

BORRELLO SUBDIVISION CITY OF OTTAWA SEWER, WATERMAIN AND ROADS



Robinson
Land Development

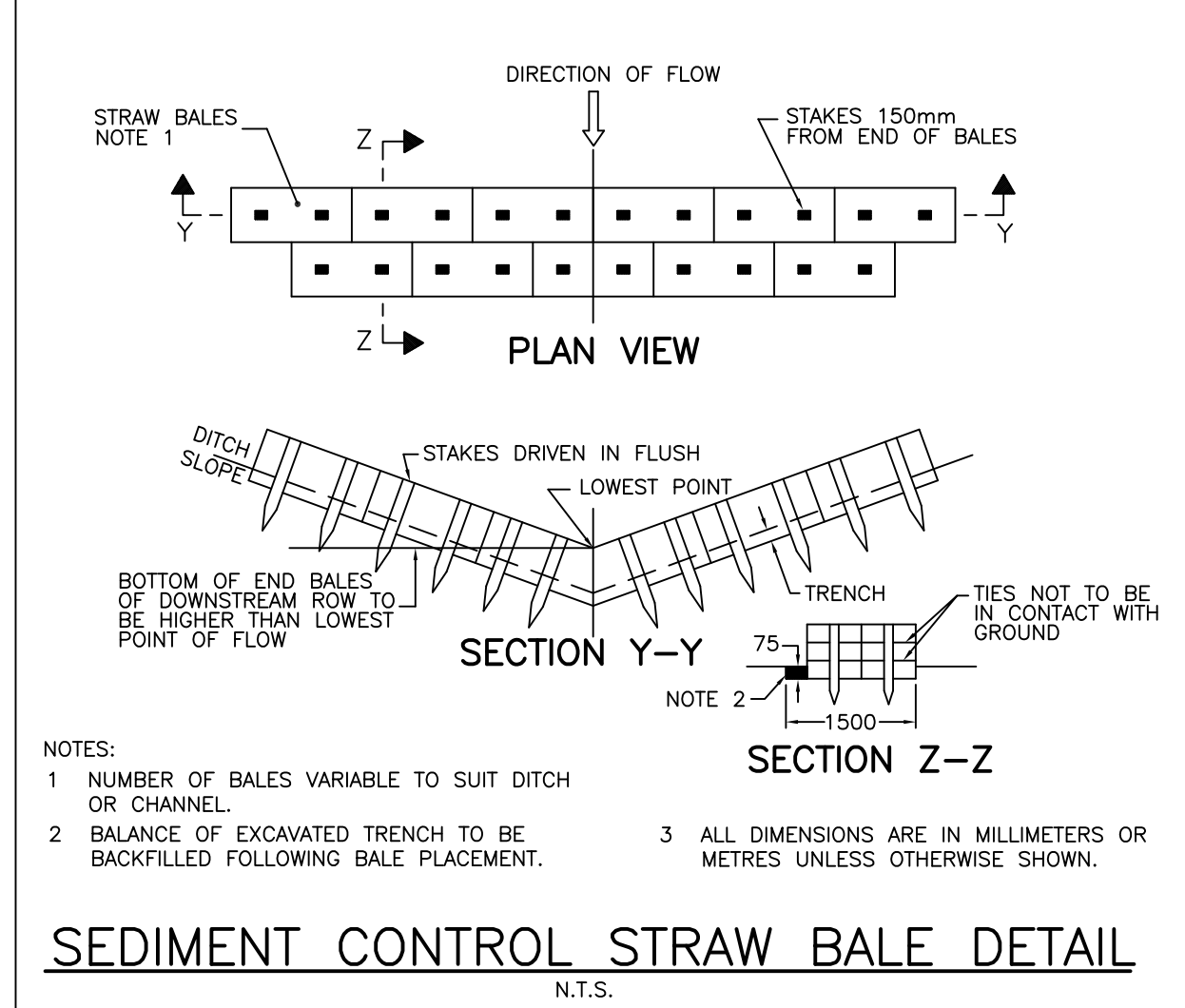
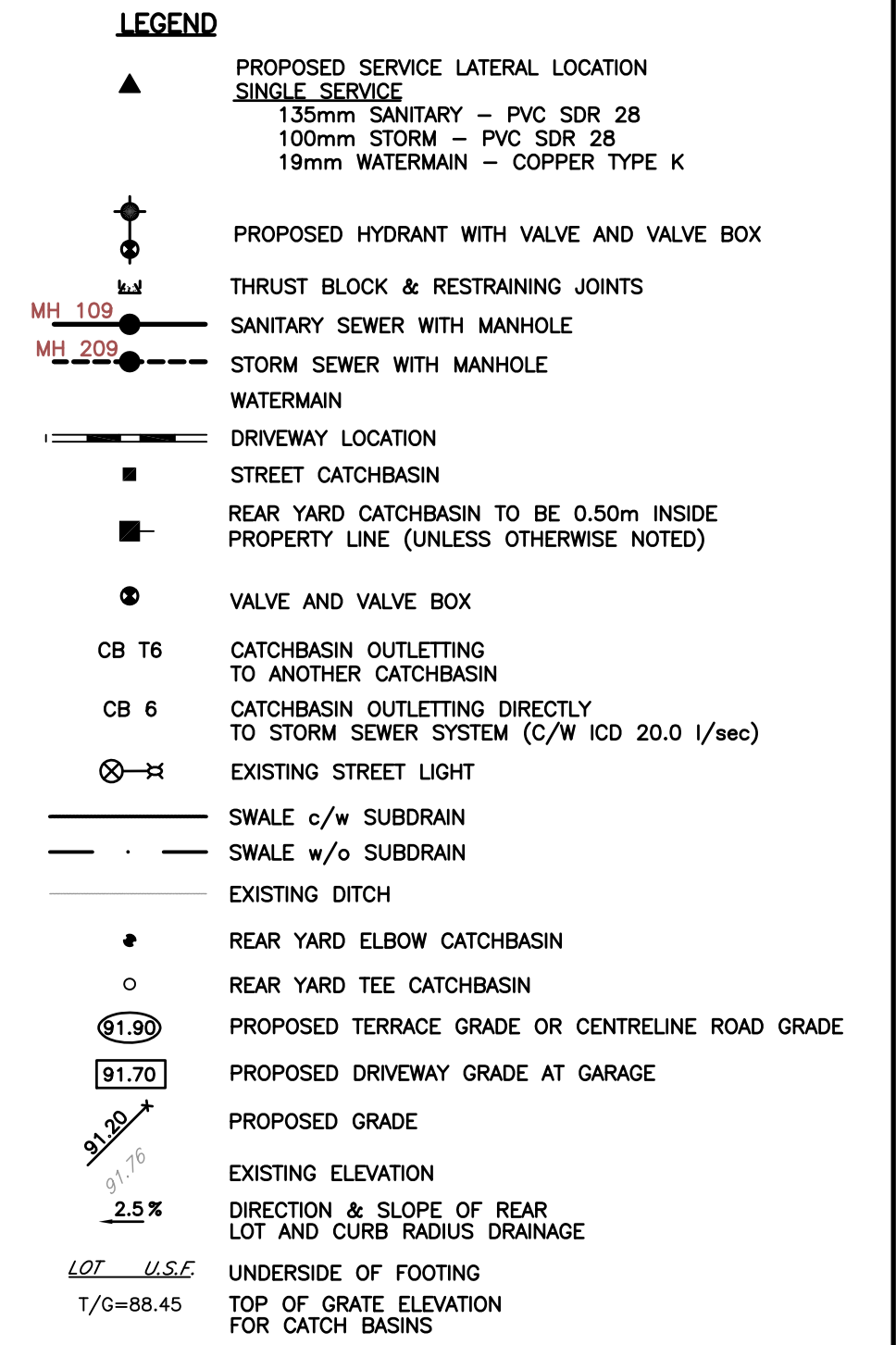
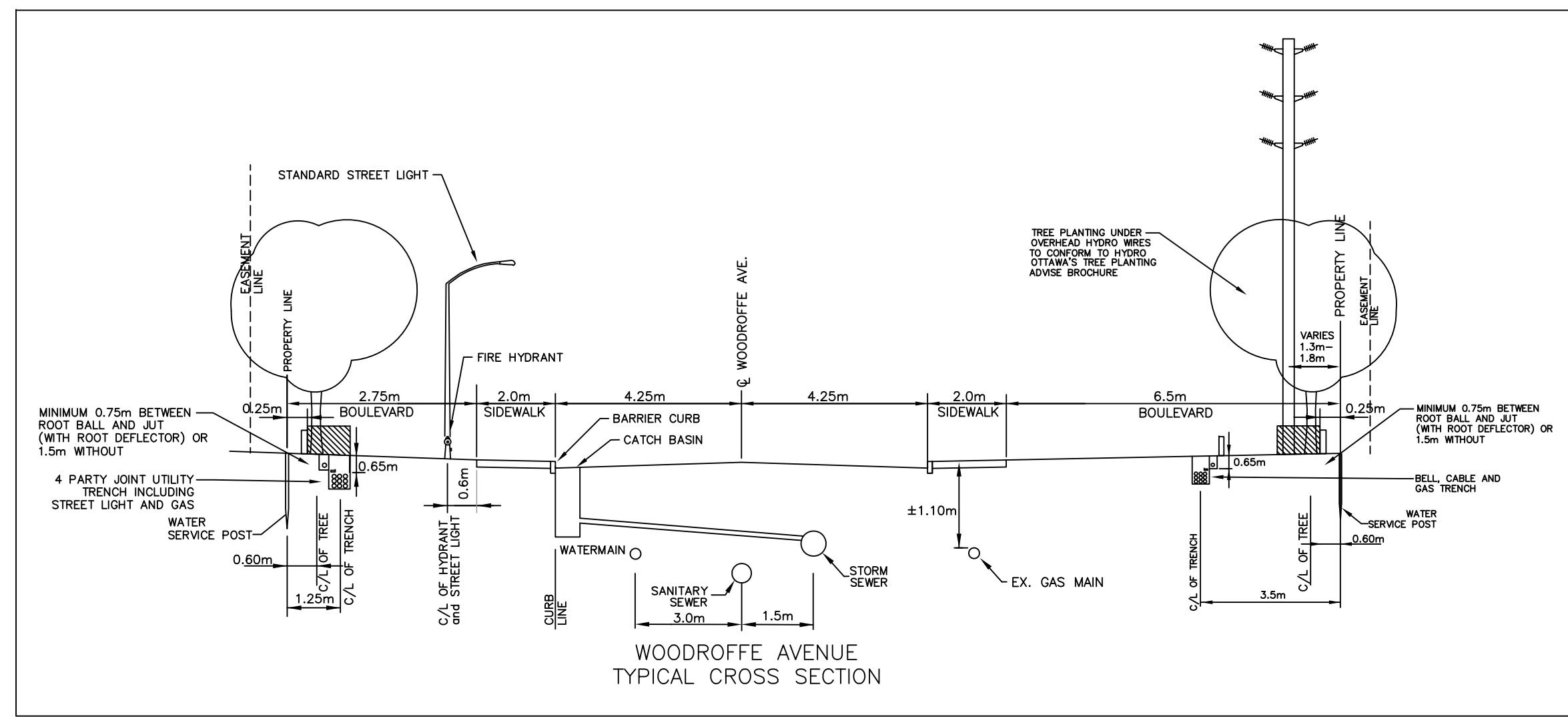
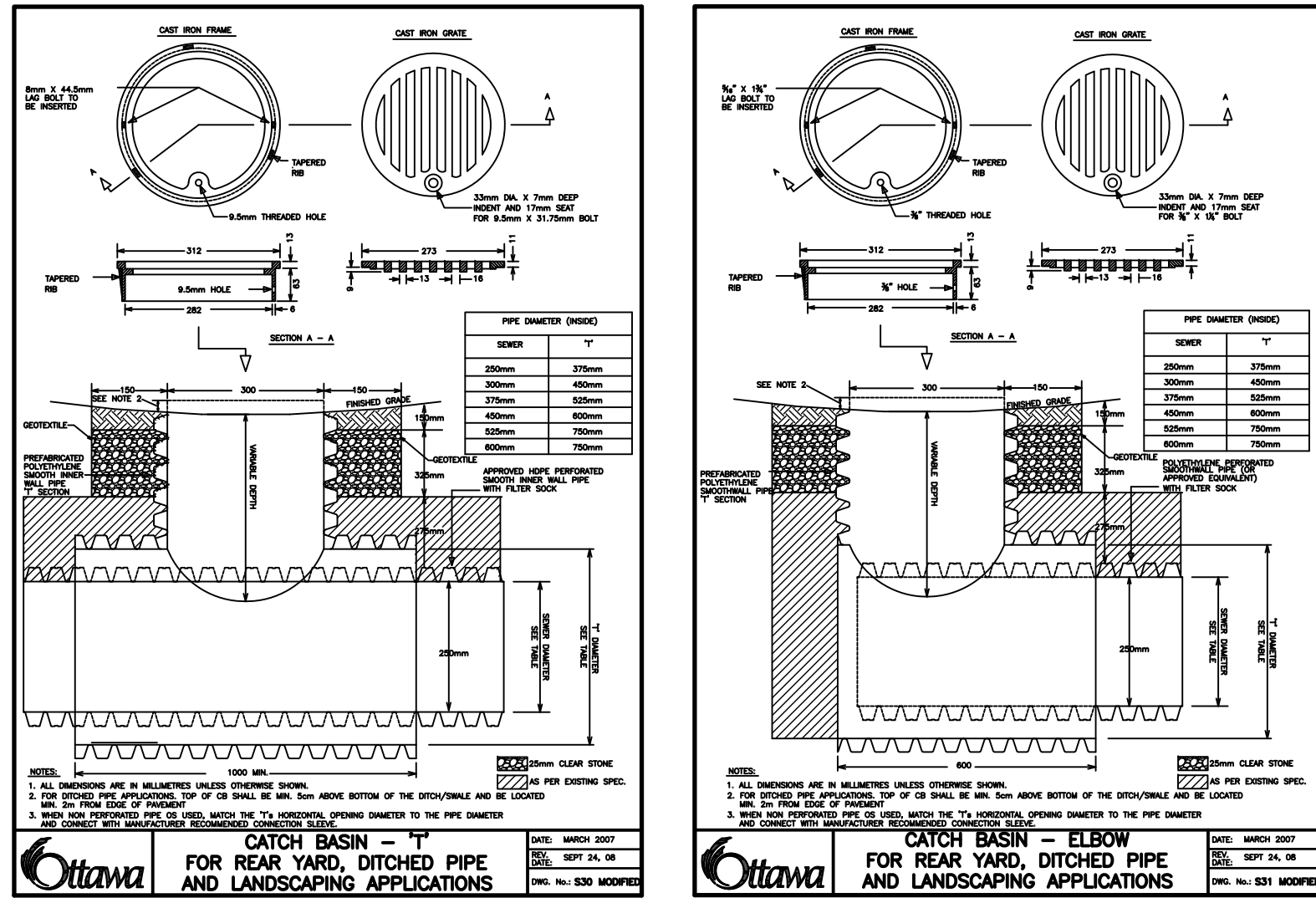
350 PALLADIUM DRIVE
KANATA, ONTARIO K2V 1A8
TELEPHONE (613) 592-6060

