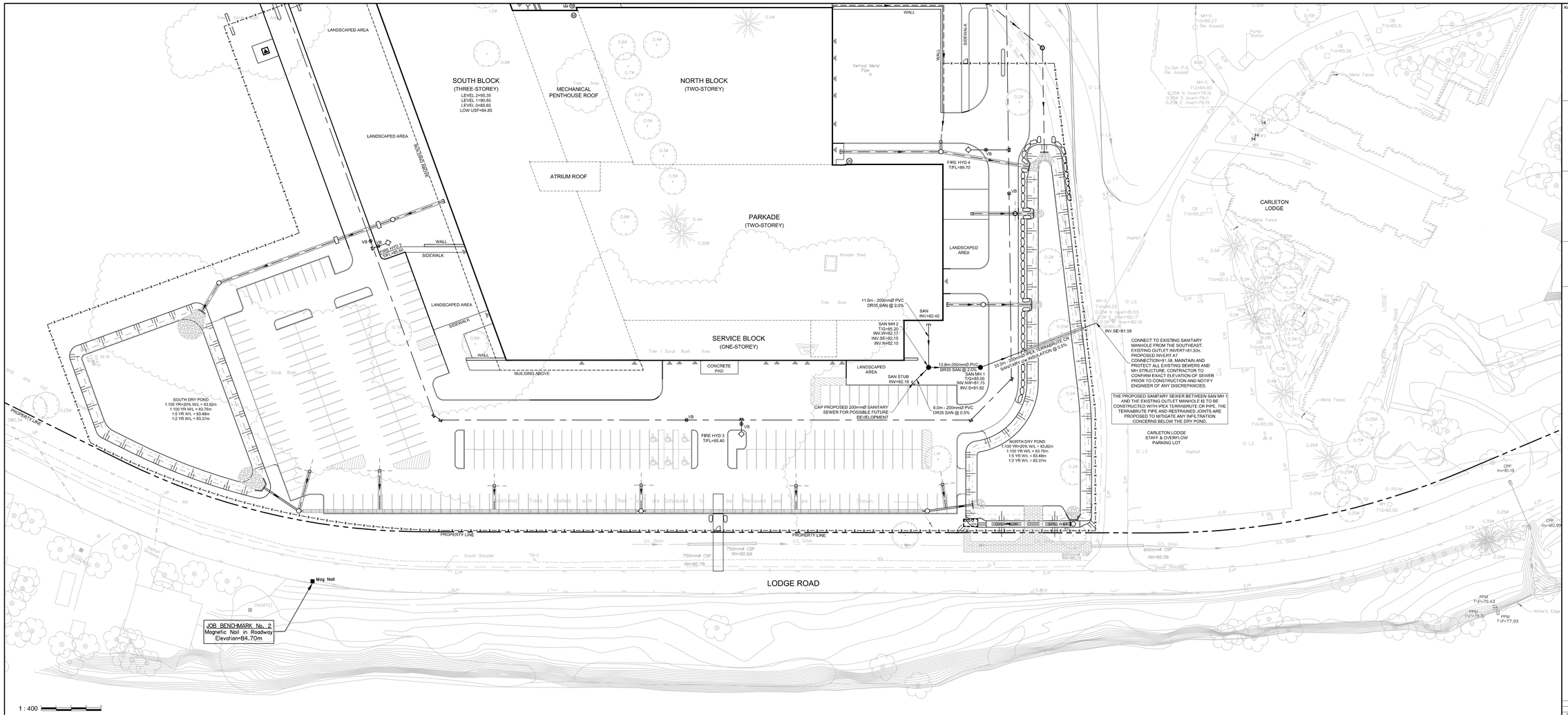


GENERAL NOTES:

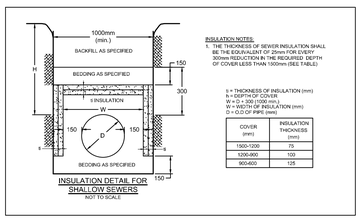
1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
3. OBTAIN 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 #18982-18 BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. DATED JUNE 13, 2018.
8. REFER TO GEOTECHNICAL REPORTS (NO. 1811131G-4000, DATED APRIL 2019) AND (NO. 1537295-1000, DATED MAY 2017), 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 T/G 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 = 87.51m.

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.



INSULATION DETAIL FOR SHALLOW SEWERS
NOT TO SCALE

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

t = THICKNESS OF INSULATION (mm)
h = DEPTH OF COVER
W = D + 300 (1050 min.)
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

SEWER NOTES:

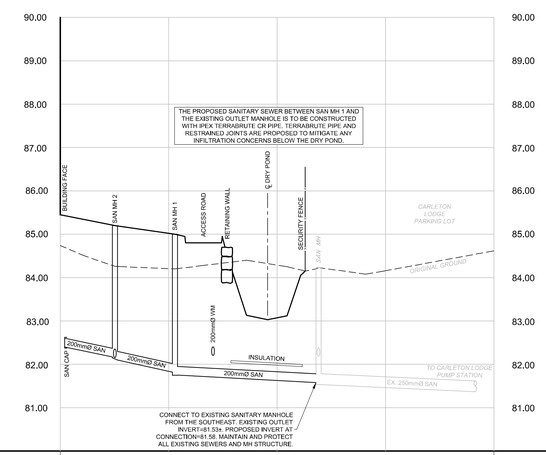
1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. SPECIFICATIONS:

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	S6	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, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES. PROVIDE COPY OF CCTV INSPECTION REPORT TO THE ENGINEER.

