

SITE SERVICING PLAN
1:300 (A1)

STORMWATER MANAGEMENT

T_c = 10 min.
C_o = 0.30 (ASSIGNED BY CITY OF WINNIPEG)
TOTAL SITE AREA = 247 acres
TOTAL IMPERVIOUS AREA = 127 acres
TOTAL PERVIOUS AREA = 120 acres

PRE-DEVELOPMENT:

ALLOWABLE STORM DISCHARGE (RATIONAL METHOD)
C = 0.35
I = 4.3 in/hr (109.5 mm/hr), 5yr storm event
Q = 2.47 cfs (0.091 m³/s)
Q = 0.091 m³/s (9.12 L/s)

POST-DEVELOPMENT:

TOTAL SITE AREA (m²)	10,000
ALLOWABLE RUNOFF COEFFICIENT (C)	0.30
Q - ALLOWABLE RUNOFF (m³/s)	0.0913
Q _{RESTRICTED} - TOTAL RESTRICTED RUNOFF (m³/s)	0.087
Q _{UNRESTRICTED} - TOTAL UNRESTRICTED RUNOFF (m³/s)	0.0243
Q _{WWS FLOWS} (m³/s)	0.02088
Q _{ON-SITE STORAGE AVAILABLE} (m³)	0.02216
ON-SITE STORAGE AVAILABLE (m³)	248.0

COMBINED SEWER FLOW SUMMARY:

PRE-DEVELOPMENT FLOW SUMMARY (A+B)

A - EX. WASTEWATER FLOWS (BASED ON G.O.W. FLOW EST. SCHEDULES)
PWWF = 0.0 L/s

B - EX. STORM RUNOFF FLOWS (BASED ON RATIONAL METHOD)
AREA = 2.47 acres
C_o = 0.30
I_{5yr} = 109.5 mm/hr, T_c = 10 min.
Q_{5yr} = 0.0913 m³/s = 9.12 L/s

TOTAL PRE-DEVELOPMENT FLOWS (COMBINED SEWER):
Q = 0.0 L/s + 9.13 L/s = 9.13 L/s (A+B)

POST-DEVELOPMENT FLOW SUMMARY

D - WASTEWATER FLOWS: REFER TO WWS FLOW ESTIMATION LETTER
DATE: MAY 26, 2023
PIPE: 95 (100 L/Day) = 0.33 L/s
PWWF = 0.38 L/s

STORM RUNOFF FLOWS (BASED ON RATIONAL METHOD):
C_o = 0.30
I_{5yr} = 109.5 mm/hr, T_c = 10 min.
Q_{5yr} = 0.0913 m³/s = 9.13 L/s

E - STORM DISCHARGE (25% STORAGE EVENT):
RESTRICTED = 37.5 L/s (Using ICD = 110mm DIA, CB01)
UNRESTRICTED Q_{25%} = 24.3 L/s (Using ICD = 150mm DIA, CB04)

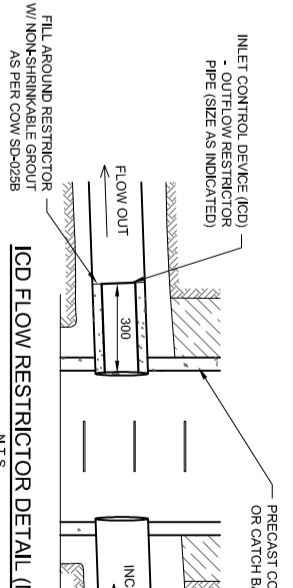
TOTAL STORMWATER DISCHARGE = 61.3 L/s
TOTAL POST-DEVELOPMENT FLOWS (75% PROVIDER (COMBINED SEWER):
Q_{post} = 0.68 L/s + 61.3 L/s = 62.0 L/s (D+E) < (A+B)
(D+E) = 62.0 L/s < (A+B) = 91.3 L/s

SITE SUMMARY

Q_{post} development = 62.0 L/s < Q_{allowable} = 91.3 L/s
REQUIRED ON-SITE STORAGE = 248.0 m³ (USING ISOBROOK METHOD)
AVAILABLE ON-SITE STORAGE = 285.3 m³
(MAXIMUM DEPTH OF PONDING SHALL NOT EXCEED 3m, OR DEPTH ON PAVED SURFACES FOR 1 IN 25 YR CITY OF WINNIPEG DESIGN STORM)

GENERAL CONSTRUCTION NOTES:

- ALL CONSTRUCTION AND UTILITIES INCORPORATED IN THE WORK SHALL CONFORM TO THE LATEST OTHERWISE.
- LOCATIONS OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. EXISTING UTILITIES SHALL BE IDENTIFIED BY THE CONTRACTOR. EXACT LOCATION AND DEPTH OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
- LOCATIONS OF PROPERTY, LIMITS AND EXISTING AND/OR PROPOSED FEATURES RELATIVE TO THESE LIMITS AS SHOWN DO NOT REPRESENT A LEGAL SURVEY. SBC INC. MAKES NO REPRESENTATION OR GUARANTEE THAT THE PROPERTY LIMIT INFORMATION SHOWN IS ACCURATE, AND ACCEPTS NO RESPONSIBILITY FOR ANY DAMAGES SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS OR ACTIONS BASED ON THIS DRAWING.
- ALL SURFACES AND ANY EXISTING UTILITIES DAMAGED OR DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR BETTER, OR REPLACED AT THE CONTRACTOR'S EXPENSE.



METRIC
WHOLE NUMBERS INDICATE MILLIMETERS
DECIMALIZED NUMBERS INDICATE METERS

2	May 26, 2023	Issued for Construction	DB
1	Mar. 10, 2023	Issued for 95% Review	DB
No.	Date	Issue / Revision	By
			J.E.

Drawn By: J.E.
Printing Date: Mar. 26, 2023

AFEGN
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253486
PROFESSOR

Province of Manitoba
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REGISTERED PROFESSIONAL ENGINEER

Seon Blackburn Consulting Inc.
15 Poseidon Bay, Winnipeg, MB
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MAY 26, 2023

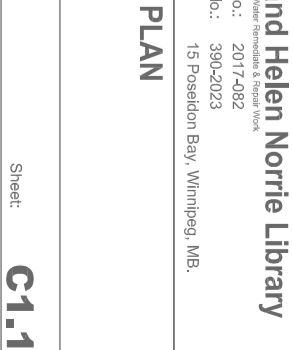
Winnipeg
Additional Site Value Revaluation & Special Works
Project No.: 2017-082
Tender No.: 390-2023
Address: 15 Poseidon Bay, Winnipeg, MB.

Bill and Helen Norrie Library

SITE SERVICING PLAN

Comm. No.: 1847B
Sheet: **C1.1**

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POST-DEVELOPMENT CATCHMENT AREAS

EXISTING	LEGEND	PROPOSED
(35.00)	BUILDING LOT GRADE	(35.00)
(25.46)	GROUND ELEVATION	(25.38)
(25.38)	DITCH ELEVATION	(25.38)
(25.40)	ROAD ELEVATION	(25.40)
(25.40)	BARRIER CURB	(25.40)
(25.40)	MOUNTABLE CURB	(25.40)