PROJECT No. 14057
JUNE 2017

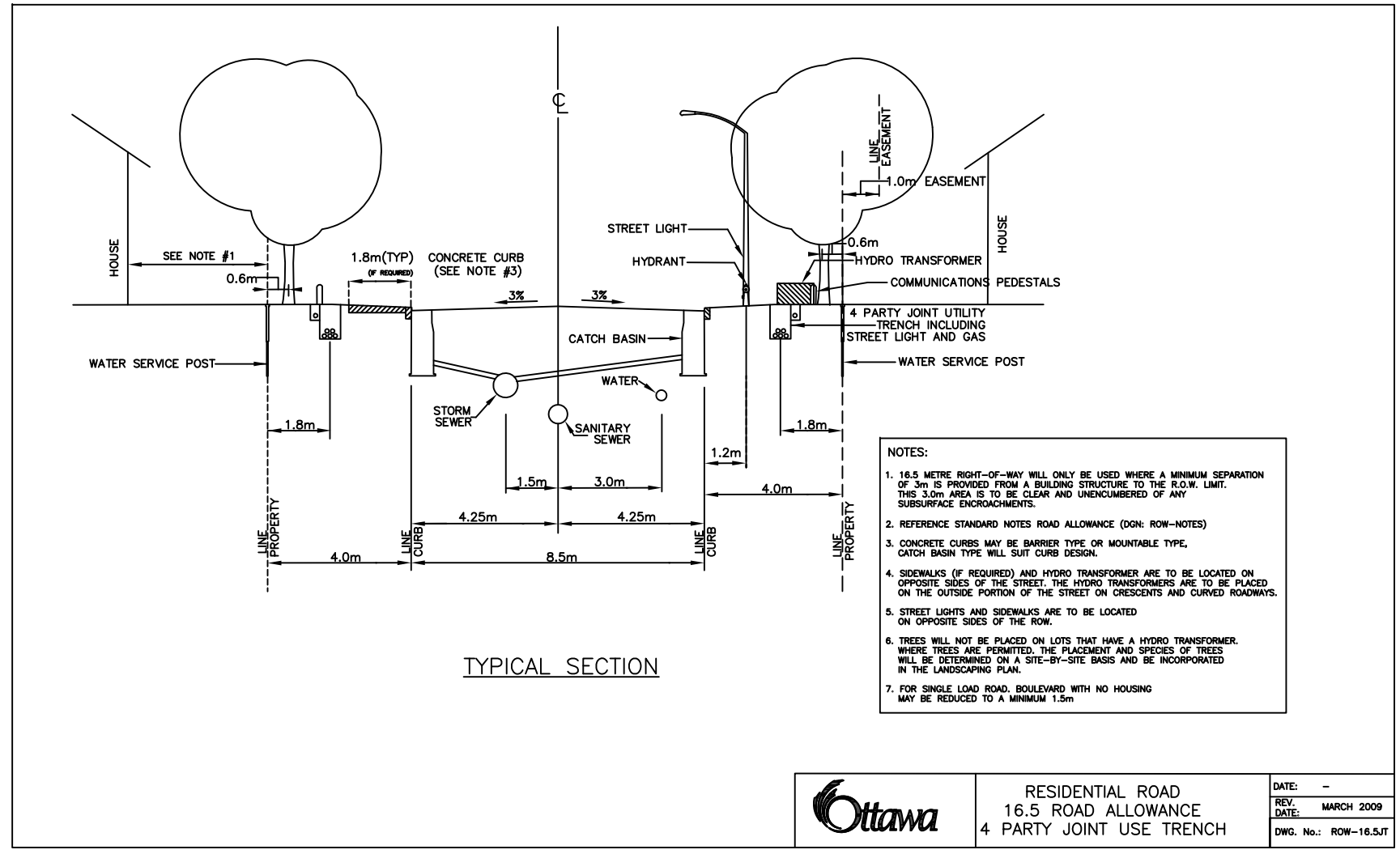
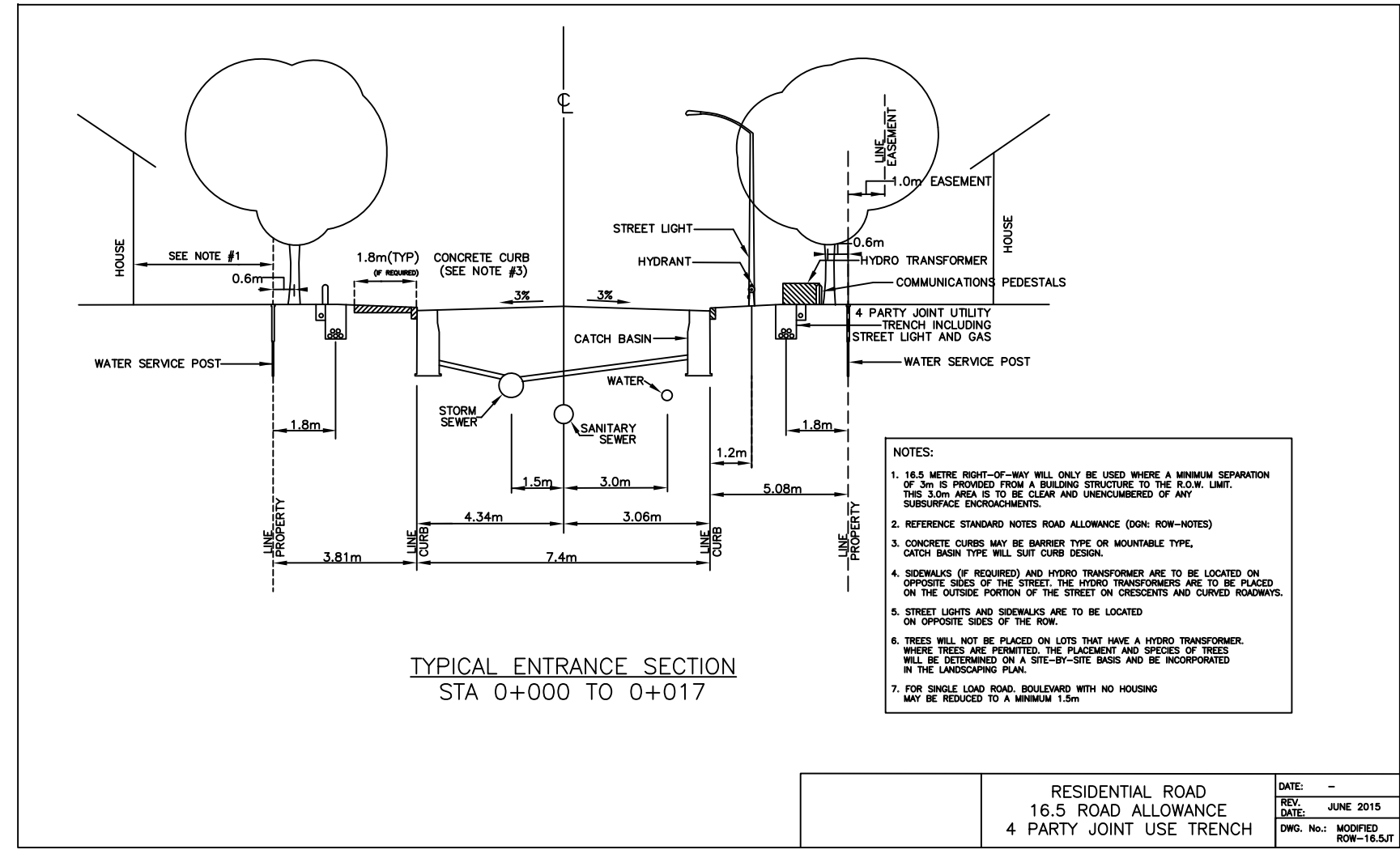
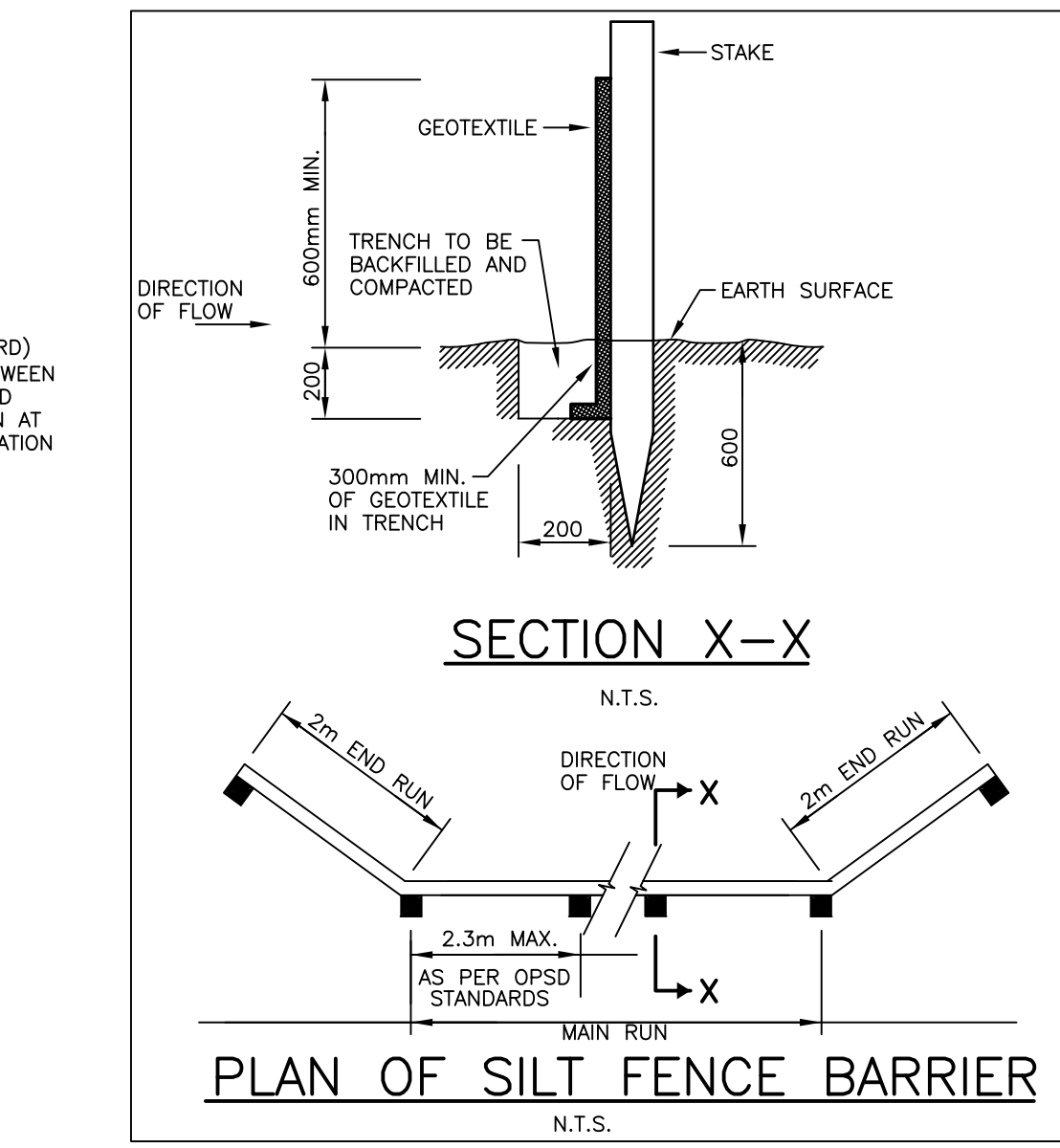
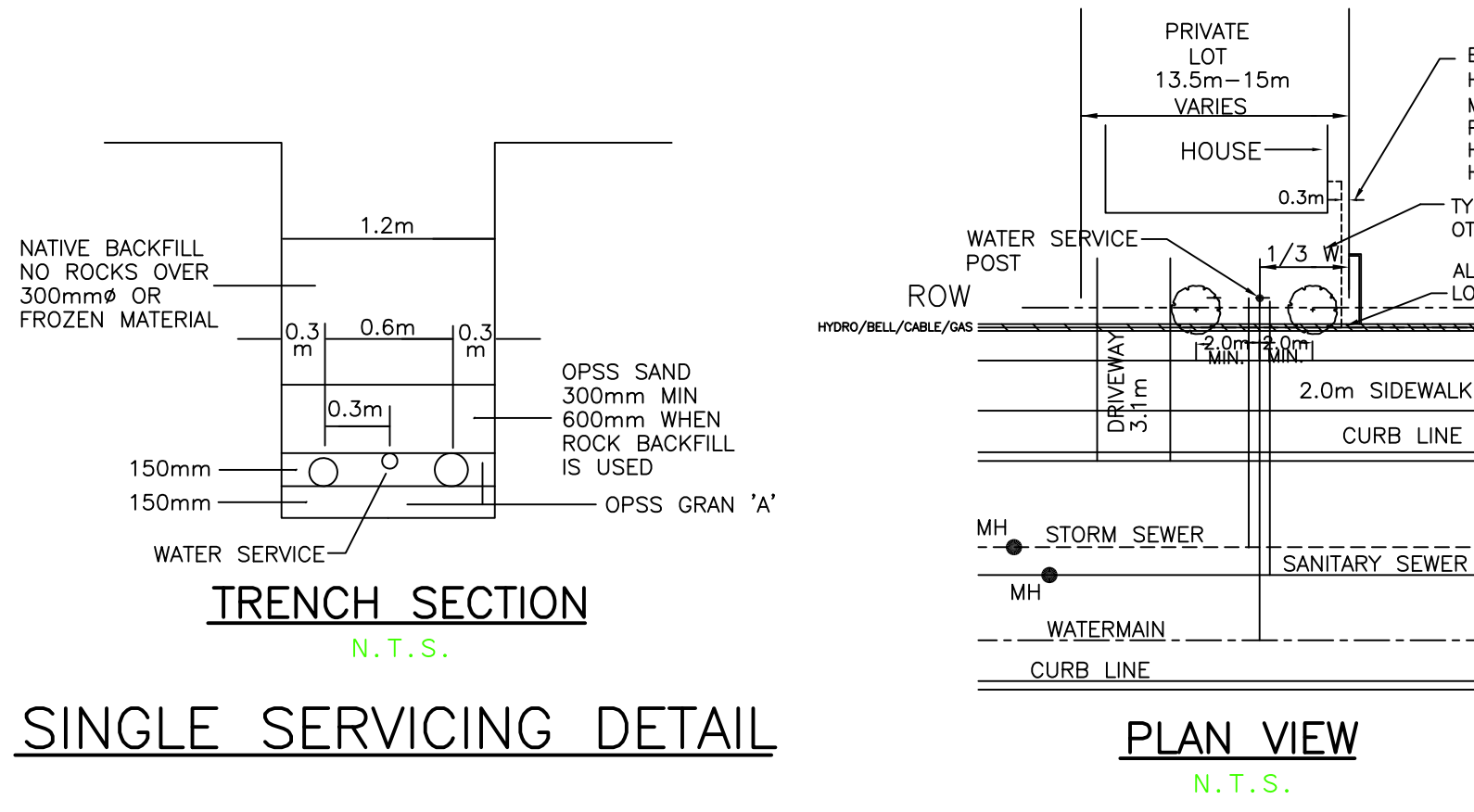
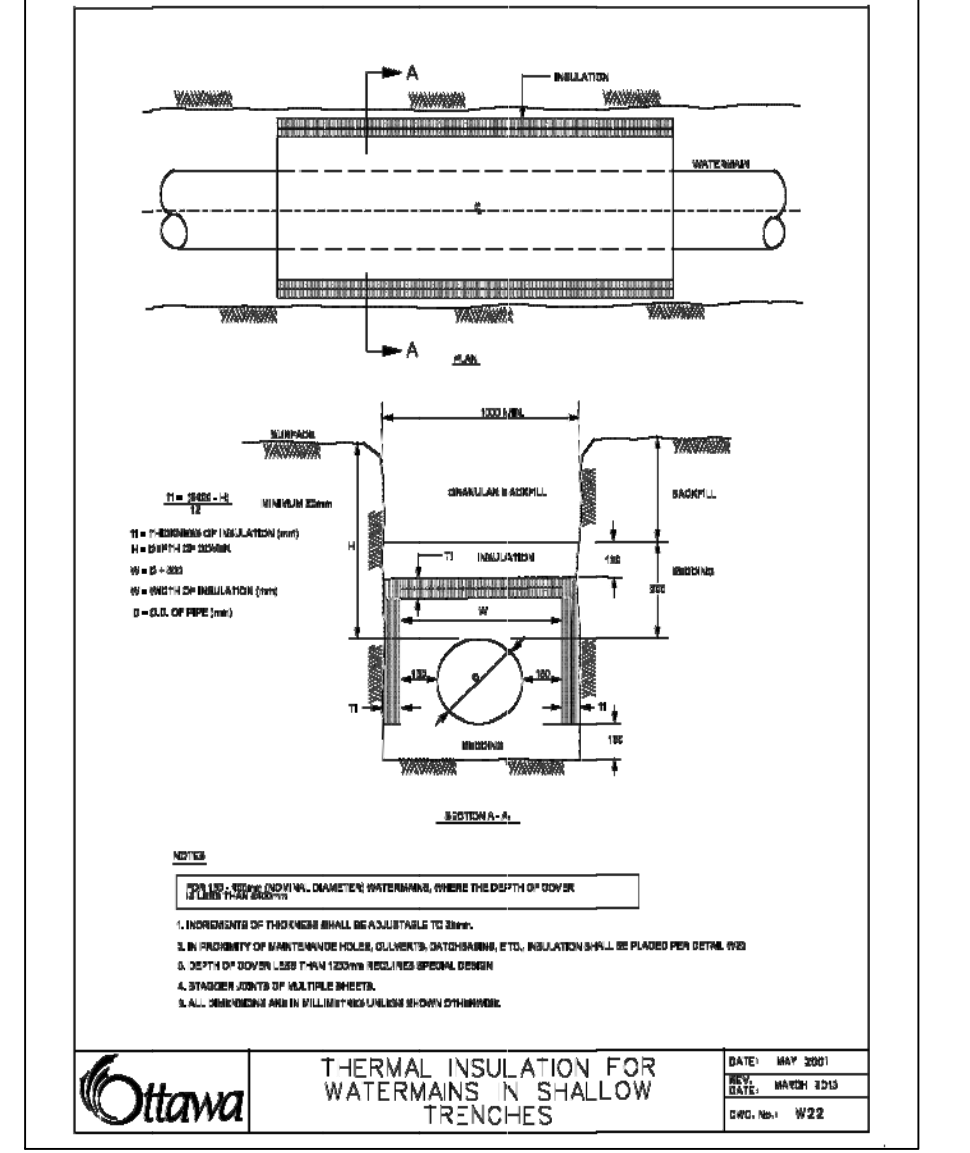
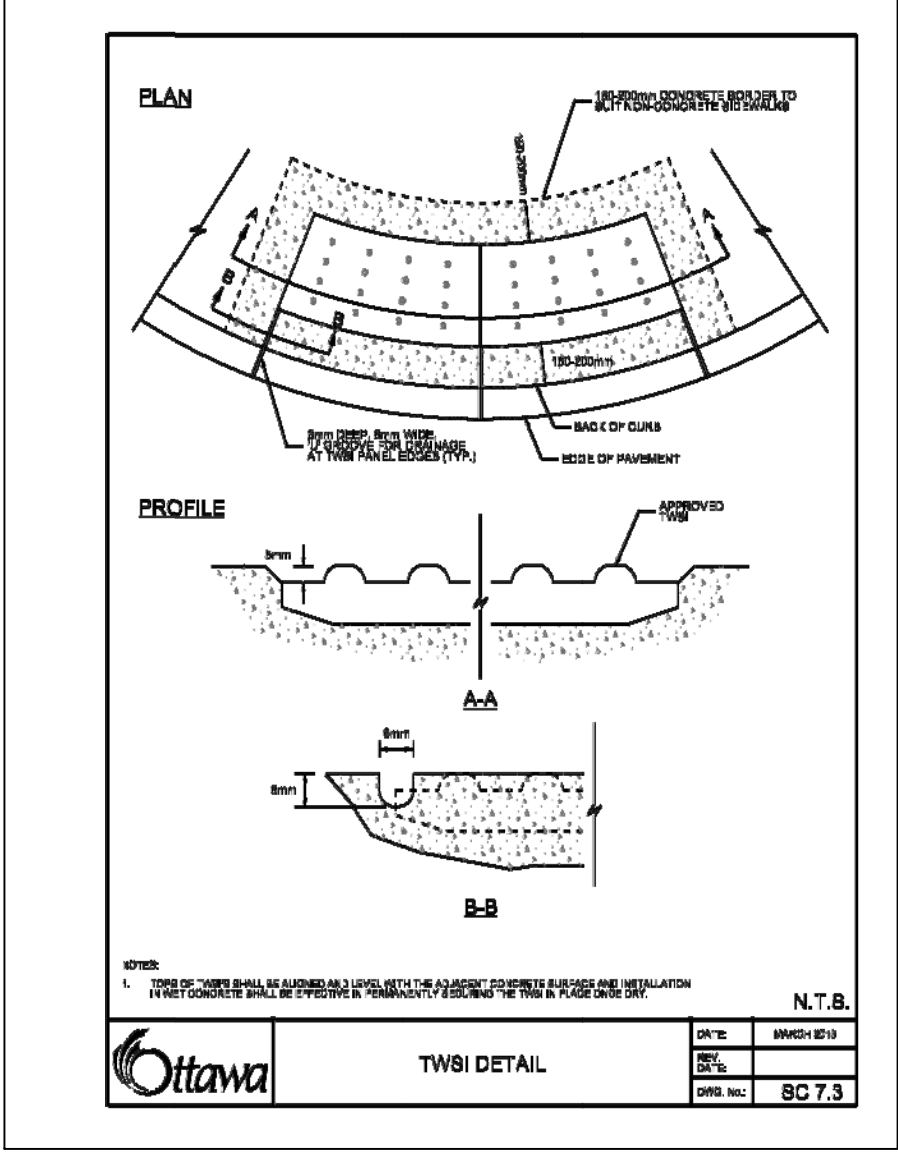
INDEX	
14057-N1	LEGEND, NOTES and DETAILS
14057-S1	GENERAL PLAN OF SERVICES
PLAN AND PROFILES	
14057-P1	BORRELLO COURT - STATION 0+000 TO STATION 0+259.82
14057-P2	WOODROFFE AVENUE - STATION 0+459 TO STATION 0+650
GRADING PLANS	
14057-GR1	GRADING and DRAINAGE PLAN
DRAINAGE AREA PLANS	
14057-SAN1	SANITARY DRAINAGE AREA PLAN
14057-STM1	STORM DRAINAGE AREA PLAN
14057-STM2	STORM DRAINAGE AREA PLAN
14057-SWM1	STORM WATER MANAGEMENT PLAN
EROSION AND SEDIMENT CONTROL PLANS	
14057-EC1	EROSION AND SEDIMENT CONTROL PLAN

