SEWER NOTES:

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200mmØ)	701.010	OPSD
CB, FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
WATERTIGHT MH FRAME AND COVER	401.030	OPSD
SEWER TRENCH	56	CITY OF OTTAWA
STORM SEWER	PVC DR 35	
SANITARY SEWER	PVC DR 35	
SANITARY SEWER BELOW DRY POND	IPEX TERRABRUTE CR	
CATCHBASIN LEAD	PVC DR 35	

3. ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2
4. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
5. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
6. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
7. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX POSITIVE SEAL AND DURASEAL), THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
8. 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 OPSS 410.07.16, 410.07.16.04 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.
9. ALL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS UNLESS OTHERWISE INDICATED.
10. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
11. ALL WEEPING TILE CONNECTIONS ARE TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES.
12. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES. PROVIDE COPY OF THE FINAL CCTV INSPECTION REPORT TO THE ENGINEER.

LEGEND

- PROPOSED SANITARY MH & SEWER
- PROPOSED CATCHBASIN MANHOLE c/w 3.0m RADIAL SUBDRAINS PER GETOTECH
- PROPOSED STORM MANHOLE & SEWER
- PROPOSED CATCHBASIN c/w 3.0m RADIAL SUBDRAINS PER GETOTECH
- PROPOSED HYDRANT AND VALVE
- PROPOSED BARRIER CURB
- PROPOSED DEPRESSED CURB
- PROPOSED WATERMAIN AND DIAMETER
- PROPOSED VALVE AND VALVEBOX
- PROPOSED BEND AND THRUSTBLOCK 11.25°, 22.5°, 45° or TEE
- PROPOSED CAP
- PROPOSED INLET CONTROL DEVICE
- ROOF DRAIN
- THERMAL INSULATION FOR SHALLOW SEWERS
- PROPOSED BUILDING ENTRANCE
- PROPOSED RETAINING WALL
- PROPOSED STORMWATER QUALITY TREATMENT UNIT

- PROPERTY LINE
- EXISTING CONCRETE CURB
- EXISTING SANITARY MANHOLE AND SEWER
- EXISTING CATCHBASIN MANHOLE
- EXISTING STM MANHOLE AND SEWER
- EXISTING CATCHBASIN C/W CATCHBASIN LEAD
- EXISTING HYDRANT
- EXISTING UTILITY POLE C/W GUY WIRE
- EXISTING WATERMAIN
- EXISTING HYDRANT C/W VALVE & LEAD
- EXISTING LIGHT STANDARD
- EXISTING FENCE
- EXISTING OVERHEAD UTILITY WIRES

- PROPOSED WATER METER AND REMOTE METER
- PROPOSED GAS METER
- CONCRETE HEADWALLS
- PROPOSED TRANSFORMER

CONNECTION TO EXISTING 200mmØ WATERMAIN TO BE FIELD DETERMINED BY CITY OF OTTAWA FORCES. EXCAVATION, BACKFILL AND REINSTATEMENT BY CONTRACTOR. ROAD CUT REINSTATEMENT AS PER CITY OF OTTAWA STANDARD R10.

INSTALLATION OF PROPOSED 200mmØ WATERMAIN ACROSS PRINCE OF WALES DRIVE TO BE COMPLETED AS TO MINIMIZE DISRUPTION BY TRENCHLESS METHOD OF THE ROADWAY OPERATIONS

REFER TO ROADWAY MODIFICATIONS PLANS (RMA-2019-TPD-033 BY OTHERS) FOR PROPOSED RMA WORKS WITHIN THE PRINCE OF WALES DRIVE RIGHT-OF-WAY AND THE NEW SITE ACCESS ENTRANCES, INCLUDING THE EAST ROADSIDE DITCHES, ASSOCIATED CULVERTS AND CATCHBASIN OUTLET.

PORTIONS OF ABANDONED 150mmØ SANITARY SEWER ON-SITE MAY NEED TO BE REMOVED TO INSTALL NEW SERVICING, CAP AND ABANDON REMAINING SEWER STUBS AS REQUIRED PER CITY STANDARD S11.4

CONNECTION TO EXISTING 200mmØ WATERMAIN TO BE FIELD DETERMINED BY CITY OF OTTAWA FORCES. EXCAVATION, BACKFILL AND REINSTATEMENT BY CONTRACTOR. COORDINATE WORK WITH CARLETON LODGE.

