APPENDICES

Appendix A POTABLE WATER SERVICING

A.1 WATER DEMAND CALCULATIONS

1125-1149 Cyrville Road, Ottawa, ON - Domestic Water Demand Estimates

Site Plan provided by J + S Architect Inc. (2021-07-06)

Project No. 160401672

Densities as per City Guidelines:		
Apartment Units		
1 Bedroom	1.4	ppu
2 Bedroom	2.1	ppu
3 Bedroom	3.1	ppu

Building ID	Amenity & Common Area (m²)	No. of Units	Population	Daily Rate of Demand [1] [2] (L/cap/day or L/ha/day)	Avg Day Demand		Max Day Demand [3] [4]		Peak Hour Demand [3] [4]	
					(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)
Building A										
Apartment Units										
1 Bedroom		60	84	280	16.3	0.27	40.8	0.68	89.8	1.50
2 Bedroom		143	300	280	58.4	0.97	146.0	2.43	321.2	5.35
3 Bedroom		5	16	280	3.0	0.05	7.5	0.13	16.6	0.28
Total common areas	2399			28000	4.7	0.078	7.0	0.117	12.6	0.210
Total Site :		**208**	**400**		**82.4**	**1.37**	**201.3**	**3.36**	**440.2**	**7.34**

1 Average day water demand for residential areas: 280 L/cap/d per ISTB-2021-03

2 Average day water demand for Amenity/common areas: 28,000 L/ha/d (Based on commercial water demand rates)

3 The City of Ottawa water demand criteria used to estimate peak demand rates for residential areas are as follows:

maximum day demand rate = 2.5 x average day demand rate for residential

peak hour demand rate = 2.2 x maximum day demand rate for residential

4 Water demand criteria used to estimate peak demand rates for amenity/common areas are as follows:

maximum daily demand rate = 1.5 x average day demand rate

peak hour demand rate = 1.8 x maximum day demand rate

1125-1149 Cyrville Road, Ottawa, ON - Domestic Water Demand Estimates

Site Plan provided by J + S Architect Inc. (2021-07-06)

Project No. 160401672

Densities as per City Guidelines:		
Apartment Units		
1 Bedroom	1.4	ppu
2 Bedroom	2.1	ppu
3 Bedroom	3.1	ppu

Building ID	Amenity & common areas (m^2)	No. of Units	Population	Daily Rate of Demand [1] [2] (L/cap/day or L/ha/day)	Avg Day Demand		Max Day Demand [3] [4]		Peak Hour Demand [3] [4]	
					(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)
Building B										
Apartment Units										
Studio		2	3	280	0.5	0.01	1.4	0.02	3.0	0.05
1 Bedroom		53	74	280	14.4	0.24	36.1	0.60	79.4	1.32
2 Bedroom		85	179	280	34.8	0.58	87.0	1.45	191.4	3.19
2 bedroom + Den		6	19	280	3.7	0.06	9.2	0.15	20.3	0.34
Total common areas	1967			28000	3.83	0.064	5.7	0.096	10.3	0.17
Total Site :		**146**	**275**		**57.3**	**0.95**	**139.4**	**2.32**	**304.4**	**5.07**

1 Average day water demand for residential areas: 280 L/cap/d per ISTB-2021-03

2 Average day water demand for Amenity/common areas: 28,000 L/ha/d (Based on commercial water demand rates)

3 The City of Ottawa water demand criteria used to estimate peak demand rates for residential areas are as follows:

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maximum daily demand rate = 1.5 x average day demand rate

peak hour demand rate = 1.8 x maximum day demand rate

A.2 FIRE FLOW REQUIREMENTS PER FUS GUIDELINES

Stantec

FUS Fire Flow Calculation Sheet

Stantec Project #: 160401672
Project Name: 1125-1149 Cyrville Road, Ottawa, ON
Date: 2021-10-20
Fire Flow Calculation #: 1
Description: Multi family residential
Notes: Building A:6-storey residential high-rise with indoor amenity in its 6th floor. Information taken from Conceptual Design by J + S Architect Inc. dated June 14, 2021. 2-hour fire separation provided between each floor and 1-hour fire separation provided for exterior vertical communications.

Step	Task	Notes						Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Non-Combustible Construction						0.8	-
2	Determine Ground Floor Area of One Unit (m2)	Used the 'gross floor area' of Building A ground floor (i.e. floor with the largest footprint, 3286.45m2) + 25% of the gross construction area of the two immediately adjoining floors (the second floor and third floor). Methodology as per Page 17 of the Fire Underwriters Survey's Water Supply for Public Fire Protection, 1999.						4867.66	-
	Determine Number of Adjoining Units	-						1	-
3	Determine Height in Storeys	Does not include floors >50% below grade or open attic space						1	-
4	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min						-	12000
5	Determine Occupancy Charge	Limited Combustible						-15%	10200
6	Determine Sprinkler Reduction	Conforms to NFPA 13						-30%	-4080
		Standard Water Supply						-10%	
		Not Fully Supervised or N/A						0%	
		% Coverage of Sprinkler System						100%	
7	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	-	-
		North	10.1 to 20	84	12	> 120	Wood Frame or Non-Combustible	15%	6120
		East	10.1 to 20	40	1	31-60	Wood Frame or Non-Combustible	13%	
		South	3.1 to 10	87	2	> 120	Wood Frame or Non-Combustible	20%	
		West	10.1 to 20	27	1	0-30	Wood Frame or Non-Combustible	12%	
8	Determine Final Required Fire Flow	**Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min**							**12000**
		Total Required Fire Flow in L/s							**200.0**
		Required Duration of Fire Flow (hrs)							**2.50**
		Required Volume of Fire Flow (m^3)							**1800**

Stantec

FUS Fire Flow Calculation Sheet

Stantec Project #: 160401672
Project Name: 1125-1149 Cyrville Road, Ottawa, ON
Date: 2021-10-20
Fire Flow Calculation #: 1
Description: Residential High-rise
Notes: Building B: 12-storey residential high-rise with indoor amenity in its 6th floor. Information taken from Conceptual Deisgn Residential Development by J + S Architect Inc. dated June 14, 2021. 2-hour fire separation provided between each floor and 1-hour fire separation provided for exterior vertical communications.

Step	Task	Notes						Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Non-Combustible Construction						0.8	-
2	Determine Ground Floor Area of One Unit (m2)	Used the 'gross floor area' of Building B's largest floor (floor with the largest footprint,1416.31 m2) + 25% of the gross construction area of the two immediately adjoining floors (the second floor and third floor). Methodology as per Page 17 of the Fire Underwriters Survey's Water Supply for Public Fire Protection, 1999.						2101.1	-
	Determine Number of Adjoining Units	-						1	-
3	Determine Height in Storeys	Does not include floors >50% below grade or open attic space						1	-
4	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min						-	8000
5	Determine Occupancy Charge	Limited Combustible						-15%	6800
6	Determine Sprinkler Reduction	Conforms to NFPA 13						-30%	-2720
		Standard Water Supply						-10%	
		Not Fully Supervised or N/A						0%	
		% Coverage of Sprinkler System						100%	
7	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	-	-
		North	20.1 to 30	45	25	> 120	Wood Frame or Non-Combustible	10%	4012
		East	10.1 to 20	40	36	> 120	Wood Frame or Non-Combustible	15%	
		South	3.1 to 10	87	6	> 120	Wood Frame or Non-Combustible	20%	
		West	10.1 to 20	27	3	61-90	Wood Frame or Non-Combustible	14%	
8	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min							8000
		Total Required Fire Flow in L/s							133.3
		Required Duration of Fire Flow (hrs)							2.00
		Required Volume of Fire Flow (m^3)							960

A.3 BOUNDARY CONDITIONS

Nwanise, Nwanise

From: Moroz, Peter
Sent: Tuesday, July 20, 2021 2:42 PM
To: Curry, William; Nwanise, Nwanise; Thiffault, Dustin
Subject: RE: BC Request

Will, Thank you very much!

Peter

Peter Moroz P.Eng., MBA
Managing Principal, Community Development

Stantec
400 - 1331 Clyde Avenue Ottawa ON K2C 3G4
Cell: (613) 294-2851

peter.moroz@stantec.com

From: Curry, William <William.Curry@ottawa.ca>
Sent: Tuesday, July 20, 2021 2:27 PM
To: Nwanise, Nwanise <Nwanise.Nwanise@stantec.com>; Thiffault, Dustin <Dustin.Thiffault@stantec.com>
Cc: Moroz, Peter <peter.moroz@stantec.com>
Subject: BC Request

The following are boundary conditions, HGL, for hydraulic analysis at 1125 Cyrville Rd (zone 1E) assumed to be a dual connection to the 254 mm on Cyrville Road (see attached PDF for location).

Minimum HGL: 109.5 m
Maximum HGL: 118.4 m
Max Day + Fire Flow (200 L/s): 105.0 m
Max Day + Fire Flow (133.3 L/s): 109.5 m

These are for current conditions and are based on computer model simulation.
Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation.

Will Curry, C.E.T.

Project Manager

Planning, Infrastructure and Economic Development /

Planification, d'infrastructure et de développement économique

City of Ottawa | Ville d'Ottawa

613.580.2424 ext./poste 16214

110 Laurier Ave., 4th Fl East;

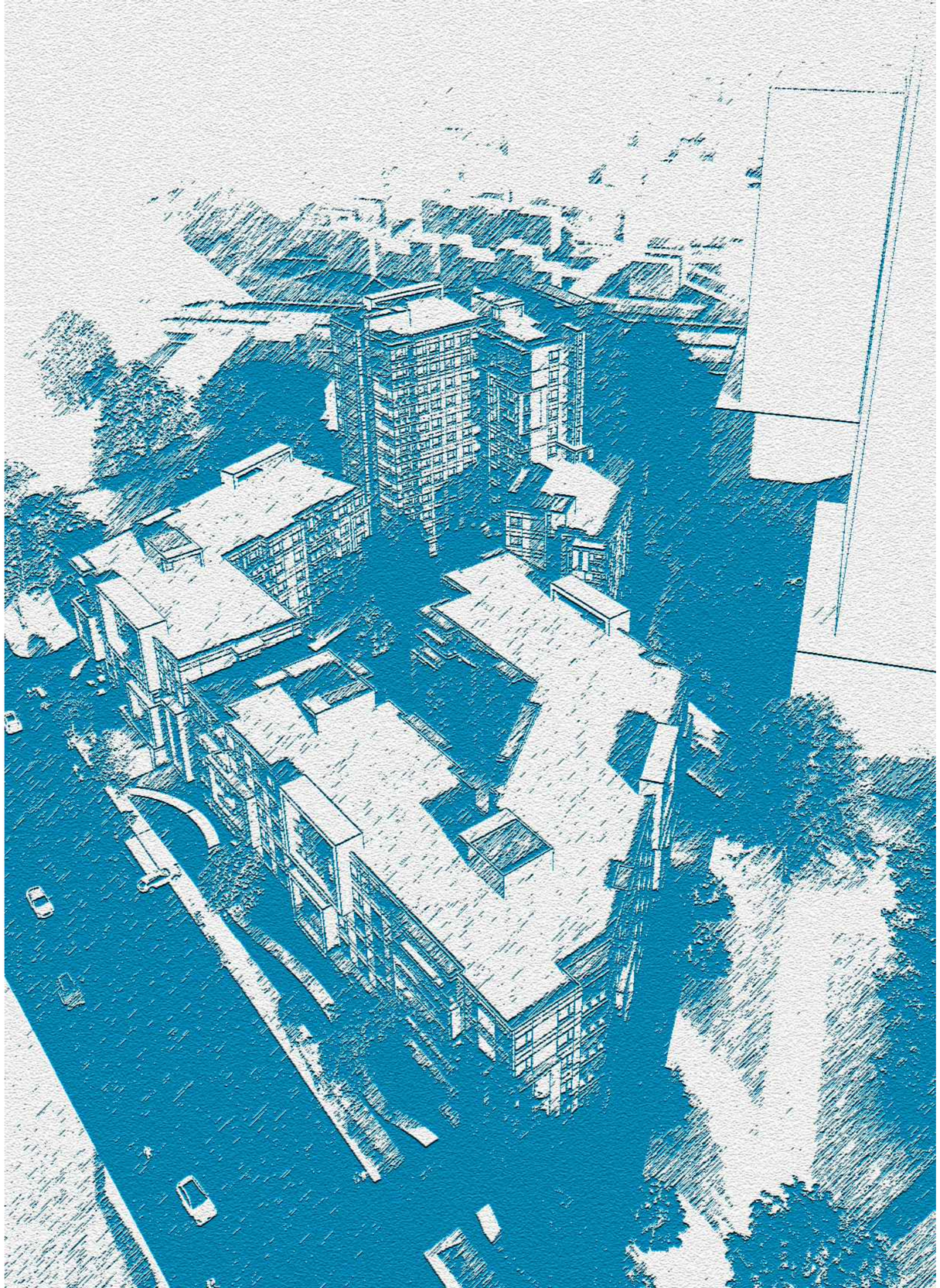
Ottawa ON K1P 1J1

William.Curry@Ottawa.ca

'

'

Appendix B PROPOSED SITE PLAN



CONCEPTUAL DESIGN
RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road, Ottawa, ON
ISSUED FOR REVIEW
JUNE 14, 2021

WESTRICH PACIFIC CORP.

J+S ARCHITECT

VIEW - A

VIEW - B

VIEW - C

J+S ARCHITECT

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NO.	REVISION	DATE(D/M/Y)
	REVISIONS:	

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:
MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:
WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE:	SEAL:
DATE: 06/08/2021	
DRAWN BY:	
CHECKED BY:	
JOB NO.: 2021-01O	

SHEET TITLE:
CONTEXT & VICINITY PLAN

DRAWING NO.:	REVISION No:
A0.1	

Project Development Data - Residential Development

1125-1149 Cyrville Road, Ottawa, ON

A. Project:

Multi-Family Residential

B. Legal Description:

C. Zoning:

Existing Zoning: MC Proposed Zoning:TD-2

D. Site Coverage Calculations:

Gross Site Area	90,171 sq ft	8377 sq m
Building Footprint Area	48,300 sq ft	4487 sq m
Site Coverage Percentage	53.6%	

E. Floor Area Ratio (F.A.R.) Calculation: **Phase 1-2**

Site Use	Gross Site Area	Proposed Total FAR Area	Proposed Gross F.A.R.
Residential	**90,171 sq ft**	**302,292 sq ft**	**3.35**

F. Residential Statistics - Floor Areas

BUILDING A.