GENERAL NOTES:

- MISCELLANEOUS:**
- CONTRACTOR TO VERIFY LOCATION AND ELEVATIONS OF ALL EXISTING SERVICES AND UTILITIES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REINSTATEMENT.
 - ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED. ALL DRAWINGS SHOULD NOT BE SCALED BY THE CONTRACTOR. ANY MISSING OR QUESTIONABLE DIMENSIONS ARE TO BE CONFIRMED WITH THE CONSULTANT IN WRITING.
 - CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA AND ONTARIO PROVINCIAL STANDARD DRAWING SUPPLEMENTS WHERE APPLICABLE AND ONTARIO PROVINCIAL STANDARDS SHALL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE. ALL DRAWINGS TO BE CHECKED FOR CONFIRMATION WITH APPLICABLE BUILDING CODES.
 - ANY DISCREPANCIES, INTERPRETATIONS, CHANGES AND ADDITIONS TO THIS PLAN MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER, WHEN NOTED AND BEFORE PROCEEDING WITH CONSTRUCTION WORKS.
 - GEOTECHNICAL REPORT AVAILABLE FROM OWNER.
 - ALL DISTURBED AREAS TO BE REINSTATED TO EQUAL OR BETTER CONDITION. ALL NEW WORK SHALL TIE INTO EXISTING.
- WATERMAIN, STORM AND SANITARY SEWERS:**
- ALL WATERMAIN, SANITARY AND STORM SEWER SERVICES, MATERIALS AND INSTALLATION SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARD DRAWINGS AND SPECIFICATIONS.
 - THERMAL INSULATION SHALL BE INSTALLED WHERE ADEQUATE SEPARATION CANNOT BE ACHIEVED. (AS PER CITY STANDARD W-22, W-23)
 - THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE STORM AND SANITARY SEWERS IN ACCORDANCE WITH OPSD 802.010, 802.013 AND 802.014. DURING CONSTRUCTION THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT AS PER OPSD 808.010. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDM.
 - THE CONTRACTOR SHALL CONDUCT EXFILTRATION (AS PER CURRENT OPSD) TESTING ON ALL NEWLY INSTALLED SANITARY SEWERS. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWER INSTALLED AND SUPERVISED BY THE ENGINEER.
 - CLAY SEALS SHOULD BE PROVIDED IN THE SERVICE TRENCHES WHERE SILTY CLAY IS ENCOUNTERED. THE SEALS SHOULD BE AT LEAST 1.5 M LONG (IN THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. GENERALLY, THE SEALS SHOULD EXTEND FROM THE FROST LINE AND FULLY PENETRATE THE BEDDING, SUBBEDDING AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPACTABLE BROWN SILTY CLAY PLACED IN MAXIMUM 225 MM THICK LAYER AND COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS SPMDM. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT STRATEGIC LOCATIONS AT NO MORE THAN 60 M INTERVALS IN THE SERVICE TRENCHES.
- CATCHBASINS:**
- ALL ROADWAY AND BOULEVARD CATCHBASINS WHICH OUTLET DIRECTLY TO THE STORM SEWER SYSTEM ARE TO BE FITTED WITH A PREMANUFACTURED PLUG TYPE INLET CONTROL DEVICE (ICD) INSTALLED IN OUTLET PIPE.
 - THE CONTRACTOR SHALL IMPLEMENT SEDIMENT CONTROL MEASURES TO PROVIDE THE NECESSARY PROTECTION OF THE RECEIVING STORM SEWER DURING CONSTRUCTION ACTIVITIES. THESE PRACTICES ARE REQUIRED TO ENSURE NO SEDIMENT AND/OR ASSOCIATED POLLUTANTS ARE RELEASED TO THE RECEIVING WATERCOURSE. (I.E. FILTER CLOTH ON ALL CATCHBASINS PRIOR TO ASPHALT, STRAW BALE CHECK DAM AT STORM OUTLET, SEDIMENT CONTROLS AROUND DISTURBED AREAS.) DEWATERING SHALL BE PUMPED INTO SEDIMENT TRAPS.
 - REAR YARD AND STREET CATCHBASIN LEADS TO BE 200mmØ PVC SDR-35 AT A MINIMUM GRADE OF 1.0% (UNLESS OTHERWISE NOTED). DOUBLE CATCHBASIN LEADS TO BE 250mmØ PVC SDR-35 AT 1.0% (MIN.).
 - ALL CATCHBASINS TO BE INSTALLED IN BARRIER CURB SHALL BE CURB FACE INLET TYPE CATCHBASINS.
 - ALL REGULAR CATCHBASINS TO HAVE S-19 FRAME AND COVERS. ALL CURB FACE INLET CATCHBASINS TO HAVE S-22, S-23 STYLE FRAME & COVERS. ALL MANHOLES TO HAVE CLOSED LIDS AS PER S-24.
 - REAR YARD CATCHBASINS TO HAVE S-19 FRAME AND COVER.
 - ALL STORM MANHOLES WITH STORM SEWERS 900mm DIA. AND LARGER TO BE BENCHED. ALL STORM MANHOLES WITH STORM SEWERS LESS THAN 900mm DIA. SHALL HAVE 300mm SUMP. AS PER SECTION 6.2.6 OF THE CITY OF OTTAWA'S SEWER DESIGN GUIDELINES 2004 EDITION.
- SERVICES:**
- IN SITUATIONS WHERE WATER SERVICES ARE IN CONFLICT WITH STORM AND SANITARY SEWERS, THE CONTRACTOR SHALL INSTALL WATER SERVICES AS PER CITY STANDARD W-38.
 - ALL CONNECTIONS TO EXISTING WATER MAIN STUBS WILL BE DONE BY CITY OF OTTAWA FORCES. CONTRACTOR TO PROVIDE EXCAVATION BACKFILLING, COMPACTION AND REINSTATEMENT, IN ACCORDANCE WITH CURRENT CITY SPECIFICATIONS.
 - ALL FIRE HYDRANT LOCATIONS ARE TO BE IN ACCORDANCE WITH CITY STANDARD W-18.
 - THE CONTRACTOR IS REQUIRED TO SCHEDULE AND CO-ORDINATE ALL WORKS WITH UTILITY COMPANIES, MUNICIPAL AUTHORITIES AND OTHER CONTRACTORS ON SITE.
 - SINGLE LOT SERVICES TO BE CONSTRUCTED 10.0m INSIDE THE PROPERTY LINE. DOUBLE LOT SERVICES TO BE CONSTRUCTED 10.0m INSIDE THE PROPERTY LINE. (UNLESS OTHERWISE NOTED)
 - TYPICAL SERVICE LOCATION TO BE 1/3 THE WIDTH OF THE LOT OFF THE PROPERTY LINE UNLESS OTHERWISE NOTED.
 - ALL UNITS WILL REQUIRE SANITARY BACKWATER VALVES IN ACCORDANCE WITH THE CITY OF OTTAWA'S TECHNICAL BULLETIN NO. ISD-2010-1, SECTION 4.4.5 OF THE CITY OF OTTAWA'S SEWER DESIGN GUIDELINES 2012 EDITION TITLED "SANITARY BACKWATER VALVES".
- ROADWAYS & CURBS:**
- FULL R.O.W. IS TO BE STRIPPED. ALL BACKFILLING TO BE DONE AS PER OPSD 514.
 - LOCAL STREETS (8.5m WIDE) TO HAVE 375mm GRANULAR 'B' TYPE II, 150mm GRANULAR 'A', 50mm SP19 ASPHALT BASE COURSE, 40mm SP12.5 ASPHALT WEAR COURSE. COLLECTOR STREETS (11.0m WIDE) TO HAVE 800mm GRANULAR 'B' TYPE 2, 150mm GRANULAR 'A', 100mm SP19 ASPHALT BASE COURSE (2 LIFTS), 50mm SP12.5 ASPHALT WEAR COURSE. ALL LOCAL STREETS WITH TOWNHOUSES TO HAVE MOUNTABLE CURB. USE OF SUBDRAINS ARE SUBJECT TO FIELD VERIFICATION.
 - WHERE A TRANSITION IS REQUIRED BETWEEN MOUNTABLE CURB AND BARRIER CURB, THE TRANSITION POINT SHALL BE AT THE MIDPOINT OF THE CURB RADIUS.
- EROSION AND SEDIMENT CONTROL**
- FILTER SOCKS ARE TO BE PLACED UNDERNEATH ALL STORM CATCHBASIN AND CATCHBASIN MANHOLE LIDS UNTIL CONSTRUCTION IS COMPLETE.
 - SILT FENCING TO BE INSTALLED WHERE INDICATED.
 - THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
 - MUD MATS TO BE INSTALLED AT ALL CONSTRUCTION ENTRANCES TO SITE.



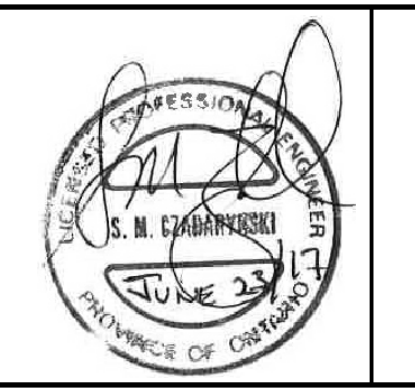
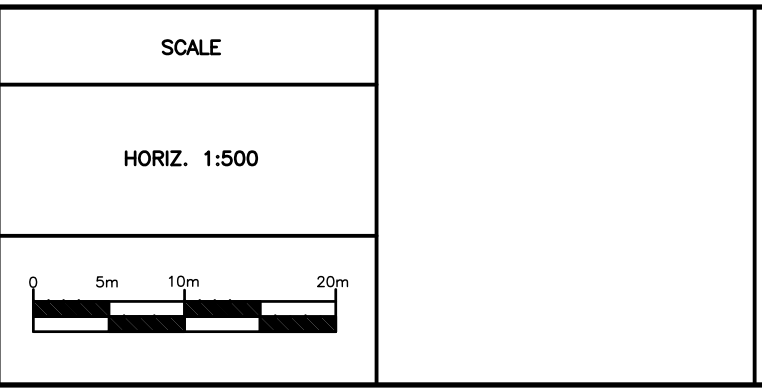
CB No.	ICD ORIFICE (L/s)	MAX. HEAD (m)	C/L ICD	ORIFICE DIAM. (mm)	ICD TYPE
CB 1	20	1.21	102.91	93.3	PLUG
CB 2	14.2	1.23	102.58	78.3	PLUG
CB 3	31	1.23	102.58	115.7	PLUG
DCB 4	20	1.10	101.05	95.6	PLUG
DCB 5	20	1.23	100.89	92.9	PLUG
CB 6	25	1.40	102.72	100.6	PLUG
CB 7	15	0.98	100.51	85.3	PLUG
CB 8	20	1.30	100.74	91.7	PLUG



NOTES

THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

NO.	REVISION DESCRIPTION	DATE	BY
5	ISSUED FOR ECA APPROVAL	23/06/17	SMC
4	REVISED PER CITY COMMENTS	28/09/16	SMC
3	REVISED PER CITY COMMENTS	17/06/16	SMC
2	REVISED PER CITY COMMENTS	10/12/15	SMC
1	ISSUED FOR REVIEW	25/05/15	SMC



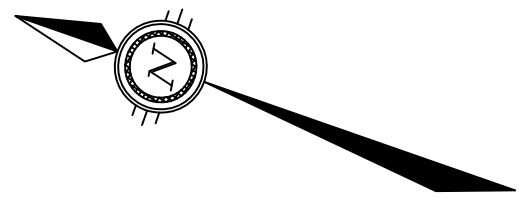
Robinson Land Development
 350 PALLADIUM DRIVE
 KANATA, ONTARIO K2V 1A8
 TELEPHONE (613) 592-6060