CAP AND ABANDON EXISTING PIPE TO THE NORTHEAST PER CITY OF OTTAWA SPEC F-00015B-06. REMOVE EXISTING PIPE TO THE SOUTHWEST. PLUG ABANDONED HOLES. ADJUST BENCHING AND REINSTATE THE EXISTING STRUCTURE AS REQUIRED.

CONNECT TO EX. SANITARY MANHOLE FROM THE SOUTHEAST. EXISTING OUTLET (TOWARDS CARLETON LODGE PUMP STATION) INVERT=81.55. PROPOSED CONNECTION INVERT=81.58.

THE PROPOSED SANITARY SEWER BETWEEN SAN MH 1 AND THE EXISTING OUTLET MANHOLE IS TO BE CONSTRUCTED WITH IPEX TERRABRUTE CR PIPE. THE TERRABRUTE PIPE AND RESTRAINED JOINTS ARE PROPOSED TO MITIGATE ANY INFILTRATION CONCERNS BELOW THE DRY POND.

NO MODIFICATIONS ARE TO BE MADE TO THE EXISTING OUTLET DITCH ALONG LODGE ROAD. MAINTAIN AND PROTECT THE EXISTING ROADSIDE DITCH CONDITIONS AND EXISTING CULVERTS AS REQUIRED.

PROPOSED STORM SEWER OUTLET TO EXISTING DITCH. PROVIDE OUTLET HEADWALL PER OPSD 804.030 c/w RODENT GRATE, OUTLET INVERT = 82.71, MAINTAIN AND PROTECT EXISTING DITCH AND DITCH FLOWS DURING ALL PHASES OF CONSTRUCTION.

APPROXIMATE ALIGNMENT OF INCOMING GAS SERVICE (DESIGNED BY OTHERS)
APPROXIMATE ALIGNMENT OF INCOMING DATA SERVICE (DESIGNED BY OTHERS)
APPROXIMATE ALIGNMENT OF INCOMING ELECTRICAL SERVICE (DESIGNED BY OTHERS)
APPROXIMATE ALIGNMENT OF CONCRETE ENCASED HYDRO SERVICES (DESIGNED BY OTHERS)
APPROXIMATE ALIGNMENT OF CONCRETE ENCASED HYDRO SERVICE (DESIGNED BY OTHERS)

PROPOSED 200mmØ WATERMAIN TABLE

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
0+000	91.20	88.80	TEE CONNECTION TO EX. 200mmØ WM
0+001.8	91.19	88.90	CROSS ABOVE EX. 200Ø SAN (±0.5m CLEARANCE)
0+003.9	91.16	88.99	CROSS ABOVE EX. 1350Ø SAN TRUNK(±6m CLEAR)
0+004.5	91.14	89.00	CROSS ABOVE EX. 375Ø STM (±0.5m CLEARANCE)
0+005.2	91.13	89.00	22.5° HORIZONTAL BEND
0+012.2	91.28	89.00	CROSS BELOW EX. BELL (±1.6m CLEARANCE)
0+018.9	91.21	89.00	CROSS ABOVE EX. 250Ø SAN FM(±0.15m CLEAR)
0+020	91.20	88.80	TRENCHLESS INSTALLATION ± 0+020 to ± 0+050
0+025	91.14	88.74	TRENCHLESS INSTALLATION ± 0+020 to ± 0+050
0+050	89.30	88.65	TRENCHLESS INSTALLATION ± 0+020 to ± 0+050
0+050.2	88.90	86.65	CROSS BELOW EX. GAS/DITCH (±1.0m CLEARANCE)
0+055.2	89.25	86.85	PROPERTY LINE / 200mmØ V&VB
0+056.8	89.20	86.80	CROSS BELOW NEW HYDRO (±1.4m CLEARANCE)
0+059.8	89.10	86.70	45° HORIZONTAL BEND
0+063.4	89.10	86.70	200 x 200 x 200 TEE (1+000)
0+075	88.85	86.45	- - -
0+080.7	89.10	86.70	200 x 200 x 200 HYDRANT TEE
0+093.0	90.05	87.65	200mmØ VALVE AND VALVE BOX
0+095.2	90.03	87.63	45° HORIZONTAL BEND
0+098.2	90.00	87.60	200 x 200 x 200 TEE (3+000)
0+100	89.96	87.56	- - -
0+125	89.56	87.02	- - -
0+132.1	89.46	86.85	CROSS BELOW 250mmØ STM (±0.5m CLEARANCE)
0+150	89.70	86.67	- - -
0+175	88.82	86.42	- - -
0+175.8	88.80	86.40	45° HORIZONTAL BEND
0+188.6	88.20	85.80	45° HORIZONTAL BEND
0+200	87.85	85.45	- - -
0+204.1	87.65	85.25	CROSS BELOW 250mmØ STM (±0.5m CLEARANCE)
0+209.0	87.50	85.10	CROSS BELOW NEW HYDROx2 (±1.4m CLEARANCE)
0+220.0	87.35	84.80	200 x 200 x 200 TEE (2+416.2)
0+223.0	87.35	84.85	200mmØ VALVE AND VALVE BOX
0+225	87.35	84.90	- - -
0+243.6	86.50	84.10	45° HORIZONTAL BEND
0+250	86.40	84.00	- - -
0+251.0	86.40	84.00	45° HORIZONTAL BEND
0+263.4	86.30●	83.90 ●	TEE CONNECTION TO EX. 200mmØ WM

