		STORM	MANH	OLE SCHE	EDULE	
LOCATION	INVE	RT ELEVA	ATIONS (TOP COVER	MANHOLE	
LOCATION	NORTH	SOUTH	EAST	WEST	(m)	TYPE
EX.	EX.97.453	97.410 E X.97.48 3				1800ø
MH 1	97.520 97.556		97.580 97.616	98.304	101.530	1520X1830
MH 2			98.631	98.716	101.640	1500ø
MH 3			98.850	99.400	102.200	1200ø
MH 4		97.630 97.704	98.790 98.855	97.620 97.644	101.550	1520X1830
MH 5		99.710		99.480 99.465	101.790	1200ø
MH 6		98.603	98.250 98.168	98.260 98.17 8	101.910	1520X1830
MH 8		98.360 98.334	98.350 98.274	98.580 98.584	101.920	1520X1830
СВМН 9		100.070 100.069	98.640 98.637	98.860 98.850	101.700	1500ø
CBMH 10		99.030 99.040	98.910 98.905		101.700	1500ø
CBMH 11	99.130 99.117	100.080 100.060		100.080 100.058	101.700	1200ø
MH 14	98.600 98.439		98.590 98.589	98.900 98.874	102.330	1520X1830
MH 15		99.170 99.137	98.960 98.927	99.190 99.16 2	102.140	1200ø
MH 16			99.480 99.441		103.140	1200ø
MH 17		99.020 99.076	98.750 98.801	98.610 98.641	102.010	1220X1220
CBMH 18	99.070 99.128	100.200 100.247	100.050 1 00.08 9		101.750	1200ø
MH 19		99.160 99.174	99.020 99.049	98.860 98.889	102.400	1200ø
MH 20	99.320 99.321				102.415	1200ø
MH 21				99.230 99.237	102.060	1200ø
MH 22	9 <u>8</u> .000 97.945	98.250 98.19 0		98.140 98.080	101.750	1520X1830
MH 23	98.260 98.202	98.390 98.370	98.460 98.400		101.705	1220X1220
CBMH 24		98.850 98.850	100.016	98.670 98.671	101.750	1500ø
CBMH 25	98.92 98.923		99.99 1 00.016	100.000 100.016	101.600	1200ø
MH 26	98.500 98.442		98.750 98.727	98.810 98.802	101.930	1500ø
MH 27		100.070 100.02 7	100.060 100.011	98.89 98.85 3	101.950	1200ø
MH 28		100.190 100.182	99.000 98.993		102.080	1200ø
CBMH 29	98.617	98.817	100.035 1 00.05 3	100.040 1 00.05 3	101.650	1200ø
CBMH 30	98.877		100.050 1 00.05 0	100.010 100.034	101.650	1200ø
CBMH 31	99.210 99.184	100.310 1 00.278		99.610 99.575	101.900	1200ø
CBMH 32			98.600 98.612	98.470 98.412	101.650	1200ø
MH 33	EX.99.342	EX.99.342		99.492	±103.070	1520X1830
MH 34	100.360	100.282	99.607	99.678	102.98	1800ø
СВМН35	100.354	100.510			102.650	1200ø
СВМН36	100.850	100.466			102.650	1200ø
BOX MH37	100.475		99.811	99.840	102.890	1520X1830
MH 39	99.96		99.90		101.90	1200ø
MH 40	100.22	100.19	100.22	100.22	102.23	1200ø
MH 41	100.03		100.06		102.00	1200ø
MH 42	99.30	99.90	-	99.36	102.10	1200ø
MH 63		99.46	99.40	100.13	101.70	1200ø
MH 64	99.52	/	100.17	100.06	101.60	1200ø

		SANITA	RY MAN	HOLE SC	HEDULE	
LOCATION	INVE	RT ELEV	ATIONS	TOP COVER	MANHOLE	
	NORTH	SOUTH	EAST	WEST	(m)	TYPE
MH1A	EX.98.30	EX.98.30	98.92 98.90		±102.750	1500ø
MH2A			99.050 99.060	99.040 99.049	103.030	1200ø
мнза			99.260 99.270	99.250 99.260	101.630	1200ø
MH4A		99.550 99.535	99.550 99.535	99.500 99.475	101.500	1200ø*
MH5A				99.670 99.648	101.750	1200ø*
MH6A	99.715 99.706	99.715 99.716			101.790	1200ø*
MH7A	99.750 99.752	99.750 99.762			101.760	1200ø*
MH8A	99.940 99.949	100.050 100.059	100.010 100.009	100.010 100.0 09	102.420	1200ø
MH9A				100.300 100.250	102.090	1200ø
MH10A	100.320 100.290				102.430	1200ø
MH11A			100.220 100.219	100.280 100.279	102.360	1200ø
MH12A			100.510 100.517		102.980	1200ø
MH13A			99.216	99.226	102.950	1200ø
MH14A		99.468	99.356	99.366	102.900	1200ø
MH15A	99.884				102.920	1200ø
MH16A			99.477	99.487	102.950	1200ø
MH17A	EX.98.466	EX.98.466		99.066	±103.060	1500ø
MH18A	100.01	100.04			102.06	1200ø

