



February 22, 2018
Our File: S-1364

Via Email: cwebb@owensound.ca

City of Owen Sound
808-2nd Avenue East
Owen Sound, ON N4K 2H4

Attention: Mr. Chris Webb, P.Eng.

Re: Andpet Subdivision
Sanitary Servicing Feasibility

Dear Chris,

In June 2006, we prepared a review of anticipated sewage flows from these lands with 52 single family residential units and 2 medium density (20 unit) residential Blocks, for a total of 92 units at 3.5 persons per unit = 332 persons.

The sewage design flow was calculated at 400 L/p/d to be 7.5 L/s.

The proponent currently intends to revise the Draft Plan submission to increase density as follows:

Total Population:

Semi Detached	22 Units
Street Townhomes	4 Units
Medium Density	96 Units
High Density	112 Units
<u>Retirement Residence</u>	<u>120 Units</u>

Total Units: 354 Units @ 2.3 P/Unit = 815 Persons

Area: 7.06 ha (incl. SWM Pond)

$$\text{Peaking Factor: } \frac{14}{4 + \sqrt{.815}} + 1 = 3.86$$

$$Q_p = \frac{0.815 \times 400 \times 3.86}{86.4} = 14.56 \text{ L/s}$$

Infiltration Allowance: 7.06ha x 0.2L/ha/s = 1.41 L/s

Total Design Flow = 15.97 L/s

This flow is intended to discharge to 16th Avenue East where the existing sewer would be replaced at a lower elevation; re-connecting on the north side of 16th Street East. The proposed 16th Avenue East sewer is 250mm ø at 0.3% grade, with a full flow capacity of 33 L/s.

The catchment area for the 16th Avenue East sanitary sewer extends southerly to 10th Street East. Only the lands on either side of 16th Avenue East, between 10th Street East and 16th Avenue East contribute flows to the proposed sewer on 16th Avenue East.

The area lands have developed differently from the original concept as was mapped by Henderson & Paddon in 1994. The following pages summarize the sewage design flows from the original concept and the current sewage design flows, based on existing and currently planned developments.

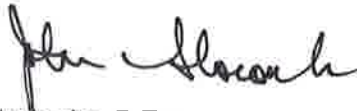
In summary, the review concludes that the current sewage design flows from 16th Avenue East to 16th Street East are 25.9 L/s, which is 78% of the 33 L/s design capacity of the planned 250mm \emptyset sewer at 0.3%.

Trusting this will satisfy the sanitary servicing interests for this development, I remain,

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in black ink, appearing to read 'J.B. Sloodmbe', written over a light blue horizontal line.

J.B. Sloodmbe, P.Eng.

JBS/mz

Encl.

cc: Andpet Realty: Peter VanDolder, via Email – peter@andpetrealty.com
Jones Consulting: Lorelie Spencer, via Email – lspencer@jonesconsulting.com
File No. S-1364

Sanitary Sewage Flows to 16th Street East / 16th Avenue East

Henderson & Paddon Concept
Original Design Flows – January, 1994.

Assumptions:

3 Persons/Unit
LDR = 18 Units/ha
MDR = 40 Units/ha
HDR = 72 Units/ha
Com = 28m³/ha.day
450 L/P.day

	COM	HDR	MDR	LDR	TOTAL	EXTRANEIOUS FLOWS
A (ha)	0.7	0.4	1.15	5.04	A _T = 7.29ha	0.2L/ha.s
Pop	N/A	87	138	272	P _{TOT} = 497	

