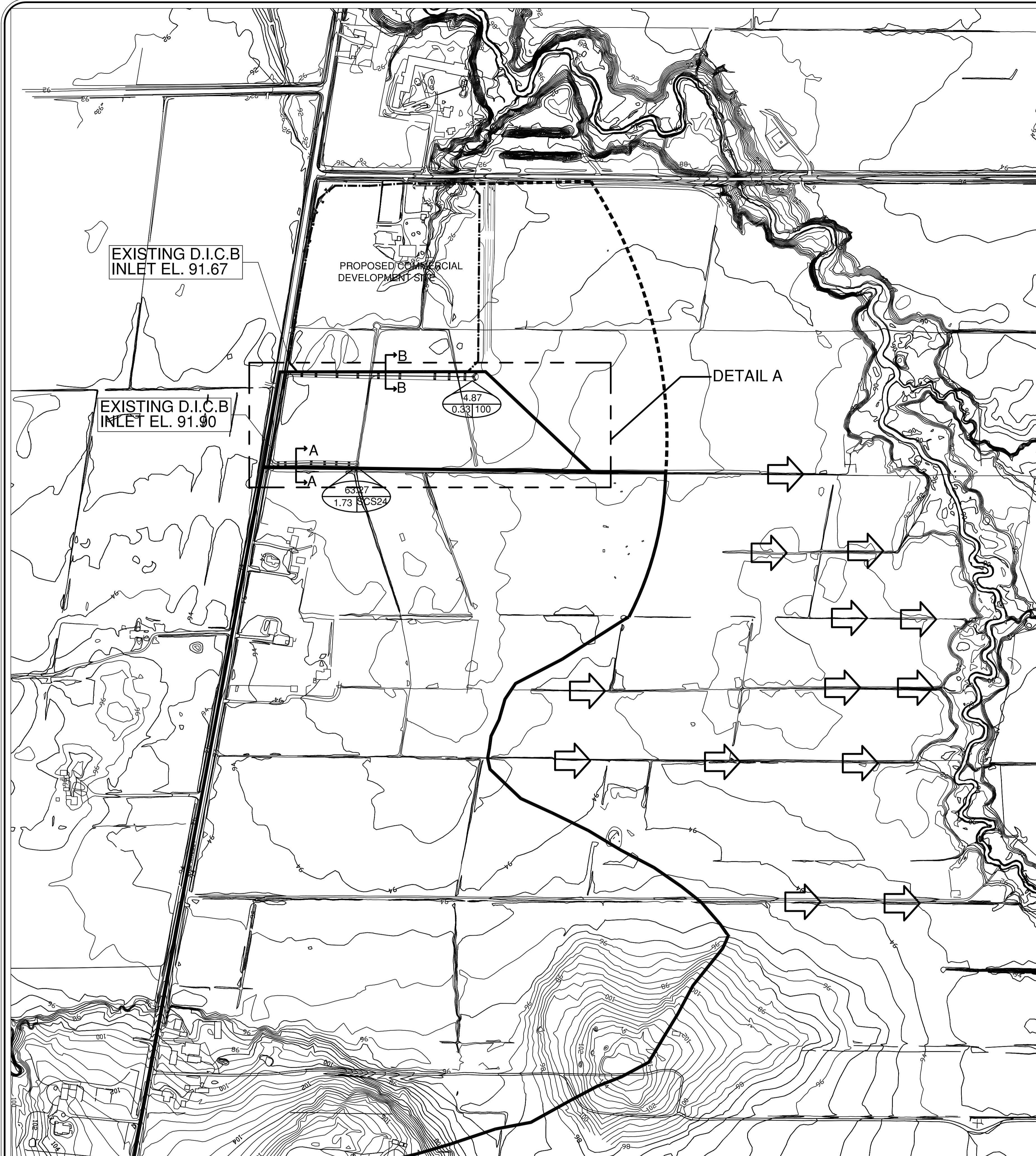
URBAN ECOSYSTEMS LIMITED
 7050 WESTON ROAD, SUITE 705
 WOODBRIDGE, ONTARIO L4L 8C7
 uel@urbanecosystems.com
 T: (905)856-0679
 F: (905)856-0698