*	COMPLETE	WITH	WATER	TIGHT	FRAME	&	COVER

	STORM	/ CATCHE	BASIN S	CHEDULE	
LOCATION	INVE	RT ELEV	ATIONS ((m)	TOP COVER
200/111011	NORTH	SOUTH	EAST	WEST	(m)
TRENCH DRAIN CB	99.65	00.05			101.05
CICB 2		99.95 99.90 100.18			101.30
CICB 3		100.00			101.40
CICB 4		99.87 100.02 99.95			101.40
CICB 5	100.20 100.20	99.95		100.30 100.30	101.80
CB 7			100.40 100.40	10000	101.80
CB 8	100.20 100.2 0				101.70
CB 9	100.00		100.25 100.25		101.85
CB 10	100.20 100.20		100.40	100.30 100.30	101.80
CB 11	100.15		100.40 1 00. 40		101.80
CICB 12	100.88 100.88				101.80
CB 14 CB 15	100.55	100.78 100.78	100.43 100.43		102.08
CB 16	100.90 100.88	100.74	100.14		102.08
CB 17		100.80 100.78	100.43 1 00.4 1		102.08
CB 18			99.85 99.8 0		101.45
CB 19	100.45 100.40			100.05	101.90
CB 20	100.75 100.72		100 95	100.85 100.82	102.32
CB 21		100.58 1 00.5 8	100.95 100.92	100.38 1 00.38	102.32
CB 22	100.68 1 00.6 8	100.58		100.38	101.98
CB 23	100.35 100.35				101.95
CB 25	100.84 100.84			100.94 100.94	102.44
CB 26			101.08 101.04		102.44
CB 27		100.28 100.53		100.18	101.83
CB 28	100.65 100.63			101- 10	101.83
CB 29	99.95 99.97 5			101.10. 101.13	101.55 .
CB 30				100.20 100.27 100.20	101.65
CB 31 CB 32			100.18 100.20	100.20	101.65 101.65
CB 33	100.02 100.00		100.20	100.11 100.10	101.60
CB 34			100.19 100.20		101.60
CB 35	100.06 100.00			100.38 100.30	101.60
CB 36	100.11		100.39 100.40		101.60
CB 39	100.08			100.22 100.20	101.65
CB 40	100.25 100.25			100.20	101.65
CB 41 CB 42	100.25			100.20 100.20	101.75
CB 43			100.18 100.20	100.2	101.65
CB 44				100.27 100.20	101.65
CB 45			100.19 1 00.15		101.65
CB 46	100.60				102.65
CB 47			101.15		102.65
CB 48	101.15	100.945	101.05		102.52
CB 49 CB 50	101.15	101.25	101.05		102.65
RYCB 51		100.50			102.00
CB 52				100.25	101.80
CB 53	00.00			100.22 100.20	101.75
CB 54	99.69 100.05				101.47
CB 55	99.66 100.03 99.80 99.81				101.45
CB 56 TRENCH	99.81 99.81 99.83				101.05
CB 57 CB 58	100.62 100.66			100.73 100.76	101.05
CB 59			100.90 1 00.86		102.26
CB 60	100.35 _R	REUSE OTATE EX. C	100.35	100.01	101.75
CB 61	99.95				101.35
CB 62	99.95				101.35
ECB					101.95
CB63			100.20	00 ==	101.60
CB64 CB65			100.15	99.77	101.55
C000			100.30		101.70

300mmø STM. 1.140m CLEARANCE UNDER 200mmø STM.

300mmø W/M 0.500m CLEARANCE UNDER 150mmø SAN.

900mmø STM. 0.990m CLEARANCE UNDER 200mmø STM. 200mmø W/M 0.700m CLEARANCE UNDER 200mmø STM

<u>CROSSING SCHEDULE</u> 300mmø SAN. 0.730m CLEARANCE UNDER EX.400mmø W/M 27 450mmø STM. 0.940m CLEARANCE UNDER 200mmø STM. 39 600mmø STM 0.350m CLEARANCE UNDER 200mmø W/M 2) 200mmø W/M 0.500m CLEARANCE OVER 300mmø STM 200mmø W/M 1.100m CLEARANCE UNDER 200mmø STM. 40 200mmø STM. 0.520m CLEARANCE OVER 200mmø W/M 300mmø SAN. 0.400m CLEARANCE UNDER 200mmø STM 300mmø SAN. 0.400m CLEARANCE UNDER 200mmø STM 300mmø SAN. 0.400m CLEARANCE UNDER 200mmø STM.