$$\text{Peaking Factor (P)} = \frac{14}{4 + \sqrt{0.497}} + 1 = 3.976$$

$$Q_{RES} = \frac{0.497 \times 450 \times 3.976}{86.4} = 10.29 \text{ L/s}$$

$$Q_{com} = 28\text{m}^3/\text{ha.day} \times 0.7\text{ha} = 0.23 \text{ L/s}$$

$$Q_{ELT} = 0.2\text{L/ha.s} \times 7.29\text{ha} = 1.46\text{L/s}$$

Original Design Flow Q_T = 11.98L/s*

*Plus Hospital Flow Temporary Prior to Diversion

Sanitary Sewage Flows to 16th Street East / 16th Avenue East

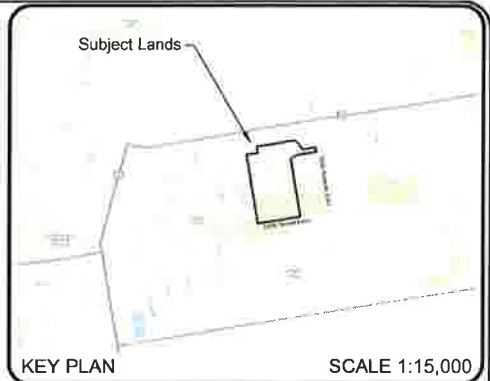
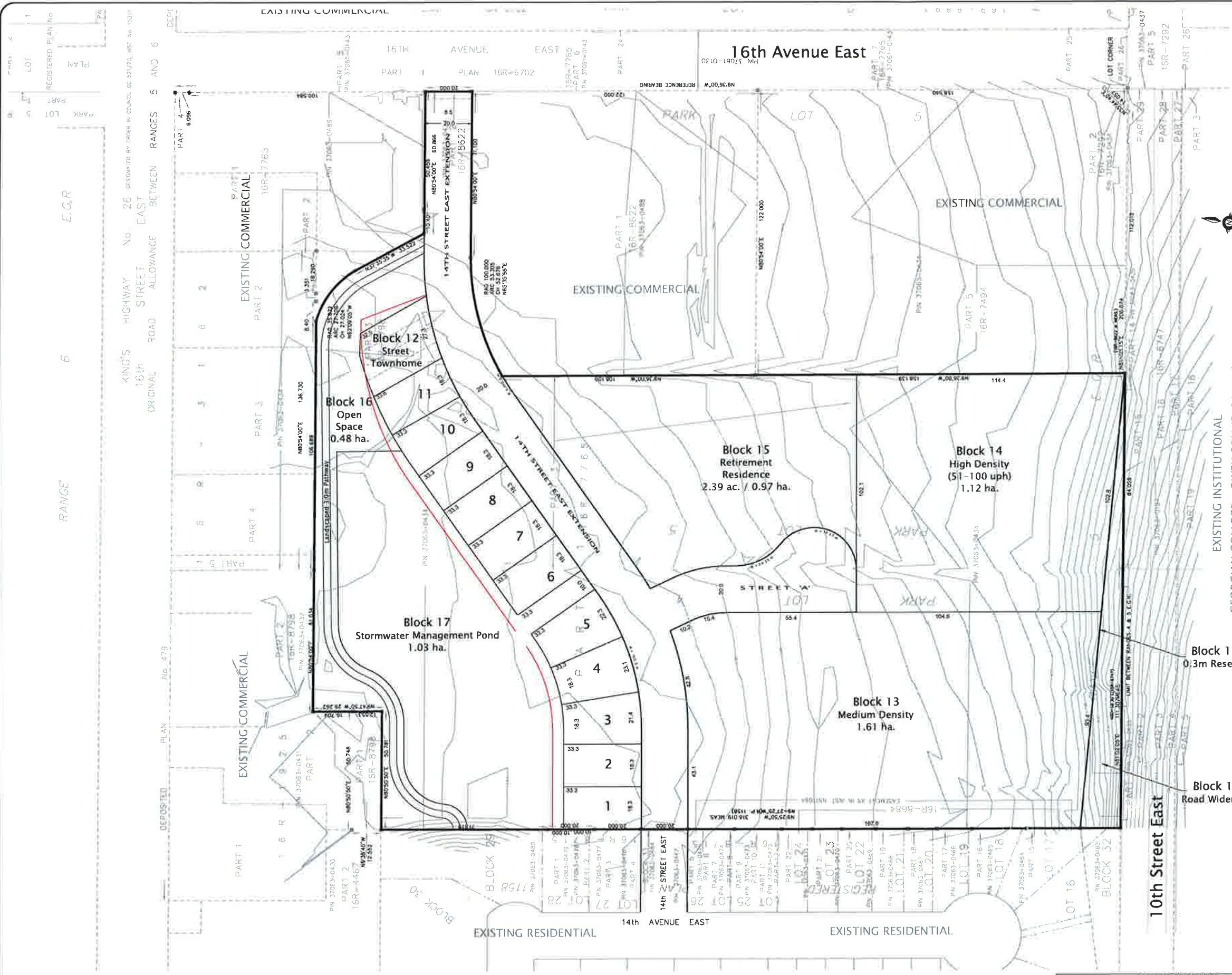
CURRENT & PLANNED DEVELOPMENT CONDITIONS – 2017	AREA (ha)	SEWAGE DESIGN FLOW (L/s)
SunLife Development (1260m ² Comm, 60Apts, 372m ²) *Diverted to 16 th Ave. E. from 10 th St. E. From Servicing Restaurant Feasibility Study	1.12 ha	5.0 L/s
Seasons Retirement Home – 126 Beds @ 225L/bed.day P = 4.22	0.9 ha	1.56 L/s
Canadian Tire – West Site Area @ 2m ³ /ha.day	2.5 ha	1.31 L/s
SouthBridge – 163 Beds @ 225L/bed.day P = 4.18	1.5 ha	2.08 L/s
Subdivision ** Westerly portion diverted easterly.	7.06 ha	15.97 L/s
TOTAL AREA SEWAGE FLOW	13.08 ha	25.9 L/s

