

**City of London**  
Planning and Development  
300 Dufferin Ave, PO Box 5035  
London, ON N6A 4L9

June 6, 2024

SBM-24-0866

**Attn: Mr. Noe O'Brien, Planning Implementation**

**Re: Servicing Feasibility Study  
Proposed 14 Unit Residential Development  
2-4 Audrey Avenue & 186-188 Huron Street, London, Ontario**

## 1. INTRODUCTION

This Servicing Feasibility Study (Study) has been prepared by Strik, Baldinelli, Moniz Ltd. (SBM) for AE Builders to address the sanitary servicing feasibility for the proposed 14-unit residential development located at 2-4 Audrey Avenue & 186-188 Huron Street, London, Ontario. The total area of the site is approximately 0.17 ha.

The subject lands consist of four (4) properties (2-4 Audrey Avenue & 186-188 Huron Street) at the intersection of Huron Street and Audrey Avenue. The site abuts Huron Street to the south, Audrey Avenue to the west, and single-family residential homes to the north and east. There are currently four existing dwellings (4 units) on the subject property. Three of those units will remain in place, with an additional 11 units under proposed conditions (total 14 units). The site will also include an accessory building, which will be used as a common indoor amenity space. Please refer to the concept plan by Callon Dietz (attached to this study) for additional information regarding the site layout.

This study is simply meant to determine the sanitary peak flow and intended population count for the proposed development to support a Zoning By-Law Amendment (ZBA) and Official Plan Amendment.

Design requirements have been based on the City of London (CofL) Design Specifications & Requirements Manual (DS&RM), updated March 2021.

## 2. SANITARY SERVICING

As per the City's record drawing 1972R1, dated December 11, 2013, the lots at 2-4 Audrey Avenue are tributary to the existing 200mm sanitary sewer on Audrey Avenue, while the lots at 186-188 Huron Street are tributary to the existing 200mm sanitary sewers on Huron Street. These properties each have their own private sanitary service connection, some of which may need to be abandoned or removed if any lots are merged. The existing service size at 2 Audrey Avenue is 100mm (unknown slope), while the other service sizes are unknown at this time.

As per the Pre-Application Consultation comments, the anticipated peak flow and intended population count is required due to the increase in density. The following assumptions and parameters were used to calculate the peak flow:

- A total site area of 0.17 ha and 14 residential units, per the concept plan provided by Callon Dietz Inc. dated June 5, 2024. The amenity building was excluded in peak flow calculations, as this will be a common indoor amenity space.
- A population density of one person per bedroom and 5 bedrooms/unit was used for all units, as discussed with the CofL and the developer.
- A flow criterion of 230 L/capita/day per section 3.8.1 of the DS&RM.
- A development uncertainty factor of 1.1.

The proposed flows from the subject site are shown on the Sanitary Sewer Design Sheet attached to this Study. Using a flow of 230 L/capita/day for the site's occupancy load of 70 people (14 units at 5.0 people/ unit) and a residential area of 0.17 ha, the anticipated peak sanitary population flow is 0.878 L/s. When combined with the infiltration flow rate of 0.017 L/s, this results in a total peak flow of 0.895 L/s.

City of London record drawing 19772R1 was used to identify existing service locations and tributary areas. Should a sanitary capacity study be needed during the next phase of this project, SBM can review additional as-builts for downstream sanitary sewers and conduct a detailed analysis.

### 3. SUMMARY

Based on the above, the total peak sanitary flow for the proposed development was estimated to be 0.895 L/s. Detailed design of the site's proposed servicing will take place at the time of Site Plan Approval application.

### 4. LIMITATIONS

This Study was prepared by SBM for AE Builders and the City of London. Use of this Study by any third party, or any reliance upon its findings, is solely the responsibility of that party. SBM accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions undertaken as a result of this Study. Third party use of this Study, without the express written consent of the Consultant, denies any claims, whether in contract, tort, and/or any other cause of action in law, against the Consultant.

All findings and conclusions presented in this Study are based on site conditions as they appeared in the information presented to SBM and related to in this document. This Study is not intended to be exhaustive in scope, or to imply a risk-free development. It should be recognized that the passage of time may alter the opinions, conclusions, and recommendations provided herein, as well as any changes in the layout of the development.

