

GENERAL NOTES:

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- REFER TO ARCHITECTS AND LANDSCAPE ARCHITECTS' DRAWINGS
- ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
- THE ORIGINAL TOPOGRAPHY AND GROUND ELEVATIONS, SERVICING AND SURVEY INFORMATION SHOWN ON THIS PLAN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF ALL INFORMATION OBTAINED FROM THIS PLAN.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- BEFORE COMMENCING CONSTRUCTION OBTAIN COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
- SIDE SLOPES FOR ALL EXCAVATIONS ARE TO BE IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT (ONTARIO REGULATION 213/91).
- PRIOR TO ANY ROCK EXCAVATION, CONTRACTOR IS REQUIRED TO COMPLETE A PRE-CONSTRUCTION SURVEY.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
- MAXIMUM EMBANKMENTS TO BE NO GREATER THAN 3:1.
- ALL CONCRETE CURBS TO COMPLY WITH CITY OF OTTAWA STANDARD BARRIER CURB SC 1-1, 150mm HIGH.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

GEOTECHNICAL REPORT:

- REFER TO SUPPLEMENTAL GEOTECHNICAL INVESTIGATION (09-1121-0163-30002, FEB. 2010) PREPARED BY GOLDER ASSOCIATES.

CRITICAL PIPE CROSSING TABLE		CLEARANCE	
1	375mm \varnothing STM INV=81.30	250mm \varnothing SAN OBV=80.84	0.46m
2	375mm \varnothing STM OBV=81.70	250mm \varnothing WM INV=81.85	0.15m
3	200mm \varnothing SAN OBV=80.90	250mm \varnothing WM INV=81.83	0.87m
4	900mm \varnothing STM OBV=82.38	200mm \varnothing SAN INV=82.60	0.22m
5	900mm \varnothing STM OBV=82.47	150mm \varnothing WM INV=82.70	0.23m
6	200mm \varnothing SAN OBV=82.42	150mm \varnothing WM INV=82.73	0.29m

WATERMAIN NOTES:

- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN	W17	CITY OF OTTAWA
HYDRANT	W18/W19	CITY OF OTTAWA
THERMAL INSULATION IN S HOLLOW TRENCHES	W25	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W33	CITY OF OTTAWA
WATERMETER	W31	CITY OF OTTAWA
SERVICE POST ASSEMBLY	W35	CITY OF OTTAWA
- WATERMAIN PIPE (150mm \varnothing) PVC DR 18
- WATERMAIN PIPE (200mm \varnothing) TYPE "K" COPPER / IPEX PEX TUBING
- WATER SERVICE (50mm \varnothing) TYPE "K" COPPER / IPEX PEX TUBING
- WM TRENCH - BEDDING (GRANULAR A) COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm)
- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
- ALL WATERMANS TO BE INSTALLED AT MIN. DEPTH OF 2.4m OR INSULATED AS PER CITY OF OTTAWA DETAIL W-17 AND/OR W-22 AND W-23.
- VALVE CHAMBERS AND VALVE BOXES PER CITY OF OTTAWA DETAILS W-1, W-2, W-3, W-4, W-5, W-6, W-7, W-8, W-9, OPSD 402.011, W-16, AND W-24.
- ALL WATERMAIN CROSSINGS AS PER CITY OF OTTAWA DETAIL W-25 AND W-25.2
- INSULATE ALL WATERMAIN AT ALL CATCHBASINS AND LEADS AS PER W-23 (TYPICALLY THE WATERMAIN SIDE ONLY).
- FIRE HYDRANTS AS PER CITY OF OTTAWA DETAILS W-18 AND W-19.
- CATHODIC PROTECTION REQUIRED FOR PVC WATERMAIN SYSTEMS PER CITY OF OTTAWA DETAILS W-40 AND W-42.
- ALL WATERMAIN TO BE INSTALLED COMPLETE WITH TRACING WIRE AS PER CITY OF OTTAWA DETAIL W-36.
- ALL WATERMAIN TO BE INSTALLED WITH THRUST BLOCKS AND RESTRAINING RINGS AS PER W-25.3, W-26.4, W-26.5 AND W-26.6.
- THRUST BLOCKS TO BE INSTALLED ON ALL CAPS, TEES, CROSSES, HORIZONTAL BENDS, TAPPING DEVICES, OTHER FITTINGS THAT STOP FLOW OR CHANGE DIRECTION OF FLOW AND HYDRANTS, AS PER WSD-D-26.5
- RESTRAINING RINGS TO BE INSTALLED ON ALL CAPS, TEES, CROSSES, HORIZONTAL AND VERTICAL BENDS, REDUCERS, SLEEVES, COUPLINGS, CURB-STUBS, AUXILIARY, ISOLATION LINE BRANCH VALVES, TAPPING VALVES, HYDRANTS, OTHER FITTINGS THAT STOP FLOW OR CHANGE DIRECTION, PUSH ON JOINTS WITHIN RESTRAINED LENGTH.
- WATER SERVICES TO BE INSTALLED AS PER CITY OF OTTAWA DETAIL W-33, W-35, AND W-36.
- WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
- DISINFECT AND TESTING OF WATERMAIN IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.