Level	Number of Floors	Unit Area per Floor	Total Unit Area	Common Area per Floor	Total Common Area	Net Floor Area Per Floor	Net Floor Area All Floors	Indoor Amenity	Gross Floor Area (Per Floors)	Gross Floor Area (All Floors)
L1	1	21,719 sq ft	21,719 sq ft	6,828 sq ft	6,828 sq ft	28,547 sq ft	28,547 sq ft	0 sq ft	35,375 sq ft	35,375 sq ft
L2 - L5	4	26,068 sq ft	104,272 sq ft	3,986 sq ft	15,944 sq ft	30,054 sq ft	120,216 sq ft	0 sq ft	34,040 sq ft	136,160 sq ft
L6	1	24,022 sq ft	24,022 sq ft	3,051 sq ft	3,051 sq ft	27,073 sq ft	27,073 sq ft	752 sq ft	30,124 sq ft	30,124 sq ft
TOTAL	**6**		**150,013 sq ft**		**25,823 sq ft**		**175,836 sq ft**	**752 sq ft**	**69,415 sq ft**	**201,659 sq ft**

BUILDING B.

Level	Number of Floors	Unit Area per Floor	Total Unit Area	Common Area per Floor	Total Common Area	Net Floor Area Per Floor	Net Floor Area All Floors	Indoor Amenity	Gross Floor Area (Per Floors)	Gross Floor Area (All Floors)
L1	1	8,047 sq ft	8,047 sq ft	3,599 sq ft	3,599 sq ft	11,646 sq ft	11,646 sq ft	0 sq ft	15,245 sq ft	15,245 sq ft
L2 - L6	5	11,020 sq ft	55,100 sq ft	1,861 sq ft	9,305 sq ft	12,881 sq ft	64,405 sq ft	0 sq ft	14,742 sq ft	73,710 sq ft
L7	1	6,298 sq ft	6,298 sq ft	1,377 sq ft	1,377 sq ft	7,675 sq ft	7,675 sq ft	869 sq ft	9,052 sq ft	9,052 sq ft
L8-L12	5	7,167 sq ft	35,835 sq ft	1,379 sq ft	6,895 sq ft	8,546 sq ft	42,730 sq ft	0 sq ft	9,925 sq ft	49,625 sq ft
TOTAL	**12**		**105,280 sq ft**		**21,176 sq ft**		**126,456 sq ft**	**869 sq ft**	**29,987 sq ft**	**98,007 sq ft**

TOTAL.

TOTAL	**---**		**255,293 sq ft**		**46,999 sq ft**		**302,292 sq ft**	**1,621 sq ft**	**99,402 sq ft**	**299,666 sq ft**

F. Residential Statistics - Unit Counts

BUILDING A.

Level	Studio	1 Bed	1Bed + Den	2 Bed	2 Bed+Den	3 Bed	Total	Number of Floors
L1	0	11	0	20	0	0	31	1
L2 - L5	0	10	0	25	0	1	36	4
L6	0	9	0	23	0	1	33	1
Total	**0**	**60**	**0**	**143**	**0**	**5**	**208**	
Distribution	***0%***	***29%***	***0%***	***69%***	***0%***	***2%***	100%	

BUILDING B.

Level	Studio	1 Bed	1Bed + Den	2 Bed	2 Bed+Den	3 Bed	Total	Number of Floors
L1	2	4	0	5	1	0	12	1
L2 - L6	0	5	0	9	1	0	15	5
L7	0	4	0	5	0	0	9	1
L8-L12	0	4	0	6	0	0	10	5
Total	**2**	**53**	**0**	**85**	**6**	**0**	**146**	
Distribution	***1%***	***36%***	***0%***	***58%***	***4%***	***0%***	100%	

TOTAL.

Total	**2**	**113**	**0**	**228**	**6**	**5**	**354**	
Distribution	***1%***	***32%***	***0%***	***64%***	***2%***	***1%***	100%	

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NO.	REVISION	DATE(D/M/Y)
	REVISIONS:	

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:
MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road, Ottawa, ON

CLIENT:
WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE:
DATE: 06/08/2021
DRAWN BY:
CHECKED BY:
JOB NO.: 2021-01O
SEAL:

SHEET TITLE:
PROJECT DATA

DRAWING NO.: A0.2
REVISION No:

LEGEND

- MUPs SETBACK
- FUTURE ROAD DEDICATION/SETBACK
- EASEMENT

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PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE: 1:350

DATE: 06/08/2021

DRAWN BY:

CHECKED BY:

JOB NO.: 2021-01O

SEAL:

SHEET TITLE:

SITE PLAN

DRAWING N0.: A1.0

REVISION No:

J+S ARCHITECT

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Rezoning Application	14/04/2021

PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

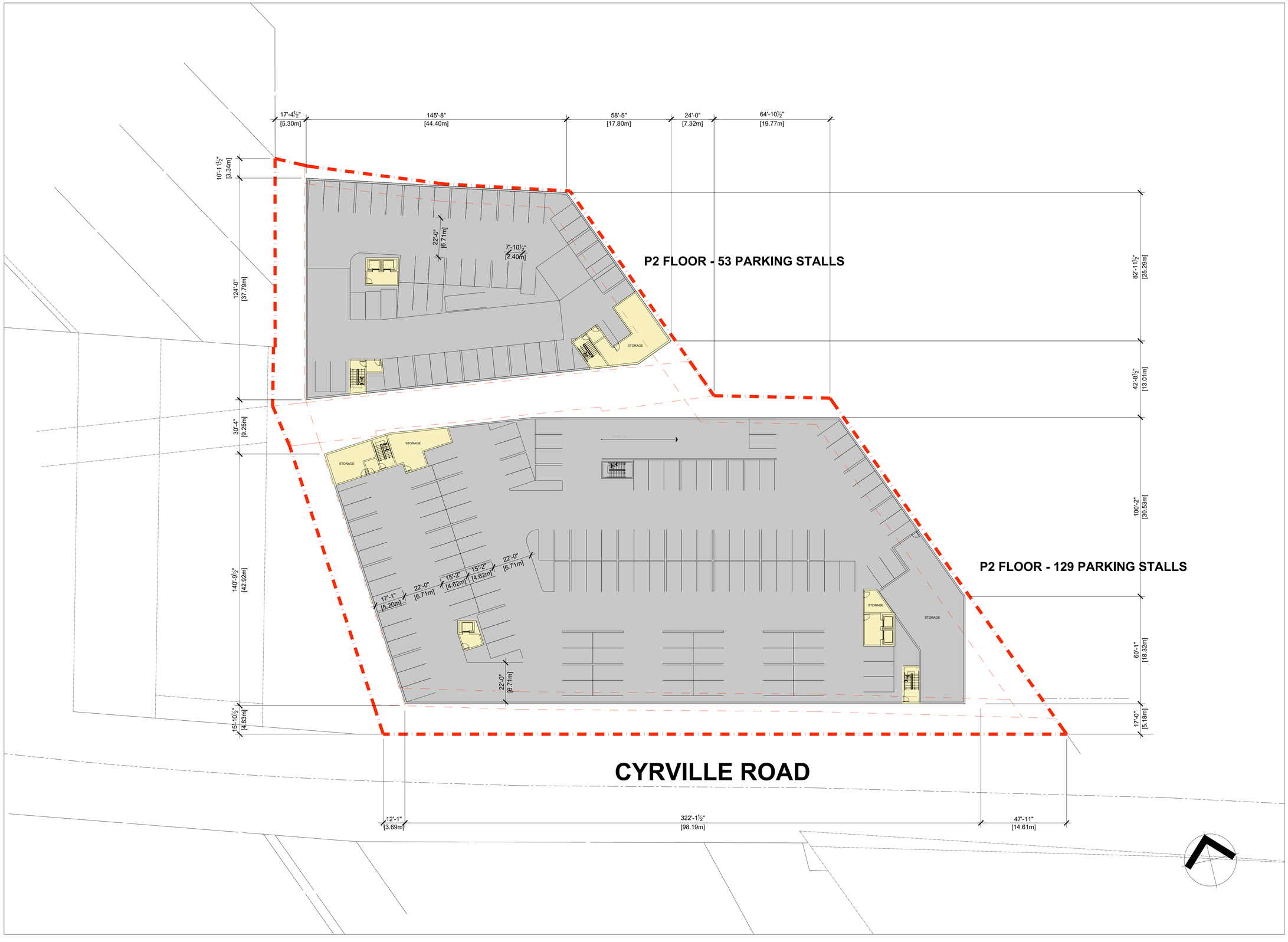
CONSULTANT:

SCALE: 1:350	SEAL:
DATE: 06/08/2021	
DRAWN BY:	
CHECKED BY:	
JOB NO.: 2021-01O	

SHEET TITLE:

GROUND FLOOR PLAN

DRAWING NO.:	REVISION No:
A1.1	



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NO. REVISION	DATE(D/M/Y)
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PROJECT:
MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:
WESTRICH PACIFIC CORP.

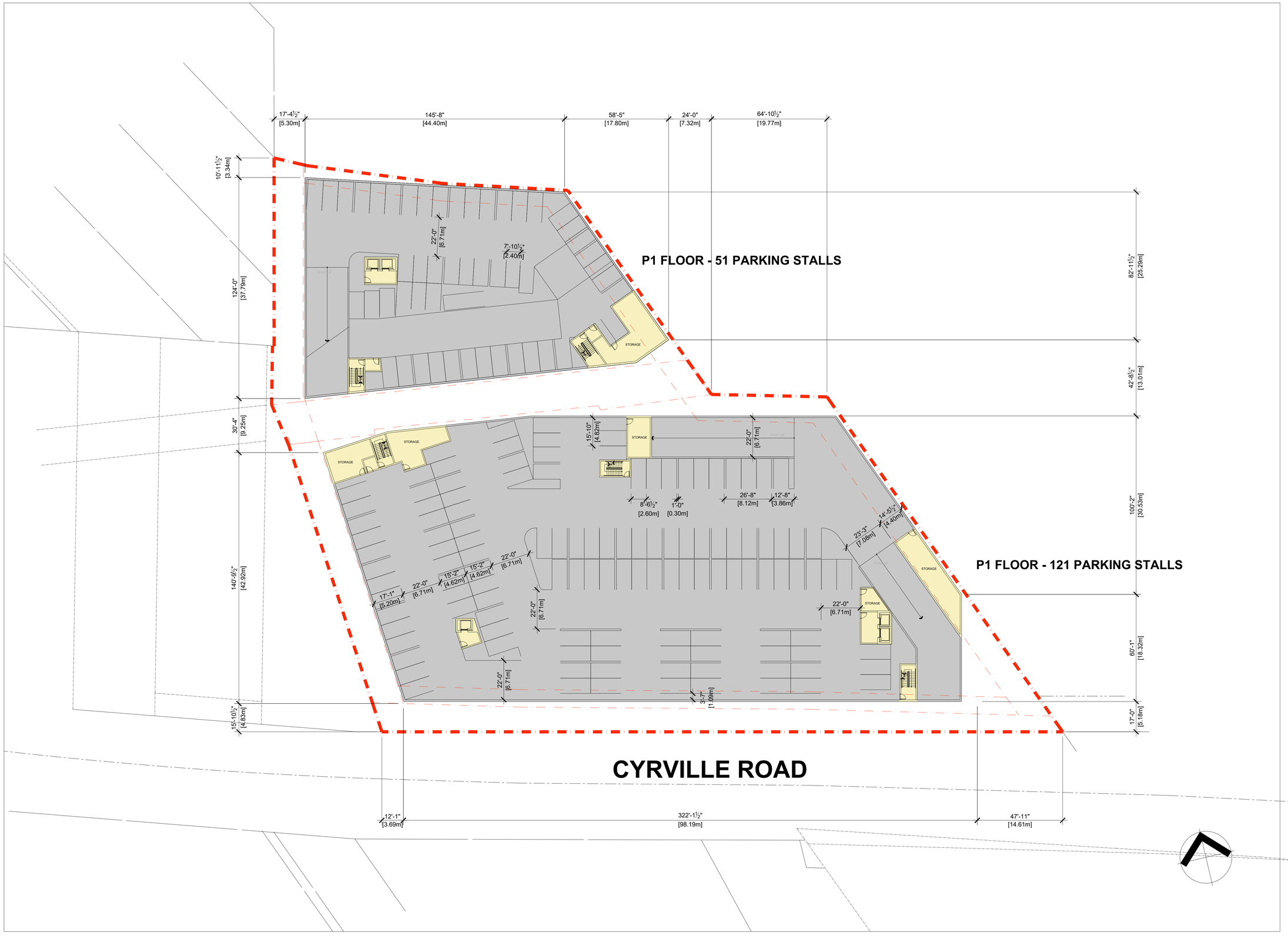
CONSULTANT:

SCALE: 1:150	SEAL:
DATE: 06/08/2021	
DRAWN BY:	
CHECKED BY:	
JOB NO.: 2021-01O	

SHEET TITLE:

BUILDING A & B
P1 FLOOR PLAN

DRAWING N0.:	REVISION No:
A2.1	



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Rezoning Application	14/04/2021

PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE: 1:150	SEAL:
DATE: 06/08/2021	
DRAWN BY:	
CHECKED BY:	
JOB NO.: 2021-01O	

SHEET TITLE:

BUILDING A & B
P1 FLOOR PLAN

DRAWING NO.:	REVISION No:
A2.1	

1 BEDROOM =11

2 BEDROOM =20

TOTAL: 31/FLOOR

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Rezoning Application	14/04/2021

PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE: 1:150	SEAL:
DATE: 06/08/2021	
DRAWN BY:	
CHECKED BY:	
JOB NO.: 2021-01O	

SHEET TITLE:

BUILDING A GROUND FLOOR PLAN

DRAWING N0.:	REVISION No:
A2.2	

1 BEDROOM =10
2 BEDROOM =25
3 BEDROOM =1
TOTAL: 36/FLOOR

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NO.	REVISION	DATE(D/M/Y)
	REVISIONS:	

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:
MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:
WESTRICH PACIFIC CORP.