DESIGN	JHB
CHECKED	SMC
DRAWN	JHB
CHECKED	SMC
APPROVED	SMC

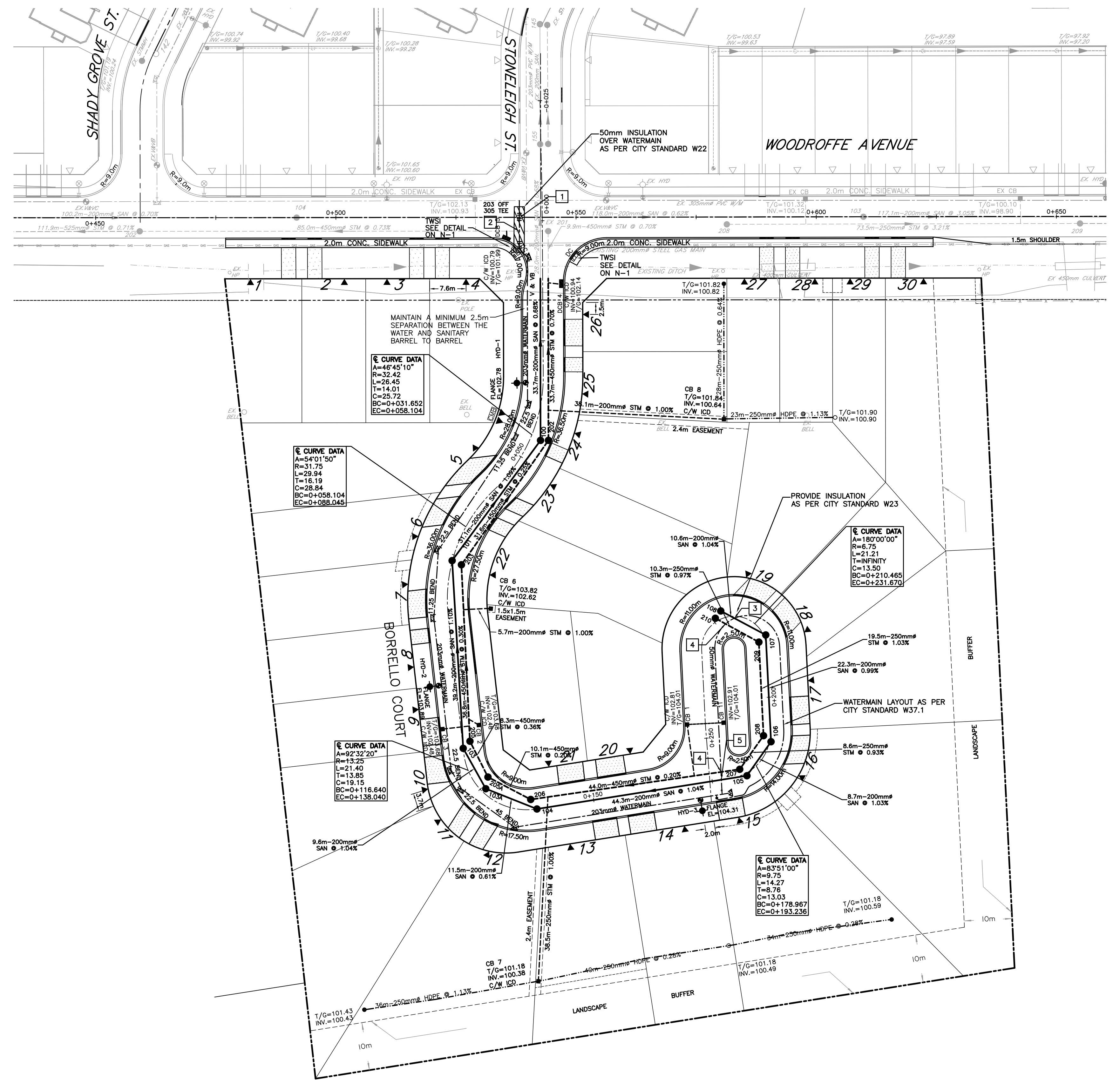
BORRELLO SUBDIVISION
 514 KOCHAR DRIVE
 OTTAWA, ON
 K2C 4H3

LEGEND, NOTES and DETAILS

PROJECT NO.	14057
SURVEY	RLD
DATED	MAY 2015
DWG. NO.	14057-N1



- LEGEND**
- ▲ PROPOSED SERVICE LATERAL LOCATION SINGLE SERVICE
 - 135mm SANITARY
 - 100mm STORM
 - 19mm WATERMAIN
 - ◆ PROPOSED HYDRANT WITH VALVE AND VALVE BOX
 - THRUST BLOCK & RESTRAINING JOINTS
 - SANITARY SEWER WITH MANHOLE
 - STORM SEWER WITH MANHOLE
 - WATERMAIN
 - EX. 109 EXISTING SANITARY SEWER WITH MANHOLE
 - EX. 209 EXISTING STORM SEWER WITH MANHOLE
 - EXISTING WATERMAIN
 - DRIVEWAY LOCATION
 - STREET CATCHBASIN
 - REAR YARD CATCHBASIN
 - VALVE AND VALVE BOX
 - CB T6 CATCHBASIN OUTLETTING TO ANOTHER CATCHBASIN
 - CB 6 CATCHBASIN OUTLETTING DIRECTLY TO STORM SEWER SYSTEM
 - SWALE c/w 250mm HDPE SUBDRAIN
 - SWALE w/o SUBDRAIN
 - PROPOSED DITCH
 - EXISTING DITCH
 - EASEMENT
 - REAR YARD ELBOW CATCHBASIN
 - REAR YARD TEE CATCHBASIN



CATCHBASIN SUMMARY TABLE

CB No.	ICD ORIFICE (L/s)	MAX. HEAD (m)	C/L ICD	ORIFICE DIAM. (mm)	ICD TYPE
CB 1	20	1.21	102.91	93.3	PLUG
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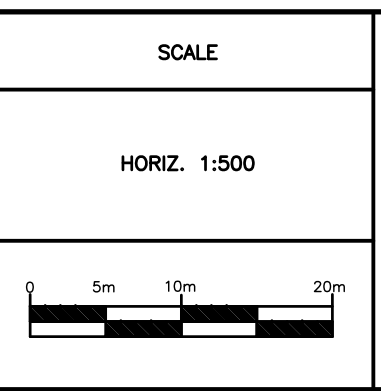
CROSSING TABLE

CROSSING No.	STATION	WATER	SANITARY	STORM	SEPARATION (m)
1	-0+000.7	INV.=99.70	OBV.=97.83	N/A	1.87
2	0+002.2	INV.=99.86	N/A	OBV.=99.52	0.34
3	0+220.6	INV.=102.06	OBV.=101.69	N/A	0.37
4	0+222.9	INV.=102.03	N/A	OBV.=101.17	0.86
4	0+257.4	INV.=101.83	N/A	OBV.=100.39	1.44
5	0+258.9	INV.=101.87	OBV.=101.07	N/A	0.80

NOTES

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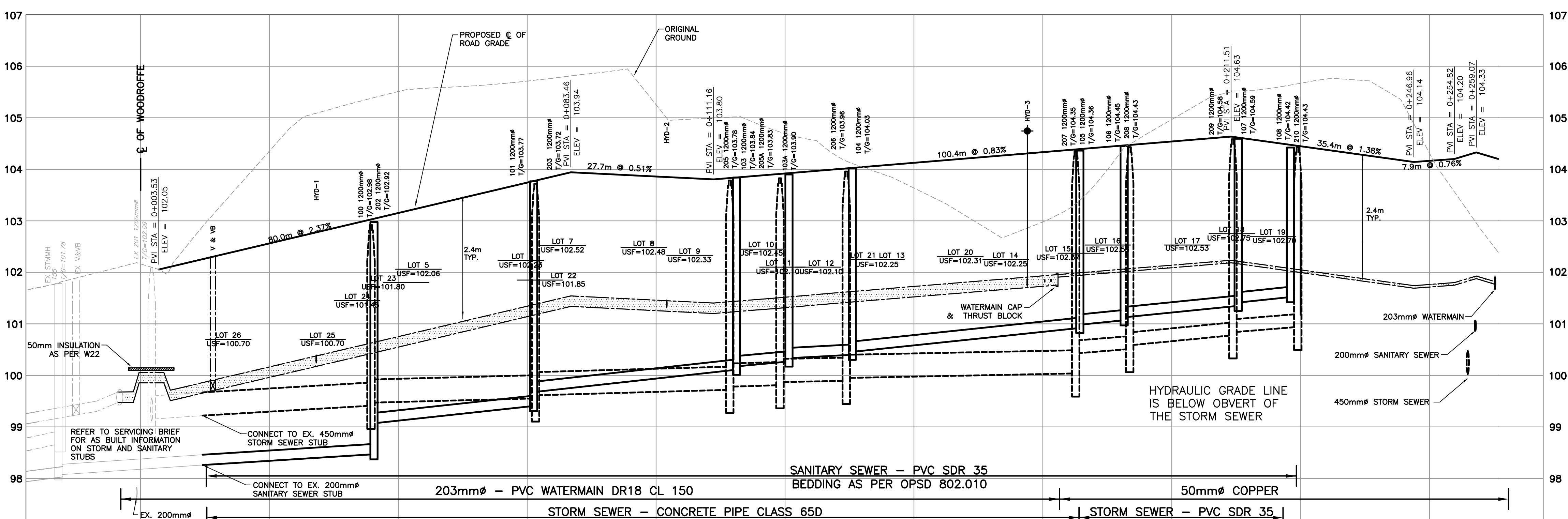
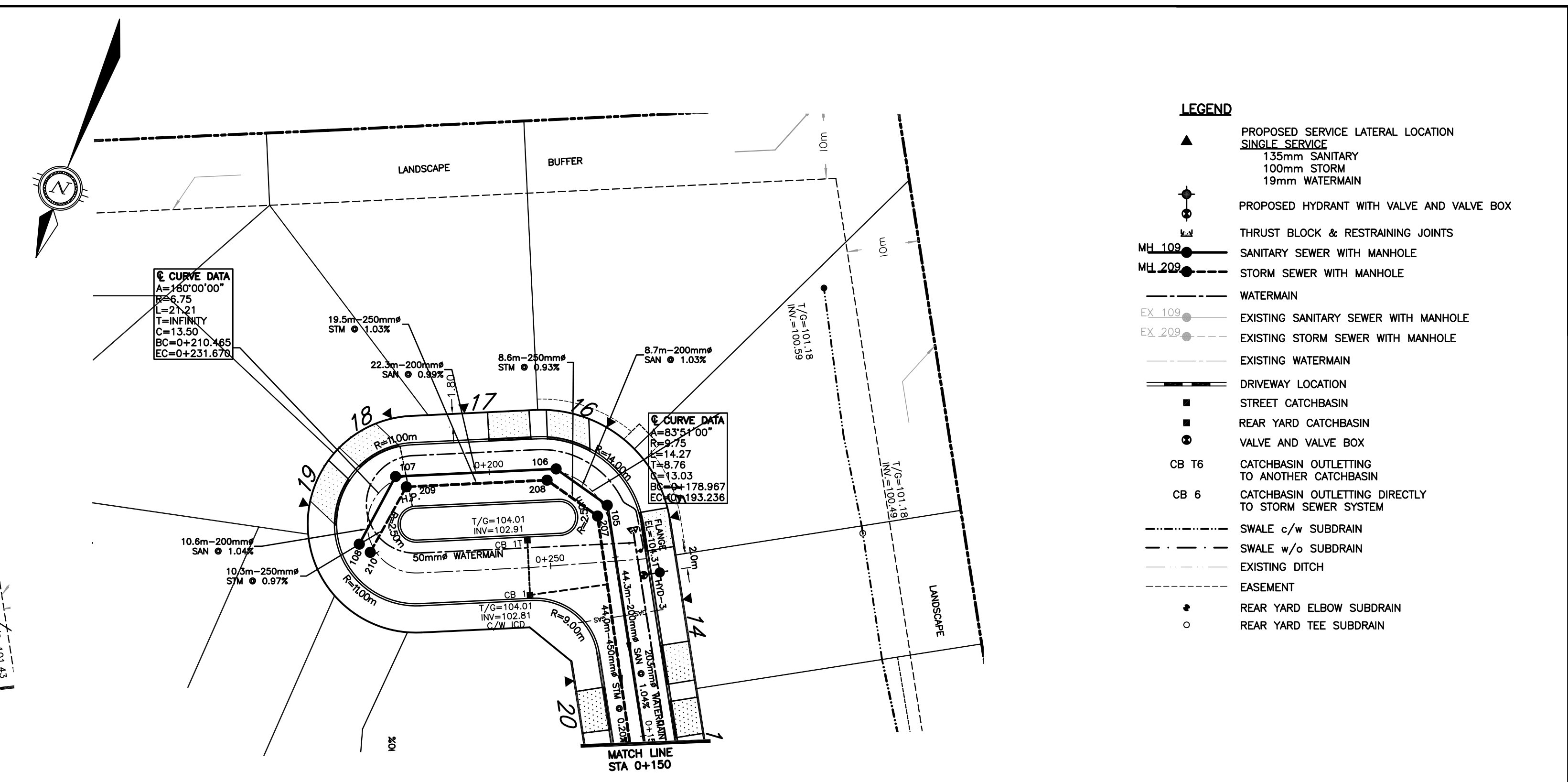
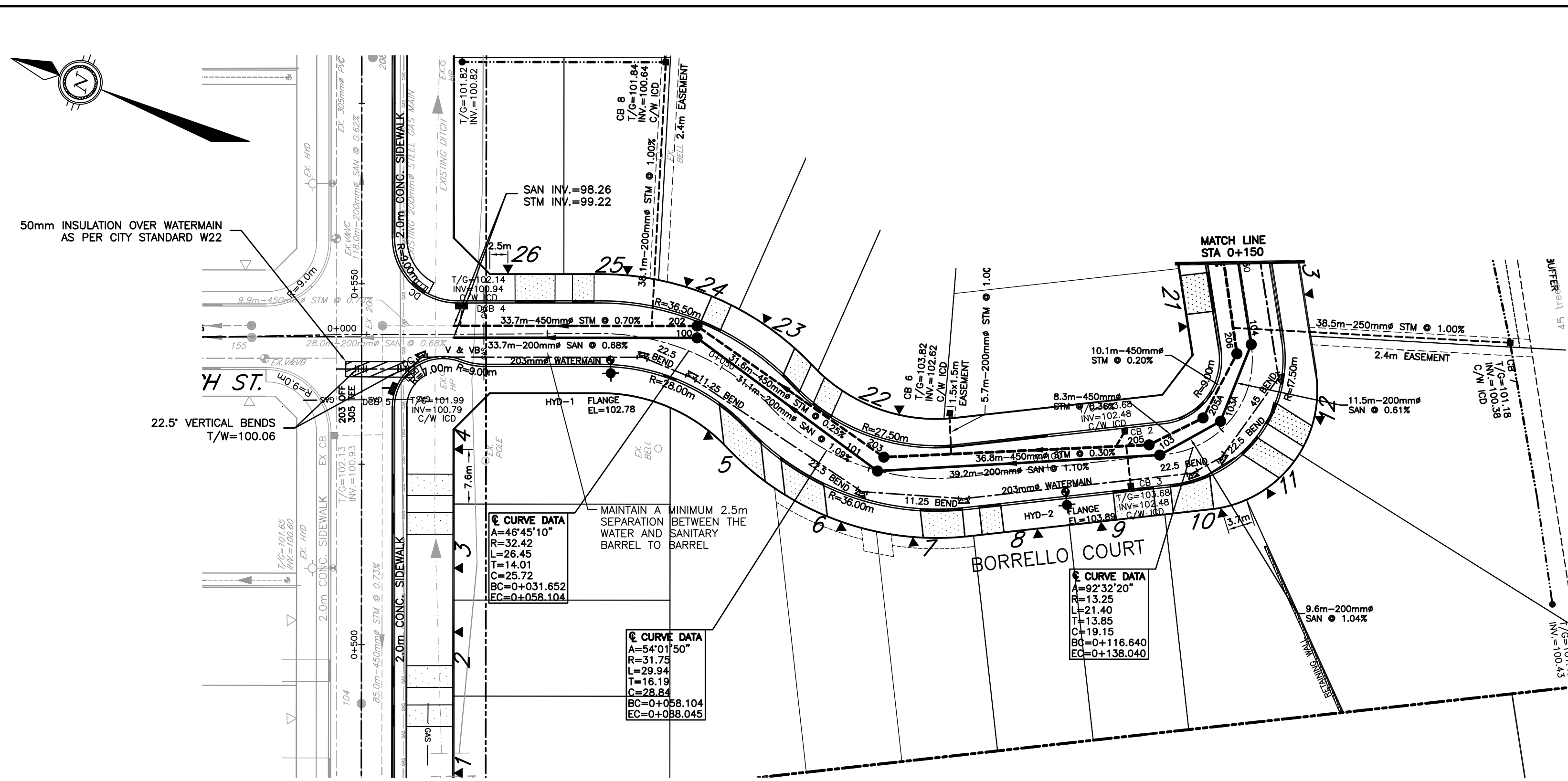
DESIGN	JHB
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BORRELLO SUBDIVISION

