

Engineer's Report S65 -  
Subsequent Connection to the  
Faulkner Municipal Drain  
Hewitt Branch  
City of Ottawa

Prepared For:



Prepared By:

Robinson Consultants Inc.  
Consulting Engineers

Our Project No. 22045  
January 3, 2023

January 3, 2023

City of Ottawa  
P.O. Box 310  
2155 Roger Stevens Drive  
North Gower, ON K0A 2T0

**Attention:**           **Mr. Dave Ryan, P.Geo.**  
                                  **Manager, Municipal Drainage**

**Reference:**           **Engineer's Report S65 -**  
                                  **Subsequent Connection to the**  
                                  **Faulkner Municipal Drain – Hewitt Branch**  
                                  **City of Ottawa, Our Project No. 22045**

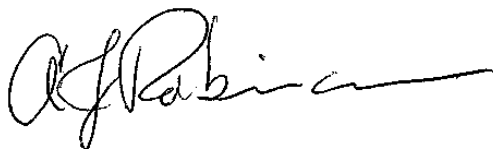
Dear Sir:

This Engineer's Report is to amend the Engineer's Report for the Hewitt Branch of the Faulkner Municipal Drain, City of Ottawa. The purpose of this Engineer's Report is to accommodate the proposed development of a salt storage facility in the drainage basin and subsequent connection to the Hewitt Branch via a mutual agreement drain (not governed by this report).

If you have any questions, please feel free to contact Andy Robinson at 613-592-6060 extension 104 or Lorne Franklin at extension 123.

Yours very truly,

ROBINSON CONSULTANTS INC.



A.J. Robinson, P.Eng.  
Drainage Engineer



Lorne Franklin, L.E.T., C.E.T., rcca, CISEC  
Licensed Engineering Technologist  
Drainage Services

AJR: plw

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## 1. INTRODUCTION

Robinson Consultants Inc. was appointed by the City of Ottawa on June 8, 2022, to prepare an Engineer's Report under Section 65(3) of the Drainage Act, R.S.O. 1990, c. D17. The Report was initiated by the request from the owner of Pt. Lot 22, Con 8 (City PW Yard – Huntley Salt Shed) to subsequently connect to the upstream end of the existing Hewitt Branch of the Faulkner Municipal Drain via a proposed “mutual agreement drain” through the W ½ Lot 22 Con. 8, geographic Township of Goulbourn.

This report permits the subsequent connection but does not govern the mutual agreement drain. Future maintenance of the mutual agreement drain remains the responsibility of the parties to the agreement.

### 1.1 History

The existing report for the Hewitt Branch of the Faulkner Municipal Drain entitled “Engineer's Report – for the Construction of the – Faulkner Municipal Drainage Works – Township of Goulbourn” was completed for the Township of Goulbourn by A.J. Graham, P.Eng., dated September 11, 1975, (1975 Report).

A review of the existing plans and assessment schedules regarding the landowners' request was completed. Properties as identified in the 1975 Report are not modified or adjusted by this report.

## 2. PROPERTY AND REQUEST

The subject property (City PW Yard – Huntley Salt Shed) is located in Pt. Lot 22, Con 8 of the geographic Township of Goulbourn and is identified as “Subject Property” on Dwg. 22045-A1, provided in **Appendix A**.

The owner of the “Subject Property” has requested they be allowed to subsequently connect to the existing Hewitt Branch of the Faulkner Municipal Drain as an outlet for a proposed mutual agreement drain through W ½ Lot 22 Con. 8, geographic Township of Goulbourn.

## 3. DETERMINATION OF THE ENGINEER

A survey of the existing Hewitt Branch was completed along with a general hydraulic review to determine if the Hewitt Branch can accommodate the flows from the proposed mutual agreement drain and provide sufficient outlet.

The survey found and identified areas of required maintenance. Details are provided on profile drawings, 22045-P1 through 22045-P4, cross section drawing, 22045-C1, and in **Table 1.0**, all of which are provided in **Appendix B**. Photos taken at the time of survey are also provided in **Appendix B**.

It is the determination of the Drainage Engineer that the subsequent connection may be accommodated, provided that the Hewitt Branch is maintained to the standards prescribed by the 1975 Engineer's Report.

The current schedule of assessment (1975, modified as necessary for severances) may be used in the distribution of any assessment for future maintenance.

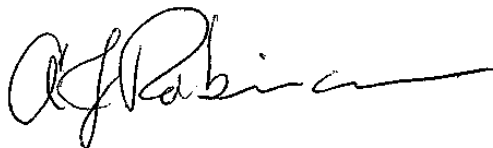
All costs associated with this Engineer's Report are to be assessed to the identified "subject property". The cost associated with the Engineer's Report is \$17,500.00. In addition to the costs of the Engineer's Report, a "buy-in" amount as prescribed by the Ontario Drainage Act, R.S.O. 1990 c. D.17 is set at \$2,500.00. This amount is to be utilized for the purpose of completing the required maintenance of the Hewitt Branch, separate from any additional amounts assessed for the required maintenance.

It is noted that the proposed mutual agreement drain does not form part of the existing Hewitt Branch of the Faulkner Municipal Drain.

For all other matters for the Hewitt Branch of the Faulkner Municipal Drain, please refer to the existing Engineer's Report entitled "Engineer's Report – for the Construction of the – Faulkner Municipal Drainage Works – Township of Goulbourn" by A.J. Graham, P. Eng., dated September 11, 1975, and the associated By-Law.

All of which is respectfully submitted,

ROBINSON CONSULTANTS INC.



