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 AND SPECIFICATIONS.

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 REFER TO SITE PLAN BY DREDGE LEAHY ARCHITECTS INC.

1.09 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. SUCH ADDITIONAL MEASURES MAY INCLUDE BUT NOT BE LIMITED TO INSTALLATION OF FILTER CLOTHS ACROSS MANHOLE AND CATCHBASIN LIDS TO PREVENT SEDIMENT FROM ENTERING THE STRUCTURE AND INSTALLATION AND MAINTENANCE OF A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.

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

1.11 ALL CONCRETE CURBS AND SIDEWALKS TO CONFORM TO O.P.S. AND CONSTRUCTED TO CITY STANDARDS. ALL ONSITE CURBS TO BE BARRIER TYPE, WITH DEPRESSIONS AS NOTED.

1.12 ALL CONCRETE SHALL BE "NORMAL PORTLAND CEMENT" IN ACCORDANCE WITH O.P.S.S. 1350 AND SHALL ACHIEVE A MINIMUM STRENGTH OF 30MPa AT 28 DAYS.

1.13 ALL CONSTRUCTION TRAFFIC TO ACCESS SITE FROM SHUTTLEWORTH DRIVE.

1.14 FOR GEOTECHNICAL REPORT SEE GEOTECHNICAL INVESTIGATION PROPOSED RESIDENTIAL DEVELOPMENT - KELLAM LANDS, OTTAWA, ON. REPORT No. 12-1121-0286 BY GOLDER ASSOCIATES.

1.15 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 THE CITY.

1.16 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 ITSELF 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.

1.17 CONTRACTOR TO SUPPLY SUITABLE FILL MATERIAL WHERE REQUIRED TO ROUGH GRADE THE SITE. ALL IMPORTED FILL MATERIAL TO BE CERTIFIED AS ACCEPTABLE BY THE GEOTECHNICAL ENGINEER.

1.18 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.

1.19 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 ENGINEER.

1.20 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.

1.21 ALL DISTURBED BOULEVARDS TO BE REINSTATED WITH SOD ON 100mm TOPSOIL.

1.22 UTILITY DUCTS TO BE INSTALLED PRIOR TO ROAD BASE CONSTRUCTION.

1.23 CLAY DIKES 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.

2.0 SANITARY

2.1 ALL SANITARY SEWER MAINS TO BE CSA CERTIFIED, BELL AND SPIGOT TYPE. ONLY FACTORY FITTINGS TO BE USED. SEWER TO BE INSTALLED AS PER OSPD 1005.01. SANITARY SEWER MATERIALS TO BE:
250mmØ AND SMALLER - PVC DR 35

2.2 ALL SANITARY MAINTENANCE HOLES TO BE 1.2m DIAMETER AS PER CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING, RUNGS, FRAME AND COVER, DROP PIPES AND LANDINGS WHERE NEEDED.

2.3 SANITARY MANHOLE COVERS TO BE CITY OF OTTAWA STD. S25 (MOD. OPSD. 401.020). SANITARY MANHOLE COVER TO BE CLOSED COVER TYPE, AS PER CITY STANDARD S24.

2.4 SANITARY SEWER LEAKAGE TEST AND CCTV INSPECTION SHALL BE COMPLETED AS PER CITY SPECIFICATIONS PRIOR TO INSTALLATION OF BASE COURSE ASPHALT.

2.5 ANY SANITARY SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.

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 SEWERS TO BE CSA CERTIFIED, BELL AND SPIGOT TYPE. ALL STORM SEWERS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. ONLY FACTORY FITTINGS TO BE USED. STORM SEWER MATERIALS TO BE : 375mmØ AND SMALLER - PVC DR 35
450mmØ AND LARGER - 100-D REINFORCED CONCRETE.

3.2 ALL STORM MAINTENANCE HOLES TO BE SIZED IN ACCORDANCE WITH THE PLANS AND AS PER CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING, RUNGS, AND FRAME AND COVER.

3.3 STORM MH COVERS TO BE OPEN TYPE, AS PER CITY STANDARD S24, FRAMES TO BE PER CITY OF OTTAWA STD. S25. CONTRACTOR TO INSTALL FILTER FABRIC UNDER STORM MH COVER UNTIL SODDING IS COMPLETE.