The design was limited to the documents referenced herein and SBM accepts no responsibility for the accuracy of the information provided by others. All designs and recommendations presented in this Study are based on the information available at the time of the review.

This document is deemed to be the intellectual property of SBM in accordance with Canadian copyright law.

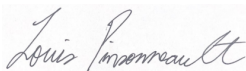
### 5. CLOSURE

We trust this Study meets your satisfaction. Should you have any questions or require further information, please do not hesitate to contact us.

Respectfully submitted,

**Strik, Baldinelli, Moniz Ltd.**

Planning • Civil • Structural • Mechanical • Electrical



Louis Pinsonneault, P.Eng.  
Civil Project Lead, Eng II



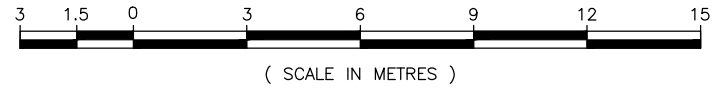
Ryan Frouws, P.Eng.  
Civil Team Lead, Eng III

Encl: Concept Plan prepared by Callon Dietz, dated June 5, 2024  
City of London Record Drawing 19772R1  
Sanitary Sewer Design Sheet calculations prepared by SBM  
Correspondence with CofL and Developer

ZONE CHART: R6-5		
BASED ON ZONING BY-LAW No. Z.-1, SECTION 10, TABLE 10.3.		
	REQUIRED R6-5	PROPOSED R6-5(*)
LOT AREA (MIN)	850 sq.m.	1714.2 sq.m.
LOT FRONTAGE (MIN)	10.0 m	31.699 m
FRONT AND EXTERIOR SIDE YARD DEPTH (MIN)	6.0 m	4.50 m
INTERIOR SIDE AND REAR YARD DEPTH (MIN)	VARIES	0.85 m
LANDSCAPE OPEN SPACE (MIN)	30%	35%
LOT COVERAGE (MAX)	45%	38%
HEIGHT (MAX)	12.0 m	12.0 m
UNITS PER HECTARE (MAX)	35	80.5

SKETCH TO ILLUSTRATE  
PROPOSED BUILDINGS  
OF PART OF  
**LOT 11, REGISTERED PLAN No. 384**  
AND OF PART OF  
**LOT 53, REGISTERED PLAN No. 453**  
IN THE  
**CITY OF LONDON**  
**COUNTY OF MIDDLESEX**

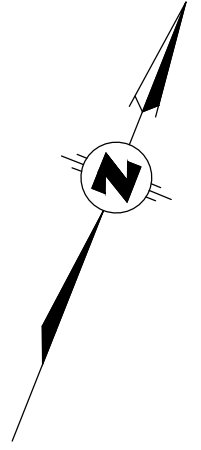
SCALE 1:200 (METRIC)



**NOTE:** DIMENSIONS SHOWN ON THIS PLAN ARE DERIVED FROM CALLON DIETZ PLANS 33R-16833, DATED MARCH 12, 2007, AND 33R-18442, DATED NOVEMBER 23, 2012.