A.J. Robinson, P. Eng.  
Drainage Engineer



Lorne Franklin, L.E.T., C.E.T., rcca, CISEC  
Licensed Engineering Technologist  
Drainage Services



Professional Engineers  
Ontario

23/01/03

Licensed Engineering Technologist

Name: L. FRANKLIN  
Number: 100501335








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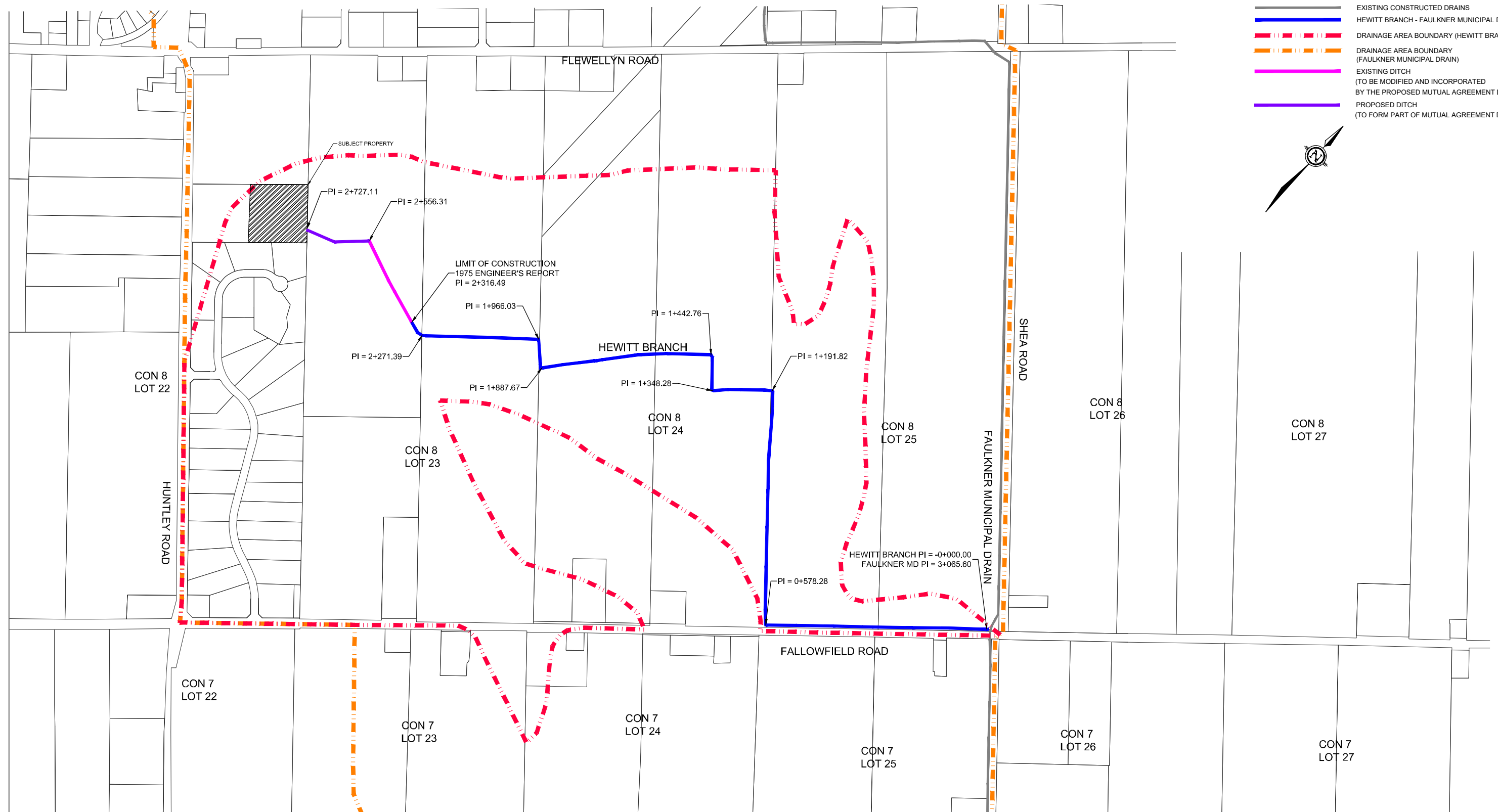
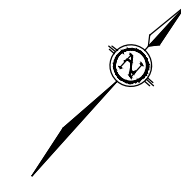
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## **APPENDIX A**

Dwg. 22045-A1 – Drainage Area Plan

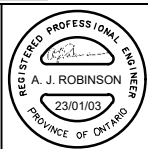
LEGEND

-  PROPERTY LINE
-  EXISTING CONSTRUCTED DRAINS
-  HEWITT BRANCH - FAULKNER MUNICIPAL DRAIN
-  DRAINAGE AREA BOUNDARY (HEWITT BRANCH)
-  DRAINAGE AREA BOUNDARY (FAULKNER MUNICIPAL DRAIN)
-  EXISTING DITCH (TO BE MODIFIED AND INCORPORATED BY THE PROPOSED MUTUAL AGREEMENT DRAIN)
-  PROPOSED DITCH (TO FORM PART OF MUTUAL AGREEMENT DRAIN)

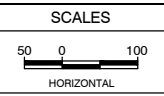


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CITY OF OTTAWA  
**S.65 SUBSEQUENT CONNECTION  
 TO THE FAULKNER MUNICIPAL DRAIN  
 HEWITT BRANCH**