**514 KOCHAR DRIVE
 OTTAWA, ON
 K2C 4H3**

GENERAL PLAN OF SERVICES

PROJECT NO.	14057
SURVEY	RLD
DATED	MAY 2015
DWG. No:	14057-S1



PROPOSED ROAD ϕ ELEVATION	TOP OF WATERMAIN ELEVATION	STORM SEWER INVERT	SANITARY SEWER INVERT	EXISTING ϕ R.O.W ELEVATION	CHAINAGE	PROPOSED ROAD ϕ ELEVATION	TOP OF WATERMAIN ELEVATION	STORM SEWER INVERT	SANITARY SEWER INVERT	EXISTING ϕ R.O.W ELEVATION	CHAINAGE
102.13	100.06	99.77	99.77	102.16	0+000	102.32	100.16	99.77	99.77	102.16	0+000
102.56	100.16	99.77	99.77	102.36	0+014	102.56	100.16	99.77	99.77	102.36	0+014
103.15	100.75	99.77	99.77	102.51	0+025	103.15	100.75	99.77	99.77	102.51	0+025
103.73	101.34	99.77	99.77	102.71	0+034.1	103.73	101.34	99.77	99.77	102.71	0+034.1
103.74	101.34	99.77	99.77	102.71	0+047	103.74	101.34	99.77	99.77	102.71	0+047
103.71	101.54	99.77	99.77	102.51	0+050	103.71	101.54	99.77	99.77	102.51	0+050
103.86	101.46	99.77	99.77	102.25	0+100	103.86	101.46	99.77	99.77	102.25	0+100
103.43	101.40	99.77	99.77	102.51	0+114.3	103.43	101.40	99.77	99.77	102.51	0+114.3
103.92	101.52	99.77	99.77	102.69	0+124.3	103.92	101.52	99.77	99.77	102.69	0+124.3
104.13	101.73	99.77	99.77	102.64	0+138.9	104.13	101.73	99.77	99.77	102.64	0+138.9
103.86	101.91	99.77	99.77	102.69	0+172	103.86	101.91	99.77	99.77	102.69	0+172
104.33	101.93	99.77	99.77	102.69	0+175	104.33	101.93	99.77	99.77	102.69	0+175
103.92	101.98	99.77	99.77	102.69	0+182.2	103.92	101.98	99.77	99.77	102.69	0+182.2
104.54	102.14	99.77	99.77	102.97	0+198.8	104.54	102.14	99.77	99.77	102.97	0+198.8
104.54	102.14	99.77	99.77	102.97	0+200	104.54	102.14	99.77	99.77	102.97	0+200
104.16	101.74	99.77	99.77	102.67	0+211.9	104.16	101.74	99.77	99.77	102.67	0+211.9
104.16	101.76	99.77	99.77	102.67	0+212.9	104.16	101.76	99.77	99.77	102.67	0+212.9
104.82	101.80	99.77	99.77	102.67	0+222.5	104.82	101.80	99.77	99.77	102.67	0+222.5
104.82	101.80	99.77	99.77	102.67	0+224.5	104.82	101.80	99.77	99.77	102.67	0+224.5
104.16	101.82	99.77	99.77	102.67	0+250	104.16	101.82	99.77	99.77	102.67	0+250

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SCALE

HORIZ. 1:500

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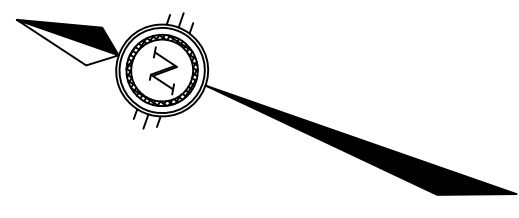
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BORRELLO SUBDIVISION

BORRELLO COURT
PLAN PROFILE
STA. 0+000 TO STA. 0+259.82

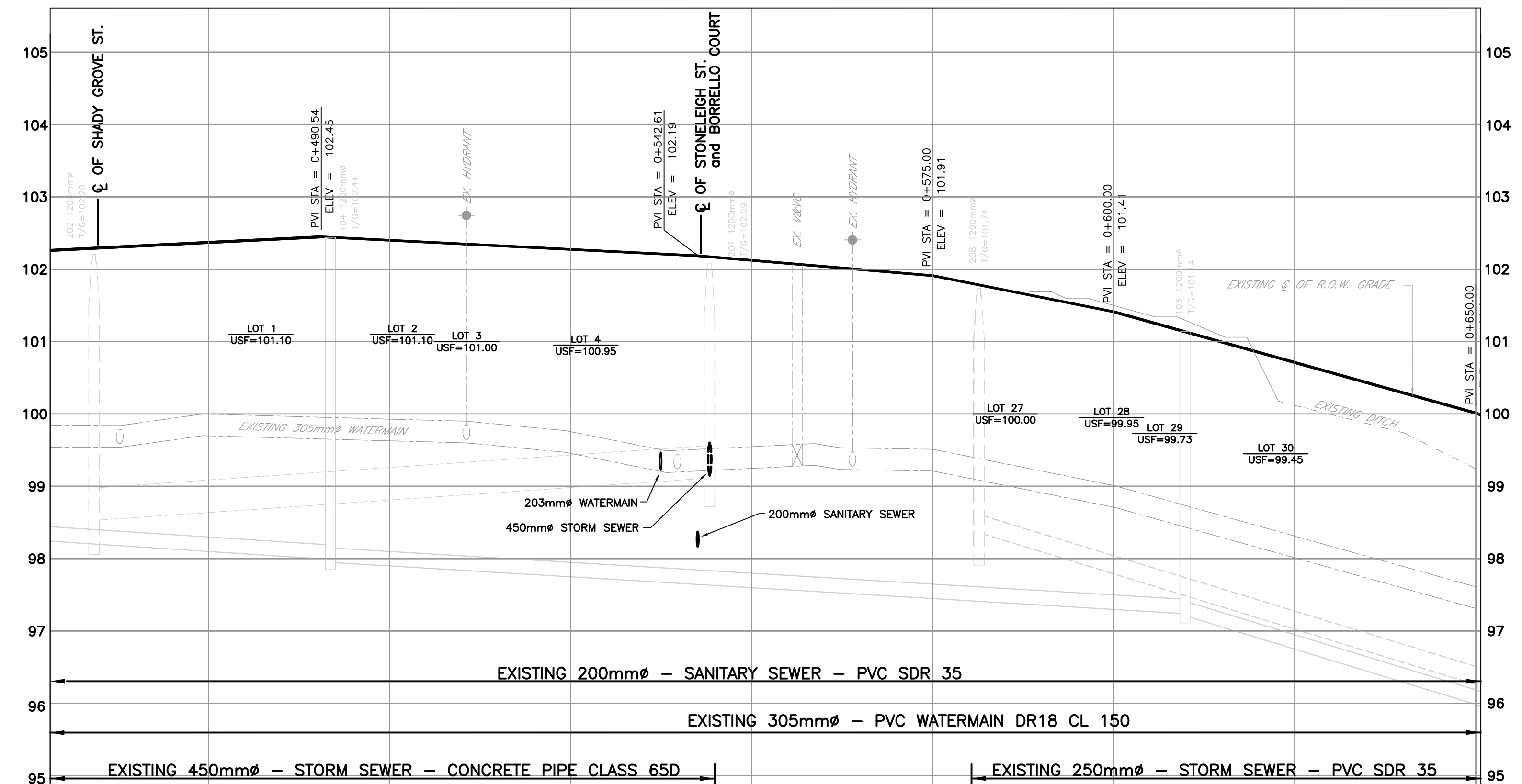
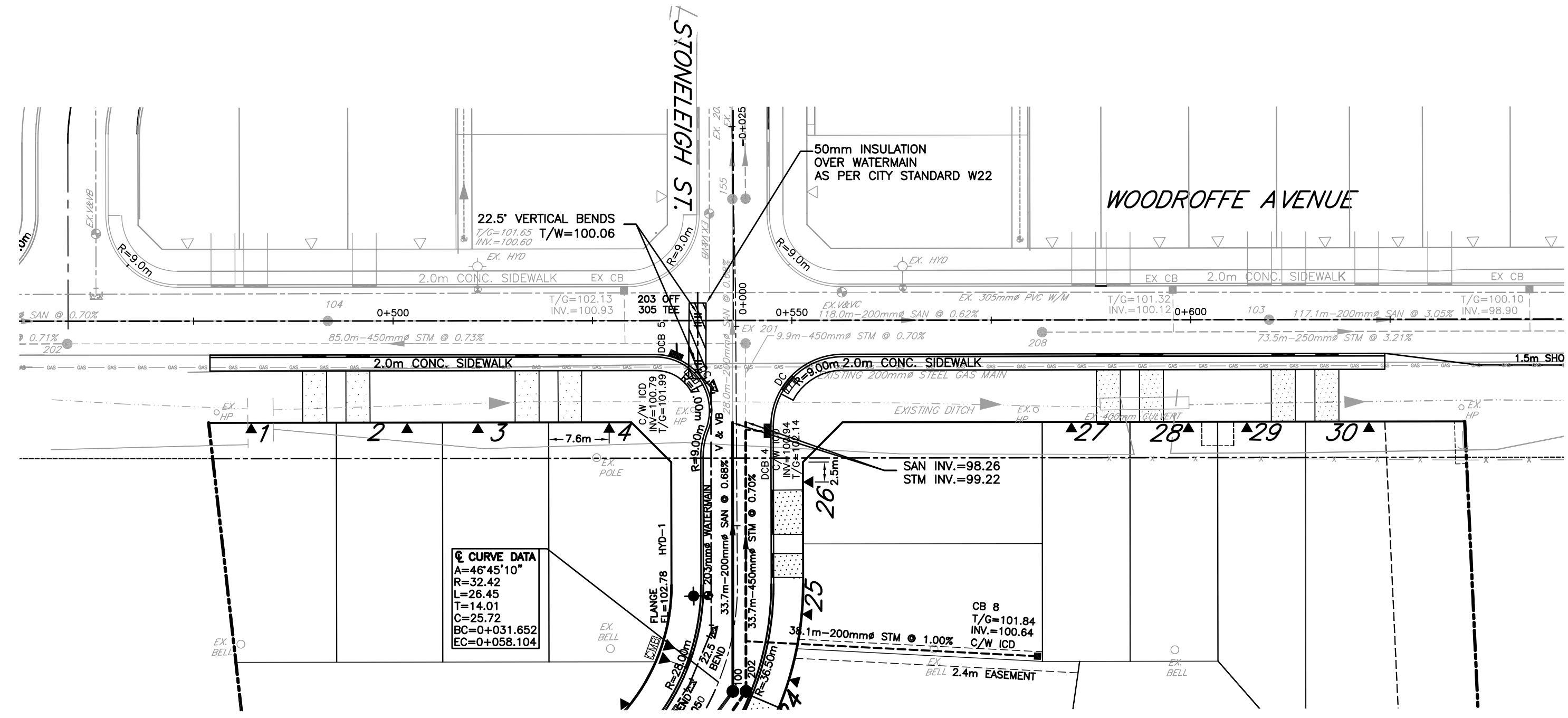
514 KOCHAR DRIVE
OTTAWA, ON
K2C 4H3

PROJECT NO. 14057
SURVEY RLD
DATED MAY 2015
DWG. No. 14057-P1



LEGEND

- ▲ PROPOSED SERVICE LATERAL LOCATION
- ▲ SINGLE SERVICE
- 135mm SANITARY
- 100mm STORM
- 19mm WATERMAIN
- ⊕ PROPOSED HYDRANT WITH VALVE AND VALVE BOX
- ⊕ THRUST BLOCK & RESTRAINING JOINTS
- ML 103 SANITARY SEWER WITH MANHOLE
- ML 203 STORM SEWER WITH MANHOLE
- WATERMAIN
- EXISTING SANITARY SEWER WITH MANHOLE
- EXISTING STORM SEWER WITH MANHOLE
- EXISTING WATERMAIN
- DRIVEWAY LOCATION
- STREET CATCHBASIN
- REAR YARD CATCHBASIN
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- CB T6 CATCHBASIN OUTLETTING TO ANOTHER CATCHBASIN
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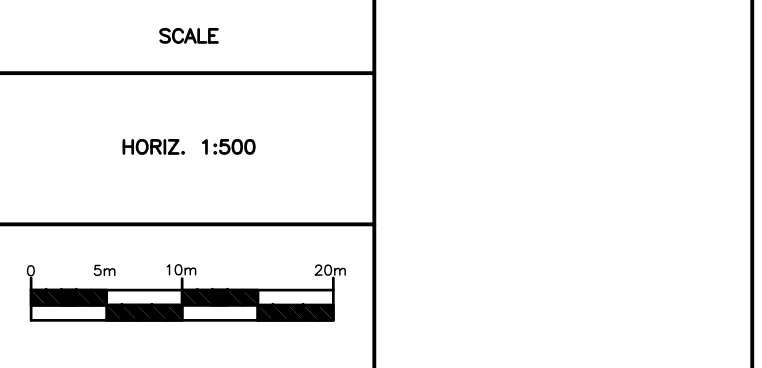
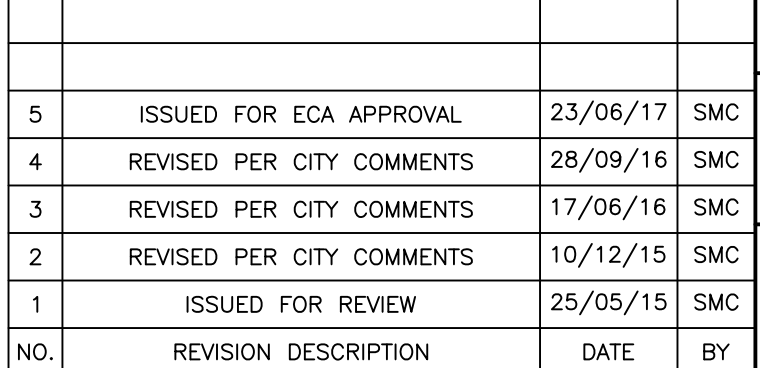


PROPOSED ROAD ℄ ELEVATION	102.37	102.40	102.27	102.12	101.91	101.41	100.71	100.01	PROPOSED ROAD ℄ ELEVATION					
TOP OF WATERMAIN ELEVATION		99.83		99.55	99.55	99.01	98.37	97.67	TOP OF WATERMAIN ELEVATION					
STORM SEWER INVERT	98.45 100.00	85.0m-450mm STM @ 0.73%	98.11 98.15	118.0m-200mm SAN @ 0.62%	98.41	73.5m-250mm STM @ 3.21%			STORM SEWER INVERT					
SANITARY SEWER INVERT									SANITARY SEWER INVERT					
EXISTING ℄ R.O.W ELEVATION	102.29	102.31	102.16	101.97	101.73	101.26	100.60	99.78	EXISTING ℄ R.O.W ELEVATION					
CHAINAGE	0+459.2	0+475	0+481.8	0+500	0+525	0+544.2	0+550	0+575	0+581.4	0+600	0+609.8	0+625	0+650.01	CHAINAGE

NOTES

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1	ISSUED FOR REVIEW	25/05/15	SMC