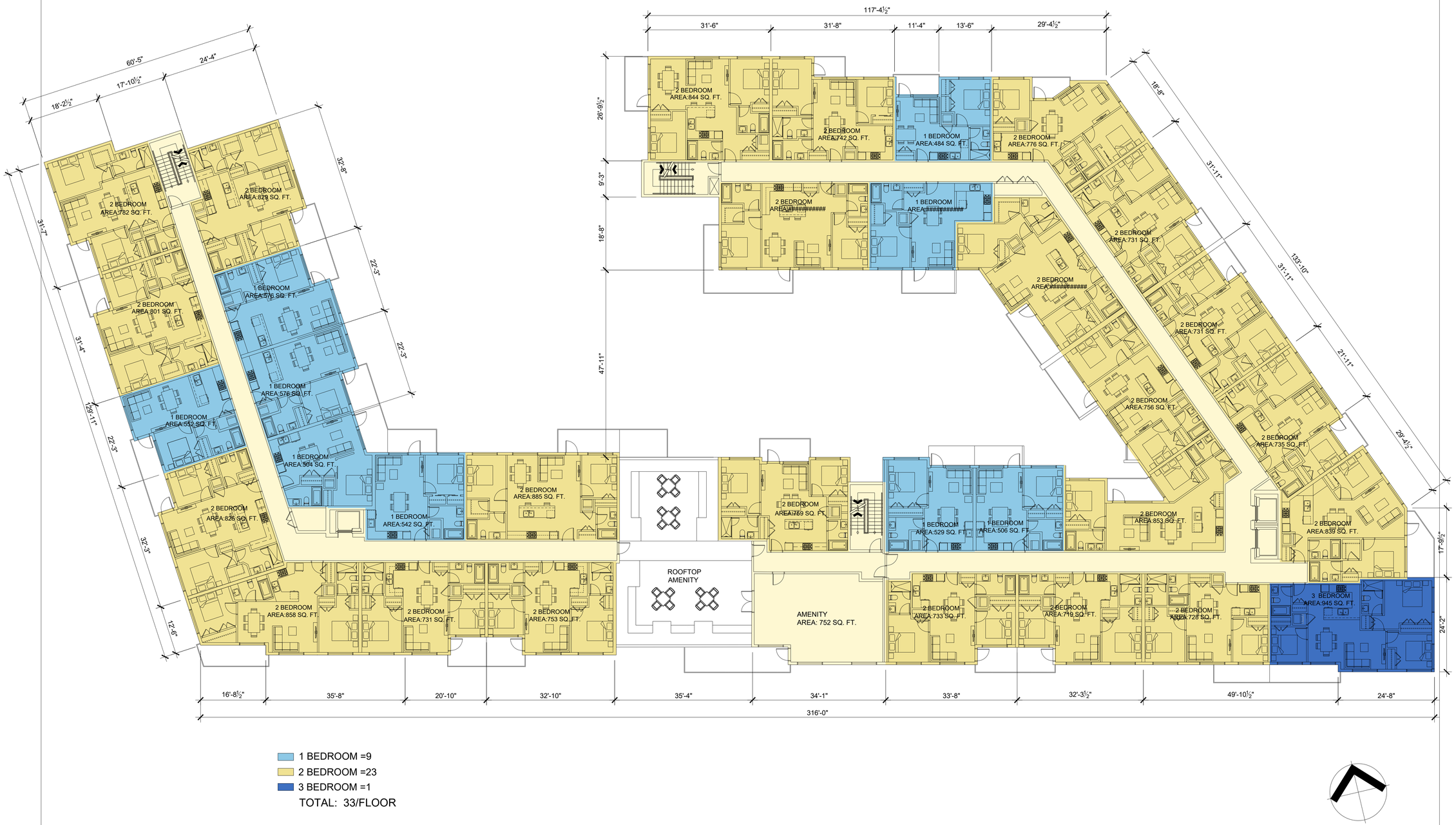
CONSULTANT:

SCALE: 1:150
DATE: 06/08/2021
DRAWN BY:
CHECKED BY:
JOB NO.: 2021-01O
SEAL:

SHEET TITLE:

BUILDING A
L2-L5 FLOOR PLAN

DRAWING N0.: A2.3
REVISION No:



1 BEDROOM =9
2 BEDROOM =23
3 BEDROOM =1
TOTAL: 33/FLOOR

J+S ARCHITECT

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WWW.JSARCHITECT.CA

NO.	REVISION	DATE(D/M/Y)
REVISIONS:		

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Rezoning Application	14/04/2021

PROJECT:
MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:
WESTRICH PACIFIC CORP.

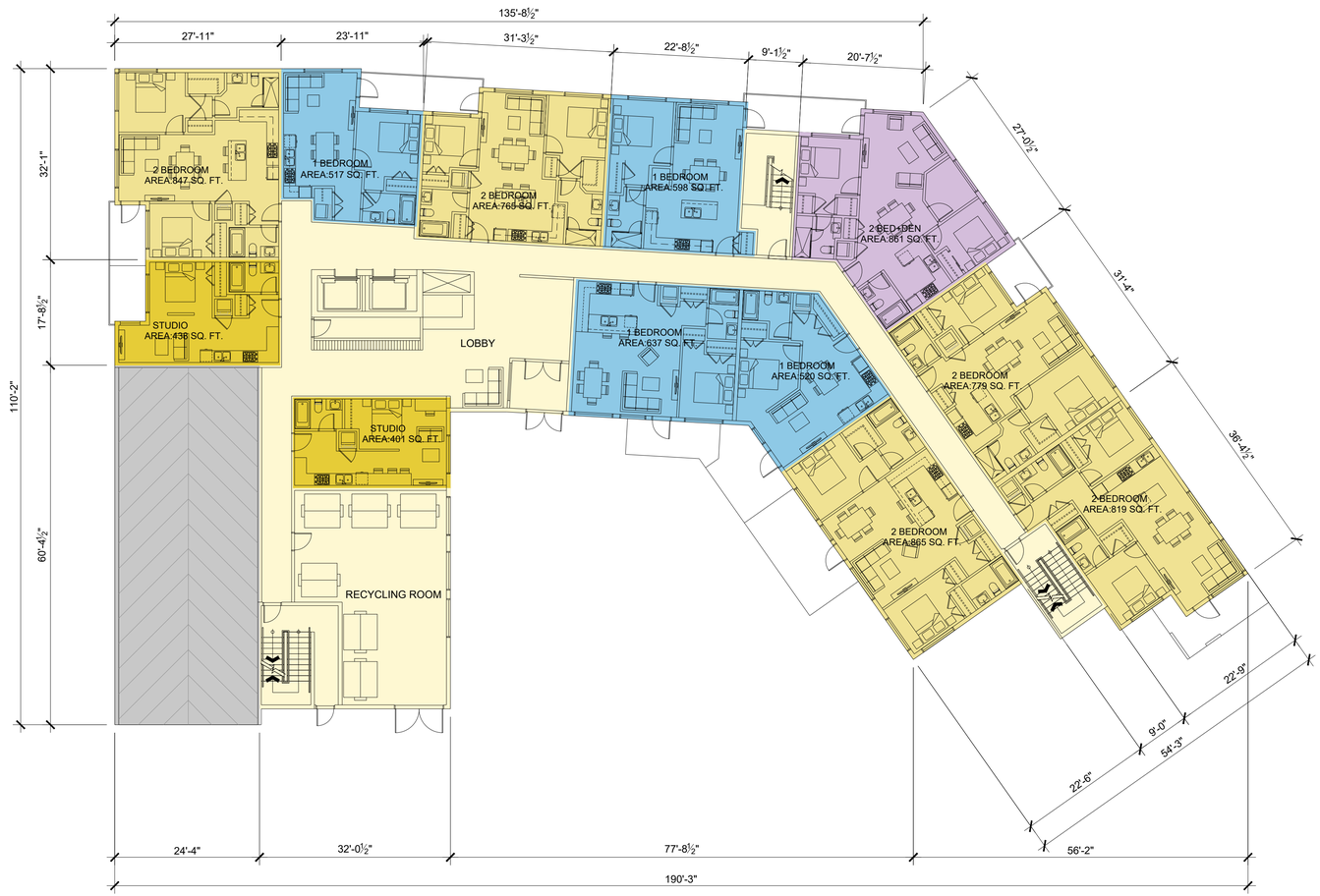
CONSULTANT:

SCALE: 1:150	SEAL:
DATE: 06/08/2021	
DRAWN BY:	
CHECKED BY:	
JOB NO.: 2021-01O	

SHEET TITLE:

BUILDING A
L6 FLOOR PLAN

DRAWING N0.:	REVISION No:
A2.4	



STUDIO =2
1 BEDROOM =4
2 BEDROOM =5
2 BED + DEN =1
TOTAL: 12/FLOOR

J+S ARCHITECT

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REVISIONS:

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Rezoning Application	14/04/2021

PROJECT:
MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:
WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE: 1:150
DATE: 06/08/2021
DRAWN BY:
CHECKED BY:
JOB NO.:
2021-01O

SEAL:

SHEET TITLE:

BUILDING B
GROUND FLOOR PLAN

DRAWING NO.:
A2.5

REVISION No:

1 BEDROOM =5
2 BEDROOM =9
2 BED + DEN =1
TOTAL: 15/FLOOR

J+S ARCHITECT

T 604 210 9698 INFO@JSARCHITECT.CA
206-4603 KINGSWAY, BURNABY, BC V5H 4M4
WWW.JSARCHITECT.CA

NO.	REVISION	DATE(D/M/Y)
	REVISIONS:	

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:
MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:
WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE: 1:150
DATE: 06/08/2021
DRAWN BY:
CHECKED BY:
JOB NO.:
2021-01O

SEAL:

SHEET TITLE:

BUILDING B
L2-L6 FLOOR PLAN

DRAWING N0.:
A2.6

REVISION No:

1 BEDROOM =4
2 BEDROOM =5
TOTAL: 9/FLOOR

1 BEDROOM =4
2 BEDROOM =6
TOTAL: 10/FLOOR

J+S ARCHITECT
T 604 210 9698 INFO@JSARCHITECT.CA
206-4603 KINGSWAY, BURNABY, BC V5H 4M4
WWW.JSARCHITECT.CA

NO.	REVISION	DATE(D/M/Y)
REVISIONS:		

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:
MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:
WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE: 1:150
DATE: 06/08/2021
DRAWN BY:
CHECKED BY:
JOB NO.: 2021-01O
SEAL:

SHEET TITLE:

BUILDING B
L7 FLOOR PLAN
L8-L12 FLOOR PLAN

DRAWING N0.: A2.7
REVISION No:

J+S ARCHITECT

T 604 210 9698 INFO@JSARCHITECT.CA
206-4603 KINGSWAY, BURNABY, BC V5H 4M4
WWW.JSARCHITECT.CA

NO. REVISION	DATE(D/M/Y)
REVISIONS:	

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE:	SEAL:
DATE: 06/08/2021	
DRAWN BY:	
CHECKED BY:	
JOB NO.: 2021-01O	

SHEET TITLE:

3D VIEW
-LOOKING TO NORTHEAST

DRAWING N0.:	REVISION No:
A5.0	

J+S ARCHITECT

T 604 210 9698 INFO@JSARCHITECT.CA
206-4603 KINGSWAY, BURNABY, BC V5H 4M4
WWW.JSARCHITECT.CA

NO.	REVISION	DATE(D/M/Y)

REVISIONS:

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE:

SEAL:

DATE: 06/08/2021

DRAWN BY:

CHECKED BY:

JOB NO.:

2021-01O

SHEET TITLE:

3D VIEW -LOOKING TO NORTHWEST

DRAWING N0.:

A5.1

REVISION No:

J+S ARCHITECT

T 604 210 9698 INFO@JSARCHITECT.CA
206-4603 KINGSWAY, BURNABY, BC V5H 4M4
WWW.JSARCHITECT.CA

NO. REVISION	DATE(D/M/Y)
REVISIONS:	

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE:	SEAL:
DATE: 06/08/2021	
DRAWN BY:	
CHECKED BY:	
JOB NO.: 2021-01O	

SHEET TITLE:

AERIAL VIEW
-LOOKING TO NORTHWEST

DRAWING N0.:	REVISION No:
A5.2	

T 604 210 9698 INFO@JSARCHITECT.CA
206-4603 KINGSWAY, BURNABY, BC V5H 4M4
WWW.JSARCHITECT.CA

NO. REVISION	DATE(D/M/Y)
REVISIONS:	

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE:

SEAL:

DATE: 06/08/2021

DRAWN BY:

CHECKED BY:

JOB NO.:
2021-01O

SHEET TITLE:

AERIAL VIEW -LOOKING TO NORTHEAST

DRAWING N0.:
A5.3

REVISION No:

J+S ARCHITECT

T 604 210 9698 INFO@JSARCHITECT.CA
206-4603 KINGSWAY, BURNABY, BC V5H 4M4
WWW.JSARCHITECT.CA

NO.	REVISION	DATE(D/M/Y)

REVISIONS:

ISSUED FOR:	DATE(D/M/Y)
Rezoning Application	14/04/2021

PROJECT:

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

1125-1149 Cyrville Road,
Ottawa, ON

CLIENT:

WESTRICH PACIFIC CORP.