Extraneous Flows @ 0.2 L/ha.s

Sanitary Sewer Pipe Capacity:

Proposed lowered sewer on 16th Avenue East thru 16th Street East 250mm ø @ 0.3% CAP = 33L/s

C:\Planning\Drawings\AND-16077\Task\Site\Map\Map.dwg, Printed: Feb 12, 2018, 9:2:52am, by: mrc@andpet.com, Job: Jones Consulting Group Ltd.



Proposed Draft Plan of Subdivision
Part of Park Lots 4 and 5, RANGE 5
East of The Garafaxa Road, PL Owen Sound
City of Owen Sound
County of Grey
2018

OWNER'S CERTIFICATE
I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF OWEN SOUND FOR APPROVAL.

DATE _____ OWNER _____

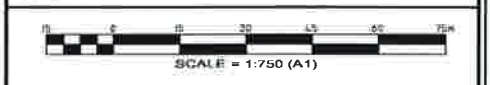
SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE _____ O.L.S. ONTARIO LAND SURVEYORS

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

a) SHOWN ON DRAFT PLAN	g) SHOWN ON DRAFT PLAN
b) SHOWN ON DRAFT PLAN	h) MUNICIPAL PIPED WATER TO BE PROVIDED
c) SHOWN ON KEY PLAN	i) CLAY LOAM
d) RESIDENTIAL, OPEN SPACE, STORMWATER MANAGEMENT	j) SHOWN ON DRAFT PLAN
e) SHOWN ON DRAFT PLAN	k) ALL MUNICIPAL SERVICES TO BE PROVIDED
f) SHOWN ON DRAFT PLAN	l) SHOWN ON DRAFT PLAN

SUBDIVISION STATISTICS	AREA (ha.)	UNITS
SEMI DETACHED - 18.3m (LOT 1)	0.69 ha.	22 units
STREET TOWNHOMES - 6m (LOT 2 - 1)	0.09 ha.	4 units
MEDIUM DENSITY (BLOCK 14)	1.61 ha.	96 units
HIGH DENSITY (BLOCK 14)	1.12 ha.	112 units
RETIREMENT RESIDENCE (BLOCK 15)	0.97 ha.	120 units
PARKLAND/OPEN SPACE (BLOCK 17)	0.48 ha.	
STORMWATER MANAGEMENT (BLOCK 18)	1.03 ha.	
ROAD WIDENING AND RESERVE (BLOCKS 18 & 20)	0.17 ha.	
ROAD (14TH STREET EAST EXTENSION & STREET 'A')	0.89 ha.	
TOTAL	7.06 ha.	354 units



ANDPET REALTY SITE
PROPOSED DRAFT PLAN OF SUBDIVISION

	Date Issued: FEB. 12, 2018
	Checked By: LS
	Project No.: AND-16077
	Drawn By: m.c.r.
Drawing Name: AND-16077-DP1d.dwg	