RIVERSIDE SOUTH RETAIL CENTER
 CITY OF OTTAWA

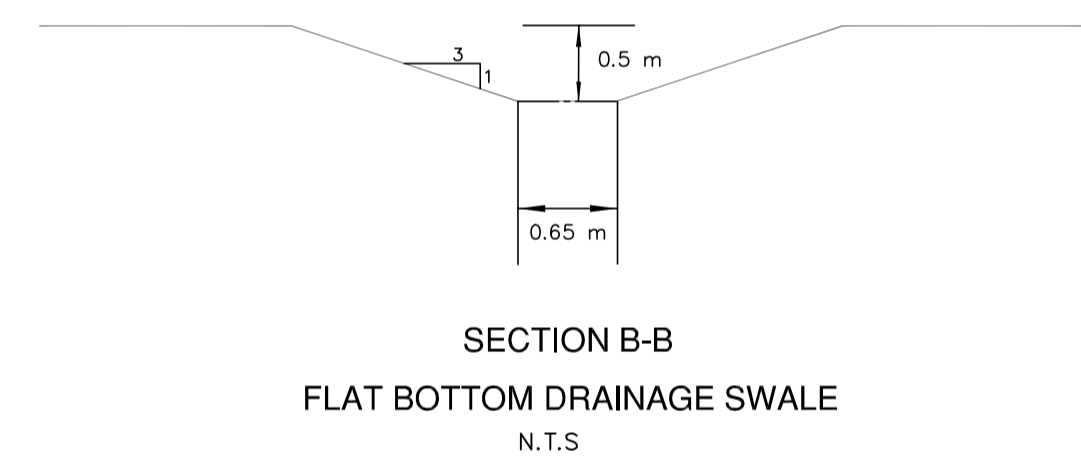
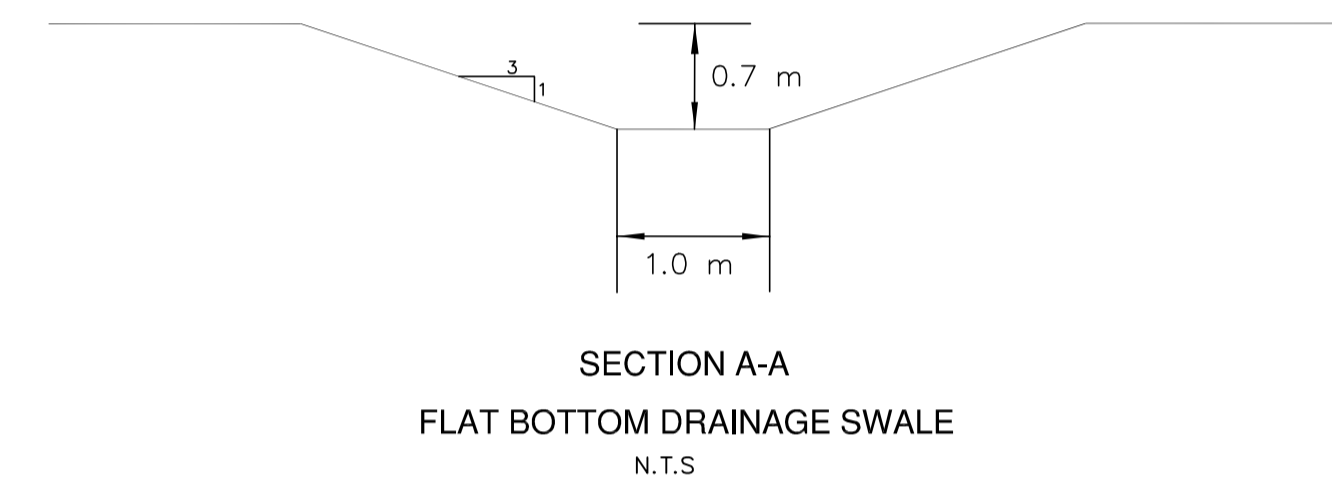
MORGUARD INVESTMENTS LTD.
 55 CITY CENTER DRIVE
 MISSISSAUGA, ONTARIO

FILE No (TBD)
COMPOSITE UTILITY PLAN

Designed By XXX	Date APR 2014	Checked By R.S.
Drawn By XXX	Project No. 12007	Approved By
Scale: 1:500		Drawing No. 7 of 8



4.87 — DRAINAGE AREA (Ha)
 0.33 | 100 — STORM
 — TIME TO PEAK (Ha)



NOTE:
 THIS DRAWING SHALL BE READ
 IN CONJUNCTION WITH DRAWING
 4 OF 8, EROSION & SEDIMENT
 CONTROL PLAN, AND DRAWING
 5 OF 8, NOTES & DETAILS
 PROJECT 12007

LOCAL BENCHMARK:
 CUT CROSS IN CONCRETE TRAFFIC ISLAND AT THE NORTH-EAST
 CORNER OF EARL ARMSTRONG ROAD AND LIMBANK ROAD
 AS ESTABLISHED BY ANNIS, O'SULLIVAN, VOLLEBECK LTD. O.L.S.