● 200mm x 200mm x 200mm TEE CONNECTIONS TO EXISTING 200mmØ WATERMAINS. EXACT ELEVATION TO BE FIELD DETERMINED.
●● PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W23 AND DETAIL W22 WHERE COVER IS LESS THAN 2.4m AND/OR ADJACENT TO OPEN STRUCTURES.

PROPOSED 200mmØ WATERMAIN TABLE

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
2+000	89.00	86.60	200 x 200 x 200 TEE (1+061.1)
2+003.0	88.84	86.44	200mmØ VALVE AND VALVE BOX
2+004.4	88.80	86.40	11.25° HORIZONTAL BEND
2+007.0	88.66	86.26	CROSS BELOW NEW HYDRO (±1.4m CLEARANCE)
2+025	87.88	85.48	- - -
2+040.1	87.50	85.10	CROSS BELOW NEW HYDROx2 (±1.4m CLEARANCE)
2+050	87.15	84.75	- - -
2+075	86.30	83.90	- - -
2+094.1	85.66	83.26	CROSS BELOW 525mmØ STM (±0.5m CLEARANCE)
2+097.5	85.55	83.15	200mmØ VALVE AND VALVE BOX
2+099.5	85.50	83.10	200 x 200 x 150 HYDRANT TEE
2+100	85.50	83.10	- - -
2+125	84.96	82.56	- - -
2+147.0	84.83	82.35	22.5° HORIZONTAL BEND
2+149.2	84.82	82.35	45° HORIZONTAL BEND
2+150	84.82	82.35	- - -
2+175	84.95	82.55	- - -
2+200	85.05	82.65	- - -
2+114.9	85.03	82.63	200mmØ VALVE AND VALVE BOX
2+225	85.10	82.70	- - -
2+227.0	85.10	82.70	200 x 200 x 150 HYDRANT TEE
2+250	85.10	82.80	- - -
2+266.8	84.95	82.55	CROSS BELOW 250mmØ STM (±0.7m CLEARANCE)
2+275	84.80	82.40	- - -
2+290.8	84.58	82.18	45° HORIZONTAL BEND
2+300	84.62	82.22	- - -
2+306.3	84.57	82.17	45° HORIZONTAL BEND
2+312.4	84.80	82.40	CROSS ABOVE 200mmØ SAN (±0.3m CLEARANCE)
2+326.1	85.18	82.78	CROSS BELOW 450mmØ STM (±0.6m CLEARANCE)
2+348	85.08	82.68	INSULATE WM (PROXIMITY TO CBMH 1)
2+350	85.08	82.68	- - -
2+350.4	85.08	82.68	CROSS BELOW 250mmØ STM (±0.6m CLEARANCE)
2+353	85.10	82.70	INSULATE WM (PROXIMITY TO CBMH 1)
2+355.8	85.12	82.72	200mmØ VALVE AND VALVE BOX
2+363.6	85.23	82.83	CROSS BELOW 450mmØ STM (±0.7m CLEARANCE)
2+367.4	85.30	82.90	200 x 200 x 150 HYD TEE
2+375	85.57	83.17	- - -
2+400	86.65	84.25	- - -
2+402.5	86.77	84.37	CROSS BELOW 300mmØ STM (±0.5m CLEARANCE)
2+413.2	87.24	84.78	200mmØ VALVE AND VALVE BOX
2+416.2	87.35	84.80	200 x 200 x 200 TEE (2+220.0)