**DRAINAGE AREA PLAN**

PROJECT No: 22045  
 CONTRACT No:  
 DATED: JAN 2023  
 DWG. No: 22045-A1

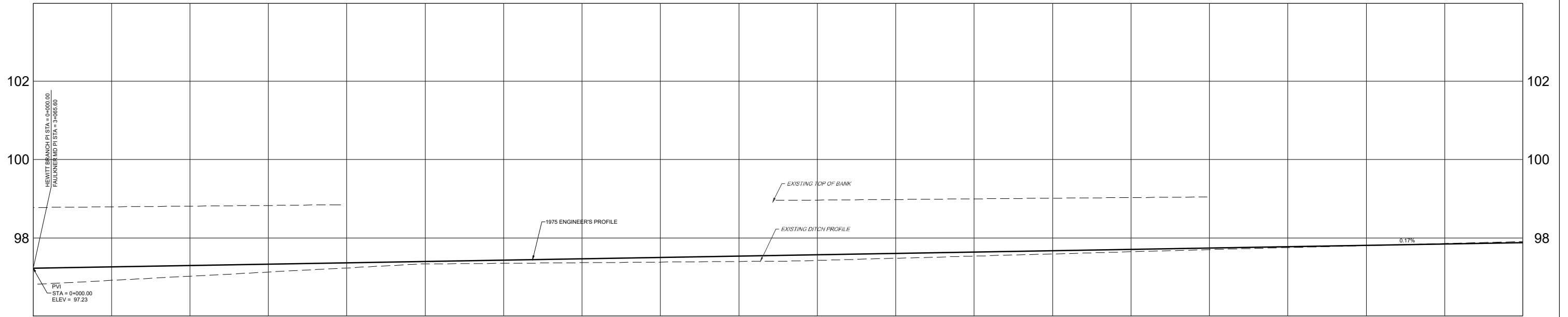
## **APPENDIX B**

Dwg. 22045-P1 through 22045-P4 – Profiles  
Dwg. 22045-C1 – Cross Sections

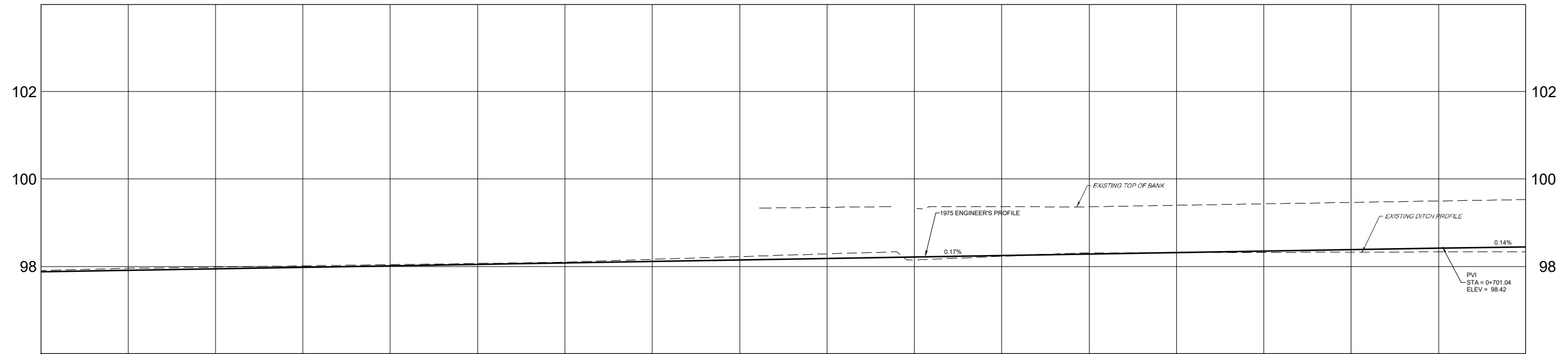
Table 1.0 – Maintenance Review

Survey Report





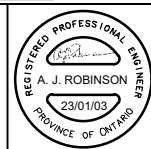
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EXISTING BOTTOM	96.61	96.62	97.02	97.13	97.23	97.34	97.35	97.37	97.39	97.40	97.43	97.46	97.51	97.59	97.65	97.70	97.75	97.80	97.85	97.91
STATION	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380



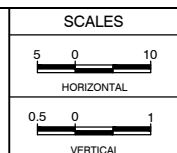
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EXISTING BOTTOM	97.91	97.96	97.99	98.01	98.04	98.07	98.10	98.15	98.23	98.29	98.15	98.23	98.31	98.31	98.32	98.33	98.33	98.34
STATION	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+520	0+540	0+560	0+580	0+600	0+620	0+640	0+660	0+680	0+700	0+720