Robinson
Land Development

350 PALLADIUM DRIVE
KANATA, ONTARIO K2V 1A8
TELEPHONE (613) 592-6060

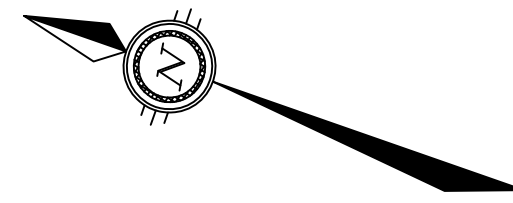
DESIGN	JHB
CHECKED	SMC
DRAWN	JHB
CHECKED	SMC
APPROVED	SMC

BORRELLO SUBDIVISION

**514 KOCHAR DRIVE
OTTAWA, ON
K2C 4H3**

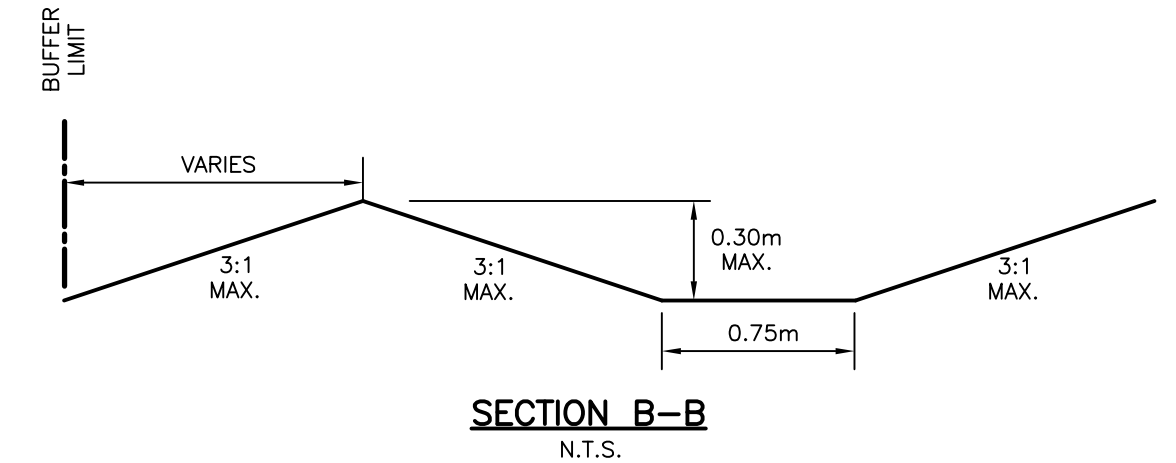
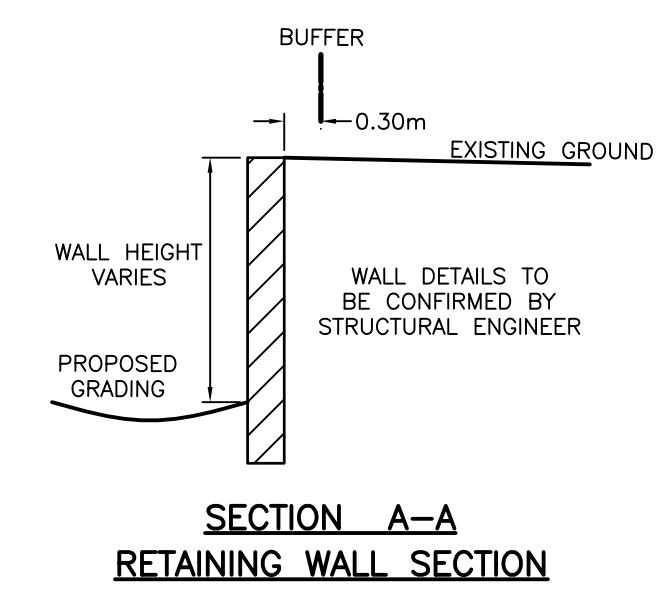
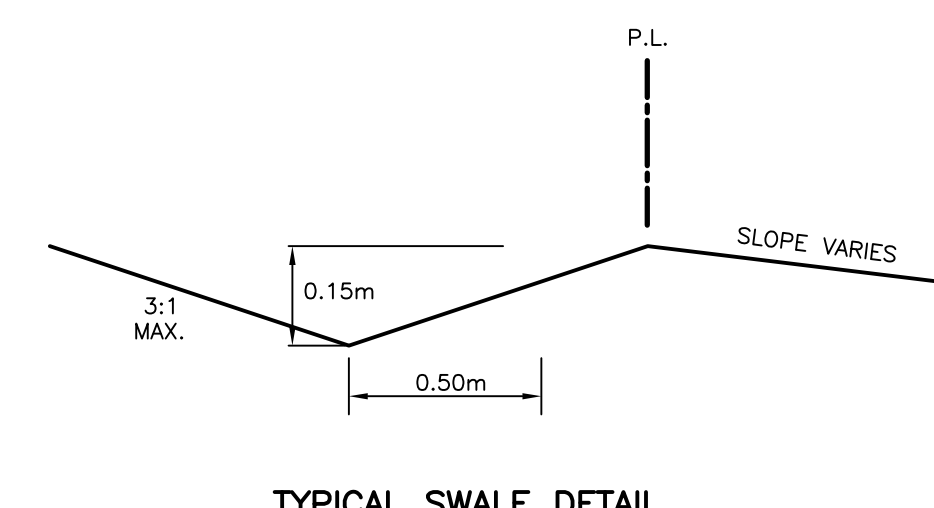
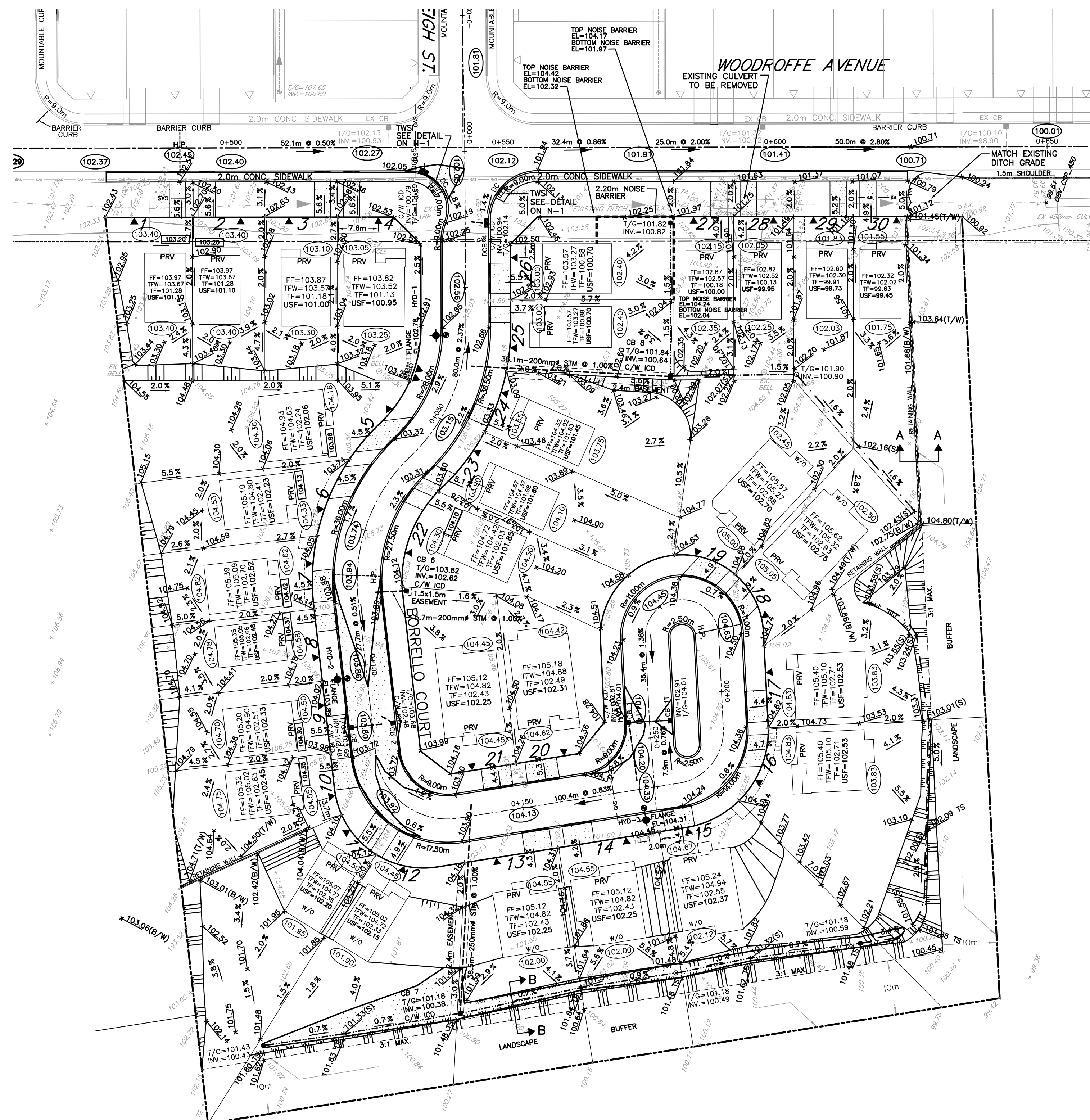
**WOODROFFE AVENUE
PLAN PROFILE
STA. 0+459 TO STA. 0+650**

PROJECT NO.	14057
SURVEY	RLD
DATED	MAY 2015
DWG. No.	14057-P2



LEGEND

- ▲ PROPOSED SERVICE LATERAL LOCATION
- SINGLE SERVICE
- 135mm SANITARY
- 100mm STORM
- 19mm WATERMAIN
- DRIVEWAY LOCATION
- STREET CATCHBASIN
- REAR YARD CATCHBASIN
- CB T6 CATCHBASIN OUTLETTING TO ANOTHER CATCHBASIN
- CB 6 CATCHBASIN OUTLETTING DIRECTLY TO STORM SEWER SYSTEM
- SWALE c/w SUBDRAIN
- SWALE w/o SUBDRAIN
- PROPOSED DITCH
- EXISTING DITCH
- EASEMENT
- TERRACING
- REAR YARD ELBOW CATCHBASIN
- REAR YARD TEE CATCHBASIN
- (91.80) PROPOSED TERRACE GRADE OR CENTRELINE ROAD GRADE
- (91.70) PROPOSED DRIVEWAY GRADE AT GARAGE
- PROPOSED GRADE
- EXISTING ELEVATION
- 2.5% DRAINAGE DIRECTION AND SLOPE
- PRV PRESSURE REDUCING VALVE REQUIRED
- PONDING AREA



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SCALE	
HORIZ. 1:500	



Robinson Land Development
 350 PALLADIUM DRIVE
 KANATA, ONTARIO K2V 1A8
 TELEPHONE (613) 592-6060

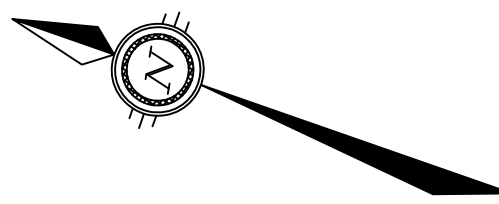
DESIGN	JHB
CHECKED	SMC
DRAWN	JHB
CHECKED	SMC
APPROVED	SMC

BORRELLO SUBDIVISION

514 KOCHAR DRIVE
OTTAWA, ON
K2C 4H3

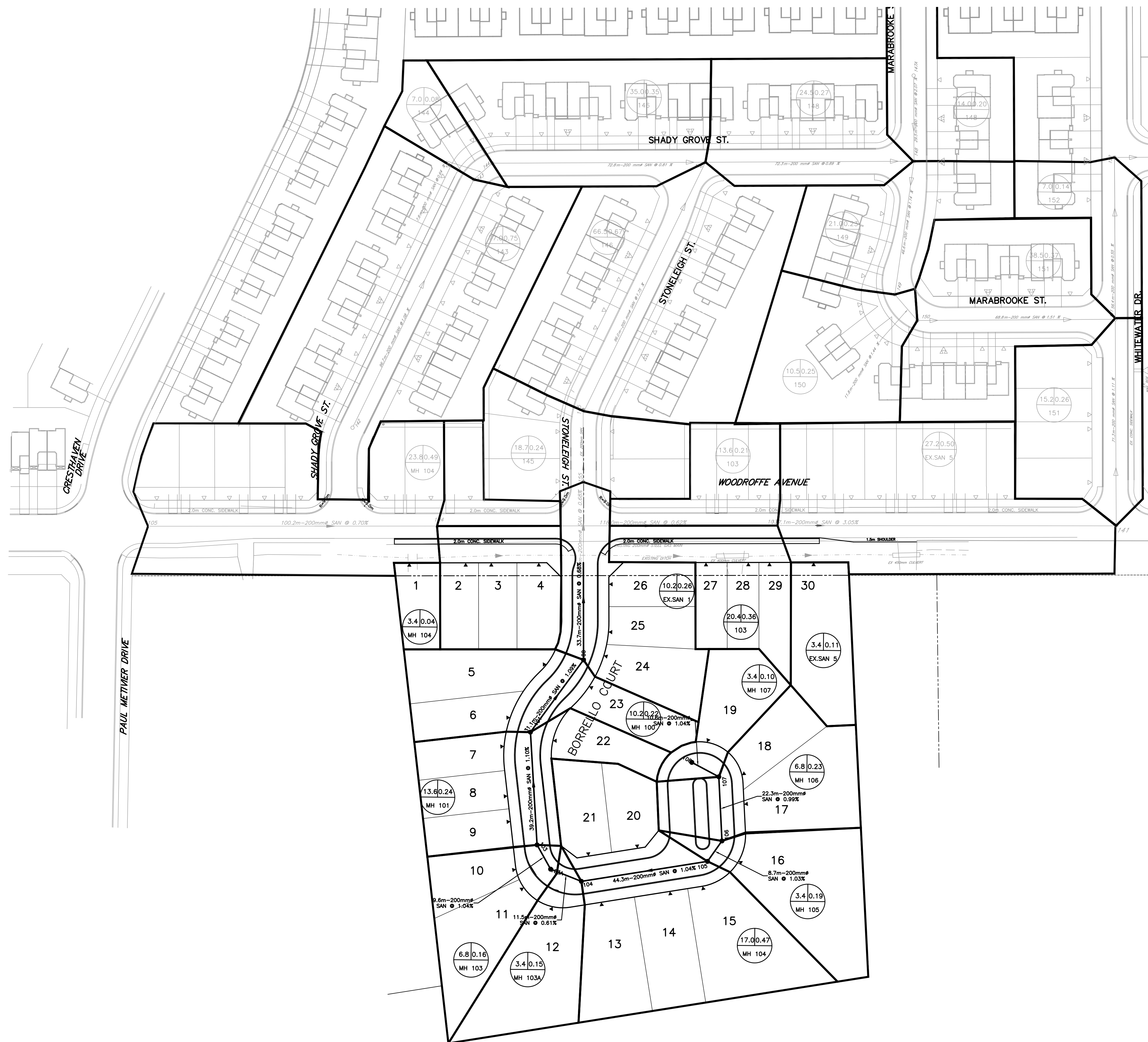
GRADING AND DRAINAGE PLAN

PROJECT NO.	14057
SURVEY	RLD
DATED	MAY 2015
DWG. No:	14057-GR1



LEGEND

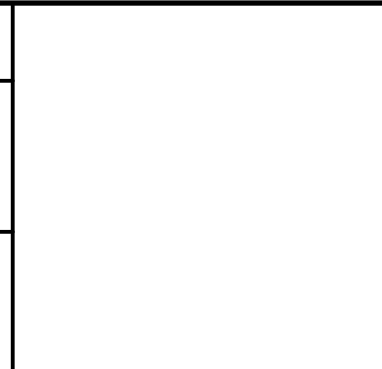
- POPULATION: 57.80.86
- AREA (ha): 128
- DOWNSTREAM MANHOLE:
- EXISTING SERVICE LOCATION:
- SERVICE LOCATION:
- SANITARY AREA BOUNDARY:



NOTES
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1	ISSUED FOR REVIEW	25/05/15	SMC

SCALE	
HORIZ. 1:500	



Robinson
 Land Development
 350 PALLADIUM DRIVE
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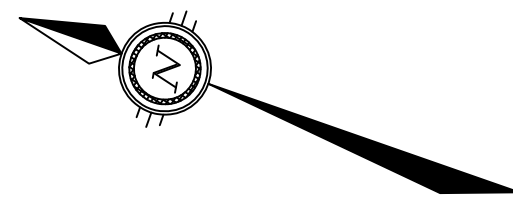
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CHECKED	SMC
DRAWN	JHB
CHECKED	SMC
APPROVED	SMC

