

**Building A Tower Roof Drain Calculations Summary**

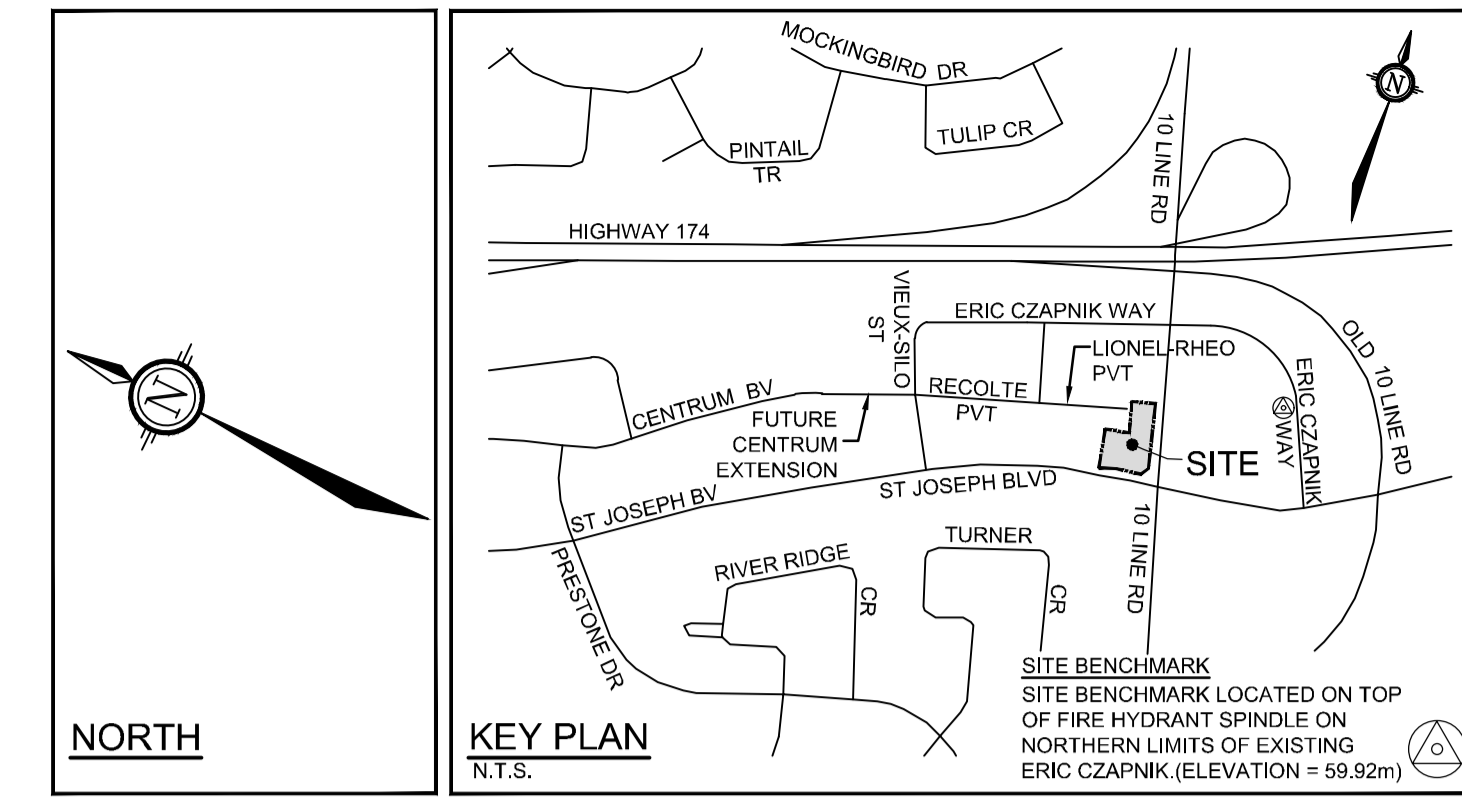
Year	Area ID	Static Ponding Area (m <sup>2</sup> )	Drainage Area (ha)	Runoff Coef. (R)	Time-of-Conc. (min)	Rainfall Intensity (mm/hr)	Uncontrolled Peak Flow (L/s)	Roof Drain Flow Control System	Setting	Controlled Peak Flow (L/s)	Flow Depth (mm)	Storage Required (m <sup>3</sup> )	Storage Available (m <sup>3</sup> )
No Year	B-AP-1	305.2	0.030	0.90	10.00	104.19	9.4	Watts Flow Control	1/2 Open	0.95	0.11	7.34	18.03
	B-AP-2	325.5	0.033	0.90	10.00	104.19	8.6	Watts Flow Control	1/2 Open	0.95	0.11	8.48	18.48
	B-AP-3	352.7	0.034	0.90	10.00	104.19	8.9	Watts Flow Control	1/2 Open	0.95	0.11	8.94	17.14
TOTAL	4.103								2.85		20.96	51.64	