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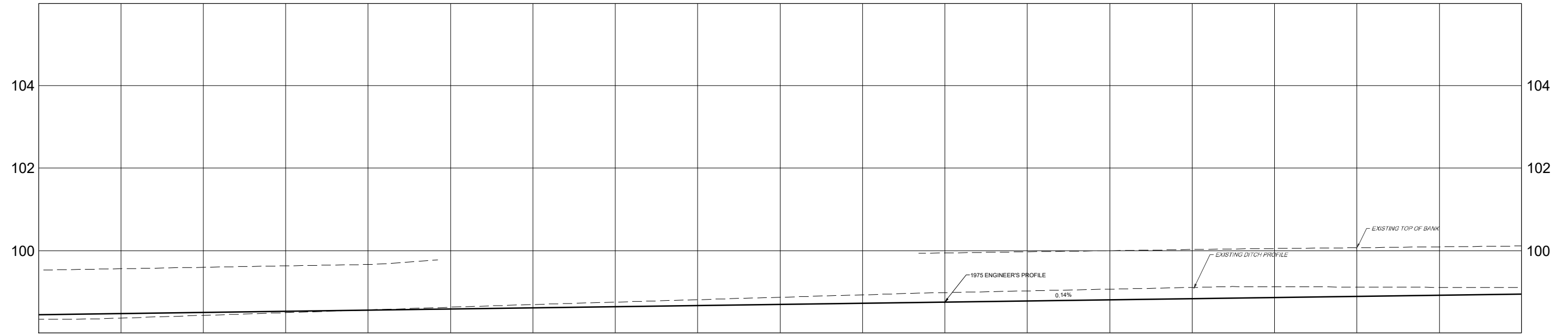
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CHECKED	LF
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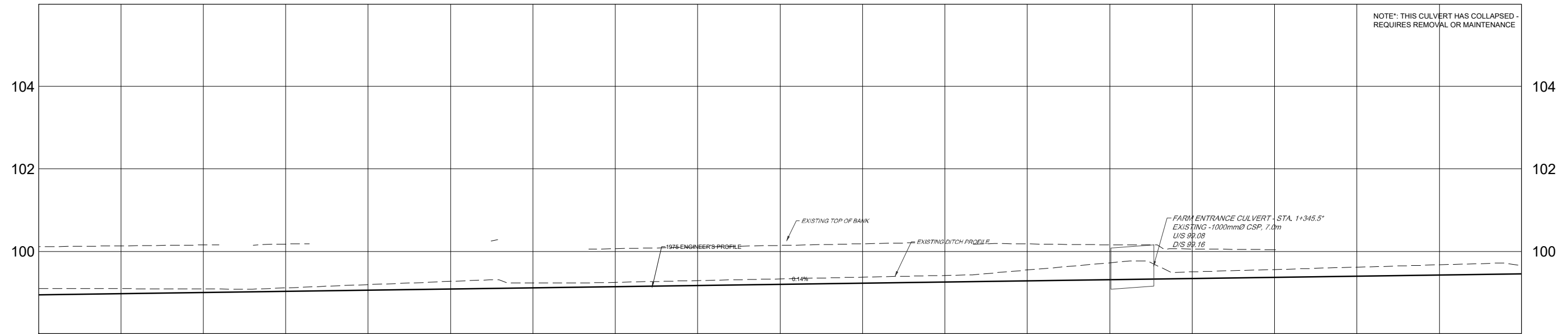
**CITY OF OTTAWA**  
**S.65 SUBSEQUENT CONNECTION  
TO THE FAULKNER MUNICIPAL DRAIN  
HEWITT BRANCH**

**DRAIN PROFILE  
STA. 0+000 TO STA. 0+720**

PROJECT No.	22045
CONTRACT No.	
DATED	JAN 2023
DWG. No.	22045-P1



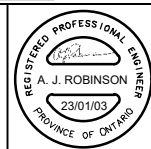
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EXISTING BOTTOM	96.34	96.37	96.43	96.50	96.59	96.63	96.70	96.75	96.81	96.87	96.93	96.99	97.03	97.07	97.11	97.13	97.12	97.11	97.10
STATION	0+720	0+740	0+760	0+780	0+800	0+820	0+840	0+860	0+880	0+900	0+920	0+940	0+960	0+980	1+000	1+020	1+040	1+060	1+080



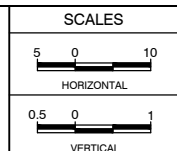
PROPOSED GRADE	98.95	98.98	99.01	99.03	99.06	99.09	99.12	99.15	99.18	99.20	99.23	99.26	99.29	99.32	99.34	99.37	99.40	99.43	99.46
EXISTING BOTTOM	96.17	96.17	96.09	96.12	96.19	96.27	96.24	96.29	96.29	96.33	96.36	96.42	96.55	96.72	96.67	96.66	96.62	96.66	96.66
STATION	1+080	1+100	1+120	1+140	1+160	1+180	1+200	1+220	1+240	1+260	1+280	1+300	1+320	1+340	1+360	1+380	1+400	1+420	1+440

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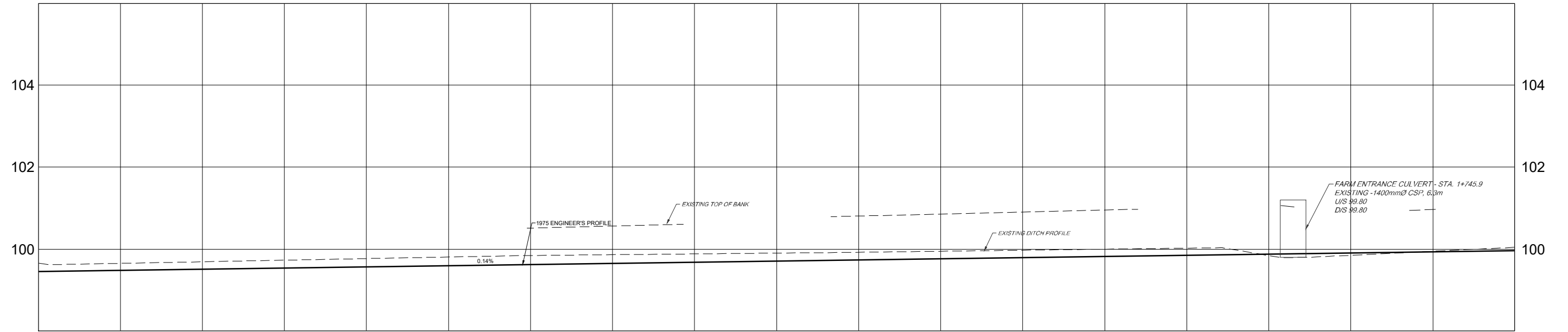
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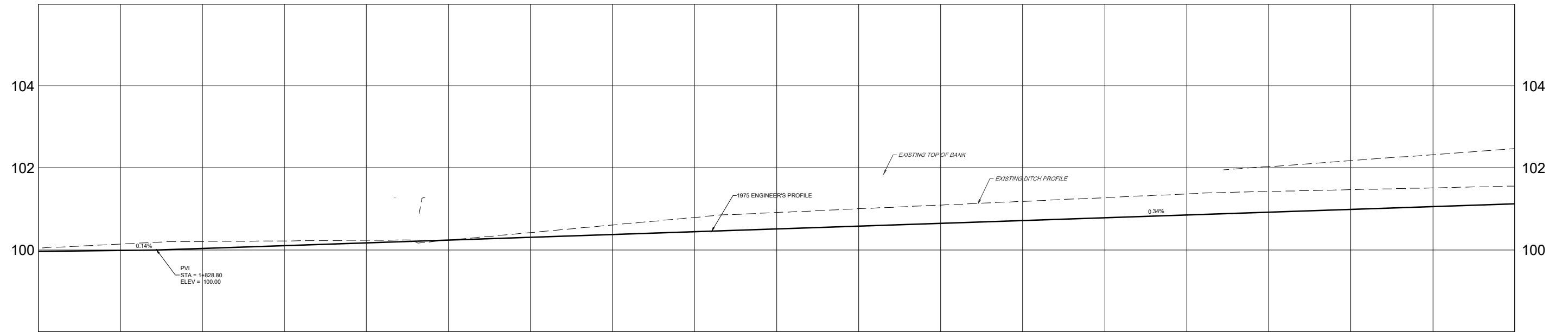
**CITY OF OTTAWA**  
**S.65 SUBSEQUENT CONNECTION  
TO THE FAULKNER MUNICIPAL DRAIN  
HEWITT BRANCH**