300mmø SAN. 0.400m CLEARANCE UNDER 200mmø STM 300mmø W/M 0.500m CLEARANCE UNDER 200mmø SAN. 0.850m CLEARANCE OVER 300mmø STM. 200mmø W/M 0.500m CLEARANCE UNDER 600mmø STM 200mmø W/M 1.300m CLEARANCE UNDER 300mmø SAN. 23 50mmø W/M 0.500m CLEARANCE UNDER 250mmø SAN. 200mmø SÁN. 0.150m CLEARANCE OVER 600mmø STM. 450mmø STM. 0.300m CLEARANCE UNDER 50mmø W/M 42 150mmø SAN. 0.650m CLEARANCE OVER 200mmø W/M 450mmø STM. 0.840m CLEARANCE UNDER 150mmø SAN. 6 300mmø W/M 1.000m CLEARANCE UNDER 200mmø STM. 200mmø STM. 0.250m CLEARANCE OVER 300mmø SAN. 200mmø SAN. 0.430m CLEARANCE UNDER 200mmø STM. 375mmø STM. 1.160m CLEARANCE UNDER 200mmø STM. 50mmø W/M 0.780m CLEARANCE UNDER 200mmø STM. 7) 975mmø STM. 0.500m CLEARANCE UNDER 300mmø W/M 975mmø STM. 0.850m CLEARANCE UNDER 300mmø W/M 50mmø W/M 0.500m CLEARANCE UNDER 200mmø SAN. 300mmø W/M 0.500m CLEARANCE UNDER 300mmø SAN. 25 375mmø STM. 0.505m CLEARANCE UNDER 50mmø W/M 0.505m CLEARANCE UNDER 50mmø W/M 375mmø STM. 0.820m CLEARANCE UNDER 150mmø SAN. 300mmø W/M 0.300m CLEARANCE OVER 975mmø STM. 300mmø W/M 0.300m CLEARANCE OVER 975mmø STM. 26 200mmø STM. 0.550m CLEARANCE UNDER 200mmø SAN. (a) 200mmø W/M 0.970m CLEARANCE UNDER 250mmø SAN. 200mmø W/M 0.500m CLEARANCE UNDER 250mmø SAN.

200mmø W/M 0.500m CLEARANCE UNDER 450mmø STM.

200mmø SAN 0.200m CLEARANCE OVER 450mmø STM.

200mmø SAN 0.200m CLEARANCE OVER 450mmø STM. 200mmø SAN. 0.200m CLEARANCE OVER 450mmø STM. 525mmø STM. 0.900m CLEARANCE UNDER 150mmø SAN. 150mmø W/M 0.800m CLEARANCE UNDER 250mmø SAN.
450mmø STM. 0.660m CLEARANCE UNDER 300mmø SAN.
300mmø STM. 0.660m CLEARANCE UNDER 375mmø STM. 300mmø W/M 0.500m CLEARANCE UNDER 375mmø STM. 200mmø SAN. 0.200m CLEARANCE OVER 450mmø STM. 200mmø SAN. 0.200m CLEARANCE OVER 525mmø STM. 29 300mmø W/M 1.000m CLEARANCE UNDER 200mmø STM. 300mmø SAN. 0.224m CLEARANCE UNDER 200mmø STM. / 150mmø W/M 0.500m CLEARANCE UNDER 525mmø STM 750mmø STM. 1.200m CLEARANCE UNDER 200mmø STM. 300mmø W/M 1.000m CLEARANCE UNDER 300mmø SAN 900mmø STM. 0.825m CLEARANCE UNDER 250mmø SAN. 300mmø W/M 0.750m CLEARANCE UNDER 150mmø SAN. 200mmø STM. 0.300m CLEARANCE UNDER 300mmø SAN. (13) 900mmø STM. 0.200m CLEARANCE UNDER 300mmø SAN. 300mmø W/M 0.500m CLEARANCE OVER 900mmø STM. 300mmø STM. 0.890m CLEARANCE UNDER 300mmø SAN. 300mmø SAN 0.650m CLEARANCE OVER 900mmø STM. 300mmø W/M 0.500m CLEARANCE OVER 250mmø STM. 300mmø SAN 0.650m CLEARANCE OVER 900mmø STM. 300mmø SAN. 0.500m CLEARANCE OVER 150mmø W/M. 32 525mmø STM. 0.300m CLEARANCE UNDER 200mmø W/M 150mmø W/M 0.500m CLEARANCE OVER 750mmø STM. 200mmø W/M 0.300m CLEARANCE UNDER 250mmø SAN. 150mmø W/M 0.500m CLEARANCE OVER 750mmø STM. 300mmø SAN. 0.200m CLEARANCE UNDER 200mmø STM. 300mmø W/M 1 200m CLEARANCE UNDER 200mmø STM. 300mmø W/M 1 200m CLEARANCE UNDER 200mmø STM. 16/ 300mmø W/M 1.200m CLEARANCE UNDER 200mmø STM. 525mmø STM. 1.270m CLEARANCE UNDER 200mmø STM. 600mmø STM 1.210m CLEARANCE UNDER 200mmø STM. 300mmø STM. 0.710m CLEARANCE UNDER 300mmø SAN. 375mmø STM. 0.843m CLEARANCE UNDER 250mmø SAN. 300mmø STM. 0.500m CLEARANCE UNDER 375mmø STM. 300mmø STM. 0.500m CLEARANCE UNDER 300mmø W/M 250mmø SAN. 0.150m CLEARANCE UNDER 200mmø STM. 300mmø W/M 1.740m CLEARANCE UNDER 200mmø SAN.