CONSULTANT:

SCALE:

SEAL:

DATE: 06/08/2021

DRAWN BY:

CHECKED BY:

JOB NO.:
2021-01O

SHEET TITLE:

AERIAL VIEW -LOOKING TO NORTH

DRAWING NO.:
A5.3

REVISION No:

Appendix C SANITARY SERVICING

C.1 SANITARY SEWER DESIGN SHEET

Stantec

SITE: **1125-1149 Cyrville Road**

DATE: 2021-10-21
REVISION: 0
DESIGNED BY: DW,NN
CHECKED BY: DT

SANITARY SEWER DESIGN SHEET
(City of Ottawa)

FILE NUMBER: 160401672

DESIGN PARAMETERS

MAX PEAK FACTOR (RES.)=	4.0	AVG. DAILY FLOW / PERSON	280 L/p/day	MINIMUM VELOCITY	0.60 m/s
MIN PEAK FACTOR (RES.)=	2.0	COMMERCIAL	28,000 L/ha/day	MAXIMUM VELOCITY	3.00 m/s
PEAKING FACTOR (INDUSTRIAL):	2.4	INDUSTRIAL (HEAVY)	55,000 L/ha/day	MANNING'S n	0.013
PEAKING FACTOR (ICI >20%):	1.5	INDUSTRIAL (LIGHT)	35,000 L/ha/day	BEDDING CLASS	B
PERSONS / 1 BEDROOM	1.4	INSTITUTIONAL	28,000 L/ha/day	MINIMUM COVER	2.50 m
PERSONS / 2 BEDROOM	2.1				
PERSONS / 3 BEDROOM	3.1	INFILTRATION	0.33 L/s/ha	HARMON CORRECTION FACTOR	0.8
PERSONS / TOWNHOME	2.7				

LOCATION			RESIDENTIAL AREA AND POPULATION									COMMERCIAL/ AMENITY/LOBBY		INDUSTRIAL (L)		INDUSTRIAL (H)		INSTITUTIONAL		GREEN / UNUSED		C+I+I	INFILTRATION			TOTAL	PIPE								
AREA ID NUMBER	FROM M.H.	TO M.H.	AREA	1 BEDROOM	2 BEDROOM	3 BEDROOM	TOWNHOME	POP.	CUMULATIVE AREA	CUMULATIVE POP.	PEAK FACT.	PEAK FLOW	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	PEAK FLOW	TOTAL AREA	ACCU. AREA	INFILT. FLOW	FLOW	LENGTH	DIA	MATERIAL	CLASS	SLOPE	CAP. (FULL)	CAP. V PEAK FLOW	VEL. (FULL)	VEL. (ACT.)
			(ha)						(ha)			(L/s)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(m)	(mm)			(%)	(l/s)	(%)	(m/s)	(m/s)
R100B	BLDG B	BLDG A	0.110	55	85	6	0	275	0.110	275	3.79	3.38	0.197	0.197	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.10	0.110	0.110	0.04	3.51	7.1	200	PVC	SDR 34	1.00	125.8	**2.79%**	1.79	0.62
G100A			0.460					0	0.460	0	3.79	0.00	0.000	0.000	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.00	0.460	0.460	0.15	3.66									
R100A	BLDG A	MONITOR	0.270	60	143	5	0	400	0.270	400	3.79	4.91	0.240	0.240	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.12	0.270	0.270	0.09	8.78	4.3	200	PVC	SDR 35	1.00	125.8	**6.98%**	1.79	0.62
	MONITOR	EX. SAN	0.000					0	0.000	0	3.80	0.00	0.000	0.000	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.00	0.000	0.000	0.00	**8.78**	11.1	200	PVC	SDR 35	1.00	125.8	**6.98%**	1.79	0.62
									0.840																											

Appendix D STORMWATER SERVICING AND MANAGEMENT

D.1 PRECONSULTATION NOTES WITH CITY OF OTTAWA

From:	Curry, William
To:	Moroz, Peter
Cc:	Boughton, Michael; Peter Hume; Murshid, Shoma; dsanche@westrichpacific.com; Jack Stirling
Subject:	Re: 1125 Cyrville Road - parting thoughts from meeting
Date:	Monday, March 15, 2021 1:44:27 PM
Attachments:	1125 Cyrville Map.pdf

Peter,

We don't permit connections to any Trunks within an easement at all. This 1900 mm Ø storm sewer has HGL issues. In a 100-year event the water is 30cm above the Storm MH cover (MHST21507) on Cummings Ave at elevation 68.24. Cover elevation is 68.21. City Water Resources staff have confirmed this. The entire pipe has maximum of about 800mm cover.

With the application of 1178 Cyrville Road I asked that they remove the 1 CB within their parcel. It spans the property line of both developments. With the development of 1125 Cyrville the CB closer to the 1113 Cyrville parcel should also be removed as it has a cover of 68.13. The City has a known history of this area and excessive ponding issues.

The constraints are:

1. No direct connections to any Trunks within an easement at all.
2. When Trunk sewers in easements are deep we typically permit 1 set of services across an Easement as there is little to no impact to the Deep trunk sewer. We could permit it here, but they would have to be pumped and maybe below the storm trunk.
3. We **do not** permit anything private to cross the easement such as Hydro, gas or utilities unless in a City Block.
4. it is Unkown exactly what 1178 Cummings, and 1098 Ogilvie are re-designing. They have not resubmitted. They could service this parcel of 1125 Cyrville if required by gravity, also with a JUMA. Note it was recommended that their entire site be raised as much as possible, near a metre in height. This may benefit 1125 Cyrville also.
5. Retaining walls if crossing an easement must be of the block type that can be easily removed by the City if need be. No fixed structures.
6. Discussion was there may be a shared Private Road between the 2 developments, Ogilvie to Cyrville and again a JUMA. Ideal for servicing.
7. Practicality may suggest providing additional cover over the pipe for protection from vehicles...etc.

CCTV was ordered and is on the List to be done. None currently available.

I hope that helps if you need to discuss further, please contact me.

Will

From: Moroz, Peter <peter.moroz@stantec.com>
Sent: Monday, March 15, 2021 12:44 PM
To: Curry, William <William.Curry@ottawa.ca>
Cc: Boughton, Michael <Michael.Boughton@ottawa.ca>; Peter Hume <peter.hume@hpurban.ca>; Murshid, Shoma <Shoma.Murshid@ottawa.ca>; dsanche@westrichpacific.com <dsanche@westrichpacific.com>; Jack Stirling <jack@thestirlinggroup.ca>
Subject: FW: 1125 Cyrville Road - parting thoughts from meeting

William, I am in process of reviewing the servicing requirements for 1125 Cyrville Road, and would like to clarify the servicing constraints pertaining to the northern part of the site, north of the City trunk storm trunk sewer (see highlighted comment below). Can you confirm which services has the City determined to be coming through 1098 Ogilvie/1178 Cummings? Alternatively, can you also confirm if water and sanitary forcemain can cross the easement with storm connection directly into the storm trunk, in the event that the easement through the 1098 Ogilvie/1178 Cummings is not available.

thx

Peter

Peter Moroz P.Eng., MBA
Managing Principal, Community Development

Stantec
400 - 1331 Clyde Avenue Ottawa ON K2C 3G4

Phone: (613) 724-4082
Cell: (613) 294-2851

peter.moroz@stantec.com

From: Murshid, Shoma <Shoma.Murshid@ottawa.ca>
Sent: Tuesday, February 16, 2021 11:42 AM
To: Peter Hume <peter.hume@hpurban.ca>
Cc: David Sanche <dsanche@westrichpacific.com>; Curry, William <William.Curry@ottawa.ca>; Boughton, Michael <Michael.Boughton@ottawa.ca>; Wang, Randolph <Randolph.Wang@ottawa.ca>; Giles, Peter <peter.giles1@ottawa.ca>; Wood, Mary Ellen <MaryEllen.Wood@ottawa.ca>; Giampa, Mike <Mike.Giampa@ottawa.ca>
Subject: 1125 Cyrville Road - parting thoughts from meeting

Hi Peter,

Even though I am not in a position to provide a formal or typical 'pre-consultation follow-up' to the February 4, 2021 meeting, I wanted to share a few items that will help in a re-design process.

You may proceed and re-convene with us on a formal pre-consultation for what is required at the time of a site plan control submission with what is permitted exactly in the zoning for the lands today without the need for a zoning amendment and/or an official plan amendment. If you wish to depart from the zoning provisions today by increasing or decreasing the density and/or heights, it will automatically trigger the need for a Zoning Amendment and we can only consider a rezoning that at the very least complies with the TD2 zone. If you wish provisions more in keeping with a TD3 zone, then this will also have to be accompanied by an Official Plan Amendment (OPA). Any site-specific OPAs must be in and deemed complete by PIED in advance of the new OP becoming Minister-approved, otherwise a 2-year moratorium on site-specific OPAs will take effect. However, if you wish to proceed with the current zone and there are minor changes required to the current zone provisions that do not change the density or height provisions and it meets the 4 tests for required for minor variance (as can be determined by a Committee of Adjustment planner), this could also be considered. Again, we are ready to review any re-design and have another pre-consult meeting with you.

Further items to consider within your re-design:

- Please be aware of affordable housing programs, such as CMHC's Rental Construction Financing program, and see if your re-design can be considered for eligibility

- Bird-safe safety design guidelines are now in effect.
  https://ottawa.ca/en/city-hall/public-engagement/projects/bird-friendly-design-guidelines
  https://ottawa.ca/en/city-hall/public-engagement/projects/bird-friendly-design-guidelines#bird-friendly-design-guidelines

- Due to the City's TOD Plan in effect for the area (Cyrville TOD) and an exception present in the current zone for MC[1957]F(1.1)H(15), there is a requirement to take an additional 5 metres of road dedication along the west side of your property from your site. This, will have to be designed, developed and constructed at the applicant's cost, via a site plan control process's review, as a MUP.

- Due to the City trunk sewer and easement running approximately halfway through your property, it makes the northern half unserviceable straight from a City source. There may be a chance to seek a service right through a private property at the moment, due to an active site plan application at 1098 Ogilvie/1178 Cummings, where the applicant appears to be proposing a private service line adjacent to the back of your site. You may wish to pursue this option with the landowner of aforementioned lands. For further information,

please click on https://devapps.ottawa.ca/en/applications/__8569VJ/details or contact Michael Boughton, Planner for this site at Michael.Boughton@ottawa.ca and/or Will Curry, Project Manager at William.Curry@ottawa.ca .

- This is an active priority streetscape along Cyrville (as per the Cyrville TOD Plan). This includes the requirement for achieving large canopy trees at the frontage of Cyrville Road, and large canopy trees along the MUP is encouraged.
- A pre-consultation with UDRP is encouraged.
- Please have a meeting to discuss your development options with Councillor Tierney.
- Ensure there are principal entrances and widnows along not only Cyrville Road, but also towards the MUP that is to be developed to the west.
- Transit-supportive uses and jobs, plus densities are encouraged at this location.
- ROW protection on Cyrville is 26m. Please ensure that this ROW protection currently exists via your surveyor. If not, the appropriate amount will have to be dedicated along Cyrville Road via the site plan control process.
- Parks will be requesting conveyance of parkland (see attached for further comments). With respect to density calculation, typically it is calculated using the entire parcel. The land conveyed as parkland is not subtracted from the parcel.

Urban Design Reflections to consider:
Here are urban design comments on behalf of PRUD:

1. The applicants face some servicing and land allocation challenges. It is anticipated that they will change their design and a second pre-consultation may be required when the new design is developed.
2. A Design Brief is required for a site plan and a scoped Design Brief is required for rezoning. The Terms of Reference of the Design Brief is attached for convenience. A wind study is not required for a mid-rise proposal. However, a wind study may be required if a high-rise is proposed in the new design.
3. The site is within a Design Priority Area and a visit to the review by the City's Urban Design Review Panel (UDRP) for formal review is required. The applicant may also benefit from an informal review by the UDRP. However, at this time, informal UDRP review is not recommended. The decision on the merits of UDRP informal review can be made at the second staff pre-consultation.
4. It is crucially important to understand the planned context of the area and develop design responses accordingly. I am sharing the slides I presented to the applicants at the meeting for information. See attached.
5. The proposed mid-rise concept is quite interesting and has the potential to achieve many planning and urban design objectives for the area, however,
    a. It appears the design does not take into consideration the approximately 5m wide trip of lands taken by the City along the west side of the property, neither does it take into consideration the street and pathway systems

envisioned in the TOP plan for the street block the site is situated.

b. The close proximity (3m) of the residential units to the interior lot lines and rear lot lines with primary windows and balconies facing the very narrow side yards and rear yard is quite concerning. Please keep in mind the planned context for the area and the neighbouring properties. Both the current zoning of MC and the future zoning of TD, as directed by the TOD study, are very permissive with respect to building setbacks. Neighbouring properties can potentially see mixed use buildings rising up right at the interior lot lines.

6. A few suggestions for the development of revised options.
    a. Provide sufficient building setbacks from the west property line (in addition to the 5m that has already been taken by the City) to allow for the construction of a potential street connection and/or a multi-use pathway.
    b. Provide sufficient building setbacks from the south and east property lines to allow for the construction of multi-use pathways.
    c. Please note the proposed development at 1178 Cumming has already provided space along interior and rear property lines to allow the above-mentioned street connections and pathways.
    d. Orient and design buildings in response to these future street connection and pathways by following the principle of “eyes on the street”. Depending on the programing there may be merits to include some ground-oriented units.
    e. Provide adequate landscaping along all public streets and pathways in accordance with the TOP plan and other relevant City policies and guidelines.
    f. Provide commercial and other active uses along Cyrville Road.
    g. Locate main pedestrian entrances on Cyrville Road as the applicants have already done in the concept shown at pre-consultation.

Further transportation and noise review notes to consider are:

- Submit a screening form.
- If a TIA is warranted proceed to scoping.
- The application will not be deemed complete until the submission of the draft step 2-4, including the functional draft RMA package (if applicable) and/or monitoring report (if applicable).
- Although a full review of the TIA Strategy report (Step 4) is not required prior to an application, it is strongly recommended. Synchro files are required at Step 4.
- A Road Noise Impact Study is required.
- Clear throat requirements as per TAC guidelines for a collector road.

Some Engineering Design Criteria to consider under a site plan control process:

<u>Design Criteria - Civil Engineer to contact Will Curry directly</u>

Storm Pre to post, C of .5, Pre tc 20; post tc 10

Onsite, 5-year pipe minimum and store up to 100-year on site. No 2-year ponding on site.

Permissible ponding of 350mm for 100-year. No spilling to adjacent properties.

At 100-year ponding elevation you must spill to City ROW

100-year Spill elevation must be 300mm lower than any building opening

Nothing is permitted with the storm easement other than asphalt, curbs, pavers, grass and low shrubs.

Water Boundary condition requests must include the location of the service and the expected loads required by the proposed development. Please provide the following information:

Location of service connections (MAP)
Type of development and the amount of fire flow required (as per FUS).
Average daily demand: ___ l/s.
Maximum daily demand: ___l/s.
Maximum hourly daily demand: ___ l/s.

Closing thoughts:

We look forward to a concept re-design. Should you be ready to pre-consult with us on a revised concept, please do not hesitate to reach out to me first and discuss. If you have any questions or concerns in the interim, please do not hesitate to contact me.