●●● INSULATE SHALLOW HYDRANT LEAD PER CITY OF OTTAWA STANDARD DETAIL W22 TO ALLOW FOR CROSSING CLEARANCE FROM ADJACENT SANITARY FORCEMAIN.

PROPOSED 200mmØ WATER SERVICE TABLE

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
3+000	90.00	87.60	200 x 200 x 200 TEE (0+098.2)
3+002.5	90.00	87.60	200mmØ VALVE AND VALVE BOX
3+005.9	90.05	87.65	CROSS BELOW NEW COMMS (±1.7m CLEARANCE)
3+007.7	90.08	87.65	CROSS BELOW NEW HYDRO (±1.4m CLEARANCE)
3+017.5	90.15	87.65	CAP 1.0m FROM BUILDING FACE

PROPOSED 200mmØ WATERMAIN TABLE

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
1+000	89.10	86.70	200 x 200 x 200 TEE (0+063.4)
1+002.0	89.05	86.65	200mmØ VALVE AND VALVE BOX
1+003.3	89.00	86.60	CROSS BELOW NEW COMMS (±1.7m CLEARANCE)
1+005.3	88.85	86.45	CROSS BELOW NEW HYDRO (±1.4m CLEARANCE)
1+013.7	88.65	86.25	45° HORIZONTAL BEND
1+025	88.40	86.00	- - -
1+046.9	88.85	86.30	CROSS BELOW NEW GAS (±1.4m CLEARANCE)
1+050	88.80	86.40	- - -
1+056.2	88.95	86.55	22.5° HORIZONTAL BEND
1+061.3	89.00	86.60	200 x 200 x 200 TEE (2+000)
1+067.1	89.00	86.60	200mmØ VALVE AND VALVE BOX
1+070.1	88.70	86.30	CAP FOR POSSIBLE FUTURE EXPANSION

GENERAL NOTES:

1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
4. BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR $5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
5. 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.
6. 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.
7. ALL ELEVATIONS ARE GEODETIC. EXISTING TOPOGRAPHIC INFORMATION HAS BEEN COMPILED FROM CITY OF OTTAWA 1:1000 BASE MAPPING AND TOPOGRAPHIC SURVEY INFORMATION FROM JOB #180982-18 BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. DATED JUNE 13, 2018.
8. REFER TO GEOTECHNICAL REPORTS (NO. 1537295-1000, DATED MAY 2017), (NO. 1513154000, DATED APRIL 2019) AND (TECHNICAL MEMORANDUM, DATED JUNE 2019), PREPARED BY GOLDER ASSOCIATES LTD., FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND FOR GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
9. REFER TO ARCHITECTS AND LANDSCAPE ARCHITECTS DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
10. REFER TO THE SITE SERVICING REPORT (R-2018-151) AND THE STORMWATER MANAGEMENT REPORT (R-2018-150) BOTH PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
11. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
12. PROVIDE LINE/PARKING PAINTING.
13. 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 TO ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES. ETC.

BENCHMARK INFO:

JOB BENCHMARK No. 1: CUT CROSS ON CONCRETE BASE OF LIGHT STANDARD NEAR NORTH-EAST CORNER THE INTERSECTION OF PRINCE OF WALES DRIVE AND LODGE ROAD.
ELEVATION = 87.57m.

JOB BENCHMARK No. 2: MAGNETIC NAIL AT EAST EDGE OF EXISTING LODGE ROAD.
ELEVATION = 84.70m.

REFER TO THE OLS PLAN OF SURVEY (DRAWING 18982-18) BY AOV FOR SPECIFIC DETAILS.