300mmø W/M 0.700m CLEARANCE UNDER 375mmø SAN.

300mmø W/M 1.150m CLEARANCE UNDER 200mmø STM.

300mmø STM 1.140m CLEARANCE UNDER 200mmø STM.

525mmø STM. 0.403m CLEARANCE UNDER 300mmø SAN.
300mmø W/M 1.690m CLEARANCE UNDER 300mmø STM.
300mmø W/M 0.500m CLEARANCE UNDER 300mmø STM.
300mmø W/M 0.500m CLEARANCE UNDER 200mmø STM.

50mmø W/M 0.500m CLEARANCE UNDER 250mmø SAN. 37 900mmø STM. 0.960m CLEARANCE UNDER 200mmø STM. 50mmø W/M 0.500m CLEARANCE OVER 450mmø STM. 50mmø STM 0.790m CLEARANCE UNDER 200mmø STM. 50mmø STM 0.790m CLEARANCE UNDER 200mmø STM.

375mmø STM. 0.480m CLEARANCE UNDER 750mmø SAN.

300mmø W/M 0.500m CLEARANCE UNDER 525mmø SAN.

450mmø STM. 0.790m CLEARANCE UNDER 150mmø SAN.

200mmØ STM. 0.850m CLEARANCE OVER 900mmØ STM. 50mmØ W/M.0.500m CLEARANCE OVER 300mmØ STM. 50mmØ W/M.O.500m CLEARANCE UNDER 250mmØ SAN.