**Building A Podium Roof Drain Calculations Summary**

Year	Area ID	Static Ponding Area (m <sup>2</sup> )	Drainage Area (ha)	Runoff Coef. (R)	Time-of-Conc. (min)	Rainfall Intensity (mm/hr)	Uncontrolled Peak Flow (L/s)	Roof Drain Flow Control System	Setting	Controlled Peak Flow (L/s)	Flow Depth (mm)	Storage Required (m <sup>3</sup> )	Storage Available (m <sup>3</sup> )
No Year	B-AP-1	370	0.037	0.90	10.00	104.19	9.6	Watts Flow Control	1/2 Open	1.26	0.14	15.50	18.50
	B-AP-2	370	0.037	0.90	10.00	104.19	18.4	Watts Flow Control	1/2 Open	1.26	0.14	18.22	18.50
	TOTAL	4.674								2.52		32.44	37.00

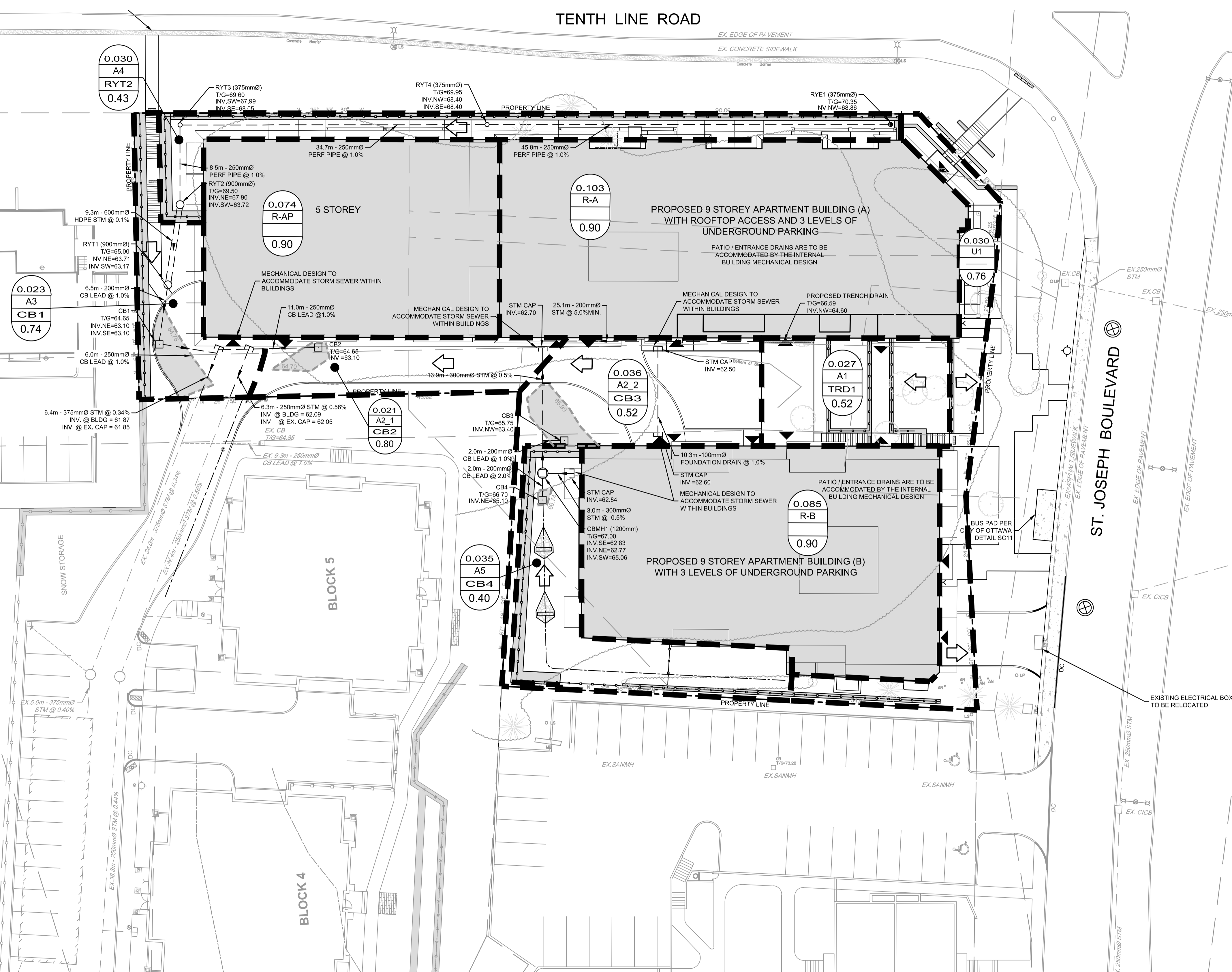
**Building B Tower Roof Drain Calculations Summary**

Year	Area ID	Static Ponding Area (m <sup>2</sup> )	Drainage Area (ha)	Runoff Coef. (R)	Time-of-Conc. (min)	Rainfall Intensity (mm/hr)	Uncontrolled Peak Flow (L/s)	Roof Drain Flow Control System	Setting	Controlled Peak Flow (L/s)	Flow Depth (mm)	Storage Required (m <sup>3</sup> )	Storage Available (m <sup>3</sup> )
No Year	B-B-1	271.3	0.027	0.90	10.00	104.19	7.4	Watts Flow Control	1/2 Open	0.95	0.10	6.10	13.57
	B-B-2	283.3	0.028	0.90	10.00	104.19	7.4	Watts Flow Control	1/2 Open	0.95	0.10	6.10	14.17
	B-B-3	295.3	0.030	0.90	10.00	104.19	7.7	Watts Flow Control	1/2 Open	0.95	0.10	5.96	14.78
TOTAL	4.985								2.85		18.12	42.51	