LEGEND

SAN MH 1	PROPOSED SANITARY MH & SEWER
CBMH 3	PROPOSED CATCHBASIN MANHOLE c/w 3.0m RADIAL SUBDRAINS PER GETOTECH
STM MH 1	PROPOSED STORM MANHOLE & SEWER
CB 2	PROPOSED CATCHBASIN c/w 3.0m RADIAL SUBDRAINS PER GETOTECH
HYD VB	PROPOSED HYDRANT AND VALVE
DC	PROPOSED BARRIER CURB
	PROPOSED DEPRESSED CURB
200mmØ W	PROPOSED WATERMAIN AND DIAMETER
VB	PROPOSED VALVE AND VALVEBOX
BEND	PROPOSED BEND AND THRUSTBLOCK 11.25°, 22.5°, 45° or TEE
	PROPOSED CAP
ICD	PROPOSED INLET CONTROL DEVICE
RD	ROOF DRAIN
	THERMAL INSULATION FOR SHALLOW SEWERS
	PROPOSED BUILDING ENTRANCE
	PROPOSED RETAINING WALL
SWQU	PROPOSED STORMWATER QUALITY TREATMENT UNIT
PROPERTY LINE	PROPERTY LINE
SANMH	EXISTING CONCRETE CURB
	EXISTING SANITARY MANHOLE AND SEWER
CBMH	EXISTING CATCHBASIN MANHOLE
STMMH	EXISTING STORM MANHOLE AND SEWER
CB	EXISTING CATCHBASIN C/W CATCHBASIN LEAD
HYD	EXISTING HYDRANT
EX UP	EXISTING UTILITY POLE C/W GUY WIRES
300mmØ WM	EXISTING WATERMAIN
HYD	EXISTING HYDRANT C/W VALVE & LEAD
LS	EXISTING LIGHT STANDARD
	EXISTING FENCE
	EXISTING OVERHEAD UTILITY WIRES
W	PROPOSED WATER METER AND REMOTE METER
G	PROPOSED GAS METER
	CONCRETE HEADWALLS



EXISTING ELEVATION		86.16		86.26		86.23		84.40		86.25	84.25		84.05	84.15	EXISTING ELEVATION
PROPOSED ELEVATION	85.45		85.20		85.00		84.80		83.13	83.03	83.12	84.15			PROPOSED ELEVATION
STORM SEWER INVERT						13.8 - 200mmØ PVC SAN @ 2.0%									STORM SEWER ELEVATION
SANITARY SEWER INVERT	82.40	W 80.17 SE 80.15 N 82.10			S 81.82 NW 81.75	33.2m-200mmØ TERRABRUTE SAN @ 0.5%						SE 81.58 W 81.53 N 82.19	70.0m-250mmø SAN @±0.7%		SANITARY SEWER ELEVATION
TOP OF WATERMAIN ELEVATION			11.6m - 200mmØ PVC SAN @ 2.0%				82.40								TOP OF WATERMAIN ELEVATION
DESCRIPTION	S=005 BUILDING S=007 CAP		S=012.6 SAN MH2		S=006.4 SAN MH1		S=035.2 VMLX7NG		S=038.3 INSUL		S=005.8 INSUL	S=008.6 EX MH1			DESCRIPTION
CHAINAGE															CHAINAGE

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DRAFT

NOT FOR CONSTRUCTION

#	DATE	REVISION NOTE
2	OCT 10/19	REVISED PER CITY COMMENTS
1	OCT 3/19	ISSUED FOR 66% DESIGN

MORIYAMA & TESHIMA ARCHITECTS
117 George Street, Toronto, Ontario Canada M5A 2N4 416-925-4484
109 Murray Street, Unit 3 Ottawa, Ontario Canada K1N 5M5 613-562-2008

CS&P Architects
117 George Street, Suite 200, Toronto, Ontario M4P2E5 416-482-5002

Stamp:

LICENSED PROFESSIONAL ENGINEER
F.S. THAUVETTE
100041380
OCT. 10, 2019
PROVINCE OF ONTARIO

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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:
SANITARY OUTLET
PLAN and PROFILE

Scale:	As Noted	Sheet No.: C-302
Date:	22 April, 2019	
Job No.:	118048 Civil	
Drawn By:	SM - Novatech	
Checked By:	FST - Novatech	
Approved By:	CJS - Novatech	

FOR REFERENCE ONLY - NOT FOR CONSTRUCTION
D07-12-19-0090

CITY PLAN # 17973

A0
Drawn Size: A0 (841 x 1189)
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