STATION		FINISHED	TOP OF	AS BUILT
STATION A 1+100.0	DESCRIPTION 400×300 TEE	GRADE(m) EX.102.60	WATERMAIN(m) EX.100.40	WATERMAIN(m)
1+111.5	300¢ V&VB SERVICE CONNECTION	103.02	100.620	100.60
1+178.49	SERVICE CONNECTION SERVICE CONNECTION	101.44	99.040	99.03
1+187.68	HYDRANT&TEE SERVICE CONNECTION	101.54	99.140	98.99
1+282.18	HYDRANT&TEE	101.58	99.18	99.00
1+305.82 B)1+312.85	300¢ V&VB 300¢ TEE	101.48	99.080 99.150	99.04
1+316.27	300×200 REDUCER	101.42	99.020	99.11
1+351.92 1+353.96	HYDRANT&TEE 45° BEND	101.67	99.270	99.21
1+359.52	45° BEND	101.66	98.650	98.94
(B) 2+100.00	200 V&VB 300ø TEE	101.90	99.270 99.150	99.270 99.16
2+103.00	SOOM IEE	101.50	98.950	98.96
2+103.50 2+103.85	VERTICAL BEND	101.51	98.950 99.300	98.96 99.26
2+103.63	300¢ V&VB	101.54	99.200	99.26
2+125.00		101.60	99.300	99.28
2+175.00 F)2+186.56	300X200Ø TEE	102.22	99.820	99.78
F 3+100.00	300X200Ø TEE	101.84	99.440	99.440
3+104.69 3+152.61	200¢ V&VB HYDRANT & TEE	101.90	99.500	99.48
G3+201.33	200¢ TEE	101.92	99.520	99.58
H)3+240.69 F)4+100.00	HYDRANT 300¢ TEE	102.10	99.700	99.72
4+101.60	300¢ V&VB	101.82	99.460	99.50
4+106.00 4+112.13	300X150Ø TEE & HYD	101.76 101.85	99.800	99.42
4+114.64	22° BEND	101.87	99.600	99.42
4+123.75 4+167.00	22° BEND	101.73	99.330	99.35 99.83
4+207.97	300¢ V&VB	102.25	99.850	99.36
4+209.30 4+209.80	VERTICAL BEND VERTICAL BEND	102.25	98.300 98.300	98.28 98.300
4+217.11	300¢ TEE	102.38	98.300	98.300
4+400.00	300¢ TEE 300×200 REDUCER	102.38	98.300 98.300	98.300 98.300
4+411.41	SERVICE CONNECTION	102.24	98.300	98.36
4+416.08 4+416.58	VERTICAL BEND VERTICAL BEND	102.23	98.300 99.830	98.38
4+437.57	HYDRANT&TEE	102.06	99.660	99.65
4+466.57 4+493.33	SERVICE CONNECTION	101.83	99.350 99.690	99.350
4+498.37	45° BEND	102.10	99.700	99.69
4+499.78	45° BEND HYDRANT	102.05	99.650	99.70
K)5+100.00	300¢ C/W 50¢ SADDLE	102.38	98.300	98.28
5+105.00 5+107.00	45° BEND	102.27	98.300	98.300
5+137.00	SERVICE CONNECTION	102.56	100.160	100.14
(K)6+100.00	SERVICE CONNECTION 3000 C/W 500 SADDLE	102.48	100.080	100.07 98.300
6+100.50	VERTICAL BEND	102.26	98.300	98.300
6+102.00 6+103.50	VERTICAL BEND 300¢ V&VB	102.26	99.860 99.850	99.860
6+106.75	SERVICE CONNECTION	102.26	99.860	99.90
6+130.50 6+144.20	HYDRANT&TEE VERTICAL BEND	102.12	99.720 99.670	99.71
6+145.5	VERTICAL BEND	102.07	98.500	98.55
6+151.5 6+152.8	VERTICAL BEND	102.00	98.500 99.600	98.55 99.600
6+187.50	SERVICE CONNECTION	102.20	98.000	98.000
6+189.00 6+201.00	SERVICE CONNECTION 50mmø SADDLE	102.20	98.000	98.000
M6+202.00	300X200 TEE	102.34	99.940	99.93
M10+100.00	50mmø SADDLE	102.35 102.42	99.940	99.93
10+110.00		102.42	100.02	100.02
G7+100.00	200¢ TEE	101.92	99.520	99.59
7+106.00 7+127.63		101.94	99.732 99.610	99.73
7+177.63	HYDRANT&TEE	102.10	99.700	99.700
7+206.00 M 7+216.63	200¢ V&VB 300X200 TEE	102.29	99.890	99.89
7+222.13	3000 V&VB	102.22	99.820	99.80
7+243.63 7+243.89	VERTICAL BEND VERTICAL BEND	102.15	99.750	99.750
7+249.37	VERTICAL BEND	102.17	100.024	100.04
7+249.63 7+285.88	VERTICAL BEND HYDRANT&TEE	102.17	99.750	99.750
7+308.13	SERVICE CONNECTION	102.87	100.470	100.46
7+314.63 N 7+328.63	300¢ V&VB 400×300 TEE	103.05 EX. 103.10	100.650 EX. 100.750	EX. 100.750
8+100.0	400×300 TEE	EX.102.97	EX.100.71	
8+121.7 8+122.7	300¢ V&VB VERTICAL BEND	102.95	100.550	
8+124.7	VERTICAL BEND	103.00	98.500	
8+127.6 8+130.6	SERVICE CONNECTION SERVICE CONNECTION	103.00	98.500 98.500	
8+133.6	VERTICAL BEND	103.19	98.500	
8+135.6 8+146.5	VERTICAL BEND	103.07	100.670	
8+147.5	VERTICAL BEND	103.00	99.786	
8+153.0 8+154.0	VERTICAL BEND	103.00	99.786 98.500	
8+162.9	300x200 CROSS	102.87	98.500	
8+165.9 8+167.9	VERTICAL BEND VERTICAL BEND	102.85 102.79	98.500	
8+167.9 8+185.8	VERTICAL BEND SERVICE CONNECTION	102.79	100.390	
8+191.9	SERVICE CONNECTION	102.74	100.340	
8+202.5	300¢ V&VB 300¢ CAP	102.85	100.450	
9+100.0	HYDRANT&TEE	103.05	100.650	
9+104.7	200x150 REDUCER VERTICAL BEND	102.85	100.450 98.500	
9+144.3	300×200 CROSS	102.87	98.500	
9+155.0 9+157.0	VERTICAL BEND VERTICAL BEND	102.90	99.500	
9+191.0	200x150 REDUCER	102.90	100.500	_
9+193.8	SERVICE CONNECTION	102.95	100.550	

100.700

103.10

S) 9+196.4 | HYDRANT&TEE

DRAWING NOTES

1.0 GENERAL

1.1 CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. 1.2 DO NOT SCALE DRAWINGS.

1.3 CONTRACTOR TO REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE ARCHITECT OR DESIGN ENGINEER AS APPLICABLE.

1.4 USE ONLY THE LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION". 1.5 ALL CONSTRUCTION SHALL COMPLY WITH CURRENT CITY OF OTTAWA STANDARDS

1.6 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS.

1.7 FOR LEGAL SURVEY INFORMATION REFER TO REGISTERED PLAN.

1.8 ALL IRON WORK ELEVATIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MINOR ADJUSTMENTS AS DETERMINED BY THE ENGINEER.