**CAUTION:** THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSES INDICATED IN THE TITLE BLOCK.

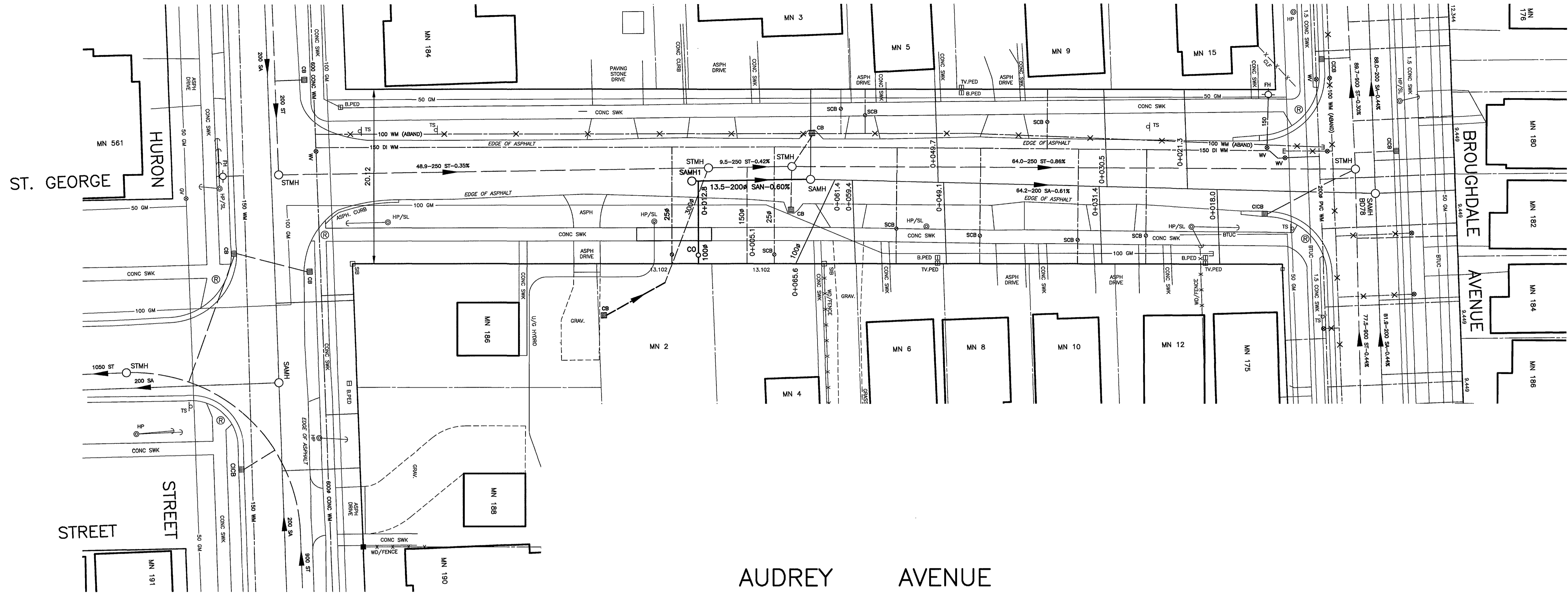
**METRIC:** DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048



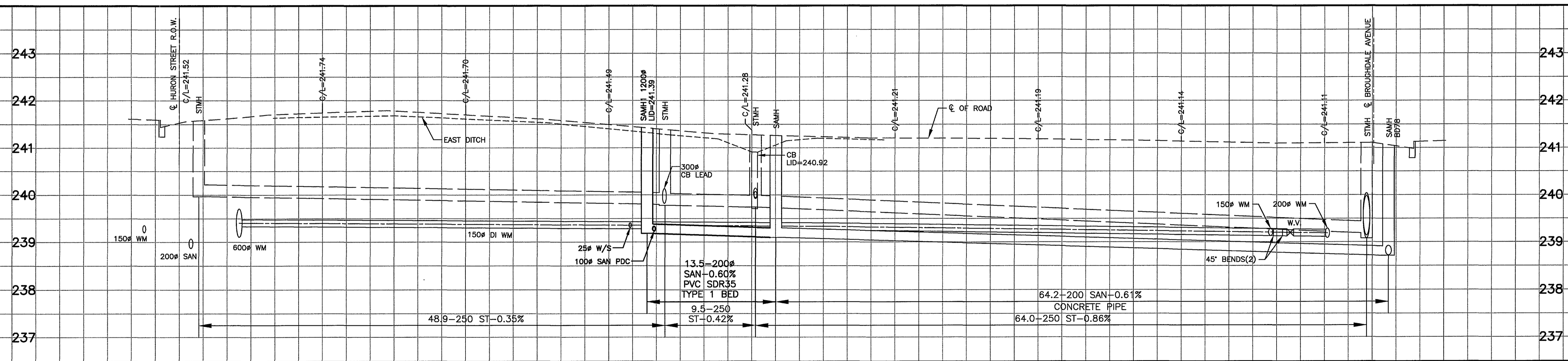
**Callon + Dietz** INCORPORATED  
ONTARIO LAND SURVEYORS  
CARLETON PLACE LONDON NORTH BAY  
info@callondietz.com callondietz.com