Best wishes,

Shoma Murshid, MCIP, RPP
File Lead, Planner II
Responsable de dossier, urbaniste II
City of Ottawa/ Ville d'Ottawa
Development Review (Suburban Services, East)/ Examen des projets d'aménagement (Services suburbains Est)
Planning, Infrastructure, and Economic Development Department/ Service de la planification, de l'infrastructure et du développement économique
110 Laurier Avenue West, 4th Floor, Ottawa ON K1P 1J1/ 110, avenue Laurier Ouest, 4e étage, Ottawa (Ontario) K1P 1J1
Mail Code/ Code de courrier : 01-14
Tel/ Tél: (613) 580-2424 ext. 15430
Fax/ Téléc. : (613) 580-4751
e-mail/ courriel : shoma.murshid@ottawa.ca
www.ottawa.ca

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collaboration.
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'

'

D.2 MODIFIED RATIONAL METHOD CALCULATIONS

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Roof Drain Design Sheet, ROOF 1A
Standard Watts Model R1100 Accuflow Roof Drain

Rating Curve				Volume Estimation				
Elevation (m)	Discharge Rate (cu.m/s)	Outlet Discharge (cu.m/s)	Storage (cu. m)	Elevation (m)	Area (sq. m)	Volume (cu. m) Increment	Volume (cu. m) Accumulated	Water Depth (m)
0.000	0.0000	0.0000	0	0.000	0	0	0	0.000
0.025	0.0003	0.0009	0	0.025	22	0	0	0.025
0.050	0.0006	0.0019	1	0.050	89	1	1	0.050
0.075	0.0009	0.0026	5	0.075	200	4	5	0.075
0.100	0.0011	0.0033	12	0.100	356	7	12	0.100
0.125	0.0013	0.0040	23	0.125	556	11	23	0.125
0.150	0.0016	0.0047	40	0.150	800	17	40	0.150

Drawdown Estimate			
Total Volume (cu.m)	Total Time (sec)	Vol (cu.m)	Detention Time (hr)
0.0	0.0	0.0	0
1.3	684.9	1.3	0.190247
4.8	1352.0	3.5	0.565801
11.7	2068.6	6.9	1.140426
23.0	2808.6	11.3	1.920599
39.8	3561.4	16.9	2.909886

Rooftop Storage Summary

Roof Area (sq.m)		1000	(Assumes 'mechanical' portion of roof is usable)
Assumed Available Roof Area (sq.m)	80%	800	
Roof Imperviousness		0.99	
Min. Roof Drain Requirement (sq.m/Notch)		900	
Number of Roof Notches*		3	* As per Ontario Building Code section OBC 7.4.10.4.(2)(c).
Max. Allowable Depth of Roof Ponding (m)		0.15	
Max. Allowable Storage (cu.m)		40	
Estimated 100 Year Drawdown Time (h)		2.9	

From Watts Drain Catalogue

Head (m)	L/s Open	75%	**50%**	25%	Closed
0.025	0.3155	0.3155	**0.3155**	0.3155	0.315451
0.050	0.6309	0.6309	**0.6309**	0.6309	0.630902
0.075	0.9464	0.8675	**0.7886**	0.7098	0.630902
0.100	1.2618	1.1041	**0.9464**	0.7886	0.630902
0.125	1.5773	1.3407	**1.1041**	0.8675	0.630902
0.150	1.8927	1.5773	**1.2618**	0.9464	0.630902

Calculation Results	5yr	100yr	Available
Qresult (cu.m/s)	0.004	0.005	-
Depth (m)	0.113	0.149	0.150
Volume (cu.m)	17.7	39.2	40.0
Draintime (hrs)	1.6	2.9	

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Roof Drain Design Sheet, ROOF 1C
Standard Watts Model R1100 Accuflow Roof Drain

Rating Curve				Volume Estimation				
Elevation (m)	Discharge Rate (cu.m/s)	Outlet Discharge (cu.m/s)	Storage (cu. m)	Elevation (m)	Area (sq. m)	Volume (cu. m) Increment	Volume (cu. m) Accumulated	Water Depth (m)
0.000	0.0000	0.0000	0	0.000	0	0	0	0.000
0.025	0.0003	0.0016	0	0.025	38	0	0	0.025
0.050	0.0006	0.0032	3	0.050	151	2	3	0.050
0.075	0.0009	0.0043	9	0.075	340	6	9	0.075
0.100	0.0011	0.0055	20	0.100	604	12	20	0.100
0.125	0.0013	0.0067	39	0.125	944	19	39	0.125
0.150	0.0016	0.0079	68	0.150	1360	29	68	0.150

Drawdown Estimate			
Total Volume (cu.m)	Total Time (sec)	Vol (cu.m)	Detention Time (hr)
0.0	0.0	0.0	0
2.2	698.6	2.2	0.194052
8.2	1379.0	6.0	0.577117
19.8	2110.0	11.6	1.163234
39.0	2864.8	19.2	1.959011
67.7	3632.7	28.6	2.968083

Rooftop Storage Summary

Roof Area (sq.m)		1700	(Assumes 'mechanical' portion of roof is usable)
Assumed Available Roof Area (sq.m)	80%	1360	
Roof Imperviousness		0.99	
Min. Roof Drain Requirement (sq.m/Notch)		900	
Number of Roof Notches*		5	* As per Ontario Building Code section OBC 7.4.10.4.(2)(c).
Max. Allowable Depth of Roof Ponding (m)		0.15	
Max. Allowable Storage (cu.m)		68	
Estimated 100 Year Drawdown Time (h)		2.9	

From Watts Drain Catalogue

Head (m)	L/s Open	75%	50%	25%	Closed
0.025	0.3155	**0.3155**	0.3155	0.3155	0.315451
0.050	0.6309	**0.6309**	0.6309	0.6309	0.630902
0.075	0.9464	**0.8675**	0.7886	0.7098	0.630902
0.100	1.2618	**1.1041**	0.9464	0.7886	0.630902
0.125	1.5773	**1.3407**	1.1041	0.8675	0.630902
0.150	1.8927	**1.5773**	1.2618	0.9464	0.630902

Calculation Results	5yr	100yr	Available
Qresult (cu.m/s)	0.006	0.008	-
Depth (m)	0.113	0.149	0.150
Volume (cu.m)	30.3	67.1	68.0
Draintime (hrs)	1.6	2.9	

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Roof Drain Design Sheet, Area ROOF 2A
Standard Watts Drain Catalogue Single Notch Roof Drain

Rating Curve				Volume Estimation				
Elevation (m)	Discharge Rate (cu.m/s)	Outlet Discharge (cu.m/s)	Storage (cu. m)	Elevation (m)	Area (sq. m)	Volume (cu. m) Increment	Volume (cu. m) Accumulated	Water Depth (m)
0.000	0.0000	0.0000	0	0.000	0	0	0	0.000
0.025	0.0003	0.0009	0	0.025	18	0	0	0.025
0.050	0.0006	0.0019	1	0.050	71	1	1	0.050
0.075	0.0008	0.0024	4	0.075	160	3	4	0.075
0.100	0.0009	0.0028	9	0.100	284	5	9	0.100
0.125	0.0011	0.0033	19	0.125	444	9	19	0.125
0.150	0.0013	0.0038	32	0.150	640	13	32	0.150

Drawdown Estimate			
Total Volume (cu.m)	Total Time (sec)	Vol (cu.m)	Detention Time (hr)
0.0	0.0	0.0	0
1.0	547.9	1.0	0.1522
3.9	1189.8	2.8	0.48268
9.3	1930.7	5.5	1.019
18.4	2728.4	9.0	1.77688
31.9	3561.4	13.5	2.76617

Rooftop Storage Summary

Total Building Area (sq.m)		800
Assume Available Roof Area (sq.m)	80%	640
Roof Imperviousness		0.99
Roof Drain Requirement (sq.m/Notch)		900
Number of Roof Notches*		3
Max. Allowable Depth of Roof Ponding (m)		0.15
Max. Allowable Storage (cu.m)		32
Estimated 100 Year Drawdown Time (h)		2.7

* As per Ontario Building Code section OBC 7.4.10.4.(2)(c).

* Note: Number of drains can be reduced if multiple-notch drain used.

From Watts Drain Catalogue

Head (m)	L/s Open	75%	**50%**	25%	Closed
0.025	0.31545	0.31545	**0.31545**	0.31545	0.31545
0.050	0.6309	0.6309	**0.6309**	0.6309	0.6309
0.075	0.94635	0.86749	**0.78863**	0.70976	0.6309
0.100	1.2618	1.10408	**0.94635**	0.78863	0.6309
0.125	1.57726	1.34067	**1.10408**	0.86749	0.6309
0.150	1.89271	1.57726	**1.2618**	0.94635	0.6309

Calculation Results	5yr	100yr	Available
Qresult (cu.m/s)	0.003	0.004	-
Depth (m)	0.112	0.149	0.150
Volume (cu.m)	13.9	31.4	32.0
Draintime (hrs)	1.4	2.7	

Stormwater Management Calculations

File No: **160401672**
Project: **1125-1149 Cyrville Road, Ottawa, ON**
Date: **2021-11-22**

SWM Approach:
Post-development to Pre-development flows

Post-Development Site Conditions:

Overall Runoff Coefficient for Site and Sub-Catchment Areas

Runoff Coefficient Table

Catchment Type	Sub-catchment Area ID / Description		Area (ha) "A"		Runoff Coefficient "C"	"A x C"		Overall Runoff Coefficient
Roof	ROOF 1B	Hard	0.010		0.9	0.009		
		Soft	0.000		0.2	0.000		
		Subtotal		0.01			0.009	0.900
Roof	ROOF 2B	Hard	0.040		0.9	0.036		
		Soft	0.000		0.2	0.000		
		Subtotal		0.04			0.036	0.900
Roof	ROOF 1A	Hard	0.100		0.9	0.090		
		Soft	0.000		0.2	0.000		
		Subtotal		0.1			0.09	0.900
Uncontrolled - Non-tributary	UNC-1	Hard	0.028		0.9	0.025		
		Soft	0.042		0.2	0.008		
		Subtotal		0.07			0.0336	0.480
Uncontrolled - Tributary	TANK 1C	Hard	0.047		0.9	0.042		
		Soft	0.023		0.2	0.005		
		Subtotal		0.07			0.0469	0.670
Uncontrolled - Tributary	TANK 2A	Hard	0.033		0.9	0.029		
		Soft	0.007		0.2	0.001		
		Subtotal		0.04			0.0308	0.770
Uncontrolled - Tributary	TANK 1B	Hard	0.007		0.9	0.006		
		Soft	0.033		0.2	0.007		
		Subtotal		0.04			0.0128	0.320
Controlled - Tributary	L 100	Hard	0.061		0.9	0.055		
		Soft	0.009		0.2	0.002		
		Subtotal		0.07			0.0567	0.810
Roof	ROOF 2A	Hard	0.080		0.9	0.072		
		Soft	0.000		0.2	0.000		
		Subtotal		0.08			0.072	0.900
Controlled - Tributary	TANK 1A	Hard	0.055		0.9	0.049		
		Soft	0.065		0.2	0.013		
		Subtotal		0.120			0.0624	0.520
Roof	ROOF 1C	Hard	0.170		0.9	0.153		
		Soft	0.000		0.2	0.000		
		Subtotal		0.170			0.153	0.900
Uncontrolled - Tributary	TANK 2B	Hard	0.022		0.9	0.020		
		Soft	0.006		0.2	0.001		
		Subtotal		0.03			0.006	0.200
Total				**0.840**			**0.609**	
Overall Runoff Coefficient= C:								**0.73**

Total Roof Areas	**0.400 ha**
Total Tributary Surface Areas (Controlled and Uncontrolled)	**0.370 ha**
Total Tributary Area to Outlet	**0.770 ha**
Total Uncontrolled Areas (Non-Tributary)	**0.070 ha**
Total Site	**0.840 ha**

Stormwater Management Calculations

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Modified Rational Method Calculatons for Storage

5 yr Intensity
City of Ottawa

$I = a/(t + b)^c$

a =	998.071
b =	6.053
c =	0.814

t (min)	I (mm/hr)
10	104.19
20	70.25
30	53.93
40	44.18
50	37.65
60	32.94
70	29.37
80	26.56
90	24.29
100	22.41
110	20.82
120	19.47

Predevelopment Target Release from Portion of Site

Subdrainage Area: Predevelopment Tributary Area to Outlet
Area (ha): 0.840
C: 0.50 *(as directed by the City of Ottawa)*

Target release rate using Tc of 20 mins. as directed by the City of Ottawa

tc (min)	I (5 yr) (mm/hr)	Qtarget (L/s)
20	70.25	**82.0**

5 YEAR Modified Rational Method for Entire Site

Subdrainage Area: ROOF 1B (Flows to stormwater cistern A) Roof
Area (ha): 0.01 Maximum Storage Depth: no storage
C: 0.90

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)
10	104.19	2.61	2.61			
20	70.25	1.76	1.76			
30	53.93	1.35	1.35			
40	44.18	1.11	1.11			
50	37.65	0.94	0.94			
60	32.94	0.82	0.82			
70	29.37	0.73	0.73			
80	26.56	0.66	0.66			
90	24.29	0.61	0.61			
100	22.41	0.56	0.56			
110	20.82	0.52	0.52			
120	19.47	0.49	0.49			

Subdrainage Area: ROOF 2B (Flows to stormwater cistern B) Roof
Area (ha): 0.04 **Maximum Storage Depth:** no storage
C: 0.90

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)
10	104.19	10.43	10.43			
20	70.25	7.03	7.03			
30	53.93	5.40	5.40			
40	44.18	4.42	4.42			
50	37.65	3.77	3.77			
60	32.94	3.30	3.30			
70	29.37	2.94	2.94			
80	26.56	2.66	2.66			
90	24.29	2.43	2.43			
100	22.41	2.24	2.24			
110	20.82	2.08	2.08			
120	19.47	1.95	1.95			

Subdrainage Area: ROOF 1A (Flows to stormwater cistern A) Roof
Area (ha): 0.10 **Maximum Storage Depth:** 150 mm
C: 0.90

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
10	104.19	26.07	3.42	22.65	13.59	103.84	0.00
20	70.25	17.58	3.62	13.96	16.75	110.84	0.00
30	53.93	13.49	3.68	9.82	17.67	112.87	0.00
40	44.18	11.05	3.68	7.38	17.70	112.94	0.00
50	37.65	9.42	3.65	5.77	17.30	112.06	0.00
60	32.94	8.24	3.61	4.63	16.66	110.64	0.00
70	29.37	7.35	3.57	3.78	15.89	108.93	0.00
80	26.56	6.65	3.51	3.13	15.04	107.06	0.00
90	24.29	6.08	3.46	2.62	14.15	105.09	0.00
100	22.41	5.61	3.40	2.21	13.24	103.07	0.00
110	20.82	5.21	3.34	1.87	12.33	101.05	0.00
120	19.47	4.87	3.27	1.60	11.49	98.68	0.00

Storage: Storage on westend roof of phase 1 building.

	Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check
5-year Water Level	112.94	0.11	3.68	17.70	40.00	0.00

Subdrainage Area: UNC-1 Uncontrolled - Non-tributary
Area (ha): 0.07
C: 0.48

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	104.19	9.73	9.73		
20	70.25	6.56	6.56		
30	53.93	5.04	5.04		
40	44.18	4.13	4.13		
50	37.65	3.52	3.52		
60	32.94	3.08	3.08		
70	29.37	2.74	2.74		
80	26.56	2.48	2.48		
90	24.29	2.27	2.27		
100	22.41	2.09	2.09		
110	20.82	1.94	1.94		
120	19.47	1.82	1.82		

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Modified Rational Method Calculatons for Storage

100 yr Intensity
City of Ottawa

$I = a/(t + b)$

a =	1735.688
b =	6.014
c =	0.820

t (min)	I (mm/hr)
10	178.56
20	119.95
30	91.87
40	75.15
50	63.95
60	55.89
70	49.79
80	44.99
90	41.11
100	37.90
110	35.20
120	32.89

Post-development Target Release from Portion of Site

Subdrainage Area: Post-development Tributary Area to Outlet

Post development
Target release rate = 82.0 L/s

100 YEAR Modified Rational Method for Entire Site

Subdrainage Area: ROOF 1B (Flows to stormwater cistern A) Roof
Area (ha): 0.01 Maximum Storage Depth: no storage
C: 1.00

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)
10	178.56	4.96	4.96			
20	119.95	3.33	3.33			
30	91.87	2.55	2.55			
40	75.15	2.09	2.09			
50	63.95	1.78	1.78			
60	55.89	1.55	1.55			
70	49.79	1.38	1.38			
80	44.99	1.25	1.25			
90	41.11	1.14	1.14			
100	37.90	1.05	1.05			
110	35.20	0.98	0.98			
120	32.89	0.91	0.91			

Subdrainage Area: ROOF 2B (Flows to stormwater cistern B) Roof
Area (ha): 0.04 **Maximum Storage Depth:** no storage
C: 1.00

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)
10	178.56	19.86	19.86			
20	119.95	13.34	13.34			
30	91.87	10.22	10.22			
40	75.15	8.36	8.36			
50	63.95	7.11	7.11			
60	55.89	6.22	6.22			
70	49.79	5.54	5.54			
80	44.99	5.00	5.00			
90	41.11	4.57	4.57			
100	37.90	4.21	4.21			
110	35.20	3.91	3.91			
120	32.89	3.66	3.66			

Subdrainage Area: ROOF 1A (Flows to stormwater cistern A) Roof
Area (ha): 0.10 **Maximum Storage Depth:** 150 mm
C: 1.00

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
10	178.56	49.64	4.20	45.44	27.27	131.11	0.00
20	119.95	33.35	4.50	28.84	34.61	142.00	0.00
30	91.87	25.54	4.63	20.91	37.63	146.49	0.00
40	75.15	20.89	4.69	16.21	38.89	148.36	0.00
50	63.95	17.78	4.70	13.08	39.24	148.87	0.00
60	55.89	15.54	4.69	10.85	39.05	148.59	0.00
70	49.79	13.84	4.67	9.17	38.52	147.81	0.00
80	44.99	12.51	4.64	7.87	37.77	146.70	0.00
90	41.11	11.43	4.60	6.83	36.87	145.36	0.00
100	37.90	10.54	4.56	5.98	35.87	143.88	0.00
110	35.20	9.79	4.51	5.27	34.80	142.29	0.00
120	32.89	9.14	4.47	4.68	33.69	140.64	0.00

Storage: Storage on westend roof of phase 1 building.

	Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check
100-year Water Level	148.87	0.15	4.70	39.24	40.00	0.00

Subdrainage Area: UNC-1 Uncontrolled - Non-tributary
Area (ha): 0.07
C: 0.60

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	178.56	20.85	20.85		
20	119.95	14.01	14.01		
30	91.87	10.73	10.73		
40	75.15	8.77	8.77		
50	63.95	7.47	7.47		
60	55.89	6.53	6.53		
70	49.79	5.81	5.81		
80	44.99	5.25	5.25		
90	41.11	4.80	4.80		
100	37.90	4.43	4.43		
110	35.20	4.11	4.11		
120	32.89	3.84	3.84		

Stormwater Management Calculations

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Modified Rational Method Calculatons for Storage

Subdrainage Area: TANK 1C (Flows to stormwater cistern A) Uncontrolled - Tributary
Area (ha): 0.07
C: 0.67

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	104.19	13.58	13.58		
20	70.25	9.16	9.16		
30	53.93	7.03	7.03		
40	44.18	5.76	5.76		
50	37.65	4.91	4.91		
60	32.94	4.30	4.30		
70	29.37	3.83	3.83		
80	26.56	3.46	3.46		
90	24.29	3.17	3.17		
100	22.41	2.92	2.92		
110	20.82	2.71	2.71		
120	19.47	2.54	2.54		

Subdrainage Area: TANK 2A (Flows to stormwater cistern B) Uncontrolled - Tributary
Area (ha): 0.04
C: 0.77

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	104.19	8.92	8.92		
20	70.25	6.02	6.02		
30	53.93	4.62	4.62		
40	44.18	3.78	3.78		
50	37.65	3.22	3.22		
60	32.94	2.82	2.82		
70	29.37	2.51	2.51		
80	26.56	2.27	2.27		
90	24.29	2.08	2.08		
100	22.41	1.92	1.92		
110	20.82	1.78	1.78		
120	19.47	1.67	1.67		

Subdrainage Area: TANK 1B (Flows to stormwater cistern A) Uncontrolled - Tributary
Area (ha): 0.04
C: 0.32

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	104.19	3.71	3.71		
20	70.25	2.50	2.50		
30	53.93	1.92	1.92		
40	44.18	1.57	1.57		
50	37.65	1.34	1.34		
60	32.94	1.17	1.17		
70	29.37	1.05	1.05		
80	26.56	0.95	0.95		
90	24.29	0.86	0.86		
100	22.41	0.80	0.80		
110	20.82	0.74	0.74		
120	19.47	0.69	0.69		

Subdrainage Area: L 100 Controlled - Tributary
Area (ha): 0.07
C: 0.81

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	104.19	16.42	12.11	4.31	2.59
20	70.25	11.07	11.07	0.00	0.00
30	53.93	8.50	8.50	0.00	0.00
40	44.18	6.96	6.96	0.00	0.00
50	37.65	5.94	5.94	0.00	0.00
60	32.94	5.19	5.19	0.00	0.00
70	29.37	4.63	4.63	0.00	0.00
80	26.56	4.19	4.19	0.00	0.00
90	24.29	3.83	3.83	0.00	0.00
100	22.41	3.53	3.53	0.00	0.00
110	20.82	3.28	3.28	0.00	0.00
120	19.47	3.07	3.07	0.00	0.00

Storage: Surface storage in 5 year event
Note: No ponding in 2year event with peak release of 12.11 L/s as directed by City of Ottawa

LMF: Vortex LMF 105
Invert Elevation 68.19 m
T/G Elevation 69.57 m
Max Ponding Depth 0.15 m
Downstream W/L 68.07 m

	Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
5-year Water Level	69.72	1.53	12.11	2.59	20.90	OK
					18.31	

Subdrainage Area: ROOF 2A (Flows to stormwater cistern B) Roof
Area (ha): 0.08 Maximum Storage Depth: 150 mm
C: 0.90

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
10	104.19	20.86	2.91	17.95	10.77	103.56	0.00
20	70.25	14.06	3.04	11.03	13.23	110.37	0.00
30	53.93	10.79	3.07	7.72	13.90	112.23	0.00
40	44.18	8.84	3.07	5.78	13.86	112.12	0.00
50	37.65	7.54	3.05	4.49	13.47	111.02	0.00
60	32.94	6.59	3.02	3.58	12.88	109.39	0.00
70	29.37	5.88	2.98	2.90	12.18	107.45	0.00
80	26.56	5.32	2.94	2.38	11.41	105.33	0.00
90	24.29	4.86	2.90	1.96	10.60	103.11	0.00
100	22.41	4.49	2.85	1.63	9.78	100.83	0.00
110	20.82	4.17	2.80	1.37	9.03	97.93	0.00
120	19.47	3.90	2.74	1.16	8.33	94.75	0.00

Storage: Storage on westend roof of phase 1 building.

	Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check
5-year Water Level	112.23	0.11	3.07	13.90	32.00	0.00

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Modified Rational Method Calculatons for Storage

Subdrainage Area: TANK 1C (Flows to stormwater cistern A) Uncontrolled - Tributary
Area (ha): 0.07
C: 0.84

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	178.56	29.10	29.10		
20	119.95	19.55	19.55		
30	91.87	14.97	14.97		
40	75.15	12.25	12.25		
50	63.95	10.42	10.42		
60	55.89	9.11	9.11		
70	49.79	8.11	8.11		
80	44.99	7.33	7.33		
90	41.11	6.70	6.70		
100	37.90	6.18	6.18		
110	35.20	5.74	5.74		
120	32.89	5.36	5.36		

Subdrainage Area: TANK 2A (Flows to stormwater cistern B) Uncontrolled - Tributary
Area (ha): 0.04
C: 0.96

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	178.56	19.11	19.11		
20	119.95	12.84	12.84		
30	91.87	9.83	9.83		
40	75.15	8.04	8.04		
50	63.95	6.85	6.85		
60	55.89	5.98	5.98		
70	49.79	5.33	5.33		
80	44.99	4.82	4.82		
90	41.11	4.40	4.40		
100	37.90	4.06	4.06		
110	35.20	3.77	3.77		
120	32.89	3.52	3.52		

Subdrainage Area: TANK 1B (Flows to stormwater cistern A) Uncontrolled - Tributary
Area (ha): 0.04
C: 0.40

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	178.56	7.94	7.94		
20	119.95	5.34	5.34		
30	91.87	4.09	4.09		
40	75.15	3.34	3.34		
50	63.95	2.84	2.84		
60	55.89	2.49	2.49		
70	49.79	2.21	2.21		
80	44.99	2.00	2.00		
90	41.11	1.83	1.83		
100	37.90	1.69	1.69		
110	35.20	1.57	1.57		
120	32.89	1.46	1.46		

Subdrainage Area: L 100 Controlled - Tributary
Area (ha): 0.07
C: 1.00

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	178.56	34.75	12.15	22.60	13.56
20	119.95	23.34	12.15	11.19	13.43
30	91.87	17.88	12.15	5.73	10.31
40	75.15	14.62	12.15	2.47	5.93
50	63.95	12.45	12.15	0.29	0.88
60	55.89	10.88	10.88	0.00	0.00
70	49.79	9.69	9.69	0.00	0.00
80	44.99	8.76	8.76	0.00	0.00
90	41.11	8.00	8.00	0.00	0.00
100	37.90	7.38	7.38	0.00	0.00
110	35.20	6.85	6.85	0.00	0.00
120	32.89	6.40	6.40	0.00	0.00

Storage: Surface storage in 100 year event

LMF: Vortex LMF 105
Invert Elevation 68.19 m
T/G Elevation 69.57 m
Max Ponding Depth 0.16 m
Downstream W/L 68.07 m

	Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
100-year Water Level	69.73	1.54	12.15	13.56	20.90	OK
					7.34	

Subdrainage Area: ROOF 2A (Flows to stormwater cistern B) Roof
Area (ha): 0.08 Maximum Storage Depth: 150 mm
C: 1.00

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
10	178.56	39.71	3.43	36.29	21.77	131.03	0.00
20	119.95	26.68	3.63	23.04	27.65	141.94	0.00
30	91.87	20.43	3.72	16.71	30.08	146.45	0.00
40	75.15	16.71	3.75	12.96	31.10	148.33	0.00
50	63.95	14.22	3.76	10.46	31.38	148.85	0.00
60	55.89	12.43	3.76	8.67	31.22	148.56	0.00
70	49.79	11.07	3.74	7.33	30.79	147.75	0.00
80	44.99	10.01	3.72	6.28	30.17	146.60	0.00
90	41.11	9.14	3.69	5.45	29.42	145.22	0.00
100	37.90	8.43	3.67	4.76	28.58	143.67	0.00
110	35.20	7.83	3.63	4.19	27.69	142.00	0.00
120	32.89	7.32	3.60	3.71	26.75	140.26	0.00

Storage: Storage on westend roof of phase 1 building.

	Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check
100-year Water Level	148.85	0.15	3.76	31.38	32.00	0.00

Stormwater Management Calculations

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Modified Rational Method Calculatons for Storage

Subdrainage Area: TANK 1A (Flows to stormwater cistern A) Controlled - Tributary
Area (ha): 0.120
C: 0.52

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	104.19	47.10	34.00	13.10	**7.86**
20	70.25	35.26	34.00	1.26	1.52
30	53.93	29.47	34.00	0.00	0.00
40	44.18	25.93	34.00	0.00	0.00
50	37.65	23.49	34.00	0.00	0.00
60	32.94	21.67	34.00	0.00	0.00
70	29.37	20.24	34.00	0.00	0.00
80	26.56	19.07	34.00	0.00	0.00
90	24.29	18.10	34.00	0.00	0.00
100	22.41	17.26	34.00	0.00	0.00
110	20.82	16.53	34.00	0.00	0.00
120	19.47	15.87	34.00	0.00	0.00

1) All flows from ROOF 1A, ROOF 1B, ROOF 1C, TANK 1A, TANK 1B, TANK 1C to be directed to a stormwater cistern.
2) Outflow from the 39 m3 cistern to be set by pump (maximum outflow rate of 34 L/s).

	Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
5-year Storage Req.	N/A	N/A	34.00	7.86	39.00	OK
			Excess storage (m3):		31.14	

Subdrainage Area: ROOF 1C (Flows to stormwater cistern A) Roof
Area (ha): 0.170 Maximum Allowable Storage Depth: 150 mm
C: 0.90

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
10	104.19	44.32	5.71	38.61	23.17	103.9	0.00
20	70.25	29.88	6.04	23.84	28.61	111.0	0.00
30	53.93	22.94	6.14	16.80	30.23	113.1	0.00
40	44.18	18.79	6.15	12.64	**30.35**	113.3	0.00
50	37.65	16.02	6.11	9.91	29.72	112.5	0.00
60	32.94	14.01	6.05	7.97	28.68	111.1	0.00
70	29.37	12.49	5.97	6.53	27.41	109.5	0.00
80	26.56	11.30	5.88	5.42	26.00	107.6	0.00
90	24.29	10.33	5.79	4.54	24.52	105.7	0.00
100	22.41	9.53	5.70	3.83	23.01	103.7	0.00
110	20.82	8.86	5.60	3.25	21.48	101.7	0.00
120	19.47	8.28	5.50	2.78	19.99	99.7	0.00

Storage: Storage on eastend roof of phase 1 building.

	Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check
5-year Water Level	113.3	0.11	6.15	30.35	68.00	0.00

Subdrainage Area: TANK 2B (Flows to stormwater cistern B) Uncontrolled - Tributary
Area (ha): 0.030
C: 0.20

tc (min)	I (5 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	104.19	23.99	15.00	8.99	5.40
20	70.25	17.25	15.00	2.25	2.70
30	53.93	13.98	15.00	0.00	0.00
40	44.18	12.01	15.00	0.00	0.00
50	37.65	10.67	15.00	0.00	0.00
60	32.94	9.68	15.00	0.00	0.00
70	29.37	8.92	15.00	0.00	0.00
80	26.56	8.32	15.00	0.00	0.00
90	24.29	7.81	15.00	0.00	0.00
100	22.41	7.39	15.00	0.00	0.00
110	20.82	7.01	15.00	0.00	0.00
120	19.47	6.68	15.00	0.00	0.00

1) All flows from ROOF 2A, ROOF 2B, TANK 2A, TANK 2B to be directed to stormwater cistern B.
2) Outflow from the 21 m3 cistern to be set by pump (maximum outflow rate of 15 L/s).

	Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
5-year Storage Req.	N/A	N/A	15.00	5.40	21.00	OK
			Excess storage (m^3):		15.60	

SUMMARY TO OUTLET

			Cistern + roof storage: Vrequired	Vavailable		
Tributary Area (Controlled)	0.770	ha				
Maximum 5yr Flow to Sewer	61.1	L/s	75.21	200.0	m^3	Ok
Tributary Area (Uncontrolled)	0.070	ha				
Maximum 5yr Flow Uncontrolled	9.7	L/s				
Total Area	0.840	ha				
Total 5yr Flow	70.8	L/s				
Target	82.0	L/s				

Project #160401672, 1125-1149 Cyrville Road, Ottawa, ON
Modified Rational Method Calculatons for Storage

Subdrainage Area: TANK 1A (Flows to stormwater cistern A) Controlled - Tributary
Area (ha): 0.120
C: 0.65

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	178.56	91.92	34.00	57.92	34.75
20	119.95	66.25	34.00	32.25	**38.70**
30	91.87	53.90	34.00	19.90	35.81
40	75.15	46.48	34.00	12.48	29.95
50	63.95	41.46	34.00	7.46	22.39
60	55.89	37.80	34.00	3.80	13.68
70	49.79	34.98	34.00	0.98	4.14
80	44.99	32.73	34.00	0.00	0.00
90	41.11	30.88	34.00	0.00	0.00
100	37.90	29.32	34.00	0.00	0.00
110	35.20	27.98	34.00	0.00	0.00
120	32.89	26.81	34.00	0.00	0.00

1) All flows from ROOF 1A, ROOF 1B, ROOF 1C, TANK 1A, TANK 1B, TANK 1C to be directed to a stormwater cistern.
2) Outflow from the 39 m3 cistern to be set by pump (maximum outflow rate of 34 L/s).

	Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
100-year Storage Req.	N/A	N/A	34.00	38.70	39.00	OK
			Excess storage (m3):		0.30	

Subdrainage Area: ROOF 1C (Flows to stormwater cistern A) Roof
Area (ha): 0.170 Maximum Allowable Storage Depth: 150 mm
C: 1.00

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)	Depth (mm)	
10	178.56	84.39	7.00	77.39	46.43	131.2	0.00
20	119.95	56.69	7.51	49.17	59.01	142.2	0.00
30	91.87	43.42	7.73	35.69	64.23	146.7	0.00
40	75.15	35.51	7.82	27.69	66.46	148.7	0.00
50	63.95	30.22	7.85	22.37	**67.12**	149.2	0.00
60	55.89	26.42	7.84	18.58	66.87	149.0	0.00
70	49.79	23.53	7.81	15.73	66.05	148.3	0.00
80	44.99	21.26	7.76	13.51	64.83	147.2	0.00
90	41.11	19.43	7.69	11.73	63.36	146.0	0.00
100	37.90	17.91	7.63	10.29	61.72	144.5	0.00
110	35.20	16.64	7.55	9.08	59.95	143.0	0.00
120	32.89	15.55	7.48	8.07	58.10	141.4	0.00

Storage: Storage on eastend roof of phase 1 building.

	Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check
100-year Water Level	149.2	0.15	7.85	67.12	68.00	0.00

Subdrainage Area: TANK 2B (Flows to stormwater cistern B) Uncontrolled - Tributary
Area (ha): 0.030
C: 0.25

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m^3)
10	178.56	46.12	15.00	31.12	18.67
20	119.95	32.31	15.00	17.31	20.77
30	91.87	25.68	15.00	10.68	19.23
40	75.15	21.72	15.00	6.72	16.13
50	63.95	19.05	15.00	4.05	12.16
60	55.89	17.12	15.00	2.12	7.64
70	49.79	15.65	15.00	0.65	2.72
80	44.99	14.48	15.00	0.00	0.00
90	41.11	13.52	15.00	0.00	0.00
100	37.90	12.73	15.00	0.00	0.00
110	35.20	12.05	15.00	0.00	0.00
120	32.89	11.47	15.00	0.00	0.00

1) All flows from ROOF 2A, ROOF 2B, TANK 2A, TANK 2B to be directed to stormwater cistern B.
2) Outflow from the 21 m3 cistern to be set by pump (maximum outflow rate of 15 L/s).

	Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
100-year Storage Req.	N/A	N/A	15.00	20.77	21.00	OK
			Excess storage (m^3):		0.23	

SUMMARY TO OUTLET

			Cistern + roof storage: Vrequired	Vavailable		
Tributary Area (Controlled)	0.770	ha				
Maximum 100yr Flow to Sewer	61.2	L/s	197.2	200.0	m^3	Ok
Tributary Area (Uncontrolled)	0.070	ha				
Total 100yr Flow Uncontrolled	20.8	L/s				
Total Area	0.840	ha				
Total 100yr Flow	82.0	L/s				
Target	82.0	L/s				Target met

D.3 STORM SEWER DESIGN SHEET

Stantec

JOB NAME	
DATE:	2021-11-22
REVISION:	1
DESIGNED BY:	DW
CHECKED BY:	DT

STORM SEWER DESIGN SHEET
(City of Ottawa)

FILE NUMBER: **160401672**

DESIGN PARAMETERS

$I = a / (t+b)^c$ (As per City of Ottawa Guidelines, 2012)

	1:2 yr	1:5 yr	1:10 yr	1:100 yr
a =	732.951	998.071	1174.184	1735.688
b =	6.199	6.053	6.014	6.014
c =	0.810	0.814	0.816	0.820

MANNING'S n = 0.013 BEDDING CLASS = B
MINIMUM COVER: 2.00 m
TIME OF ENTRY 20 min

LOCATION			DRAINAGE AREA																				PIPE SELECTION										
AREA ID NUMBER	FROM M.H.	TO M.H.	AREA (2-YEAR) (ha)	AREA (5-YEAR) (ha)	AREA (10-YEAR) (ha)	AREA (100-YEAR) (ha)	AREA (ROOF) (ha)	C (2-YEAR) (-)	C (5-YEAR) (-)	C (10-YEAR) (-)	C (100-YEAR) (-)	A x C (2-YEAR) (ha)	ACCUM AxC (2YR) (ha)	A x C (5-YEAR) (ha)	ACCUM. AxC (5YR) (ha)	A x C (10-YEAR) (ha)	ACCUM. AxC (10YR) (ha)	A x C (100-YEAR) (ha)	ACCUM. AxC (100YR) (ha)	T of C (min)	$I_{2\text{-YEAR}}$ (mm/h)	$I_{5\text{-YEAR}}$ (mm/h)	$I_{10\text{-YEAR}}$ (mm/h)	$I_{100\text{-YEAR}}$ (mm/h)	$Q_{CONTROL}$ (L/s)	ACCUM. $Q_{CONTROL}$ (L/s)	Q_{ACT} (CIA/360) (L/s)	LENGTH (m)	PIPE WIDTH OR DIAMETEI (mm)	PIPE HEIGHT (mm)	PIPE SHAPE (-)	MATERIAL (-)	CLASS (-)	SLOPE %	Q_{CAP} (FULL) (L/s)	% FULL (-)	VEL. (FULL) (m/s)	VEL. (ACT) (m/s)	TIME OF FLOW (min)
TANK 2A	CB 103	CBMH 102	0.00	0.04	0.00	0.04	0.00	0.00	0.77	0.00	0.77	0.000	0.000	0.031	0.031	0.000	0.000	0.031	0.031	20.00	52.03	70.25	82.21	119.95	0.0	0.0	16.3	7.6	200	200	CIRCULAR	PVC	-	1.00	33.3	**48.86%**	1.05	0.89	0.14
	CBMH 102	BLDG B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.031	0.000	0.000	0.000	0.031	20.14	51.80	69.94	81.85	119.42	0.0	0.0	16.2	1.3	200	200	CIRCULAR	PVC	-	1.00	33.3	**48.64%**	1.05	0.89	0.02
																				20.17									200	200									
ROOF 2A, ROOF 2B, TANK 2B	BLDG B	BLDG A	0.00	0.15	0.00	0.15	0.00	0.00	0.76	0.00	0.76	0.000	0.000	0.114	0.114	0.000	0.000	0.114	0.114	20.00	52.03	70.25	82.21	119.95	0.0	0.0	60.2	7.1	300	300	CIRCULAR	PVC	-	1.00	96.2	**62.64%**	1.37	1.25	0.09
																				20.09									300	300									
TANK 1B	CB101	BLDG A	0.00	0.04	0.00	0.04	0.00	0.00	0.32	0.00	0.32	0.000	0.000	0.013	0.013	0.000	0.000	0.013	0.013	20.00	52.03	70.25	82.21	119.95	0.0	0.0	6.8	1.5	200	200	CIRCULAR	PVC	-	1.00	33.3	**20.30%**	1.05	0.68	0.04
																				20.04									200	200									
ROOF 1A, ROOF 1B, ROOF 1C, TANK 1A, TANK 1C	BLDG A	MONITOR MH	0.00	0.47	0.00	0.47	0.00	0.00	0.77	0.00	0.77	0.000	0.000	0.361	0.361	0.000	0.000	0.361	0.361	20.00	52.03	70.25	82.21	119.95	0.0	0.0	190.9	5.2	375	375	CIRCULAR	PVC	-	2.50	260.6	**73.24%**	2.47	2.38	0.04
																				20.04																			
L100	L100A	MONITOR MH	0.00	0.07	0.00	0.07	0.00	0.00	0.81	0.00	0.81	0.000	0.000	0.057	0.057	0.000	0.000	0.057	0.057	20.00	52.03	70.25	82.21	119.95	0.0	0.0	30.0	12.0	200	200	CIRCULAR	PVC	-	1.50	40.8	**73.43%**	1.28	1.23	0.16
																				20.16																			
	MONITOR MH	STM 1000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.418	0.000	0.000	0.000	0.418	20.16	51.77	69.90	81.80	119.34	0.0	0.0	219.7	13.5	450	450	CIRCULAR	PVC	-	1.00	297.4	**73.87%**	1.81	1.74	0.13
																				20.29									450	450									

D.4 CORRESPONDENCE WITH RIDEAU VALLEY CONSERVATION AUTHORITY (RVCA)

Nwanise, Nwanise

From: Jamie Batchelor <jamie.batchelor@rvca.ca>
Sent: Thursday, October 21, 2021 9:57 AM
To: Wu, Dennis
Cc: Moroz, Peter; Thiffault, Dustin; Sharp, Mike; Nwanise, Nwanise
Subject: RE: 160401672 _ 1125-1149 Cyrville Rd_ Stormwater Quality Control Criteria

Good Morning Dennis,

The downstream outlet to a watercourse is less than 500m. Therefore, t=on-site water quality control would be required. The water quality objective is 'enhanced' (80% TSS removal). We would also strongly encourage you to incorporate Lid measures into the stormwater management plan and to consider the new criteria for the upcoming linear ECA process.

Jamie Batchelor, MCIP, RPP
Planner, ext. 1191
Jamie.batchelor@rvca.ca

Rideau Valley Conservation Authority
3889 Rideau Valley Drive
PO Box 599, Manotick ON K4M 1A5
T 613-692-3571 | 1-800-267-3504 F 613-692-0831 | www.rvca.ca

From: Wu, Dennis <Dennis.Wu@stantec.com>
Sent: Tuesday, October 19, 2021 3:44 PM
To: Jamie Batchelor <jamie.batchelor@rvca.ca>
Cc: Moroz, Peter <peter.moroz@stantec.com>; Thiffault, Dustin <Dustin.Thiffault@stantec.com>; Sharp, Mike <Mike.Sharp@stantec.com>; Nwanise, Nwanise <Nwanise.Nwanise@stantec.com>
Subject: 160401672 _ 1125-1149 Cyrville Rd_ Stormwater Quality Control Criteria

Good day Jamie,

I am writing to request stormwater quality control criteria for a proposed development at 1125-1149 Cyrville Road, the property area is bound by Cyrville Road to the south, between the intersections with Michael Street and Cummings Avenue. Stantec is preparing an Adequacy of Services report in support of an application for site control and zoning amendment.

The proposed development area (0.84 ha) contains two residential high-rise buildings, one at 6-storeys and the other at 12-storeys. The 6-storey building contains 208 units in total and an estimated population at 400. It consists of 60 one-bedroom units, 143 two-bedroom units, 5 three-bedroom units, and 2,392m^2 of communal amenity areas. The 12-storey building would house 146 total units with population of 275, including 55 one-bedroom units, 85 two-bedroom units, 6 three-bedroom units, and 2,028m^2 of communal amenity areas. There will be an access lane for internal circulation and access to parking, which is found in two underground parking levels (P1 and P2) in each building, totaling 354 parking stalls overall.

A location map, Site Servicing Plan, and Stormwater Drainage plan are attached for your use and reference.

Please do not hesitate to contact me if you require more information.

Thank you in advance.

Best regards,

Dennis Wu,EIT
Civil Designer, Community Development

Mobile: (613) 413-1218
dennis.wu@stantec.com

Stantec
400 - 1331 Clyde Avenue
Ottawa ON K2C 3G4

D.5 STORMCEPTOR SIZING SHEET AND STANDARD DETAIL

Project Summary Report: 1125 - 1149 Cyrville Road Stormceptor Sizing

Project Information & Location			
Project Name	1125 - 1149 Cyrville Road	**Project Number**	16041672
City	Ottawa	**State/ Province**	Ontario
Country	Canada	**Date**	10/21/2021
Designer Information		**EOR Information (optional)**	
Name	Nwanise Nwanise	**Name**	
Company	Stantec Consulting Ltd	**Company**	
Phone #	647-400-1759	**Phone #**	
Email	nwanise.nwanise@stantec.com	**Email**	

Stormwater Treatment Recommendation
The recommended Stormceptor Model(s) which achieve or exceed the user defined water quality objective for each site within the project are listed in the below Sizing Summary table.