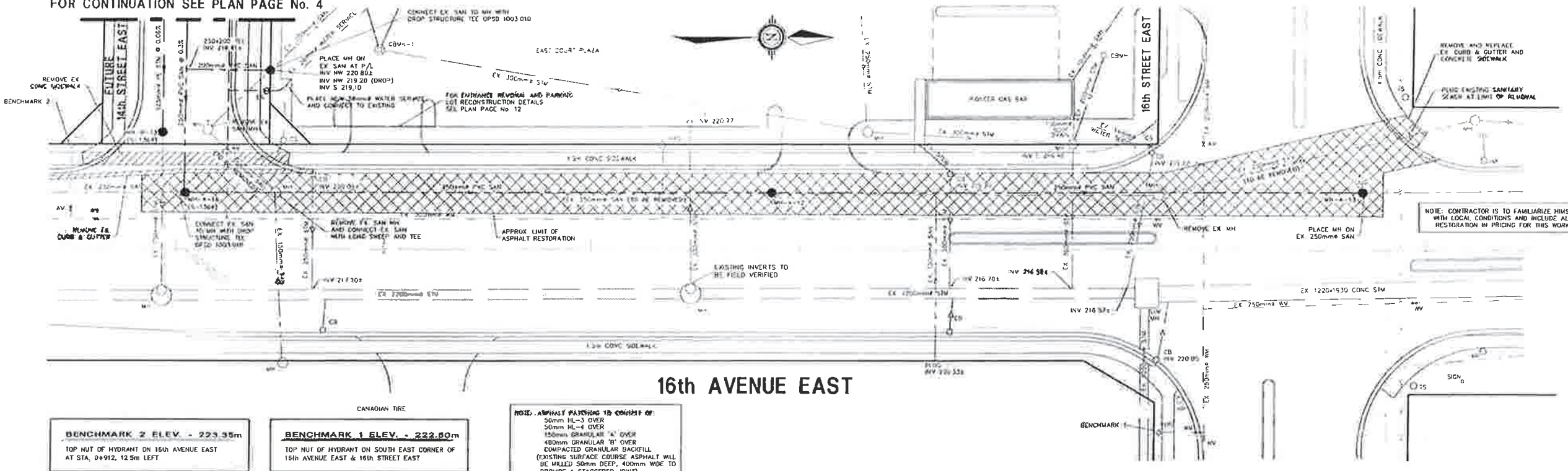
JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
223 Madison Drive East Unit 1, Owen Sound, Ontario N4K 0Y6
Phone: 519-754-2348 Fax: 519-754-2666