SURVEY BY: DRAWN BY: MM FILE No: 23-25729 PLAN No: DDD-4273

REGISTERED  
**ISO 9001**



**SITE BENCHMARK:**  
 MONUMENT - CITY OF LONDON VERTICAL CONTROL  
 MONUMENT No V92-4 LOCATION - ON RICHMOND  
 STREET, 15.0m SOUTH OF THE CENTER LINE OF TOWER  
 LANE 12.0m WEST OF THE CENTER LINE OF RICHMOND  
 STREET, SET IN THE NORTH EAST CORNER OF THE  
 CONCRETE RAMP TO THE BANK OF MONTREAL BUILDING.  
 ELEVATION - 242.259m



STATION	SANITARY INVERT	STORM INVERT	WATERMAIN ELEVATION
0+000	239.97N		
0+015			
0+030			
0+045			
0+049	239.905	239.92E	239.78N
0+050.9			
0+060	239.74S	239.76E	239.74N
0+060.4			
0+062.5	239.10S	239.11E	239.10N
0+075			
0+090			
0+105			
0+120			
0+124.4	239.19S	239.14E	239.08W
0+126.7	239.71S	239.72E	239.71W
0+135			

EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT
SANITARY SEWERS	1206-1952, 18928-2005,	-	SANITARY MH & PDC	MAY 2013	DESIGN: R.J.P.	1.	RECORD DRAWING	DEC. 11, 13	SCO-TERRA
STORM SEWERS	WD405-1983, 18928-2005,	-	WATER SERVICE CONNECTION	MAY 2013	DRAWN BY: R.T.	2.			
100 WM (ABANDONED)	WD-405	JAN 1983	GRANULAR BASE	MAY 2013	CHECKED: R.J.P.	3.			
150 WM	WD405-1983, 18928-2005,	-	PAVING - I BASE	MAY 2013	APPROVED: R.J.P.	4.			
			PAVING - II BASE	MAY 2013	DATE: DECEMBER 2013				

<p><b>SCO-TERRA</b>          CONSULTING GROUP LIMITED</p> <p>321 DUFFERIN AVENUE, LONDON, ONTARIO, CANADA N6B 1Z3          Tel: (619) 434-0278 Fax: (619) 434-6820 e-mail: info@scoterra.com</p>	<p>Alternative Energy          Environmental Assessment          Water and Wastewater Infrastructure          Water Resources Engineering</p>	<p>ENGINEER'S STAMP          R.S. FELLERIN          90257007          PROVINCE OF ONTARIO</p>	<p><b>CORPORATION OF THE CITY OF LONDON</b>          London CANADA</p>	<p>SCALE - 1 : 250          2.5 0 5m          SCALE - 1 : 50          0.5 0 1m</p>	<p><b>MN 2 AUDREY AVENUE</b>          NEW SANITARY SEWER and LOT SERVICE CONNECTIONS</p> <p><b>AUDREY AVENUE</b>          FROM HURON STREET TO BROUGHDALE AVENUE</p>	<p>PROJECT No. _____</p> <p>SHEET No. _____</p> <p>PLAN FILE No. <b>19772R1</b></p>
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**SANITARY SEWER DESIGN SHEET**



q = average per capita daily flow	230	L/cap.d
i = unit of industrial flow	25.00	m <sup>3</sup> /ha.d
ic = unit of peak extraneous flow	0.1	L/ha.s
High Density Residential (Apartment Buildings)	1.60	ppu
Medium Density Residential (Multi-Family/Townhouse)	2.40	ppu
Low Density Residential (Single Family/Semi-Detached)	3.00	ppu
Subject Site Criteria	5.00	bedrooms/unit
Commercial/Institutional	100.00	people/ha
Uncertainty Factor	1.10	

P = population  
 M = peaking factor (Harmon)  
 P = p x # units / 1000  
 $M = 1 + 14 / (4 + p^{1/2})$   
 $Q = (P \times q \times M) / 86.4$   
 M Min = 4  
 M Max = 10

<b>DATE:</b> Jun. 06, 2024	<b>FILE No.:</b> SBM-24-0866
<b>DESIGNED:</b> L.K.P.	<b>PROJECT:</b> 2-4 Audrey Ave & 186-188 Huron St, London

Q(p) = peak population flow (L/s)  
 $Q(i) = i \times A$  = peak extraneous flow (L/s)  
 $Q(c) = \frac{c \times A}{86400}$  = peak commercial flow (L/s)  
 Q(d) = Q(p) + Q(i) = peak design flow (L/s)