1.9 ALL CONCRETEE CURBS AND SIDEWALKS TO CONFORM TO O.P.S. AND

CONSTRUCTED TO CITY STANDARDS. ALL ONSITE CURBS TO BE BARRIER TYPE. 1.10 ALL CONCRETEE SHALL BE "NORMAL PORTLAND CEMENT" IN ACCORDANCE WITH

O.P.S.S. 1350 AND SHALL ACHIEVE A MINIMUM STRENGTH OF 30MPa AT 28 DAYS. 1.11 ALL CONSTRUCTION TRAFFIC TO ACCESS SITE OFF HUNTMAR OR HAZELDEAN

1.12 CONTRACTOR TO PROTECT EXISTING INFRASTRUCTURE AND PROPERTY SUCH AS TREES, PARKING METERS, SIDEWALKS, CURBS, ASPHALT, AND STREET SIGNS FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR TO PAY THE COST TO REINSTATE OR REPLACE ANY DAMAGED INFRASTRUCTURE OR PROPERTY TO THE SATISFACTION OF

1.13 THE POSITION OF POLE LINES, CONDUITS, WATERMAIN, SEWERS, AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES ARE 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 THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, SHALL PROTECT ALL

UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM. 1.14 CONTRACTOR TO SUPPLY SUITABLE FILL MATERIAL WHERE REQUIRED TO ROUGH GRADE THE SITE.

1.15 CONTRACTOR TO HAUL EXCESS MATERIAL OFFSITE AS NECESSARY TO GRADE SITE TO MEET THE PROPOSED GRADES. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY ENGINEER. ENGINEER TO

DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.

1.16 ALL DISTURBED BOULEVARDS TO BE REINSTATED WITH SOD ON 100mm TOPSOIL. 1.17 UTILITY DUCTS TO BE INSTALLED PRIOR TO ROAD BASE CONSTRUCTION.

2.0 SANITARY 2.1 ALL SANITARY SEWERMAINS TO BE CSA CERTIFIED PVC SDR 35, BELL AND SPIGGOT TYPE. ONLY FACTORY FITTINGS TO BE USED. SEWER TO BE INSTALLED AS PER OSPD

2.2 ALL SANITARY MAINTENANCE HOLES TO BE 1.2m DIAMETER AS PER CITY OF

OTTAWA STANDARDS COMPLETE WITH BENCHING, STEPS IF REQUIRED, AND FRAME

2.5 ANY SANITARY SEWER WITH LESS THAN 1.8m COVER REQUIRES THERMAL

INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE

2.3 SANITARY MH FRAME AND COVER TO BE CLOSED COVER TYPE, AS PER CITY 2.4 SANITARY SEWER LEAKAGE TEST AND CCTV INSPECTION SHALL BE COMPLETED AS PER CITY SPECIFICATIONS PRIOR TO INSTALLATION OF BASE COURSE ASPHALT.

2.6 CONNECTION TO THE EXISTING SANITARY SEWER TO BE INCLUDED IN THE COST FOR SANITARY SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.

3.0 STORM 3.1 ALL STORM SEWER TO BE CSA CERTIFIED PVC SDR 35 OR CONCRETEE

CLASS 100-D, BELL AND SPIGGOT TYPE. ALL STORM SEWERS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. ONLY FACTORY FITTINGS TO BE USED. 3.2 ALL STORM MAINTENANCE HOLES TO BE SIZED IN WITH THE PLANS AND AS PER

CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING FOR SEWERS 900mm OR

GREATER, STEPS IF REQUIRED, AND FRAME AND COVER. 3.3 STORM MH FRAME AND COVERS TO BE OPEN TYPE, AS PER CITY STANDARD S24. CONTRACTOR TO INSTALL FILTER FABRIC UNDER STORM MH COVER UNTIL SODDING IS

3.4 STORM MAINTENANCE HOLES TO BE AS PER OPSD 701.010, TAPER TOP TYPE COMPLETE WITH 300mm SUMP FOR SEWER LESS THAN 900mmØ. ALL STORM CBMH'S TO

BE FLAT TOP TYPE. 3.5 ALL CATCH BASINS TO BE AS PER OPSD 705.010, FRAME & GRATE AS PER 400.02, LEAD TO BE AS PER ITEM 3.1.

3.6 ALL DITCH INLET CB'S TO BE AS PER OPSD 705.030 WITH 3:1 SLOPE. ALL DITCH INLET MANHOLES TO BE TYPE A AS PER OPSD 702.040. ALL DITCH INLET GRADE AS PER OPSD 403.010, LEAD AS PER ITEM 3.1.

3.7 150mm DIAMETER SOCK-WRAPPED PERFORATED PVC SUBDRAINS TO BE INSTALLED AT ALL CBMH'S AND CB'S. SUBDRAINS TO BE 3m LONG (EACH SIDE – CURB INLETS, AND FOUR ORTHOGONALLY OUT – SUMP INLETS) AND DISCHARGE INTO CBMH OR CB.

3.8 STORMWATER ICD'S TO BE INSTALLED IN CB'S PRIOR TO BASE ASPHALT.

3.9 ANY STORM SEWER WITH LESS THAN 1.8m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER. 3.10 CONNECTION TO THE EXISTING STORM SEWER TO BE INCLUDED IN THE COST FOR STORM SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUT TO CITY

4.0 WATER

4.1 ALL WATERMAINS TO BE PVC DR 18, WITH MINIMUM COVER OF 2.4m AND INSTALLED PER CITY OF OTTAWA STANDARDS. ALL WATER SERVICES TO BE COPPER OR APPROVED EQUAL WITH MINIMUM COVER OF 2.4 m AND INSTALLED AS PER CITY OF OTTAWA STANDARDS.