3.4 STORM MAINTENANCE HOLES TO BE OPSD, SIZE AS SPECIFIED, TAPER TOP.

3.5 ALL CATCH BASINS TO BE AS PER OPSD 705.010, FRAME & FISH TYPE GRATE AS PER CITY OF OTTAWA STD. S19.1.

3.6 150mm DIAMETER SOCK-WRAPPED PERFORATED PVC SUBDRAINS TO BE INSTALLED AT THE LIMIT OF THE HEAVY DUTY ROAD STRUCTURE WHERE IT MEETS THE LIGHT DUTY ROAD STRUCTURE AND AT ALL CB'S IN HEAVY DUTY ROADS AS IDENTIFIED ON PLAN. SUBDRAINS TO DISCHARGE TO CB'S AS SHOWN.

3.7 ANY STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.

3.8 CONNECTION TO THE EXISTING STORM SEWER TO BE INCLUDED IN THE COST FOR STORM SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUT TO CITY STANDARDS.

3.9 CONTRACTOR TO PROVIDE IPEX-TEMPEST MHF ICD'S SHOP DRAWINGS, OR EQUIVALENT, FOR ENGINEERS REVIEW PRIOR TO ORDERING ICD'S.

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 DOMESTIC WATER SERVICES ARE TO BE 200mmØ.

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. 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 CITY OF OTTAWA STANDARDS.

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

4.6 ALL VALVES & VALVE BOXES AND CHAMBERS, 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 INCLUDED IN THE COST FOR THE WATERMAIN INSTALLATION. THIS COST INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.

4.10 THESE CROSSINGS WERE PROVIDED FOR THE PREVIOUS SITE PLAN APPLICATION AND ARE NO LONGER NECESSARY BASED ON THE REVISED SANITARY SEWER WATERMAIN CONFIGURATION.

5.0 PARKING LOT AND WORK IN PUBLIC RIGHTS 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 REPORT.

5.6 GRANULAR A MATERIAL 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 REPORT.

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 EXISTING EAST SIDE ROAD DITCH ALONG PALLADIUM DRIVE TO BE REALIGNED AS PER THE GRADING PLAN. ADJACENT AREAS BETWEEN ROAD SIDE DITCH AND PARKING LOT TO BE RE GRADED AS PER THE GRADING PLAN. ALL RE GRADED AREAS IN EXISTING PUBLIC RIGHTS OF WAY AND ANY OTHER DISTURBED AREAS IN EXISTING PUBLIC RIGHTS OF WAY ARE TO BE FINISHED WITH SOD ON 100mm TOPSOIL.

5.13 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.

5.14 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.