**LEGEND**

- SITE BOUNDARY
- PROPOSED STORM SEWER AND DIRECTION OF FLOW
- PROPOSED RETAINING WALL
- PROPOSED RETAINING WALL WITH CHAINLINK FENCE
- PROPOSED BUILDING ENTRANCE
- PROPOSED SIAMESE CONNECTION
- STORM DRAINAGE AREA
- EXISTING STORM MANHOLE AND SEWER
- EXISTING SANITARY MANHOLE
- EXISTING VALVE AND VALE BOX
- EXISTING FIRE HYDRANT
- EXISTING CATCHBASIN
- EXISTING TOP OF GRATE
- EXISTING UTILITY POLE C/W GUY WIRES
- EXISTING LIGHT STANDARD
- 0.030 - DRAINAGE AREA (HECTARES)
- A2\_2 - DRAINAGE AREA I.D.
- CB3 - MANHOLE TO MANHOLE
- 0.62 - RUNOFF COEFFICIENT
- 1:100yr PONDING AREA AND ELEVATION
- 1.5yr PONDING AREA AND ELEVATION



**PONDING<sup>1</sup>**

CB No.	RIM ELEV. (m)	EVENT	WATER LEVEL ELEV. (DEPTH) (m)
CB1	64.65	2yr	(0.00) 63.97
		5yr	(0.00) 64.16
		100yr	(0.09) 64.75
		Static	(0.10) 64.75
		100yr + 20%	(0.11) 64.76
CB2	64.65	2yr	(0.00) 64.27
		5yr	(0.00) 64.65
		100yr	(0.05) 64.70
		Static	(0.10) 64.75
		100yr + 20%	(0.11) 64.76
CB3	65.75	2yr	(0.00) 64.26
		5yr	(0.00) 65.01
		100yr	(0.24) 65.99
		Static	(0.30) 66.05
		100yr + 20%	(0.31) 66.06
CB4	66.70	2yr	(0.00) 65.38
		5yr	(0.00) 65.95
		100yr	(0.04) 66.74
		Static	(0.30) 67.00
		100yr + 20%	(0.09) 66.79
CBMH1	67.00	2yr	(0.00) 63.72
		5yr	(0.00) 63.74
		100yr	(0.00) 63.78
		Static	(0.00) 67.00
		100yr + 20%	(0.00) 63.80
RYE1	70.35	2yr	(0.00) 68.86
		5yr	(0.00) 68.86
		100yr	(0.00) 68.86
		Static	(0.00) 70.35
		100yr + 20%	(0.00) 68.86

<sup>1</sup>BASED ON PCSWMM MODEL (6-HOUR CHICAGO STORM DISTRIBUTION)

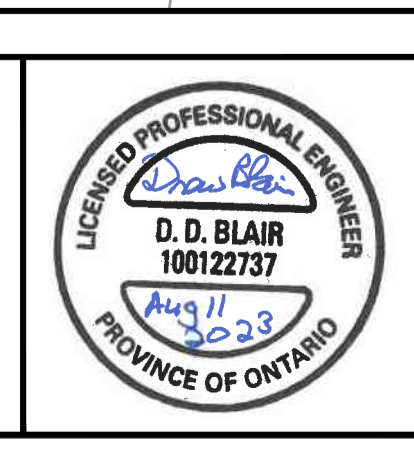
**APPROVED**  
By Adam Brown at 2:07 pm, Dec 05, 2023

**ADAM BROWN**  
MANAGER, DEVELOPMENT REVIEW - RURAL  
PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT  
DEPARTMENT, CITY OF OTTAWA

**NOTE:**  
THE POSITION OF ALL POLE LINES, CONDUITS, WATER MAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

**SCALE**  
1:250

No.	REVISION	DATE	BY
5.	ISSUED FOR SITE PLAN APPROVAL	AUG 11/23	DOB
4.	ISSUED FOR CITY OF OTTAWA REVIEW	JUN 2/23	DOB
3.	ISSUED FOR CITY OF OTTAWA REVIEW	JAN 27/23	DOB
2.	ISSUED FOR CITY OF OTTAWA REVIEW	MAY 8/22	DOB
1.	ISSUED FOR CITY OF OTTAWA REVIEW	DEC 23/21	DOB



**LOCATION**  
CITY OF OTTAWA  
HILLSIDE COMMONS  
ORLEANS TOWN CENTER

**DRAWING NAME**  
STORMWATER MANAGEMENT PLAN

PROJECT No.	120237-00
REV	REV # 5
DRAWING No.	120237-STM

M:\2020\120237\CADD\Design\120237-STM.dwg, STM, Aug 04, 2023, -3:01pm, smathews

D07-12-21-0229