BORRELLO SUBDIVISION

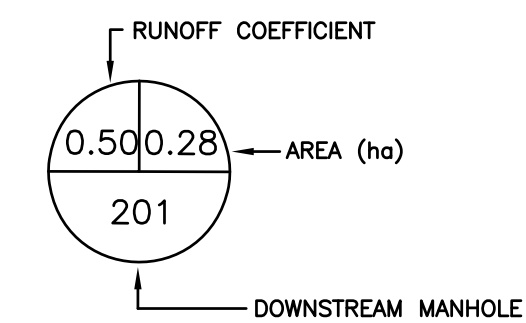
 514 KOCHAR DRIVE
 OTTAWA, ON
 K2C 4H3

SANITARY DRAINAGE AREA PLAN

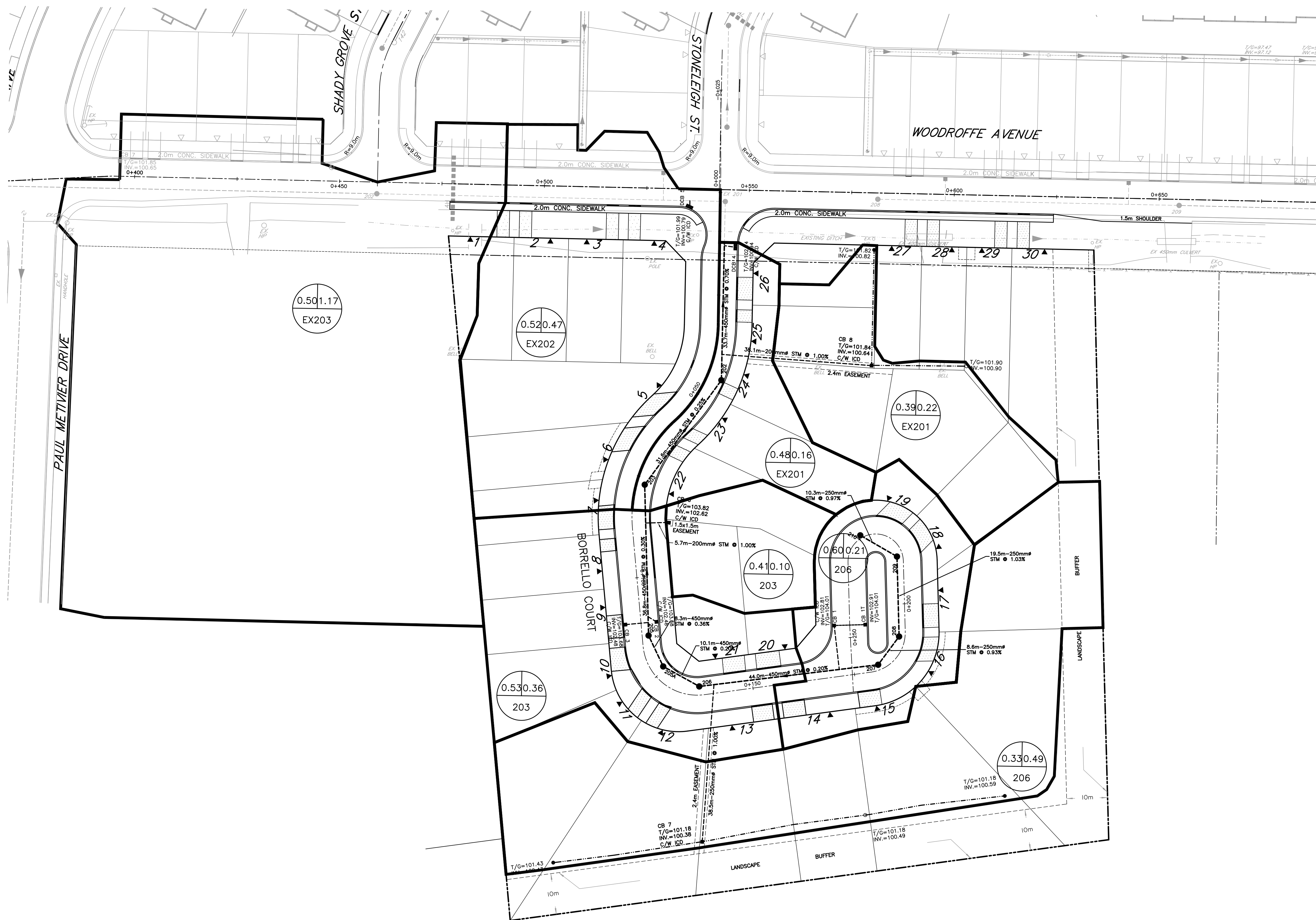
PROJECT NO.	14057
SURVEY	RLD
DATED	MAY 2015
DWG. No:	14057-SAN1



LEGEND

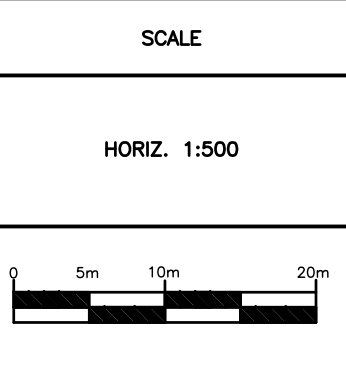


- ▼ SERVICE LOCATION
- STREET CATCHBASIN
- REAR YARD CATCHBASIN
- REAR YARD TEE CATCHBASIN
- REAR YARD ELBOW CATCHBASIN
- CB 6 CATCHBASIN OUTLETING DIRECTLY TO STORM SEWER SYSTEM
- CB T6 CATCHBASIN OUTLETING TO ANOTHER CATCHBASIN
- DRAINAGE AREA BOUNDARY



NOTES
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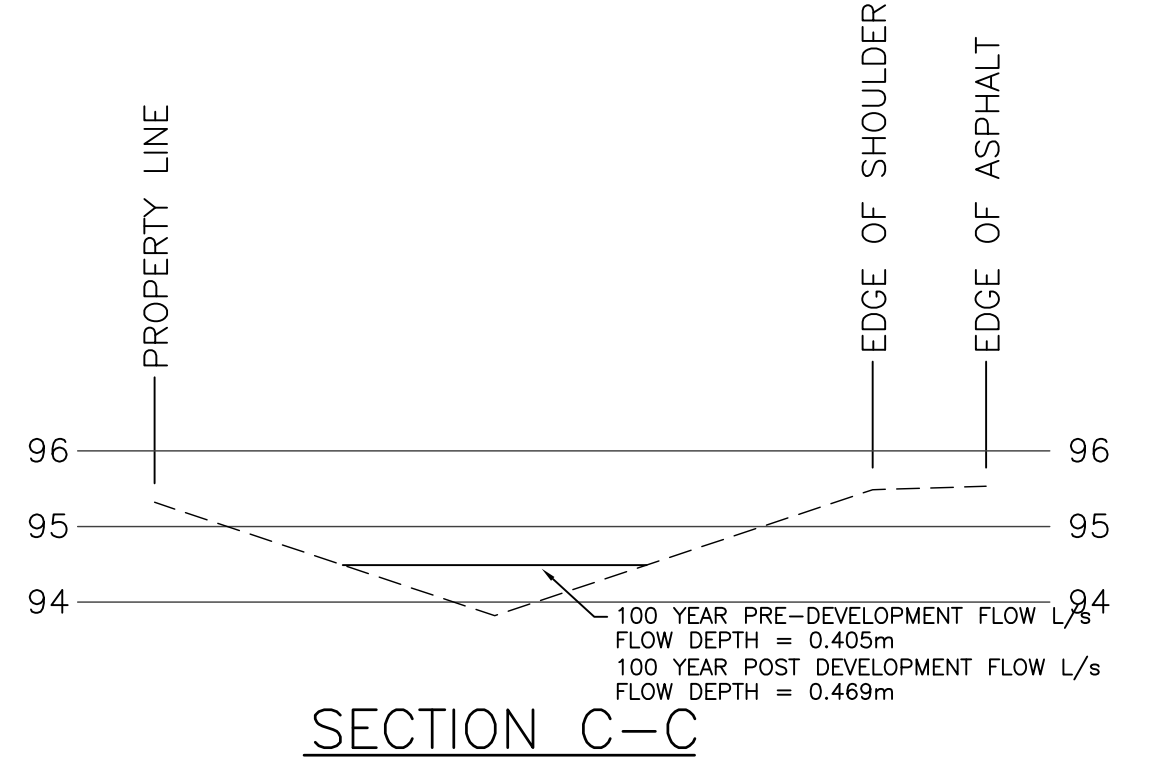
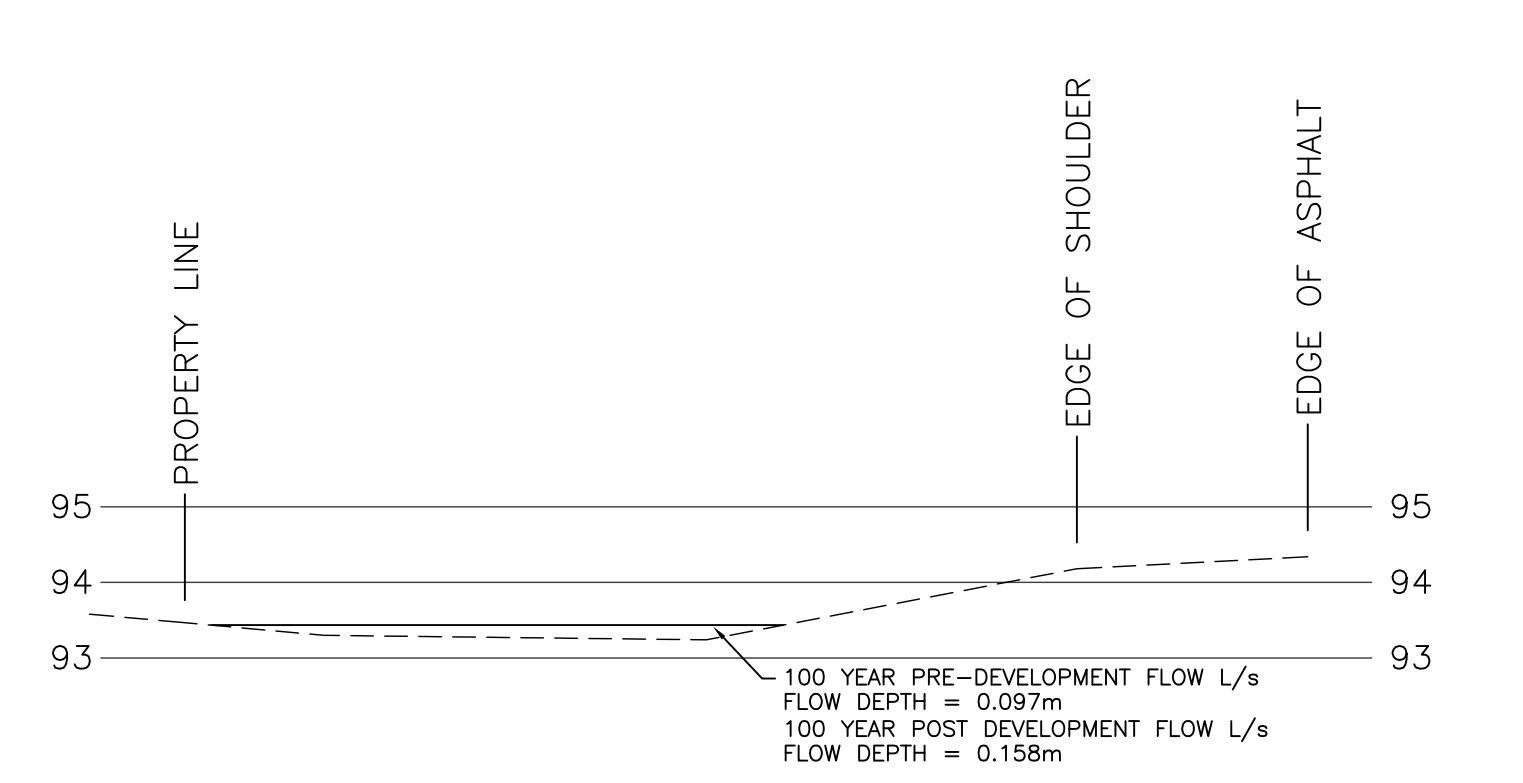
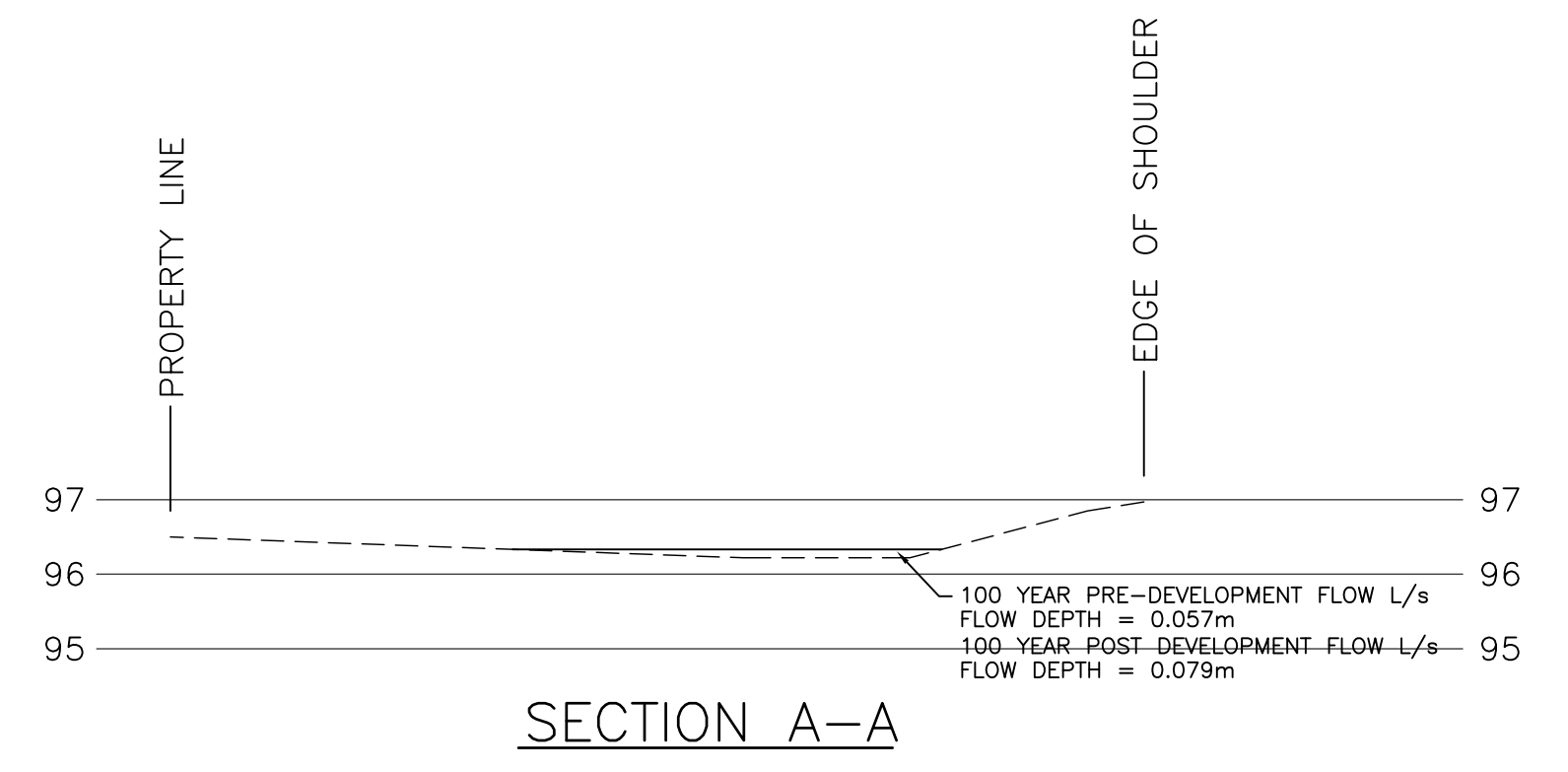
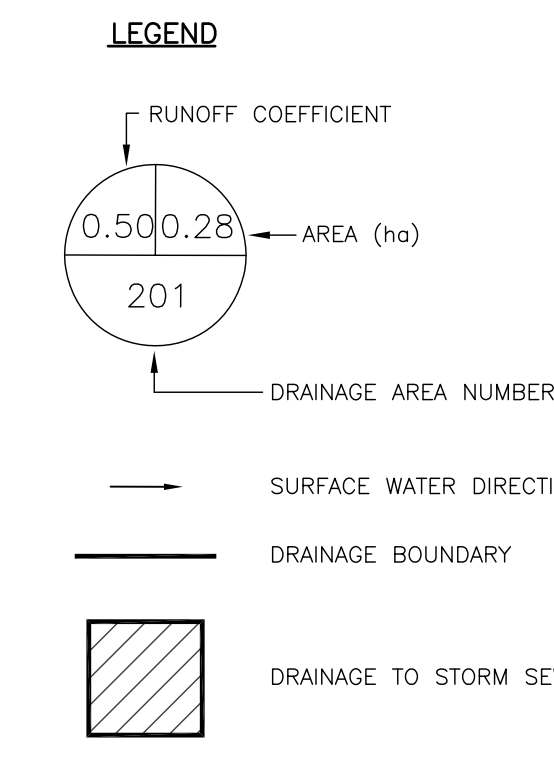
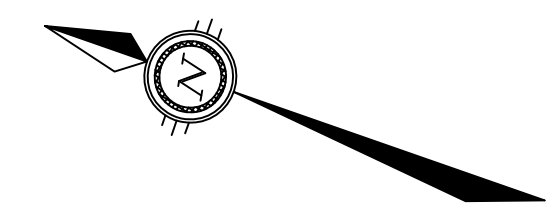
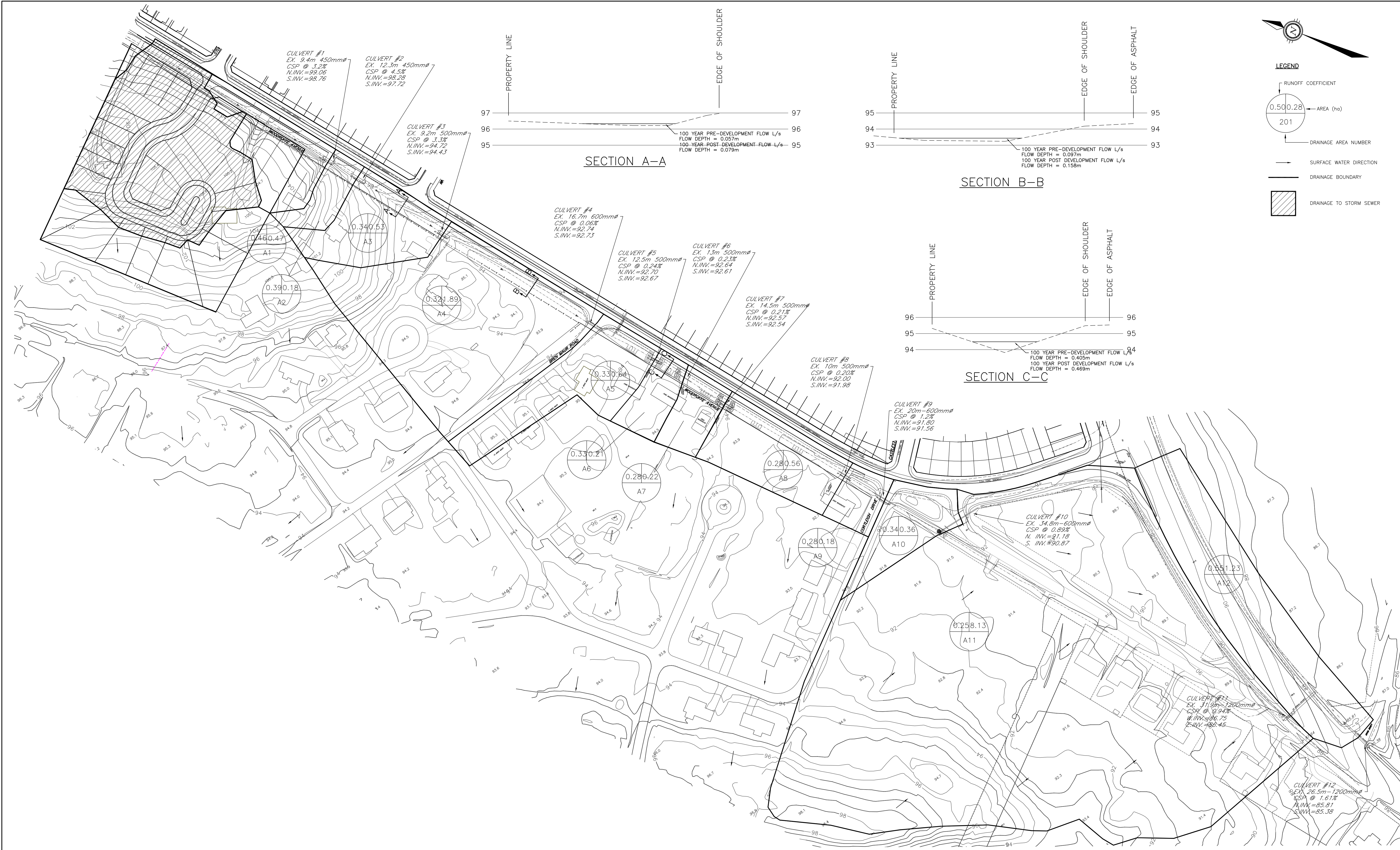
Robinson
 Land Development
 350 PALLADIUM DRIVE
 KANATA, ONTARIO K2V 1A8
 TELEPHONE (613) 592-6060