SEWER NOTES:

- SPECIFICATIONS:

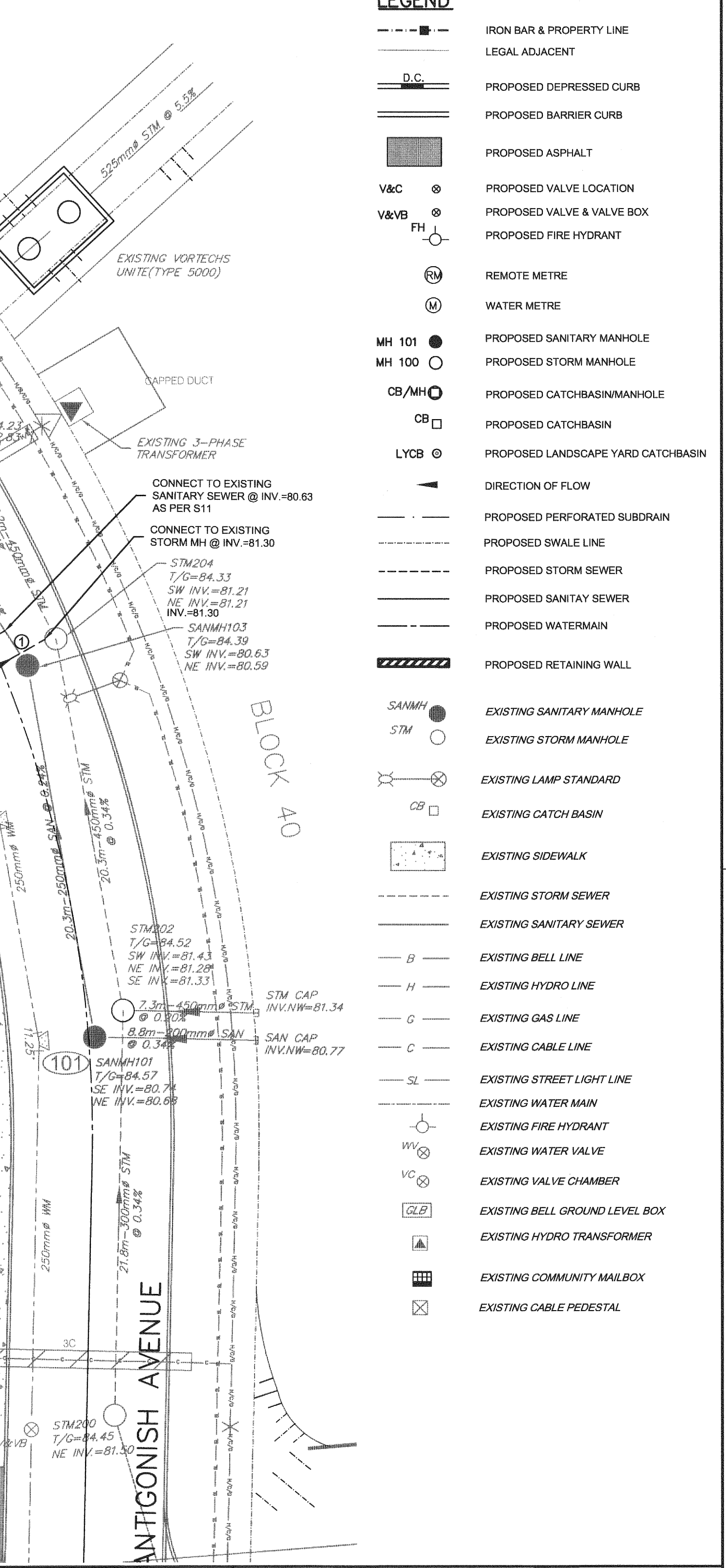
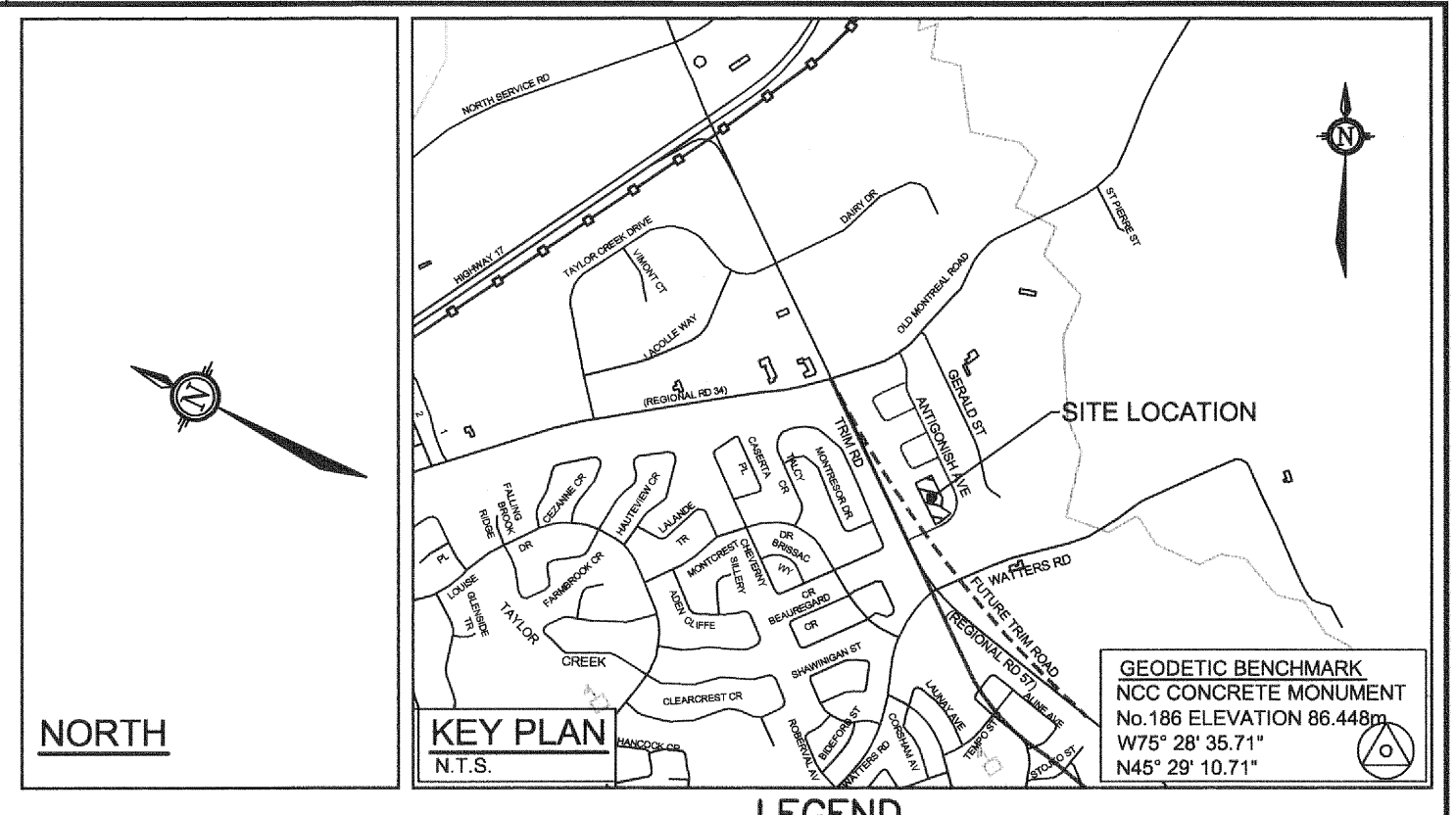
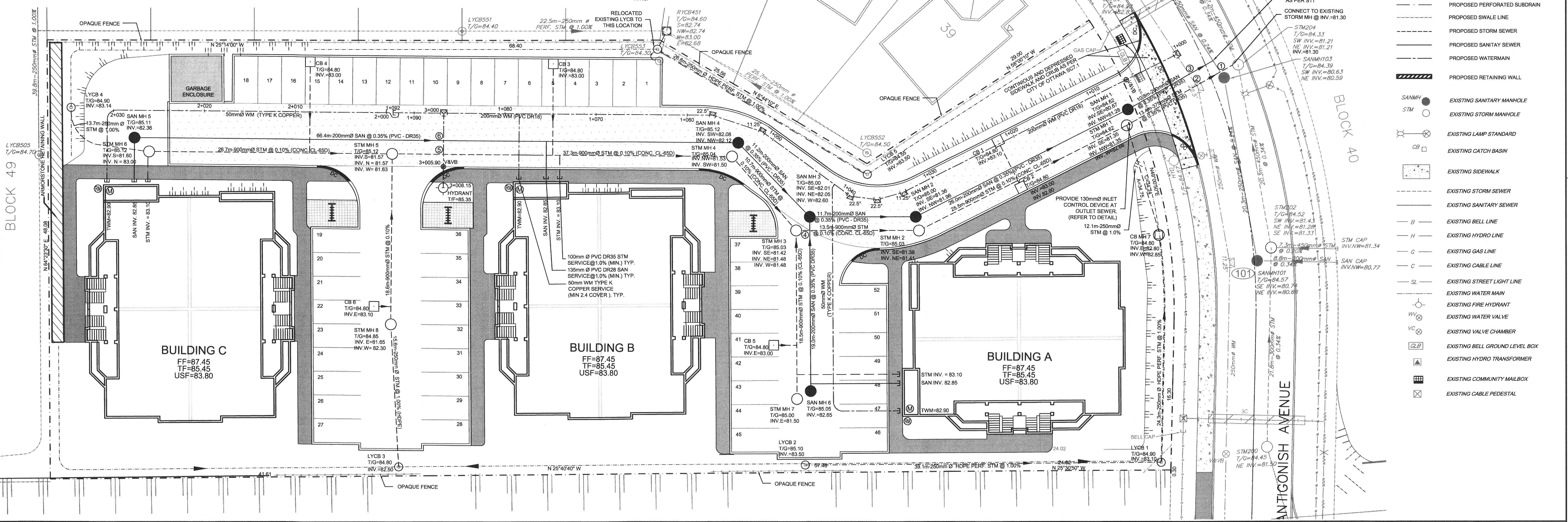
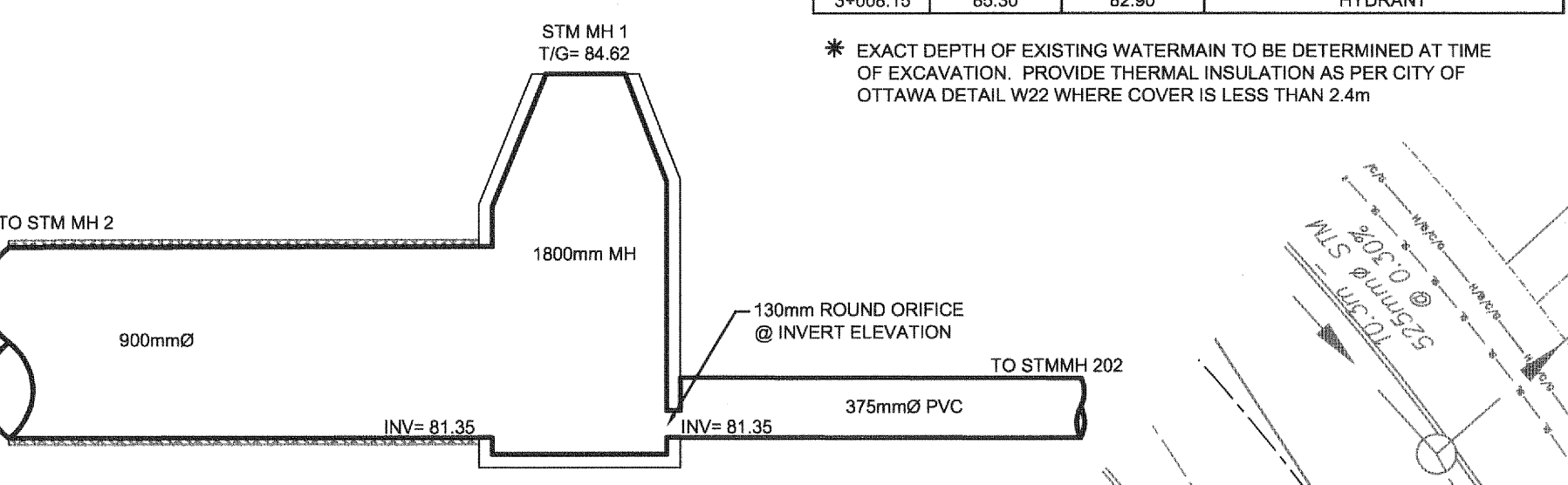
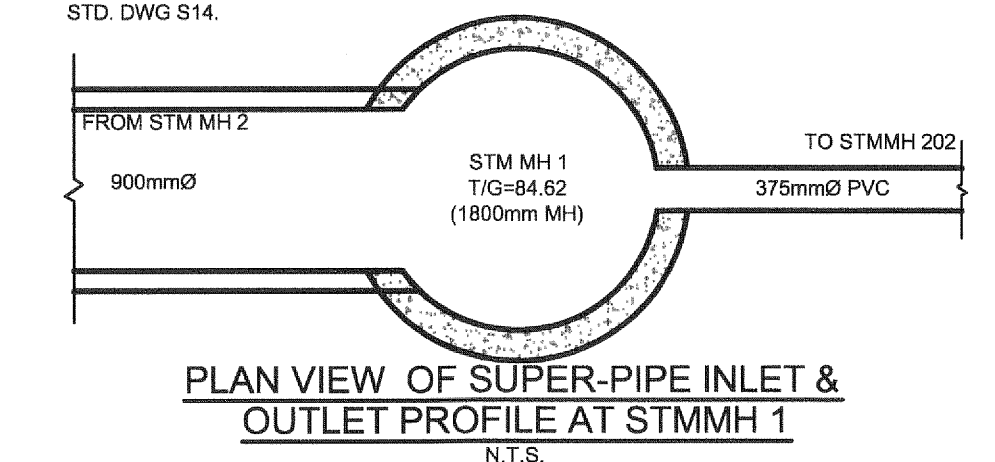
ITEM	SPEC. No.	REFERENCE
CATCHBASIN (800x600mm)	705.010	OPSD
STORM (1800x)	701.010	OPSD
SANITARY MAN-HOLE (1200x)	701.010	OPSD
CB, FRAME & COVER	S19.1	CITY OF OTTAWA
STORM/SANITARY MH FRAME & COVER	S24, S24.1, S25	CITY OF OTTAWA
- SEWER TRENCH - BEDDING (GRANULAR A) COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm)
- PVC DR 35 ($\varnothing < 450$ mm) CONC. CL. 65D (24x450mm)
- PVC DR 35
- HDPE DR26
- INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmx1200mm H-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
- FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MAN-HOLES (FOR EXAMPLE KOR-N-SEAL, PSX POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
- THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSD 410.07.16, 410.07.18, 410.07.19 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.
- CBMHS ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
- CONTRACTOR TO TELEWISE (CCTV) ALL PROPOSED SEWERS, 200mm \varnothing OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
- ALL WORKS SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.
- ALL SANITARY SEWER AND STORM SEWER CAPS ARE TO BE WATERTIGHT.
- FULL PORT BACKWATER VALVES ARE REQUIRED ON THE SANITARY SERVICES, INSTALLED AS PER CITY STD. DWG S14-1. AND A BACKWATER VALVE IS REQUIRED ON THE STORM SERVICES / FOUNDATION DRAINS FOR THE BUILDING PERIMETER, INSTALLED AS PER CITY STD. DWG S14.