Project Summary						
Site Name	**Drainage Area (ha)**	**Imperviousness %**	**PSD**	**Target TSS Removal (%)**	**TSS Removal (%) Provided**	**Recommended Model**
1125 - 1149 Cyrville Road	0.84	0.73		80	83	EFO6

Notes

• Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor, which uses the EPA Rainfall and Runoff modules.
• Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal defined by the selected PSD, and based on stable site conditions only, after construction is completed.
• For submerged applications or sites specific to spill control, please contact your local Stormceptor representative for further design assistance.

Stormceptor Net Annual Sediment Load Reduction Sizing Tool

Project Name: 1125 - 1149 Cyrville Road **Site Name:** 1125 - 1149 Cyrville Road **Location:** Ottawa / ON

Site has been updated successfully.

Download Stormceptor Specifications & Drawings

Download Stormceptor EFO Sizing Report

Design Summary

Net Annual Sediment (TSS) Load Reduction Sizing Summary	
Stormceptor Model	**TSS Removal Provided (%)**
EFO4	70
EFO6	83
EFO8	89
EFO10	91
EFO12	93

Recommended Stormceptor EFO Model: EFO6

Estimated Net Annual Sediment (TSS) Load Reduction (%): 83

Water Quality Runoff Volume Capture (%): > 90

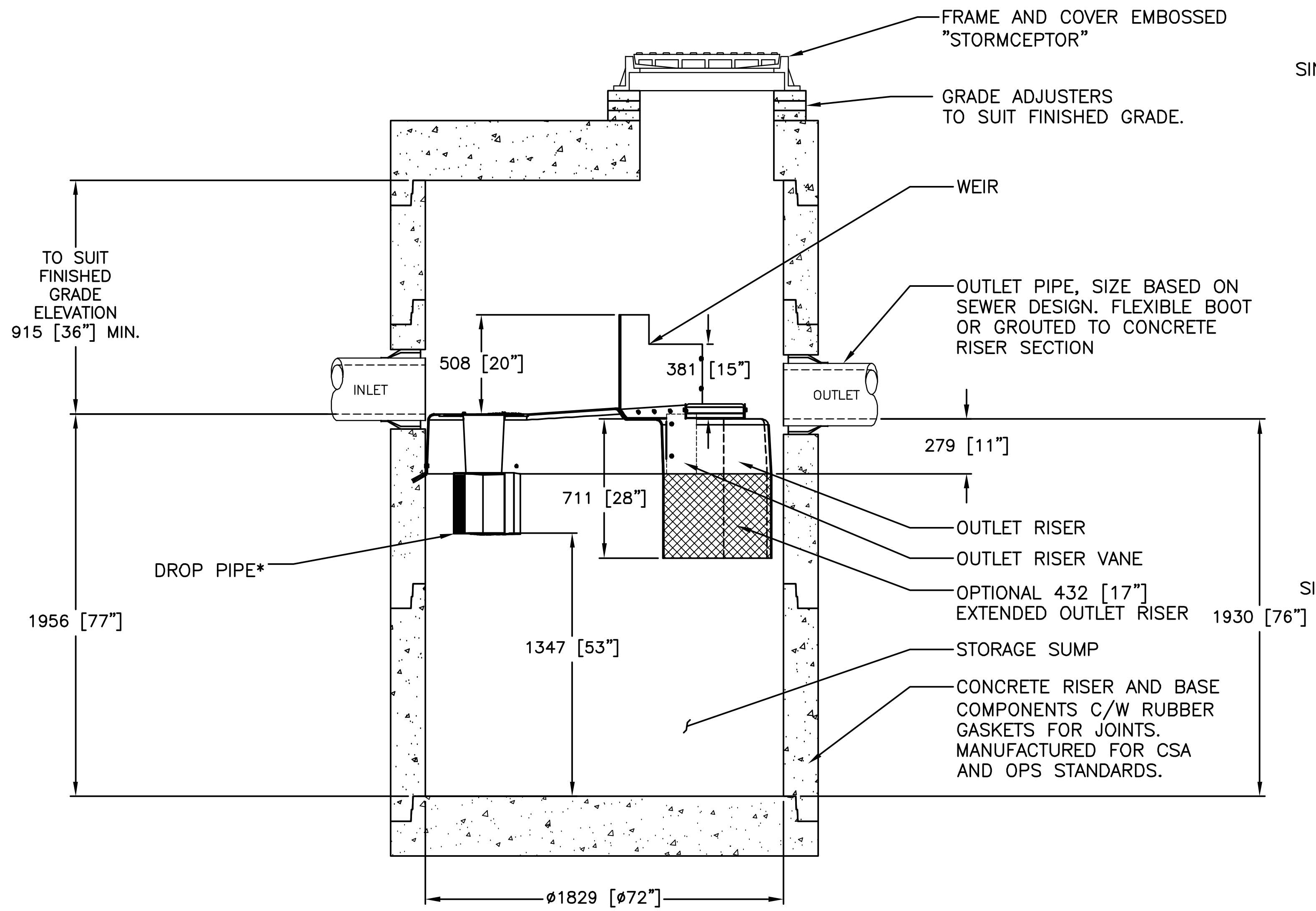
Upstream Flow Controlled Results								
Rainfall Intensity	Percent Rainfall	Cumulative Rainfall	Flow Rate (L/s)	Flow Rate (L/min)	Surface Loading	Removal Efficiency	Incremental Removal	Cumulative Removal

(mm/hr)	Volume	Volume			Rate ($L/min/m^2$)	(%)	(%)	(%)
1	22.3%	22.3%	1.70	102.3	38.9	93	20.7	20.7
2	17.8%	40.0%	3.41	204.6	77.8	90	16.0	36.7
3	13.1%	53.1%	5.11	306.8	116.7	86	11.3	47.9
4	9.2%	62.4%	6.82	409.1	155.6	81	7.5	55.5
5	6.5%	68.9%	8.52	511.4	194.5	77	5.0	60.5
6	31.1%	100.0%	10.23	613.7	233.3	73	22.8	83.3
7	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
8	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
9	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
10	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
11	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
12	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
13	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
14	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
15	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
16	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
17	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
18	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
19	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
20	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
21	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
22	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
23	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
24	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
25	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
30	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
35	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
40	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
45	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3
50	0.0%	100.0%	11.00	660.0	251.0	72	0.0	83.3

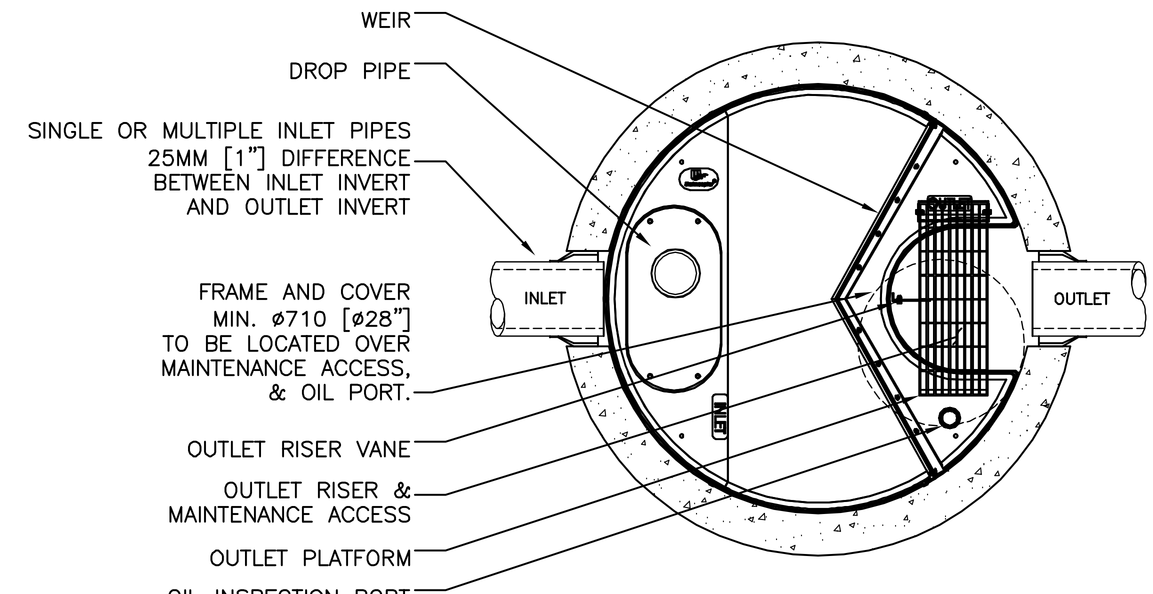
Download Stormceptor Specifications & Drawings

< Back Cancel Save Sizing Report

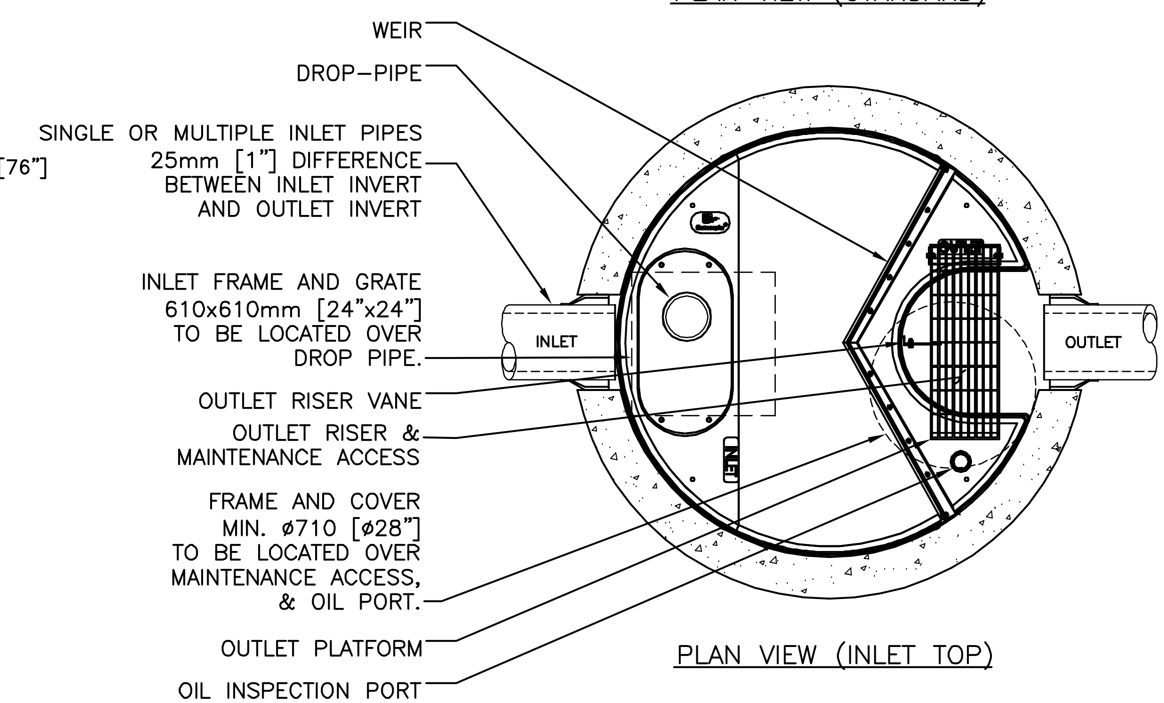
DRAWING NOT TO BE USED FOR CONSTRUCTION



SECTION VIEW



PLAN VIEW (STANDARD)



PLAN VIEW (INLET TOP)

GENERAL NOTES:

* MAXIMUM SURFACE LOADING RATE (SLR) INTO LOWER CHAMBER THROUGH DROP PIPE IS 1135 L/min/m^2 (27.9 gpm/ft^2) FOR STORMCEPTOR EF6 AND 535 L/min/m^2 (13.1 gpm/ft^2) FOR STORMCEPTOR EFO6 (OIL CAPTURE CONFIGURATION).

1. ALL DIMENSIONS INDICATED ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SPECIFIED.
2. STORMCEPTOR STRUCTURE INLET AND OUTLET PIPE SIZE AND ORIENTATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.
3. UNLESS OTHERWISE NOTED, BYPASS INFRASTRUCTURE, SUCH AS ALL UPSTREAM DIVERSION STRUCTURES, CONNECTING STRUCTURES, OR PIPE CONDUITS CONNECTING TO COMPLETE THE STORMCEPTOR SYSTEM SHALL BE PROVIDED AND ADDRESSED SEPARATELY.
4. DRAWING FOR INFORMATION PURPOSES ONLY. REFER TO ENGINEER'S SITE/UTILITY PLAN FOR STRUCTURE ORIENTATION.
5. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

FOR SITE SPECIFIC DRAWINGS PLEASE CONTACT YOUR LOCAL STORMCEPTOR REPRESENTATIVE. SITE SPECIFIC DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME. SOME FIELD REVISIONS TO THE SYSTEM LOCATION OR CONNECTION PIPING MAY BE NECESSARY BASED ON AVAILABLE SPACE OR SITE CONFIGURATION REVISIONS. ELEVATIONS SHOULD BE MAINTAINED EXCEPT WHERE NOTED ON BYPASS STRUCTURE (IF REQUIRED).

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT THE DEVICE FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. DEVICE ACTIVATION, BY CONTRACTOR, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE STORMCEPTOR UNIT IS CLEAN AND FREE OF DEBRIS.

STANDARD DETAIL
NOT FOR CONSTRUCTION

SITE SPECIFIC DATA REQUIREMENTS

STORMCEPTOR MODEL	EFO6				
STRUCTURE ID	*				
HYDROCARBON STORAGE REQ'D (L)	*				
WATER QUALITY FLOW RATE (L/s)	*				
PEAK FLOW RATE (L/s)	*				
RETURN PERIOD OF PEAK FLOW (yrs)	*				
DRAINAGE AREA (HA)	*				
DRAINAGE AREA IMPERVIOUSNESS (%)	*				
PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

* PER ENGINEER OF RECORD

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MARK	DATE	REVISION DESCRIPTION	BY
####	####	####	####
####	####	####	####
####	####	####	####
1	6/8/18	OUTLET PLATFORM	JSK
0	05/26/17	INITIAL RELEASE	JSK

Stormceptor® EF

SCALE = NTS

imbrium®

407 FAIRVIEW DRIVE, WHITBY, ON L1N 3A9
TF 800-565-4801 CA 416-960-9900 INTL +1-416-960-9900

DATE: 10/13/2017	
DESIGNED: JSK	DRAWN: JSK
CHECKED: BSF	APPROVED: SP
PROJECT No.: EFO6	SEQUENCE No.: *
SHEET: 1 OF 1	

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