Min full flow velocity = 0.6 m/s

LOCATION			INDIVIDUAL					CUMULATIVE				DESIGN FLOWS				PROPOSED SANITARY SEWER										
STREET	FROM MH	TO MH	No. RESIDENTIAL UNITS	RES. POP	COMM POP.	RES. AREA (ha)	COMM/INST AREA (ha)	INDUSTRIAL AREA (ha)	POP	COMM/INST AREA (ha)	INDUSTRIAL AREA (ha)	RES. AREA	TOTAL AREA (ha)	PEAKING FACTOR (M)	POPULATION FLOW, Q(p) (L/s)	INDUSTRIAL FLOWS (L/s)	PEAK EXTRANEOUS FLOW, Q(i) (L/s)	PEAK DESIGN FLOW, Q(d) (L/s)	LENGTH (m)	PIPE SIZE DIAMETER (mm)	GRADE (%)	MANNING'S n	CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	ACTUAL VELOCITY (m/s)	PERCENT FULL
Audrey Ave	Subject Site	SAMH1	14	70	0.00	0.1714	0.00	0.00	70.00	0.00	0.00	0.17	0.17	4.28	0.878	0.000	0.017	0.895	20.0	150	2.00%	0.013	21.5	1.22	0.59	4.2%
Audrey Ave	SAMH1	SAMH	0	0	0.00	0.00	0.00	70.00	0.00	0.00	0.17	0.17	4.28	0.878	0.000	0.017	0.895	13.5	200	0.60%	0.013	25.4	0.81	0.38	3.5%	
<b>TOTALS</b>			<b>14</b>	<b>70</b>	<b>0.00</b>	<b>0.17</b>	<b>0.00</b>	<b>0.00</b>																		

## Louis Pinsonneault

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**From:** Uri Hecht <uri@aebuilders.ca>  
**Sent:** Thursday, May 16, 2024 10:56 AM  
**To:** Louis Pinsonneault  
**Cc:** Ryan Frouws; Ben Hyland  
**Subject:** Re: FW: 2-4 Audrey Ave & 186-188 Huron St

**This type of housing generally have one person per bedroom, so only one bed.**

This count will already be in excess of the city standard. Doesn't seem like Paul have an issue with that.

Thanks

On Thu, May 16, 2024, 10:48 a.m. Louis Pinsonneault <[lpinsonneault@sbmltd.ca](mailto:lpinsonneault@sbmltd.ca)> wrote:

Hi Uri,

Please see the email from Paul below. Are you able to confirm there will only be one bed per bedroom?

Thanks,

**Louis Pinsonneault, P.Eng.**

Civil Project Lead, Eng II

P: 519-471-6667 x 158

E: [lpinsonneault@sbmltd.ca](mailto:lpinsonneault@sbmltd.ca)



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**From:** DiLosa, Paul <[pdilosa@london.ca](mailto:pdilosa@london.ca)>  
**Sent:** Monday, May 6, 2024 11:18 AM  
**To:** Louis Pinsonneault <[lpinsonneault@sbmltd.ca](mailto:lpinsonneault@sbmltd.ca)>; O'Brien, Noe <[nobrien@london.ca](mailto:nobrien@london.ca)>  
**Cc:** Ben Hyland <[bhyland@sbmltd.ca](mailto:bhyland@sbmltd.ca)>  
**Subject:** RE: 2-4 Audrey Ave & 186-188 Huron St

Hi Louis,

2 people would be a fair assumption but if there are architectural plans that confirm 1 bed per room, that would be considered acceptable justification.

Thanks,



**Paul Di Losa, C.Tech.**

Senior Technologist, Development Engineering

Planning and Development

City of London

300 Dufferin Ave. London ON, N6A 4L9  
P: 519.661.CITY(2489) x 4575  
[pdilosa@london.ca](mailto:pdilosa@london.ca) | [www.london.ca](http://www.london.ca)

The City of London is situated on the traditional lands of the Anishinaabek (AUh-nish-in-ah-bek), Haudenosaunee (Ho-den-no-show-nee), Lūnaapéewak (Len-ah-pay-wuk) and Attawandaron (Add-a-won-da-run). We honour and respect the history, languages and culture of the diverse Indigenous people who call this territory home. The City of London is currently home to many First Nations, Metis and Inuit people today. As representatives of the people of the City of London, we are grateful to have the opportunity to work and live in this territory.