BUILDING SERVICES DATA				
BUILDING NO.	USF ELEVATION	SAN INVERT	STM INVERT	TWM
A	83.80	82.85	83.10	82.90
B	83.80	82.85	83.10	82.90
C	83.80	82.85	83.10	82.90

CATCHBASIN TABLE					
CB No.	T/G ELEVATION	INVERT	HYDROVEX	5-YR HEAD (m)	RELEASE RATE (L/s)
1	84.80	83.10	-	-	-
2	84.80	82.90	75-SVHV	1.63	5
3	84.80	83.00	75-SVHV	1.83	5
4	84.80	83.00	75-SVHV	1.83	5
5	84.80	83.00	83-SVHV	1.83	20.15
6	84.80	83.10	114-SVHV	1.83	38
CBM17	84.60	82.80	250-SVHV	1.46	2.83

WATERMAIN TABLE			
STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
1+000.00	84.30	81.90	250mm x 200mm TEE
1+006.20	84.40	82.00	VALVE & VALVE BOX
1+010.00	84.64	82.24	-
1+020.00	84.85	82.45	-
1+030.00	84.84	82.44	-
1+033.50	84.87	82.47	11.25° BEND
1+036.55	84.90	82.50	22.5° BEND
1+039.50	84.93	82.53	22.5° BEND
1+040.00	84.93	82.53	-
1+041.40	84.93	82.53	TEE
1+050.00	85.00	82.60	-
1+051.50	85.01	82.61	11.25° BEND
1+057.20	85.02	82.62	22.5° BEND
1+060.00	85.02	82.62	-
1+070.00	84.95	82.55	-
1+080.00	84.98	82.58	-
1+086.80	85.05	82.65	200mm x 150mm TEE
1+090.00	85.00	82.60	-
1+091.70	85.00	82.60	50mm WM CONNECTION
1+092.30	85.00	82.60	CAP
2+000.00	85.05	82.65	-
2+010.00	84.87	82.47	-
2+020.00	85.03	82.63	-
2+030.00	85.30	82.80	-
2+028.10	85.45	83.05	CAP
3+000.00	85.05	82.65	200mm x 150mm TEE
3+005.90	85.15	82.75	VALVE
3+008.15	85.30	82.90	HYDRANT

* EXACT DEPTH OF EXISTING WATERMAIN TO BE DETERMINED AT TIME OF EXCAVATION. PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W22 WHERE COVER IS LESS THAN 2.4m



NOTE: THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, 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.

CLARIDGE HOMES
 CLARIDGE HOMES SUITE 2001, 210 GLADSTONE AVENUE, OTTAWA, ONTARIO K2P 0Y6.

NOTE: CONTRACTOR TO CONFIRM ELEVATIONS OF INFRASTRUCTURE IN THE STREET PRIOR TO EXTENDING SERVICES INTO THE SITE AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.

No.	REVISION	DATE	BY
6.	ISSUED FOR SITE PLAN APPLICATION	MAR. 12/2012	GJM
5.	ISSUED TO ARCHITECT FOR REVIEW	MAR.06/2012	BHB
4.	ISSUED TO ARCHITECT FOR REVIEW	FEB. 13/2012	BHB
3.	ISSUED TO ARCHITECT FOR REVIEW	FEB. 6/2012	BHB
2.	ISSUED TO ARCHITECT FOR REVIEW	NOV. 9/2011	GJM
1.	ISSUED TO ARCHITECT FOR REVIEW	OCT. 19/2011	GJM

SCALE: 1:200

DESIGN: BHB
 CHECKED: GJM
 DRAWN: LLW
 CHECKED: BHB
 APPROVED: GJM

FOR REVIEW ONLY

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LOCATION: CITY OF OTTAWA, ROYAL RIDGE BLOCK 47
 DRAWING NAME: GENERAL PLAN OF SERVICES
 PROJECT No.: 111156-00
 REV: REV # 8
 DRAWING No.: 111156-GP

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