

To: David Ailles
 York Developments
 File: 161414170

From: Darryl Hern, P.Eng
 Stantec London
 Date: January 9, 2024

Reference: Westwinds Subdivision Sanitary Capacity

This memo is compiled to confirm the sewer system within the W3 Subdivision and Sunset Creek Subdivision have the sanitary capacity within this system to permit the density requested from the Westwinds Subdivision.

The Westwinds Subdivision, with lies adjacent to the northeast of the W3 Subdivision has been included in the design of the sanitary sewer system within the W3 Subdivision, specifically W3 Phase 2.

Stantec has included the population densities as outlined in the chart below and included on the attached design sheet and External Sanitary Area plan. The Westwinds Subdivision would contribute to the sanitary sewers along Royal Magnolia Avenue and, under the ultimate scenario, when the sewer is connected to the Colonel Talbot Pumping station there is adequate capacity to accommodate the Westwinds Subdivision's flows.

ULT 1 – POPULATION CALCULATION					
ZONING	AREA (ha)	UNITS	POP/ha	POP/units	POP.
MED DENSITY	10.15	–	180	–	1827
ROADS	2.61	–	–	–	–
WESTWINDS SUBDIVISION	16.19	BLOCKS 1, 1A, 2, 3, 4	LOW DENSITY	3/46	138
		BLOCKS 5, 7	MED DENSITY	2.4/24	58
		BLOCKS 6, 9, 10	APT & TOWNHOUSE	2.4/24 1.6/984	1632
		BLOCK 8	MED DENSITY	1.6/108	173
		BLOCK 11	MED DENSITY	1.6/130	208
		BLOCK 12	MED DENSITY	2.4/16 1.6/115	222
TOTAL	28.95	–	–	–	4258

Stantec added these populations into the design sheet for W3 Phase 2 (attached) and can confirm that the pipes are sized to adequately handle the sanitary flows from the Westwinds Subdivision as well as the W3 Subdivision with the total flows not exceeding the downstream pipe's capacity.

January 9, 2024

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We trust this clarifies the required sanitary capacities for the areas outlined above. If you require anything further, please contact the undersigned.

Sincerely,

Stantec Consulting Ltd.

Darryl Hern, P.Eng.

Project Manager, Community Development

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Attachment: W3 Subdivision Phase 2 - Sanitary Design Sheet
W3 Subdivision Phase 2 - External Sanitary Drainage Area Plan

c. C.C. Mike Meddaoui - Westwinds

RESIDENTIAL COMMERCIAL AND INSTITUTIONAL POPULATION DENSITIES

SANITARY SEWER DESIGN SHEET
CITY OF LONDON

THE FOLLOWING POPULATION ALLOWANCES WILL APPLY WHEN DESIGNING SANITARY SEWERS:
 LOW DENSITY (SINGLE-FAMILY / SEMI-DETACHED) = 30 UNITS / HECTARE @ 3 PEOPLE / UNIT
 MEDIUM DENSITY (MULTI-FAMILY / TOWNHOUSE / ROWHOUSE) = 75 UNITS / HECTARE @ 2.4 PEOPLE / UNIT
 HIGH DENSITY (APARTMENTS) = 150 - 300 UNIT / HECTARE @ 1.6 PEOPLE / UNIT
 COMMERCIAL / INSTITUTIONAL = 100 PEOPLE / HECTARE
 SECONDARY SCHOOL = 1500 PEOPLE
 ELEMENTARY SCHOOL = 600 PEOPLE

DESIGN CRITERIA
 SEWAGE = 230 LITRE / CAPITA / DAY
 INFILTRATION = 8640 LITRES / HECTARE / DAY
 PEAKING FACTOR $1 + \frac{14}{4 + P^{0.5}}$