**DRAIN PROFILE  
STA. 0+720 TO STA. 1+440**

PROJECT No.	22045
CONTRACT No.	
DATED	JAN 2023
DWG. No.	22045-P2



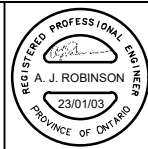
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EXISTING BOTTOM	99.66	99.65	99.69	99.73	99.77	99.81	99.85	99.87	99.90	99.93	99.95	99.99	100.00	100.00	100.03	99.84	99.85	99.85	100.05
STATION	1+440	1+460	1+480	1+500	1+520	1+540	1+560	1+580	1+600	1+620	1+640	1+660	1+680	1+700	1+720	1+740	1+760	1+780	1+800



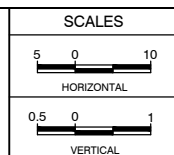
PROPOSED GRADE	99.96	99.99	100.04	100.11	100.17	100.24	100.31	100.38	100.44	100.51	100.58	100.65	100.71	100.78	100.85	100.92	100.99	101.05	101.12
EXISTING BOTTOM	100.05	100.14	100.20	100.22	100.23	100.24	100.42	100.61	100.79	100.91	101.00	101.09	101.19	101.27	101.36	101.42	101.47	101.51	101.56
STATION	1+800	1+820	1+840	1+860	1+880	1+900	1+920	1+940	1+960	1+980	2+000	2+020	2+040	2+060	2+080	2+100	2+120	2+140	2+160

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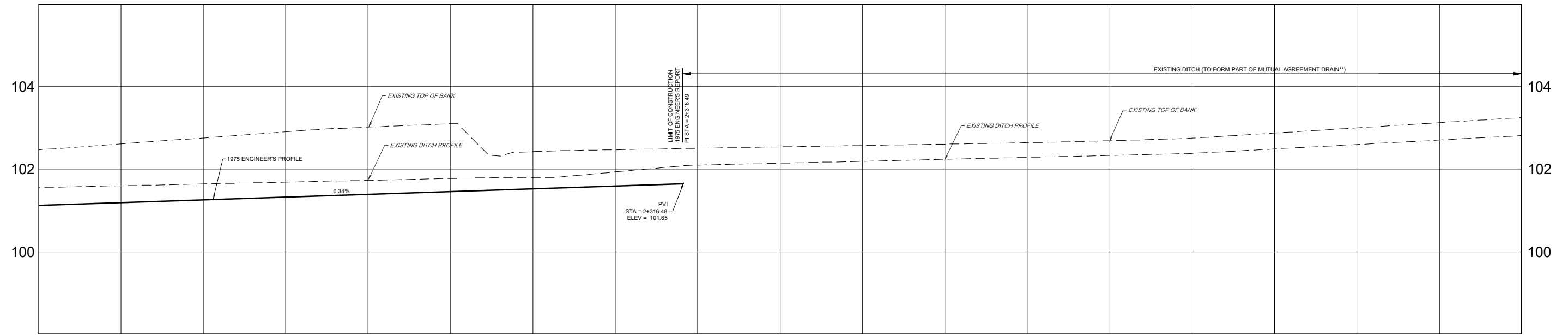
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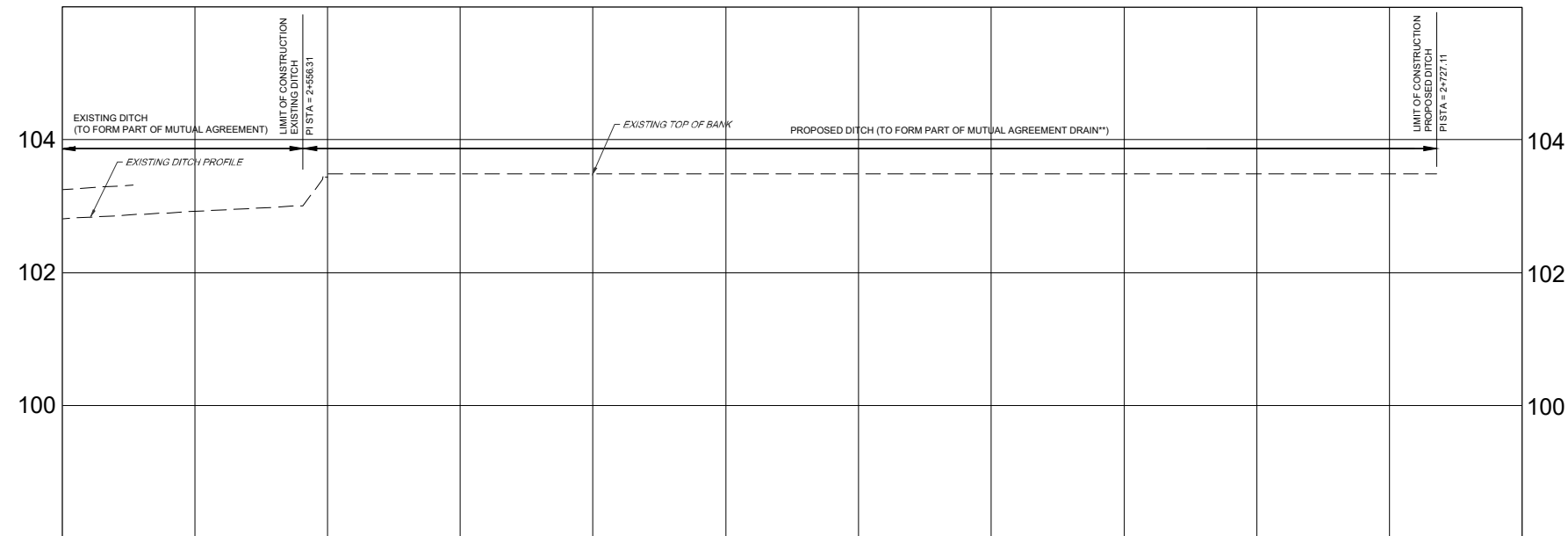
**CITY OF OTTAWA**  
**S.65 SUBSEQUENT CONNECTION TO THE FAULKNER MUNICIPAL DRAIN HEWITT BRANCH**