CATCH BASIN DATA TABLE

STRUCTURE ID	AREA ID	STRUCTURE	COVER	ELEVATION: TOP OF GRATE	ELEVATION: INVERT INLET	ELEVATION: INVERT OUTLET	OUTLET PIPE: DIAMETER (mm)	OUTLET PIPE: TYPE	HEAD	FLOW	ICD TYPE
ECB1	P105	CITY STD S29	S30/S31	93.40		92.400	250	HDPE PERF			
TCB1	P105	CITY STD S29	S30/S31	93.55	92.350	92.350	250	HDPE PERF			
CICB13	P105	OPSD 705.010	S22 & S23	93.90	92.300	92.200	200	PVC DR-35	1.700	36.00	Tempest HF - Type B
CB12	P101A	OPSD 705.010	S19	94.00		92.300	200	PVC DR-35	1.800	14.00	Tempest Vortex
CB14	P101B	OPSD 705.010	S19	94.00		92.300	200	PVC DR-35	1.800	21.00	Tempest HF - Type A
CB1	P106B	OPSD 705.010	S19	94.00	92.230	92.100	250	PVC DR-35	1.975	7.00	Tempest Vortex
CB2	P106A	OPSD 705.010	S19	94.00		92.400	200	PVC DR-35			
CB4	P103A	OPSD 705.010	S19	94.17		92.500	200	PVC DR-35			
CB5	P103B	OPSD 705.010	S19	93.75	92.228	92.050	200	PVC DR-35			
CB7	P8B	OPSD 705.010	S19	93.80		92.100	200	PVC DR-35	1.700	32.00	Tempest HF - Type B
CB9	P8C	OPSD 705.010	S19	93.75		92.050	200	PVC DR-35			
CB10	P8A	OPSD 705.010	S19	93.55		91.850	200	PVC DR-35	1.950	6.00	Tempest Vortex
CBMH8	P8C	OPSD 701.010	S25 & S28.1 Open	93.75	91.800	91.286	375	PVC DR-35			
CBMH14	P113A	OPSD 701.010	S25 & S28.1 Open	93.95	92.159	92.113	300	PVC DR-35	1.937	14.00	Tempest Vortex
CBMH6	P103C	OPSD 701.010	S25 & S28.1 Open	93.95	91.531	91.500	250	PVC DR-35	2.425	17.00	Tempest Vortex
TCB2	P8C	CITY STD S29	S30/S31	93.70	92.700	92.700	250	HDPE PERF			
ECB2	P8C	CITY STD S29	S30/S31	93.80		92.800	250	HDPE PERF			
ECB3	P103B	CITY STD S29	S30/S31	94.10		92.500	200	PVC DR-35			
ECB33	P113B	CITY STD S29	S30/S31	93.45		92.450	250	HDPE PERF			
CCB32	P113A	CITY STD S29	S30/S31	93.50	92.350	92.350	250	HDPE PERF			
CB30	P113B	OPSD 705.010	S19	93.82	92.150	92.150	200	PVC DR-35			
TCB31	P113B	CITY STD S29	S30/S31	93.55	92.250	92.250	250	HDPE PERF			
CCB30	P113B	CITY STD S29	S30/S31	93.95	92.150	92.150	250	PVC DR-35			
CB36	P113A	OPSD 705.010	S19	94.00	92.368	92.300	250	PVC DR-35			
CB35	P113A	OPSD 705.010	S19	94.00		92.500	200	PVC DR-35			
CB32	P113B	OPSD 705.010	S19	93.50	91.789	91.700	250	PVC DR-35			
CB31	P113B	OPSD 705.010	S19	93.50	91.940	91.890	250	PVC DR-35			
MH113	P113B	OPSD 701.010	OPSD 401.030	93.80		91.306	375	PVC DR-35	2.157	89.0	Tempest HF - Type E
CB33	P113B	OPSD 705.010	S19	93.55		92.050	200	PVC DR-35			

Bold font indicates CB's with ICD's

Revision: 2019-01-09

PAVEMENT STRUCTURE **

CAR ONLY PARKING AREAS:

50mm WEAR COURSE – HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
150mm BASE – OPSS GRANULARGRANULAR "A" CRUSHED STONE
300mm SUBBASE – OPSS GRANULAR "B" TYPE II
SUBGRADE – IN SITU SOIL, OR OPSS GRANULAR "B" TYPE I OR II MATERIAL PLACED OVER IN SITU SOIL

HEAVY TRUCK PARKING AREAS AND ACCESS LANES:

40mm WEAR COURSE – HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
50mm BINDER COURSE – HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm BASE COURSE – OPSS GRANULAR "A" CRUSHED STONE
450mm SUBBASE – OPSS GRANULAR "B" TYPE II
SUBGRADE – IN SITU SOIL, OR OPSS GRANULAR "B" TYPE I OR II MATERIAL PLACED OVER IN SITU SOIL