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**From:** Louis Pinsonneault <[lpinsonneault@sbmltd.ca](mailto:lpinsonneault@sbmltd.ca)>  
**Sent:** Monday, May 6, 2024 10:23 AM  
**To:** DiLosa, Paul <[pdilosa@london.ca](mailto:pdilosa@london.ca)>; O'Brien, Noe <[nobrien@london.ca](mailto:nobrien@london.ca)>  
**Cc:** Ben Hyland <[bhyland@sbmltd.ca](mailto:bhyland@sbmltd.ca)>  
**Subject:** [EXTERNAL] RE: 2-4 Audrey Ave & 186-188 Huron St

Hi Paul,

OBC uses 2 people per bedroom for occupancy, but that would result in a much higher per-unit population than considered in the City standards. Can you please clarify if that is the number we should use?

Thanks,

**Louis Pinsonneault, P.Eng.**

Civil Project Lead, Eng II

P: 519-471-6667 x 158

E: [lpinsonneault@sbmltd.ca](mailto:lpinsonneault@sbmltd.ca)



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**From:** DiLosa, Paul <[pdilosa@london.ca](mailto:pdilosa@london.ca)>

**Sent:** Monday, May 6, 2024 10:07 AM

**To:** Louis Pinsonneault <[lpinsonneault@sbmltd.ca](mailto:lpinsonneault@sbmltd.ca)>; O'Brien, Noe <[nobrien@london.ca](mailto:nobrien@london.ca)>

**Cc:** Ben Hyland <[bhyland@sbmltd.ca](mailto:bhyland@sbmltd.ca)>

**Subject:** RE: 2-4 Audrey Ave & 186-188 Huron St

Hi Louis,

If the exact bed count is known, this number should be used to determine peak flows in this situation.



Let me know if there's anything further.

Thanks,



London  
CANADA

**Paul Di Losa, C.Tech.**

Senior Technologist, Development Engineering

Planning and Development

City of London

300 Dufferin Ave. London ON, N6A 4L9

P: 519.661.CITY(2489) x 4575

[pdilosa@london.ca](mailto:pdilosa@london.ca) | [www.london.ca](http://www.london.ca)

The City of London is situated on the traditional lands of the Anishinaabek (AUh-nish-in-ah-bek), Haudenosaunee (Ho-den-no-show-nee), Lūnaapéewak (Len-ah-pay-wuk) and Attawandaron (Add-a-won-da-run). We honour and respect the history, languages and culture of the diverse Indigenous people who call this territory home. The City of London is currently home to many First Nations, Metis and Inuit people today. As representatives of the people of the City of London, we are grateful to have the opportunity to work and live in this territory.

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**From:** Louis Pinsonneault <[lpinsonneault@sbmltd.ca](mailto:lpinsonneault@sbmltd.ca)>

**Sent:** Monday, May 6, 2024 9:07 AM

**To:** O'Brien, Noe <[nobrien@london.ca](mailto:nobrien@london.ca)>; DiLosa, Paul <[pdilosa@london.ca](mailto:pdilosa@london.ca)>

**Cc:** Ben Hyland <[bhyland@sbmltd.ca](mailto:bhyland@sbmltd.ca)>

**Subject:** [EXTERNAL] 2-4 Audrey Ave & 186-188 Huron St

Hi Paul,

We are working on a sanitary brief for a development at 2-4 Audrey Ave & 186-188 Huron St (record of pre-application consultation attached).

Based on a site area of 0.17ha and 12 units (70 units/ha), this would fall under medium density (2.4 people/unit) going by the City of London standards.

However, there are several bedrooms proposed for each unit (see floor plans attached), which would increase the total population.

Can you please provide clarification on the appropriate population density to be used for this development?

Thanks,

**Louis Pinsonneault, P.Eng.**

Civil Project Lead, Eng II

P: 519-471-6667 x 158

E: [lpinsonneault@sbmltd.ca](mailto:lpinsonneault@sbmltd.ca)