DESIGN	JHB
CHECKED	SMC
DRAWN	JHB
CHECKED	SMC
APPROVED	SMC

BORRELLO SUBDIVISION
 514 KOCHAR DRIVE
 OTTAWA, ON
 K2C 4H3

STORM DRAINAGE AREA PLAN

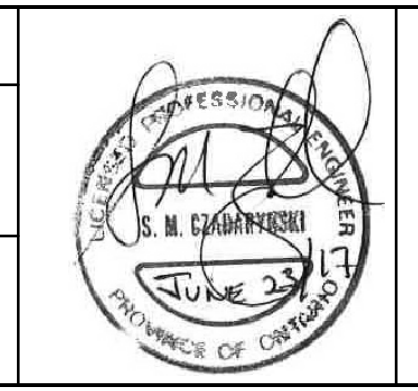
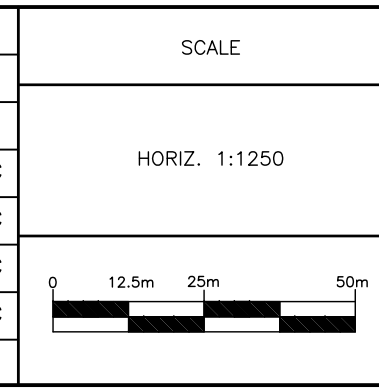
PROJECT NO.	14057
SURVEY	RLD
DATED	MAY 2015
DWG. No:	14057-STM1



NOTES

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Robinson Land Development

CONSULTING ENGINEERS

350 PALLADIUM DRIVE
KANATA, ONTARIO K2V 1A8
TELEPHONE (613) 592-6060

DESIGN	JHB
CHECKED	SMC
DRAWN	JHB
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APPROVED	SMC

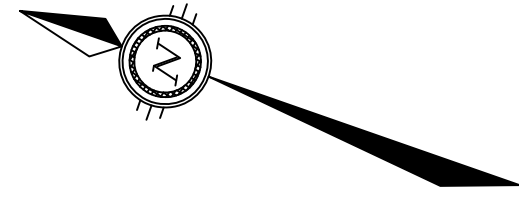
BORRELLO SUBDIVISION

514 KOCHAR DRIVE
OTTAWA, ON
K2C 4H3

STORM DRAINAGE AREA

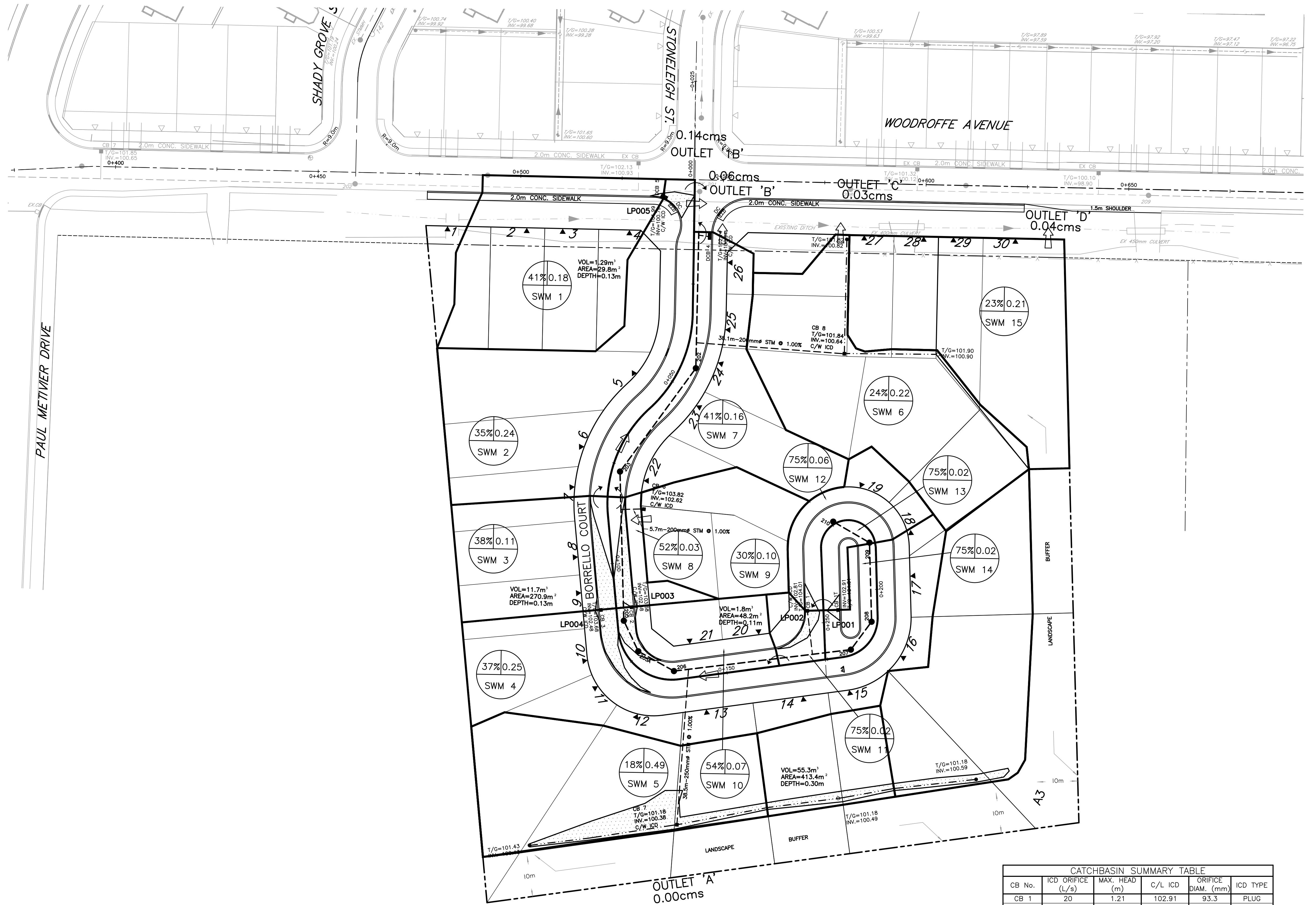
PROJECT NO.	14057
SURVEY	RLD
DATED	DECEMBER 2015
DWG. No.	14057-STM2

Prepared by: JHB
 Checked by: SMC
 Drawn by: JHB
 Date: 10/12/15
 Reference: 1305-10-000



LEGEND

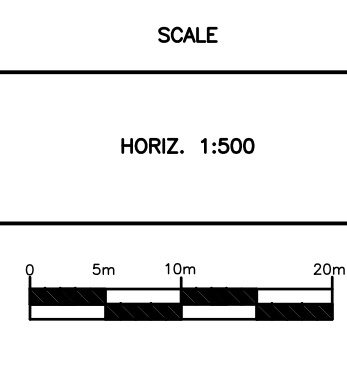
- LP001 PONDING AREA ID
- ← OVERLAND DRAINAGE DIRECTION
- TOTAL IMPERVIOUSNESS
- 25% 0.28 SUB CATCHMENT AREA (ha)
- 201 SUB CATCHMENT ID



CB No.	ICD ORIFICE (L/s)	MAX. HEAD (m)	c/L ICD	ORIFICE DIAM. (mm)	ICD TYPE
CB 1	20	1.21	102.91	93.3	PLUG
CB 2	14.2	1.23	102.58	78.3	PLUG
CB 3	31	1.23	102.58	115.7	PLUG
DCB 4	20	1.10	101.05	95.6	PLUG
DCB 5	20	1.23	100.89	92.9	PLUG
CB 6	25	1.40	102.72	100.6	PLUG
CB 7	15	0.98	100.51	85.3	PLUG
CB 8	20	1.30	100.74	91.7	PLUG

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Robinson Land Development
 350 PALLADIUM DRIVE
 KANATA, ONTARIO K2V 1A8
 TELEPHONE (613) 592-6060

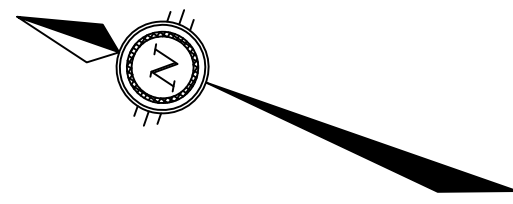
DESIGN	JHB
CHECKED	SMC
DRAWN	JHB
CHECKED	SMC
APPROVED	SMC

BORRELLO SUBDIVISION

514 KOCHAR DRIVE
OTTAWA, ON
K2C 4H3

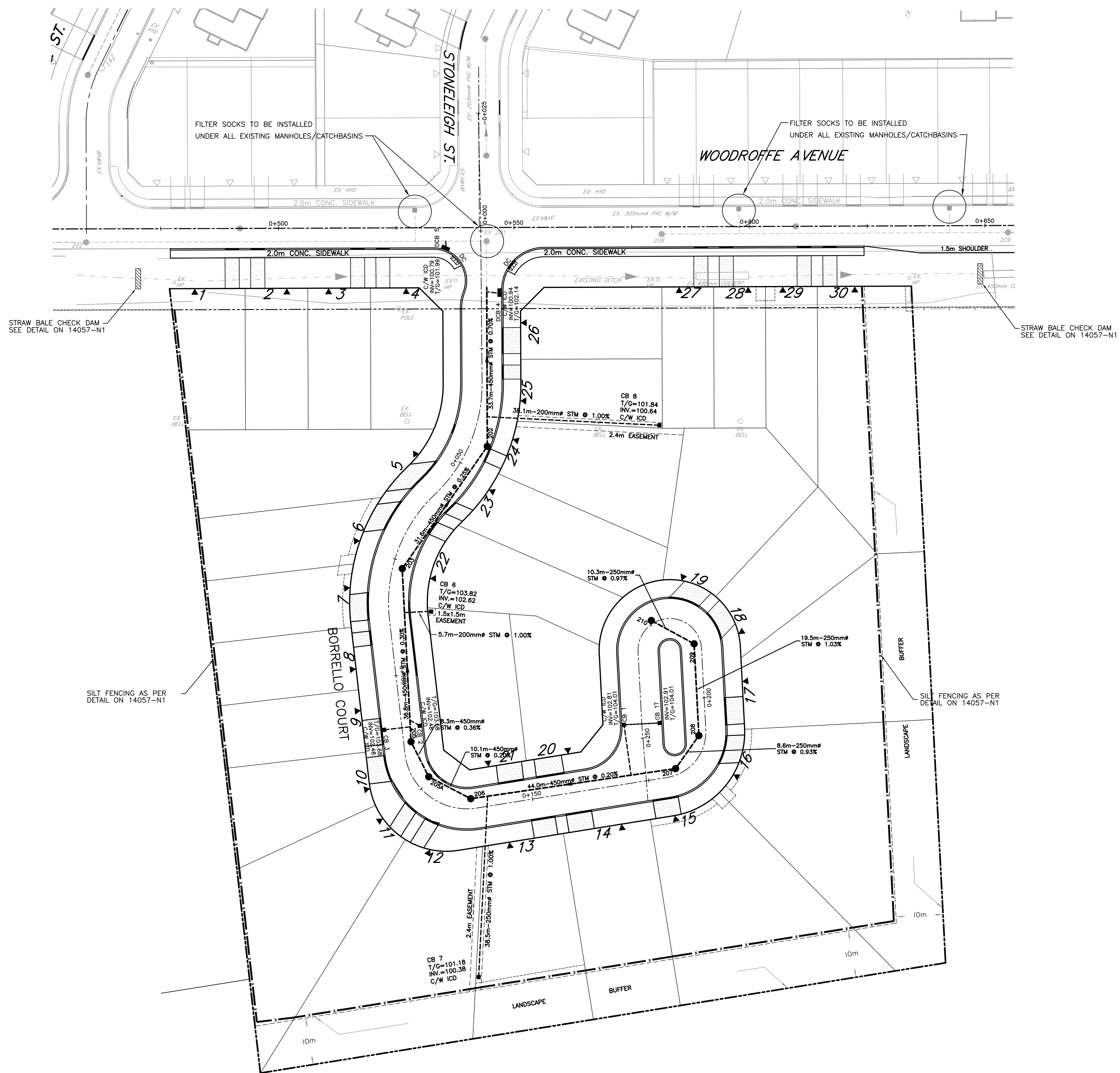
STORM WATER MANAGEMENT PLAN

PROJECT NO.	14057
SURVEY	RLD
DATED	MAY 2015
DWG. No.	14057-SWM1



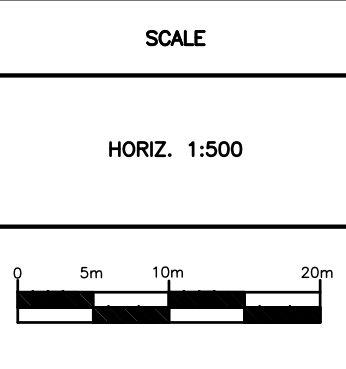
LEGEND

- EXISTING STORM SEWER
- - - EXISTING DITCH
- STORM SEWER
- STORM MANHOLE
- CB
- SILT FENCE
- ▨ STRAW BALE CHECK DAM



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Robinson
Land Development

CONSULTING ENGINEERS
 350 PALLADIUM DRIVE
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 TELEPHONE (613) 592-6060

DESIGN	JHB
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CHECKED	SMC
APPROVED	SMC

BORRELLO SUBDIVISION

514 KOCHAR DRIVE
 OTTAWA, ON
 K2C 4H3

EROSION AND SEDIMENT
 CONTROL PLAN

PROJECT NO.	14057
SURVEY	RLD
DATED	MAY 2015
DWG. No:	14057-EC1