** REFER TO GEOTECHNICAL REPORT 12-1121-0286 BY GOLDER ASSOCIATES

WATERMAIN SCHEDULE

	STATION	DESCRIPTION	FINISHED GRADE	TOP OF WATERMAIN	AS-BUILT WATERMAIN
A	0+000.00	CONNECT TO EXISTING 200ø CAP	94.14		*EX.±91.81*
	0+004.09	200x150REDUCER	94.08	91.68	
B	0+007.15	150x150TEE	94.02	91.62	
B	0+000.00	150x150TEE	94.02	91.62	
	0+002.36	22.5° BEND	93.98	91.58	
	0+014.22	45° BEND	93.95	91.55	
	0+018.76	45° BEND	94.03	91.63	
	0+040.17	V&VB	94.09	91.69	
	0+041.17	45° BEND	94.10	91.70	
	0+045.79	45° BEND	94.35	91.95	
C	0+046.63	BUILDING "E" CONNECTION	94.37	91.97	
B	0+000.00	150x150TEE	94.02	91.78	
	0+015.71	V&VB	93.69	91.29	
	0+017.57	22.5° BEND	93.62	91.22	
	0+042.51	45° BEND	93.70	91.30	
	0+045.01	45° BEND	93.66	91.26	
D	0+047.20	BUILDING "D" CONNECTION	93.90	91.50	
E	0+000.00	CONNECT TO EXISTING 200ø CAP	94.08		*EX.±91.73*
F	0+006.11	200x150CROSS	94.11	91.71	
	0+020.00	--	94.10	91.70	
	0+040.00	--	94.15	91.75	
	0+064.06	HYDRANT TEE	93.98	91.58	
	0+070.54	200x150 REDUCER	93.95	91.55	
	0+071.82	VERTICAL BEND	93.92	91.52	
	0+072.32	VERTICAL BEND	93.91	90.50	
	0+074.21	45BEND	93.93	90.50	
	0+077.97	45BEND	94.00	90.50	
	0+080.49	VERTICAL BEND	94.03	90.50	
	0+080.99	VERTICAL BEND	94.04	91.64	
	0+092.39	45BEND	94.02	91.62	
	0+098.65	45BEND	94.09	91.69	
	0+116.12	V&VB	94.09	91.69	
	0+118.58	45BEND	94.10	91.70	
	0+121.52	45BEND	94.29	91.89	
I	0+124.26	BUILDING "A" CONNECTION	94.33	91.93	
F	0+000.00	200x150CROSS	94.11	91.71	
	0+014.37	V&VB	93.95	91.55	
	0+017.18	45BEND	94.09	91.69	
	0+20.68	45BEND	94.27	91.87	
G	0+21.90	BUILDING "C" CONNECTION	94.30	91.90	
F	0+000.00	200x150CROSS	94.11	91.71	
	0+029.63	45BEND	94.14	91.74	
	0+032.63	45BEND	94.19	91.79	
	0+035.35	V&VB	94.21	91.81	
H	0+038.85	BUILDING "B" CONNECTION	94.50	92.10	

REVISED 2018-11-14

CROSSING SCHEDULE

1	250ø STM 0.25m CLEARANCE OVER 200ø SAN.
2	375ø STM 0.25m CLEARANCE UNDER 200ø SAN.
3	250ø STM 0.20m CLEARANCE OVER 200ø SAN.
4	150ø W/M 1.00m CLEARANCE OVER 200ø SAN.
5	150ø W/M 0.70m CLEARANCE OVER 450ø STM.
6	200ø W/M 1.10m CLEARANCE UNDER 250ø STM.
7	250ø STM 0.80m CLEARANCE OVER 200ø SAN.
8	150ø W/M 0.35m CLEARANCE OVER 200ø SAN.
9	200ø STM 1.15m CLEARANCE OVER 200ø SAN.
10	150ø W/M 0.85m CLEARANCE OVER 450ø STM.
11	200ø STM 0.90m CLEARANCE OVER 200ø WM.
12	200ø STM 1.0m CLEARANCE OVER 200ø SAN.
13	450ø STM 0.20m CLEARANCE UNDER 200ø SAN.
14	150ø W/M 0.50m(MIN) CLEARANCE UNDER 300ø STM.
15	200ø SAN 0.25m CLEARANCE OVER 300ø STM.
16	150ø W/M 0.8m CLEARANCE UNDER 200ø SAN.
17	150ø W/M .5m (MIN) CLEARANCE UNDER 250ø STM.
18	250ø STN 0.2m CLEARANCE OVER 250ø STM.

LEGEND:

Symbol	Description
MH3A	EXISTING SANITARY MANHOLE
MH3	EXISTING STORM MANHOLE
CB T/G 99.76	EXISTING STREET CATCHBASIN
CICB G/G 99.76	EXISTING CURB INLET CATCHBASIN
V&VB	EXISTING VALVE AND VALVE BOX
V&C	EXISTING VALVE AND CHAMBER
HYD B/F 100.56	EXISTING HYDRANT
	EXISTING BARRIER CURB
D.C.	EXISTING DEPRESSED BARRIER CURB
	EXISTING CONCRETE SIDEWALK
	250mmØ SUBDRAIN
	SIAMESE CONNECTION (IF REQUIRED)
M	METER
RM	REMOTE METER
PRV	PRESSURE REDUCING VALVE
	WATERMAIN IDENTIFICATION
1	PIPE CROSSING IDENTIFICATION
	INLET CONTROL DEVICE LOCATION
	PROTECTIVE BOLLARD
	HEAVY DUTY ASPHALT / FIRE ROUTE
MH3A	SANITARY MANHOLE
MH3	STORM MANHOLE
CB T/G 99.76	CATCHBASIN c/w TOP OF GRATE
RYCB T/G 99.76	REAR YARD CATCHBASIN c/w GUTTER GRADE
ECB T/G 100.25	REAR YARD "END" CATCHBASIN C/W TOP OF GRATE 300ø)
CBMH T/G 101.55	CATCHBASIN MANHOLE c/w TOP OF GRATE
V&VB	VALVE AND VALVE BOX
V&C	VALVE AND CHAMBER
HYD B/F 100.56	HYDRANT c/w BOTTOM OF FLANGE ELEVATION
D.C.	DEPRESSED BARRIER CURB AS PER SC1.1
	BARRIER CURB AND GUTTER AS PER SC1.2
	MOUNTABLE CURB AS PER SC1.3
	PROPOSED CONCRETE SIDEWALK
200mmø SAN	SANITARY SEWER & FLOW DIRECTION
825mmø STM	STORM SEWER & FLOW DIRECTION
200ø WATERMAIN	WATERMAIN
200ø WM RED 150ø WM	WATERMAIN REDUCER
2 VBENDS	VERTICAL BEND LOCATION
	PROPERTY LINE
MB	PROPOSED MAIL BOX
	PROPOSED SWALE C/W FLOW DIRECTION
0.5%	PROPOSED DITCH C/W FLOW DIRECTION AND SLOPE
1.3%	SLOPE C/W FLOW DIRECTION
	MAJOR OVERLAND FLOW ROUTE
×104.62	PROPOSED SPOT GRADE
×104.40 (S)	PROPOSED SWALE GRADE
×104.50 (S)HP	PROPOSED SWALE HIGH POINT
104.60× 103.59	LOT CORNER GRADE C/W EXISTING GROUND
86.45 EX ×	TIE INTO EXISTING GRADE
96.79	FULL STATIC PONDING GRADE
	RETAINING WALL
105.30× T/W	TOP OF RETAINING WALL
103.50× B/W	PROPOSED BOTTOM OF RETAINING WALL
	TERRACING 3:1 MAXIMUM UNLESS NOTED OTHERWISE
	PRELIMINARY ROOF DRAIN LOCATION
TP 13-301	TEST PITS (SEE GEOTECHNICAL REPORT)
	CLAY DYKES PER S8
F.F.E.=106.30	PROPOSED BUILDING FINISHED FLOOR ELEVATION
U.S.F.=104.30	PROPOSED UNDERSIDE OF FOOTING ELEVATION
	PROPOSED TRANSFORMER
B	PROPOSED BIKE RACK

Commercial Sanitary STRUCTURE TABLE

NAME	RIM ELEV.	INVERT IN	INVERT IN AS-BUILT	INVERT OUT	INVERT OUT AS-BUILT	DESCRIPTION
MH101A	94.00	NW91.680		SE91.240		12000mmø OPSD-701.010
MH104A *	94.04	NW90.896 SW90.895		SE90.297		12000mmø OPSD-701.010
MH105A	93.80	NW91.952		NE91.364		12000mmø OPSD-701.010
MH112A	93.84	SE90.949		N90.351		12000mmø OPSD-701.010
MH113A	93.79			NW91.034		12000mmø OPSD-701.010
MH114A *	93.99	SE92.218		SW91.800		12000mmø OPSD-701.010

* COVERS FOR SANITARY MAINTENANCE HOLES TO HAVE WATERTIGHT LIDS AS PER OPSD-401.030.