DATE: Sep-23
 DESIGNED BY: CHK

PROJECT NAME: **W3 SUBDIVISION PHASE 2** (TOP) = TOP END OF SEWER TRIBUTARY

PROJECT FILE NO. 161414170

LOCATION				AREA			POPULATION						SEWAGE FLOWS			SEWER DESIGN						PROFILE												
AREA No.	STREET NAME	FROM MANHOLE	TO MANHOLE	NET OR GROSS	DELTA HECTARES	TOTAL HECTARES	POP. PER HECTARE	PER LOT	NO. OF LOTS	DELTA POP.	TOTAL POP.	PEAKING FACTOR	INFILT L/s	SEWAGE L/s	TOTAL L/s	PIPE SIZE mm	n	SLOPE %	CAP L/s	VELOCITY m/s	LENGTH m	FALL IN SEWER	HEADLOSS IN U.S. MH	DROP IN MANHOLE	INVERT ELEVATION									
																									U.S.	D.S.								
EXT 1	ROYAL MAGNOLIA AVENUE	(TOP)	S114	N	28.95	28.95				4258	4258	3.31	2.90	41.26	44.15																			
EXT A216	ROYAL MAGNOLIA AVENUE	S114	S113	N	0.30	29.25		2.4	14	32	4290	3.31	2.93	41.53	44.46	300	0.013	0.30	53.0	0.75	62.1	0.186	-	-		267.119	266.933							
EXT A217	ROYAL MAGNOLIA AVENUE	S113	S106	N	0.50	29.75		2.4	23	54	4344	3.30	2.98	41.99	44.97	300	0.013	0.30	53.0	0.75	69.0	0.207	-	0.030		266.903	266.696							
EXT A215	ROYAL MAGNOLIA AVENUE	CAP2	S106	N	2.02	2.02				600	600	3.93	0.20	6.91	7.11	200	0.013	1.30	37.4	1.19	9.2	0.120	-	-		267.120	267.000							
A218	ROYAL MAGNOLIA AVENUE	S106	S105	N	0.17	31.94				0	4944	3.25	3.19	47.05	50.24	300	0.013	0.30	53.0	0.75	57.6	0.173	-	0.030		266.666	266.493							
A214	ROYAL MAGNOLIA AVENUE	(TOP)	S105	N	1.18	1.18				0	0	4.50	0.12	0.00	0.12																			
A219	FUT. STREET L	(TOP)	S105	N	0.08	0.08				0	0	4.50	0.01	0.00	0.01																			
A206	ROYAL MAGNOLIA AVENUE	S105	S104	N	0.38	33.58		3	5	15	4959	3.25	3.36	47.17	50.53	300	0.013	0.30	53.0	0.75	76.0	0.228	-	-		266.463	266.235							
A207	DARWIN CRESCENT	S107	S104	N	0.36	0.36		3	5	15	15	4.40	0.04	0.19	0.23	200	0.013	1.30	37.4	1.19	74.0	0.962	-	-		269.800	268.838							
A205	ROYAL MAGNOLIA AVENUE	S104	S103	N	0.58	34.52		3	11	33	5007	3.24	3.45	47.57	51.02	300	0.013	0.30	53.0	0.75	67.9	0.204	-	-		266.205	266.001							
A204	ROYAL MAGNOLIA AVENUE	S103	S102	N	0.90	35.42		3	18	54	5061	3.24	3.54	48.02	51.56	300	0.013	0.30	53.0	0.75	97.1	0.291	-	0.030		265.971	265.680							
A203	ROYAL MAGNOLIA AVENUE	S102	S101	N	0.87	36.29		3	17	51	5112	3.24	3.63	48.44	52.07	300	0.013	0.30	53.0	0.75	98.0	0.294	-	0.030		265.650	265.356							
A208	DARWIN CRESCENT	S107	S108	N	0.39	0.39		3	6	18	18	4.39	0.04	0.23	0.27	200	0.013	1.00	32.8	1.04	18.0	0.180	-	-		269.800	269.620							
A209	DARWIN CRESCENT	S108	S109	N	0.52	0.91		3	9	27	45	4.32	0.09	0.57	0.66	200	0.013	1.00	32.8	1.04	47.8	0.478	-	0.030		269.590	269.112							
A210	DARWIN CRESCENT	S109	S110	N	0.85	1.76		3	14	42	87	4.26	0.18	1.09	1.26	200	0.013	0.55	24.3	0.77	96.5	0.531	-	0.030		269.082	268.551							
A211	DARWIN CRESCENT	S110	S111	N	0.87	2.63		3	15	45	132	4.21	0.26	1.63	1.89	200	0.013	0.55	24.3	0.77	97.2	0.535	-	0.030		268.521	267.987							
A212	DARWIN CRESCENT	S111	S112	N	0.40	3.03		3	6	18	150	4.19	0.30	1.84	2.14	200	0.013	0.55	24.3	0.77	14.4	0.079	-	0.030		267.957	267.878							
A213	DARWIN CRESCENT	S112	S101	N	0.36	3.39		3	5	15	165	4.18	0.34	2.02	2.36	200	0.013	0.55	24.3	0.77	77.3	0.425	-	0.030		267.848	267.423							
A202	ROYAL MAGNOLIA AVENUE	S101	CAP	N	0.27	39.95		3	4	12	5289	3.22	4.00	49.91	53.90	300	0.013	0.40	61.2	0.87	46.5	0.186	-	0.030		265.326	265.140							
A202	ROYAL MAGNOLIA AVENUE	CAP	EX S1	N	0.00	39.95				0	5289	3.22	4.00	49.91	53.90	300	0.013	0.40	61.2	0.87	2.9	0.012	-	0.000		265.140	265.128							
A201	ROYAL MAGNOLIA AVENUE	EX S1	EX S2	N	0.32	40.27		3	6	18	5307	3.22	4.03	50.06	54.08	300	0.013	0.50	68.4	0.97	37.8	0.189	-	0.030		265.098	264.909							

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EXISTING SERVICES	DRAWING #, SOURCE	DATE	CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT	CONSULTANT OR DIVISION	ENGINEER'S STAMP	SCALE	TITLE	PROJECT No.
					DESIGN	CHK	1. AS PER 1ST SUBMISSION COMMENTS	FEB 2023	STANTEC	 <p>400-330 RIVERBEND ROAD London, ON, N6K 0J5 www.stantec.com</p> <p>The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. The Copyright in all design and drawings is the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.</p>		W3 SUBDIVISION - PHASE 2 W3 LAMBETH FARMS INC. SANITARY DESIGN SHEET PART 1	161414170	
					DRAWN BY	CHK	2. AS PER 2ND SUBMISSION COMMENTS	JUNE 2023	STANTEC		SHEET No.			
					CHECKED	DWH	3. AS PER 3RD SUBMISSION COMMENTS	SEPT 2023	STANTEC		5 of 34			
					APPROVED	DWH	4. AS PER 4TH SUBMISSION COMMENTS	DEC 2023	STANTEC		PLAN FILE No.			
					DATE	APRIL 2022								