SCHEDULE OF REVISIONS

DATE	DESCRIPTION	DRAWN

ANDPET REALTY SITE
CITY OF OWEN SOUND

FOR CONTINUATION SEE PLAN PAGE No. 4

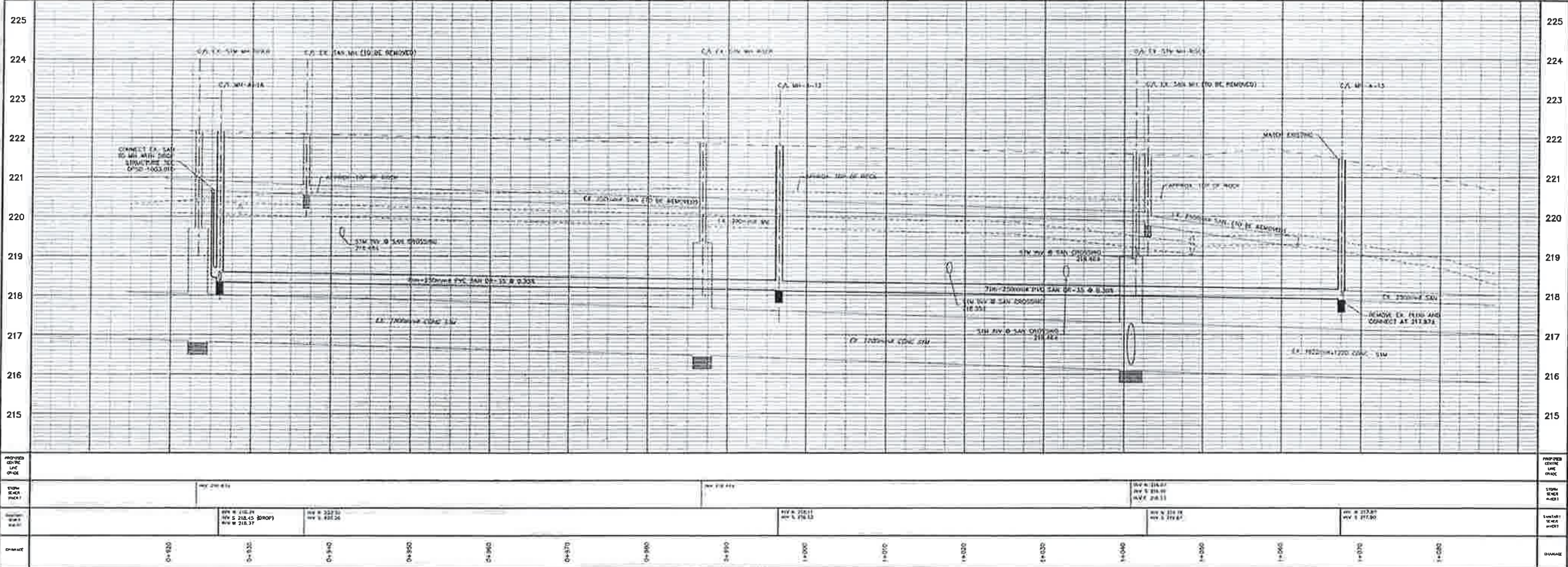


BENCHMARK 2 ELEV. - 223.35m
TOP HUT OF HYDRANT ON 16th AVENUE EAST AT STA. 0+912, 12.5m LEFT

BENCHMARK 1 ELEV. - 222.50m
TOP HUT OF HYDRANT ON SOUTH EAST CORNER OF 16th AVENUE EAST & 16th STREET EAST

NOTE - ASPHALT PATCHING TO CONSIST OF:
50mm HL-3 OVER
50mm HL-4 OVER
150mm GRANULAR 'A' OVER
400mm GRANULAR 'B' OVER
COMPACTED GRANULAR BACKFILL
(EXISTING SURFACE COURSE ASPHALT WILL BE MILLED 50mm DEEP, 400mm WIDE TO PROVIDE A STAGGERED JOINT)

NOTE: CONTRACTOR IS TO FAMILIARIZE HIMSELF WITH LOCAL CONDITIONS AND INCLUDE ALL RESTORATION IN PRICING FOR THIS WORK



NOTES:

1. ALL SEWERS ARE TO BE CONSTRUCTED WITH BULKHEADS IN ACCORDANCE WITH THE U.P.W.S. UNLESS OTHERWISE NOTED.
2. ALL SEWERS SHALL BE CONSTRUCTED WITH BULKHEADS IN ACCORDANCE WITH THE U.P.W.S. UNLESS OTHERWISE NOTED.
3. ALL SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CODES.
4. ALL MATERIALS FOR SEWERS, MANHOLES, AND VALVES TO BE USED SHALL BE APPROVED BY THE U.P.W.S. AND SHALL BE INSTALLED IN ACCORDANCE WITH THE U.P.W.S. UNLESS OTHERWISE NOTED.
5. ALL BACKFILL UNDER THE PROPOSED ROAD, CURBS OR SIDEWALK MUST BE GRANULAR.
6. ALL INVERTS TO BE VERIFIED.
7. ALL SEWERS SHALL BE CONSTRUCTED TO THE U.P.W.S. UNLESS OTHERWISE NOTED.
8. 50mm of STYROFOAM S.W. INSULATION TO BE PLACED BETWEEN ANY COMPONENT OF WATER SYSTEM AND STRUCTURE IF THERE IS LESS THAN 150mm CLEAR.
9. WATER MAINS TO HAVE 25mm SEPARATION FROM BULKHEADS AND OTHER SERVICES.
10. AT ALL POINTS WHERE WATERMAIN AND SEWERS CROSS, ENSURE 500mm VERTICAL SEPARATION BETWEEN TOP OF WATERMAIN AND BOTTOM OF ALL SEWERS AND 150mm VERTICAL SEPARATION BETWEEN BOTTOM OF WATERMAIN AND TOP OF ALL SEWERS.

THE POSITION OF HOLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN IN 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 VERIFY THE POSITION OF ALL UTILITIES AND STRUCTURES AND SHALL OBTAIN ALL NECESSARY PERMITS FOR ANY WORK TO BE DONE.

No.	DATE	REVISION DESCRIPTION	BY	CHECKED
2	FEB 12/08	GENERAL REVISIONS	J.B.S.	J.V.D.
1	DEC 12/05	GENERAL REVISIONS	J.B.S.	J.V.D.