Commercial – Storm STRUCTURE TABLE

NAME	RIM ELEV.	INVERT IN	INVERT IN AS-BUILT	INVERT OUT	INVERT OUT AS-BUILT	DESCRIPTION
CBMH6	93.95	NE91.531		SW91.500		12000mmø OPSD-701.010
CBMH8	93.77	SE91.879		NE91.286		12000mmø OPSD-701.010
CBMH114	93.95	NE92.159		SW92.113		12000mmø OPSD-701.010
MH101	94.03	SW91.085 NE91.380 NW91.957		SE91.011		12000mmø OPSD-701.010
MH103	94.24	SE92.345 N91.812		SW91.700		12000mmø OPSD-701.010
MH104 *	94.03	NW90.290 SW91.240 NE91.927		SE90.215		12000mmø OPSD-701.010
MH105	93.72	NW91.962		NE91.513		12000mmø OPSD-701.010
MH112	93.92	SE91.201		N90.638		12000mmø OPSD-701.010
MH113	93.83	SW91.611 SE91.946		NW91.306		12000mmø OPSD-701.010

* COVERS FOR STORM MAINTENANCE HOLES TO HAVE WATERTIGHT LIDS AS PER OPSD-401.030.

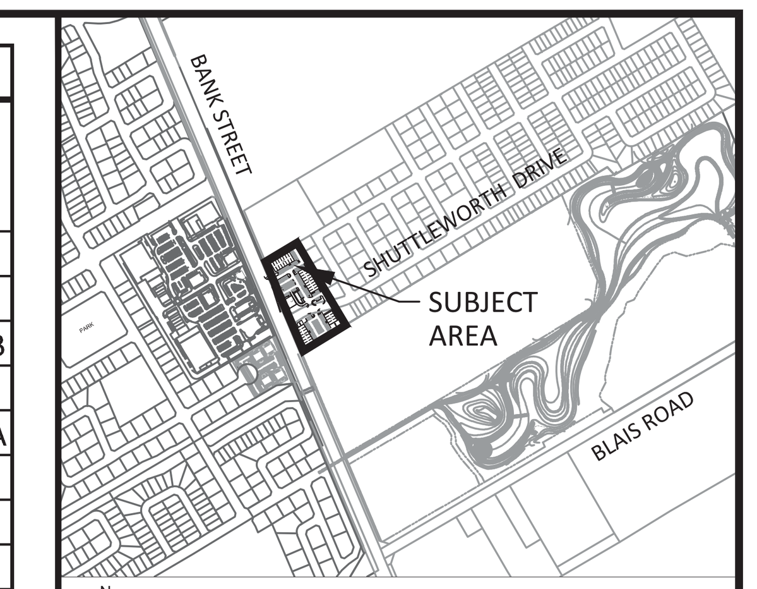
APPROVED
By Don Herweyer at 12:14 pm, Mar 15, 2019

DON HERWEYER, MCIP, RPP
MANAGER, DEVELOPMENT REVIEW - SOUTH
PLANNING, INFRASTRUCTURE & ECONOMIC
DEVEVELOPMENT DEPARTMENT, CITY OF OTTAWA

APPROVED ☐ REFUSED ☐

THIS ____ DAY OF ____________ , 20______

DON HERWEYER, MCIP, RPP
MANAGER, DEVELOPMENT REVIEW - SOUTH
PLANNING, INFRASTRUCTURE & ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



KEY PLAN
(NTS)

No.	REVISIONS	By	Date
14			
13			
12			
11			
10			
9			
8			
7			
6			
5	REVISED AS PER NEW SITE PLAN AND CITY COMMENTS	T.R.B.	2019:01:22
4	ISSUED FOR TENDER	T.R.B.	2019:01:17
3	RE-SUBMISSION FOR SITE PLAN APPROVAL	T.R.B.	2019:01:10
2	REVISED AS PER NEW SITE PLAN AND CITY COMMENTS	T.R.B.	2018:11:14
1	ISSUED FOR SPA	T.R.B.	2018:07:12

URBANDALE CORPORATION

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Project Title
Cowan's Grove
PLAZA
4791 BANK STREET

PROFESSIONAL ENGINEER
LICENSED
T. R. BRULE
2019/01/22
PROVINCE OF ONTARIO

Drawing Title
DETAILS AND NOTES

Scale
N.T.S.

Design	Date
J.B.	JUNE 2018
Drawn	**Checked**
D.P.S.	T.R.B.
Project No.	**Drawing No.**
116871	C-010

D07-12-18-0109

#17750

J:\116871_CowanComercl\5.9 Drawings\59civil\layouts\C-010.dwg Layout Name: C-010 Plot Style: AIA STANDARD-FULL.CTB Plot Scale: 1:25.4 Plotted At: 1/31/2019 8:38 AM Last Saved By: DSIURNA Last Saved At: Jan. 31, 19