APPROVED

THIS____DAY OF ______, 20_____

DERRICK MOODIE, MANAGER DEVELOPMENT REVIEW WEST PLANNING, INFRASTRUCTURE AND ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

REFUSED

4.2 THRUST BLOCKS TO BE INSTALLED AT ALL BENDS, TEES, AND CAPS ALL AS PER OPSD 1103.01 AND 1103.02.

4.3 CONTRACTOR TO CONDUCT PRESSURE AND LEAKAGE TESTING OF ALL WATERMAINS AND DISINFECT AND CHLORINATE ALL WATERMAINS TO THE SATISFACTION OF M.O.E.E. AND THE CITY OF OTTAWA.

4.4 TRACER WIRE TO BE INSTALLED ALONG THE FULL LENGTH OF WATERMAIN AND ATTACHED TO EACH MAIN STOP AS PER MUNICIPAL STANDARDS.

4.5 ALL COMPONENTS OF THE WATER DISTRIBUTION SYSTEM SHALL BE CATHODICALLY PROTECTED AS PER MUNICIPAL STANDARDS.

4.6 ALL VALVES & VALVE BOXES. HYDRANTS, AND HYDRANT VALVES AND ASSEMBLIES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS.

4.7 ANY WATERMAIN WITH LESS THAN 2.4m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER. 4.8 CONTRACTOR IS RESPONSIBLE FOR ACQUIRING THE WATER PERMIT FROM THE CITY

OF OTTAWA AND PAYMENT OF ANY FEES ASSOCIATED WITH SECURING THE WATER PERMIT. OWNER IS RESPONSIBLE FOR REIMBURSING THE CONTRACTOR FOR THE ACTUAL COST OF ACQUIRING THE WATER PERMIT.

4.9 CONNECTION TO EXISTING WATERMAIN TO BE CITY FORCES, EXCAVATION AND BACKFILLING AND REINSTATEMENT BY CONTRACTOR, COST TO BE INCLUDING THE COST FOR THE WATERMAIN INSTALLATION. THIS COST INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.

5.0 ROAD AND WORK IN THE RIGHT OF WAY

5.1 CONTRACTOR TO REINSTATE ROAD CUTS PER CITY OF OTTAWA STANDARD R-10.

5.2 THE CONTRACTOR SHALL PREPARE A TRAFFIC MANAGEMENT PLAN FOR REVIEW AND APPROVAL BY THE CITY OF OTTAWA. CONTRACTOR TO MAINTAIN TRAFFIC FLOW DURING THE ENTIRE CONSTRUCTION PERIOD. MAINTENANCE OF ROAD CUTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. PROVISION OF FLAGMEN, DETOURS AS NECESSARY, BARRICADES AND SIGNS TO THE FULL SATISFACTION OF THE ENGINEER AND ROAD AUTHORITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

5.3 CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROOFROLLING, TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.

5.4 FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.

5.5 CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOETCHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF GRANULAR B MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL

5.6 GRANULAR A MATERIAL ONLY TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL ENGINEER OF GRANULAR B PLACEMENT.

5.7 CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR A MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOETCHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF GRANULAR A MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL

5.8 ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL ENGINEER OF GRANULAR A PLACEMENT.

5.9 CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF ASPHALT MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.

5.10 CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE ENGINEER WITH VERIFICATION PRIOR TO PLACEMENT.

5.11 DITCHES DISTURBED DURING CULVERT INSTALLATION AND GRADING OPERATIONS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION AND FLOWLINE GRADES. 5.12 CULVERTS TO CONSIST OF 2.8MM THICKNESS MATERIAL AND BE INSTALLED PER

5.13 CONTRACTOR TO REINSTATE ANY DISTURBED AREA WITHIN EXISTING ROW OR ADJACENT LANDS TO THE BETTER OF IMPORTED SOD ON 100MM TOPSOIL, OR TO MATCH ORIGINAL CONDITION.

5.14 ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY ENGINEER. ENGINEER TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.

5.15 PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESSES) FOR HEAVY DUTY AND LIGHT DUTY AREAS TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT AND SHOWN ON THE PLANS.

6.0 SEDIMENT AND EROSION CONTROL

CITY OF OTTAWA STANDARDS.

6.1 CONTRACTOR TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES AS IDENTIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING. GRADING, REMOVAL OF VEGETATION, ETC.). DURING ALL PHASES OF THE SITE PREPARATION AND CONSTRUCTION THE MEASURES ARE TO BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER AND CITY OF OTTAWA IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL. SHOULD ANY ADDITIONAL MEASURES BE REQUIRED TO ADDRESS FIELD CONDITIONS THEY SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR THE CITY OF OTTAWA. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

6.2 ANY GROUND WATER PUMPING IS LIMITED TO 10 000I/d. AND SHALL BE DISCHARGED IN TO AN APPROVED FILTER MECHANISM PRIOR TO RELEASE TO THE ENVIRONMENT.