16th AVENUE EAST SANITARY SEWER

CITY OF OWEN SOUND

PLAN & PROFILE

STA. 0+920 TO STA. 1+070

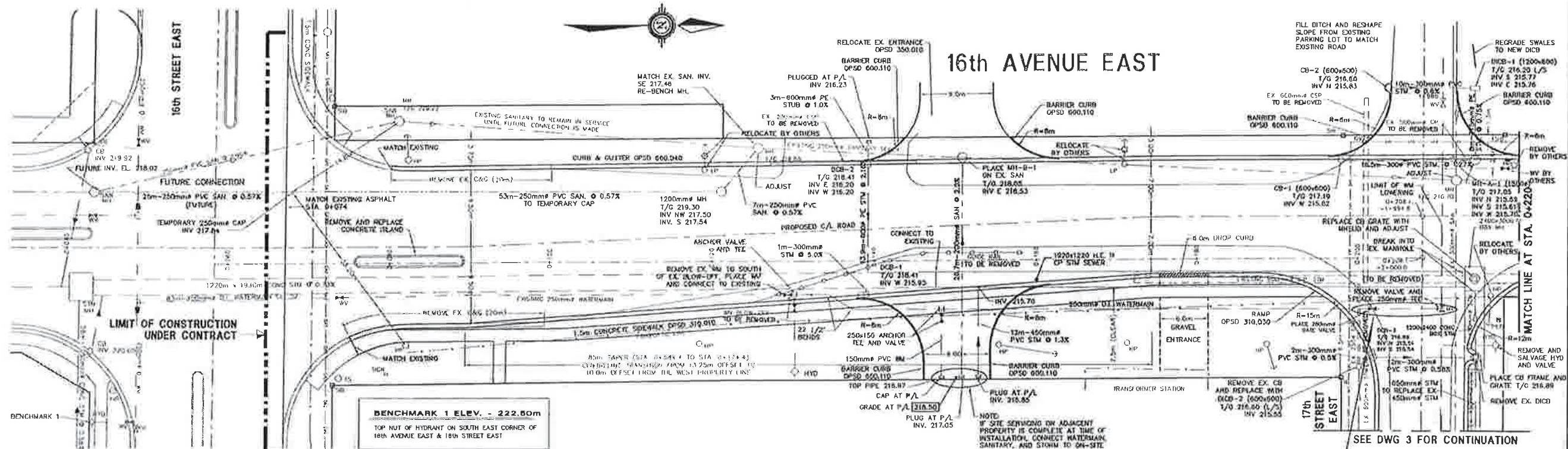
GAMSBY AND MANNEROW LIMITED
CONSULTING PROFESSIONAL ENGINEERS
GUELPH - OWEN SOUND - LISTOWEL

DRAWN BY: J.B.S.
CHECKED BY: J.B.S.
DATE: DECEMBER 4, 2006

APPROVED BY: J.B.S.
DATE: DECEMBER 4, 2006

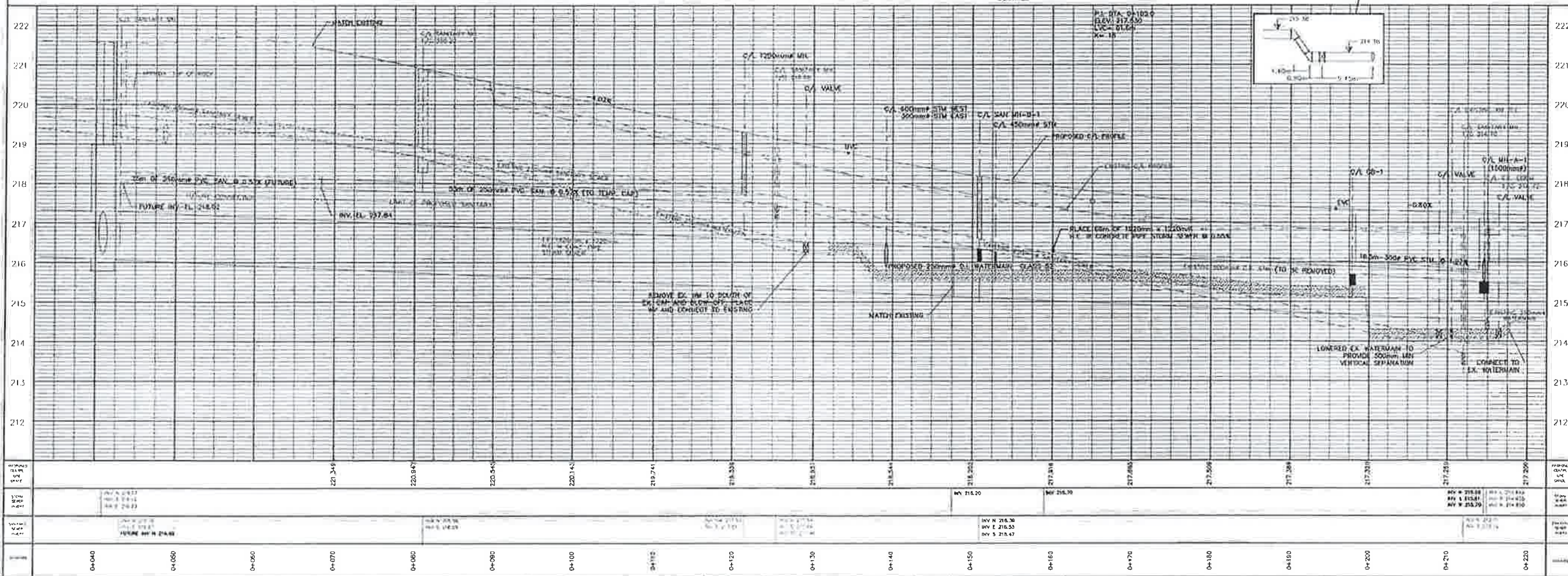
PROJECT No.: S-1364
SCALE: HORIZ. 1:250
VERT. 1:50