**DRAIN PROFILE**  
**STA. 1+440 TO STA. 2+160**

PROJECT No.	22045
CONTRACT No.	
DATED	JAN 2023
DWG. No.	22045-P3



PROPOSED GRADE	101.12	101.19	101.26	101.32	101.39	101.46	101.53	101.59											
EXISTING BOTTOM	101.56	101.60	101.64	101.69	101.73	101.77	101.80	101.59	102.10	102.14	102.19	102.24	102.28	102.33	102.38	102.43	102.48	102.53	102.57
STATION	2+160	2+180	2+200	2+220	2+240	2+260	2+280	2+300	2+320	2+340	2+360	2+380	2+400	2+420	2+440	2+460	2+480	2+500	2+520

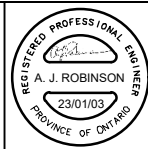


PROPOSED GRADE																			
EXISTING BOTTOM	102.81	102.82	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.48	102.81
STATION	2+520	2+540	2+560	2+580	2+600	2+620	2+640	2+660	2+680	2+700	2+720	2+740							

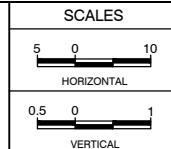
NOTE\*\*: INFORMATION ON THE PROPOSED MUTUAL AGREEMENT DRAIN IS PROVIDED IN THE MUTUAL AGREEMENT DOCUMENTS AND DOES NOT FORM PART OF THE EXISTING HEWITT BRANCH OF THE FAULKNER MUNICIPAL DRAIN

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APPROVED	AJR

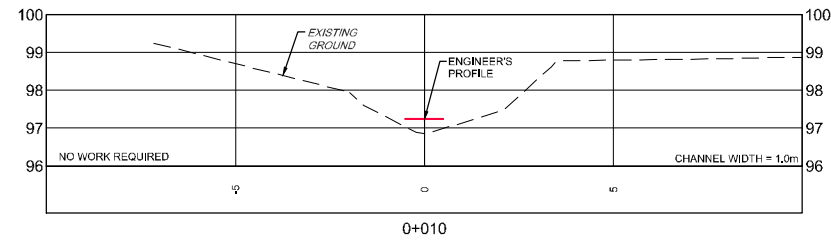
CITY OF OTTAWA

**S.65 SUBSEQUENT CONNECTION  
 TO THE FAULKNER MUNICIPAL DRAIN  
 HEWITT BRANCH**

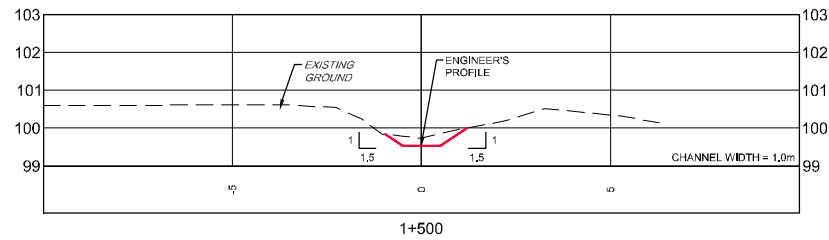
**DRAIN PROFILE  
 STA. 2+140 TO STA. 2+740**

PROJECT No.	22045
CONTRACT No.	
DATED	JAN 2023
DWG. No.	22045-P4

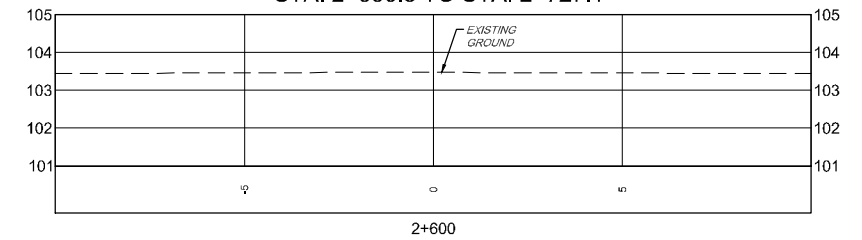
TYPICAL SECTION  
STA. 0+000 TO STA. 0+250