6.3 SEEPAGE BARRIERS WILL BE CONSTRUCTED IN ANY TEMPORARY DRAINAGE DITCH. 6.4 FILLER CLOTHS WILL BE PLACED ON OPEN INFRASTRUCTURES SUCH AS MANHOLE AND CATCH BASIN UNTIL STRUCTURES ARE COMMISSIONED AND PUT IN USE. 7.0 GEOTECHNICAL.

7.1 FOR DETAILS OF TEST PITS AND VARIOUS CONSTRUCTION REQUIREMENTS SEE GEOTECHNICAL REPORT, GEOTECHNICAL INVESTIGATION PROPOSAL COMMERCIAL DEVELOPMENT HAZELDEAN ROAD AT HUNTMAR DRIVE, OTTAWA ONTARIO, BY PATERSON GROUP DATED FEBRUARY 24, 2012.

7.2 FILL MATERIAL WITHIN THE PARKING LOT AND BUILDING PAD AREAS, AND SUPPORTING BUILDING FOUNDATIONS SHALL BE COMPACTED TO 98% STANDARD MODIFIED PROCTOR DENSITY AND TO THE SATISFACTION OF THE GEOTECHNICAL

7.3 ALL FILL MATERIAL TO BE CERTIFIED AS ACCEPTABLE BY THE GEOTECHNICAL

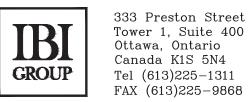
7.4 ALL COMPACTION METHODS TO BE PERFORMED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER TO INCLUDE BUT NOT BE LIMITED TO THE THICKNESS OF LIFTS. AND COMPACTION EQUIPMENT USED.

7.5 CLAY SEALS TO BE INSTALLED WHERE INDICATED ON THE DRAWINGS OR AS APPROVED AND DIRECTED BY THE GEOTECHNICAL ENGINEER ALL IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

7.6 PIPE BEDDING AND BACKFILL SHALL BE COMPLETED IN ACCORDANCE WITH LATEST CITY OF OTTAWA STANDARD. AT A MINIMUM BEDDING FOR SEWER AND WATERMAIN SHALL BE 150mm OPSS GRANULAR A, COMPACTED TO 95% SPMDD AND EXTEND TO SPRINGLINE OF PIPE. COVER MATERIAL SHALL CONSIST OF OPSS GRANULAR A AND SHALL EXTEND FROM SPRINGLINE TO MINIMUM 300mm ABOVE OBVERT OF PIPE, AND COMPACTED TO 95% SPMDD. SEE GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS.

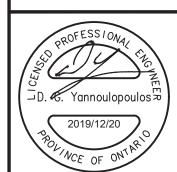
22	B, BOX D ISSUED FOR CONSTRUCTION	DGY	18: 04: 06
21	ISSUED FOR TENDER	DGY	18: 01: 15
20	REVISED AS PER CITY COMMENTS		17: 11: 23
19	ISSUED FOR SPA	DGY	17:11:02
18	REVISED AS PER SITE PLAN	DGY	17: 07: 07
17	REVISED AS PER CITY COMMENTS		17: 06: 23
16	REVISED BLD 2 & PAD E	DGY	17: 02: 14
15	REVISED AS PER CITY COMMENTS		16: 08: 02
14	SPA BLDG 1 & 2	DGY	16: 03: 07
13	ASBUILT		15: 01: 19
12	REVISED AS PER SITE PLAN	DGY	14: 11: 03
11	SPA	DGY	14: 09: 09
10	REVISED AS PER SITE PLAN	DGY	14: 08: 08
9	REVISED AS PER CITY COMMENTS	DGY	14: 07: 31
8	REVISED DOLLAR & CRUB	DGY	14: 06: 03
7	ISSUED FOR PAD F TENDER	DGY	13: 02: 14
6	REVISED FOR PAD F	DGY	12:11:16
5	REVISED SPRINKLER ROOM BOX E	DGY	12: 03: 09
4	REVISED PER CITY COMMENTS AND PAD E	DGY	12: 02: 22
3	REVISED FOR BOX E	DGY	12: 01: 26
2	REVISED SITE PLAN PH1 & PH2	DGY	11:11:24
1	ISSUED FOR APPROVAL	DGY	11: 10: 27
No.	REVISIONS	Ву	Date

NORTH AMERICAN DEVELOPMENT GROUP



5705 HAZELDEAN ROAD

OTTAWA, ONT.



Drawing Title

SCHEDULES AND NOTES PHASE 1 & 2

OCTOBER 2011 D.G.Y. D.G.Y. Project No. rawing No. C-105