WATERMAIN NOTES:

1. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE CITY OF OTTAWA FORCES.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
HYDRANT INSTALLATION	W19	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING OVER SEWER	W25.2	CITY OF OTTAWA
WATERMAIN	PVC DR 18	

3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
4. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE NOTED.
5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

ICD DATA TABLE - STM MH 1

DESIGN EVENT	ICD TYPE / MODEL	DIAMETER OF OUTLET PIPE (mm)	DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)
1:5 YR	PLUG TYPE (225mmØ ORIFICE)	525	76.9	0.69	83.48
1:100 YR	PLUG TYPE (225mmØ ORIFICE)	525	93.9	0.97	83.76

INSULATION NOTES:
1. THE THICKNESS OF SEWER INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm OF COVER BELOW THE REQUIRED DEPTH OF COVER LESS THAN 1500mm (SEE TABLE)

E = THICKNESS OF INSULATION (mm)
h = DEPTH OF COVER
W = WIDTH OF TRENCH
W = WIDTH OF INSULATION (mm)
D = O.D OF PIPE (mm)

COVER (mm)	INSULATION THICKNESS (mm)
1500>1200	75
1200>900	100
900>600	125

INSULATION DETAIL FOR SHALLOW SEWERS
NOT TO SCALE

WATERMAIN CROSSING BELOW SEWER
NOT TO SCALE

1 : 400

SOUTH BLOCK (THREE-STOREY)
LEVEL 2=95.35
LEVEL 1=90.85
LEVEL 0=85.65
LOW USF=84.65

NORTH BLOCK (HIGH ROOF)

MECHANICAL PENTHOUSE ROOF

ATRIUM ROOF

PARKADE (TWO-STOREY)

SERVICE BLOCK (ONE-STOREY)

CARLETON LODGE

CARLETON LODGE STAFF & OVERFLOW PARKING LOT

RIDEAU RIVER

LODGE ROAD

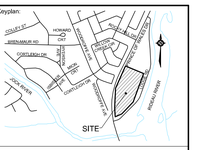
PRINCE OF WALES DRIVE

WILLOW CREEK CIRCLE

CHESTERMERE CRESCENT

STORMTECH SC-310 CHAMBERS

Keyplan:



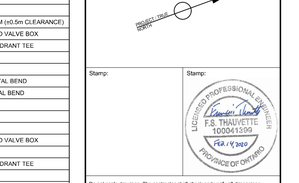
NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

#	DATE	REVISION NOTE
7	FEB 14/20	ISSUED FOR SPA (R3)
6	JAN 23/20	ISSUED FOR GEOTECHNICAL REVIEW
5	DEC 20/19	ISSUED FOR BUILDING PERMIT
4	OCT 10/19	REVISED PER CITY COMMENTS
3	OCT 3/19	ISSUED FOR 66% DESIGN
2	MAY 31/19	ISSUED FOR 33% DESIGN
1	MAY 29/19	ISSUED FOR SITE PLAN APPROVAL

MORIYAMA & TESHIMA ARCHITECTS
mtarch.com
117 George Street, Toronto, Ontario Canada M5A 2N4 416-925-4484
109 Murray Street, Unit 3 Ottawa, Ontario Canada K1N 5M5 613-562-2908

CS&P Architects
csparch.com
2345 Yonge Street, Suite 200, Toronto, Ontario M4P2E5 416-482-5002

Stamp:



Do not scale drawings. The contractor shall check and verify all dimensions and report any errors or omissions to this architect before commencing or proceeding with any work. All drawings remain the property of the architect.

Owner / Developer:
CITY OF OTTAWA
110 LAURIER AVENUE WEST,
OTTAWA ON K1P 1J1

Applicant:
COLLIERS PROJECT LEADERS INC.
150 ISABELLA STREET, SUITE 700,
OTTAWA ON. K1S 1V7

Project:
SOUTH FACILITY PHASE A
3505 PRINCE OF WALES DRIVE,
OTTAWA ON.

Title:
SITE SERVICING PLAN

Scale:	1 : 400
Date:	22 April, 2019
Job No.:	118048 Civil
Drawn By:	SM - Novatech
Checked By:	FST - Novatech
Appoved By:	FST - Novatech
Sheet No.:	C-100

D07-12-19-0090

CITY PLAN # 17973

A0

Sheet Size: A0 (841 x 1189)
M:\2018\118048\CAD\Design\118048-GP.dwg, C-100, Feb 13, 2020 - 4:26pm, smatthews