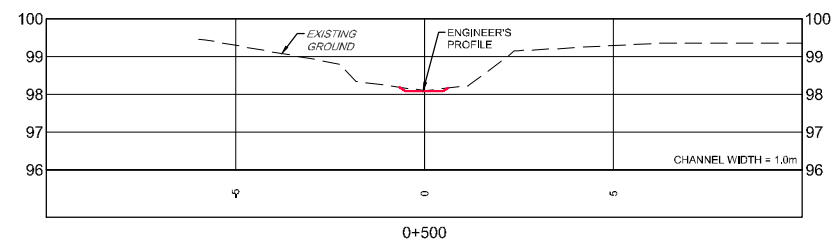
TYPICAL SECTION  
STA. 1+250 TO STA. 1+750



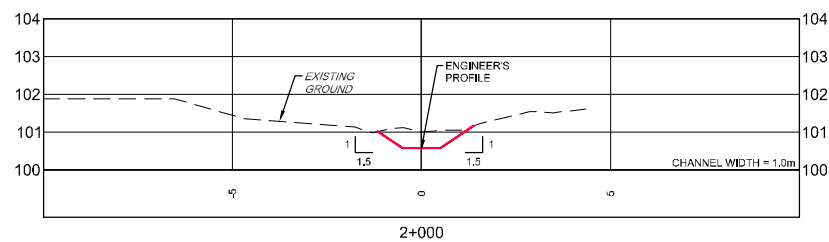
TYPICAL SECTION (PROPOSED DITCH-  
TO FORM PART OF MUTUAL AGREEMENT DRAIN\*\*)  
STA. 2+556.3 TO STA. 2+727.1



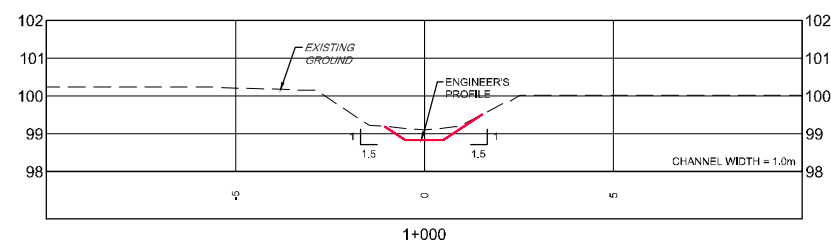
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STA. 0+250 TO STA. 0+750



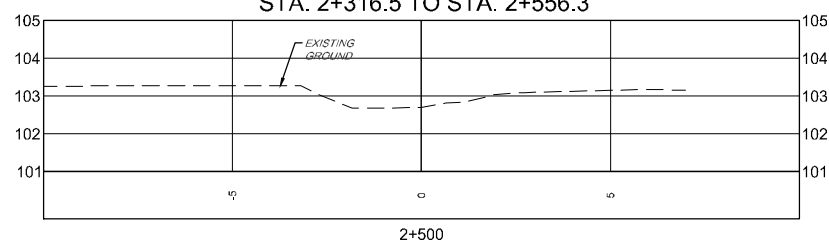
TYPICAL SECTION  
STA. 1+750 TO STA. 2+316.5



TYPICAL SECTION  
STA. 0+750 TO STA. 1+250



TYPICAL SECTION (EXISTING DITCH -  
TO FORM PART OF MUTUAL AGREEMENT DRAIN\*\*)  
STA. 2+316.5 TO STA. 2+556.3



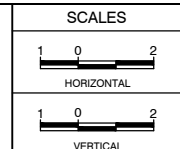
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Limitations: Providing plans, non-technical content of reports and other non-technical advice for submission under the Ontario Drainage Act.  
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DESIGN	LF
CHECKED	AJR
DRAWN	DD
CHECKED	LF
APPROVED	AJR

CITY OF OTTAWA  
S.65 SUBSEQUENT CONNECTION  
TO THE FAULKNER MUNICIPAL DRAIN  
HEWITT BRANCH

CROSS SECTIONS

PROJECT No.	22045
CONTRACT No.	
DATED	JAN 2023
DWG. No.	22045-C1

## Table 1.0 – Maintenance Review

Below provides a list of survey stations taken along the drain and a comparison to the 1975 Hewitt Branch proposed profile to provide a determination of required maintenance.

“Below Grade” indicates areas where the existing depth of the drain exceeds the requirements from the proposed profile. It is noted that fill is not required.

<b>STA (Converted to Metric)</b>	<b>Cut (+)/Below Grade (-) (m)</b>
<b>Hewitt Branch 1975</b>	<b>Hewitt Branch 1975</b>
0+000	-0.45 (Below Grade)
0+005.00	-0.43 (Below Grade)
0+104.06	-0.08 (Below Grade)
0+199.39	-0.16 (Below Grade)
0+304.44	-0.05 (Below Grade)
0+405.83	0.04 (Cut)
0+502.57	0.01 (Cut)
0+580.95	0.13 (Cut)
0+583.28	-0.07 (Below Grade)
0+586.40	-0.07 (Below Grade)
0+622.63	0.03 (Cut)
0+737.79	-0.08 (Below Grade)
0+841.87	0.07 (Cut)
0+938.64	0.22 (Cut)
1+014.65	0.27 (Cut)
1+136.96	0.05 (Cut)
1+194.44	0.2 (Cut)
1+196.82	0.2 (Cut)
1+198.91	0.12 (Cut)
1+217.34	0.09 (Cut)
1+311.68	0.15 (Cut)
1+349.88	0.44 (Cut)
1+349.88	<b>Collapsed culvert found at location Requires removal or replacement</b>
1+354.14	0.43 (Cut)
1+359.92	0.15 (Cut)
1+440.35	0.26 (Cut)
1+447.76	0.15 (Cut)
1+562.91	0.21 (Cut)
1+637.53	0.19 (Cut)
1+733.59	0.17 (Cut)
1+747.76	-0.09 (Below Grade)
1+754.36	-0.1 (Below Grade)