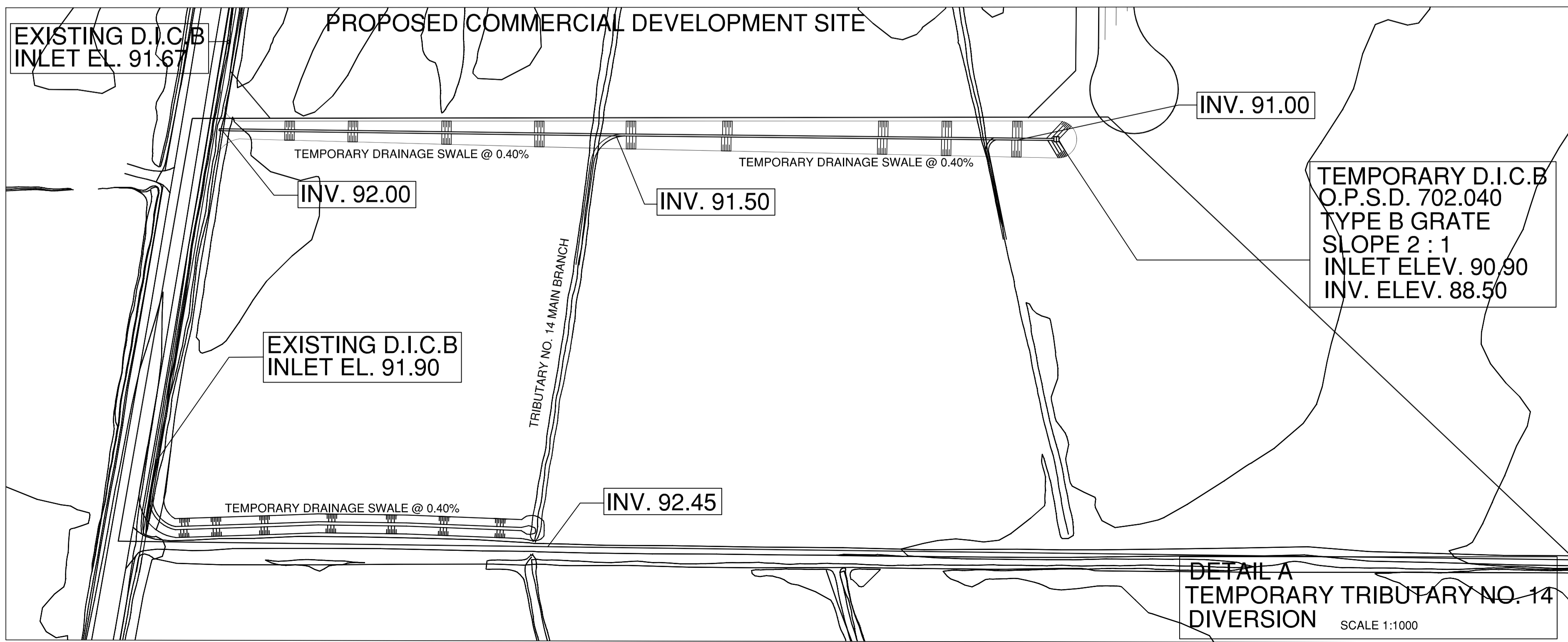
ELEVATION 92.67

No.	By	Date	Revision	Checked
3.	J.H.	July 18/14	ISSUED FOR SECOND SUBMISSION	
2.	J.H.	May 20/14	REVISED AS PER CITY COMMENTS	
1.	C.R.M.	Apr 9/14	ISSUED FOR SITE PLAN APPROVAL	

APPROVED AS TO FORM IN RELIANCE UPON
 THE PROFESSIONAL SKILL AND ABILITY OF
 URBAN ECOSYSTEMS LIMITED AS TO DESIGN
 AND SPECIFICATION.

Director of Engineering _____ Date _____

REGISTERED PROFESSIONAL ENGINEER
 ROSARIO SACCO
 JULY 18, 2014
 PROVINCE OF ONTARIO



URBAN ECOSYSTEMS LIMITED
 7050 WESTON ROAD, SUITE 705
 WOODBINE, ONTARIO L4L 8G7
 info@urbanecosystems.com
 T: (905)856-0629
 F: (905)856-0698

UEL

RIVERSIDE SOUTH RETAIL CENTER
 CITY OF OTTAWA

MORGUARD INVESTMENTS LTD.
 55 CITY CENTER DRIVE
 MISSISSAUGA, ONTARIO

FILE No D07-12-14-0067
**EXTERNAL STORM
 DRAINAGE AREA PLAN**

Designed By: XXX	Date: APR 2014	Checked By: R.S.
Drawn By: XXX	Approved By:	
Scale: 1:3000	Project No: 12007	Drawing No: 8 of 8