DRAWING No.: 11



BENCHMARK 1 ELEV. - 222.60m
 TOP NUT OF HYDRANT ON SOUTH EAST CORNER OF
 16th AVENUE EAST & 16th STREET EAST

SEE DWG 3 FOR CONTINUATION



NOTES: 1.) MILL ALL ASPHALT JOINTS (50mm DEPTH) TO ALLOW FOR 450mm OVERLAP WITH SURFACE COURSE.

THE POSITION OF POLE AND STRUCTURE APPROXIMATE
 SHOWN AND NOT TO BE CONSIDERED AS A BASIS FOR
 DESIGN OR FOR CONSTRUCTION PURPOSES AND THE
 CONTRACTOR SHALL VERIFY THE POSITION AND DEPTH OF
 ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION.

DATE: DEC 14/06
 FOR: CIVIL
 CHECKED: JRS
 DRAWN: JRS

DESIGNED BY: JRS
 CHECKED BY: JRS
 DATE: DEC 14/06

PROJECT NO: 1545
 SHEET NO: 1

APPROVED BY: JRS
 DATE: APRIL 5, 2008

16th AVENUE EAST
CITY OF OWEN SOUND

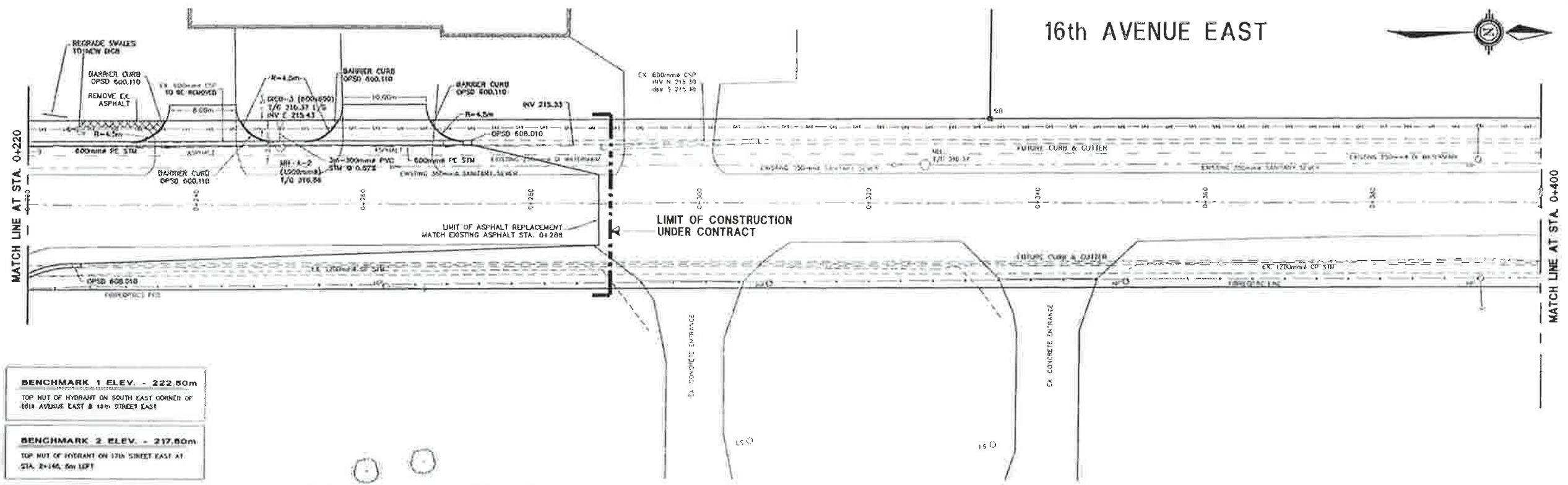
PLAN & PROFILE

— STA. 0+040 TO STA. 0+220 —

GAMSBY AND MANNEROW LIMITED
 CONSULTING PROFESSIONAL ENGINEERS
 GUELPH - OWEN SOUND - LISTOWEL

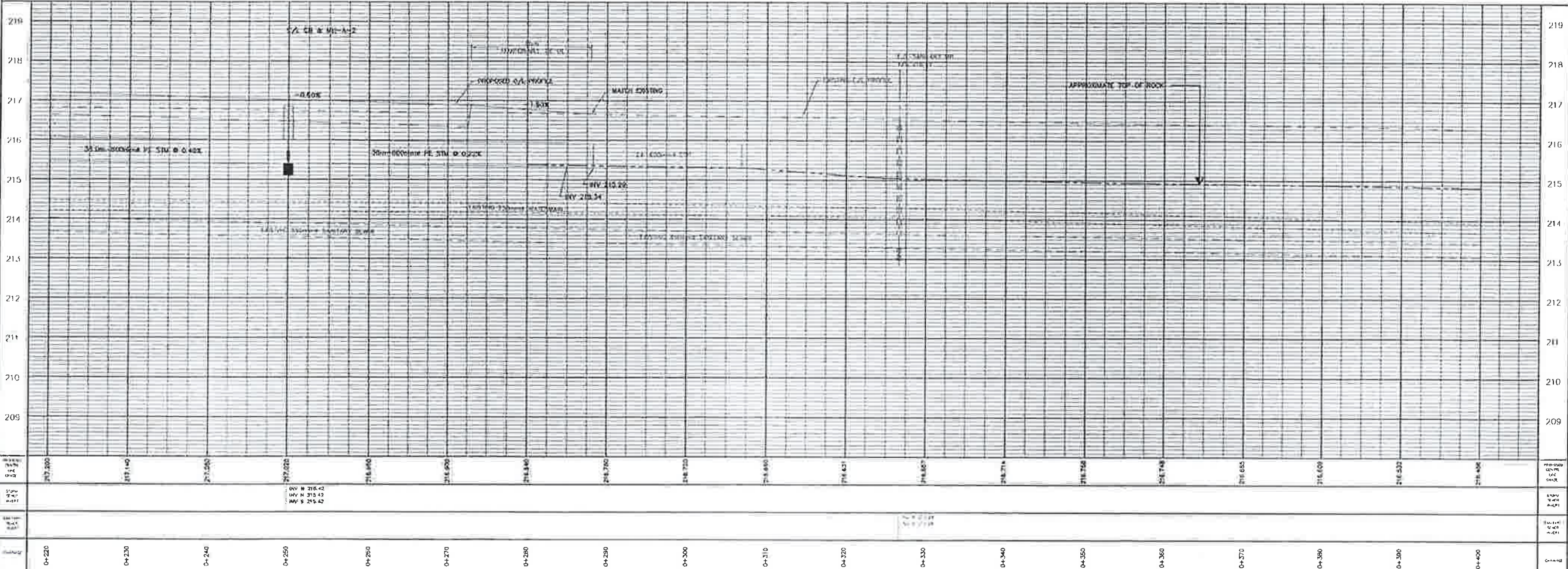
PROJECT NO: 1545
 SHEET NO: 1

16th AVENUE EAST



BENCHMARK 1 ELEV. - 222.80m
 TOP NUT OF HYDRANT ON SOUTH EAST CORNER OF
 16th AVENUE EAST & 16th STREET EAST

BENCHMARK 2 ELEV. - 217.80m
 TOP NUT OF HYDRANT ON 17th STREET EAST AT
 STA. 2+44.8m LPT



NOTES: 1) MILL ALL ASPHALT JOINTS (50mm DEPTH) TO ALLOW FOR 450mm OVERLAP WITH SURFACE COURSE.

THE POSITION OF POLE LINES, CONDUITS, APPURTENANCES AND OTHER UNDERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS AND WHERE SHOWN IS FOR INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND SPACING OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION.



16th AVENUE EAST
CITY OF OWEN SOUND
PLAN & PROFILE
 STA. 0+220 TO STA. 0+400

GAMSBY AND MANNEROW LIMITED
 CONSULTING PROFESSIONAL ENGINEERS
 GUELPH - OWEN SOUND - LISTOWEL

DESIGNED BY E.J.T.	APPROVED BY J.B.S.	DATE APRIL 5, 2006	JOB NO. M-1543	DRAWING NO. 2
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