<b>1+836.29</b>	0.2 (Cut)
<b>1+892.67</b>	0.02 (Cut)
<b>1+895.79</b>	0.01 (Cut)
<b>1+897.56</b>	-0.06 (Below Grade)
<b>1+971.03</b>	0.37 (Cut)
<b>2+091.87</b>	0.51 (Cut)
<b>2+266.47</b>	0.3 (Cut)
<b>2+276.39</b>	0.29 (Cut)
<b>2+290.00</b>	0.24 (Cut)
<b>2+322.15</b>	0.44 (Cut)



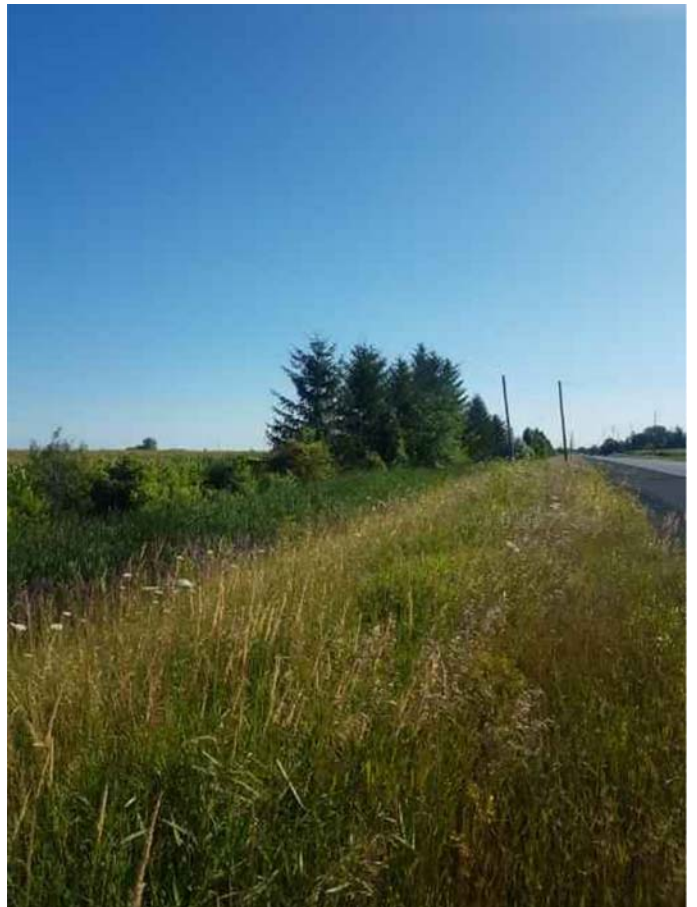
1-0+000 Upstream.jpeg



2-0+000 Downstream - Looking at Faulkner MD.jpeg



3-0+500 Upstream.jpeg



4-0+500 Downstream.jpeg





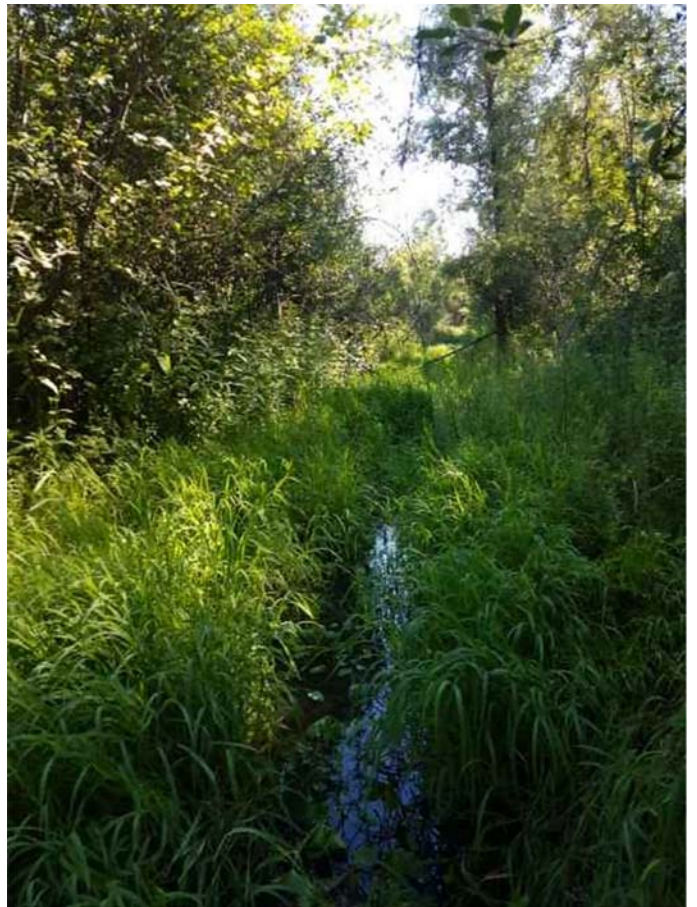
5-1+000 Upstream.jpeg



6-1+000 Downstream.jpeg



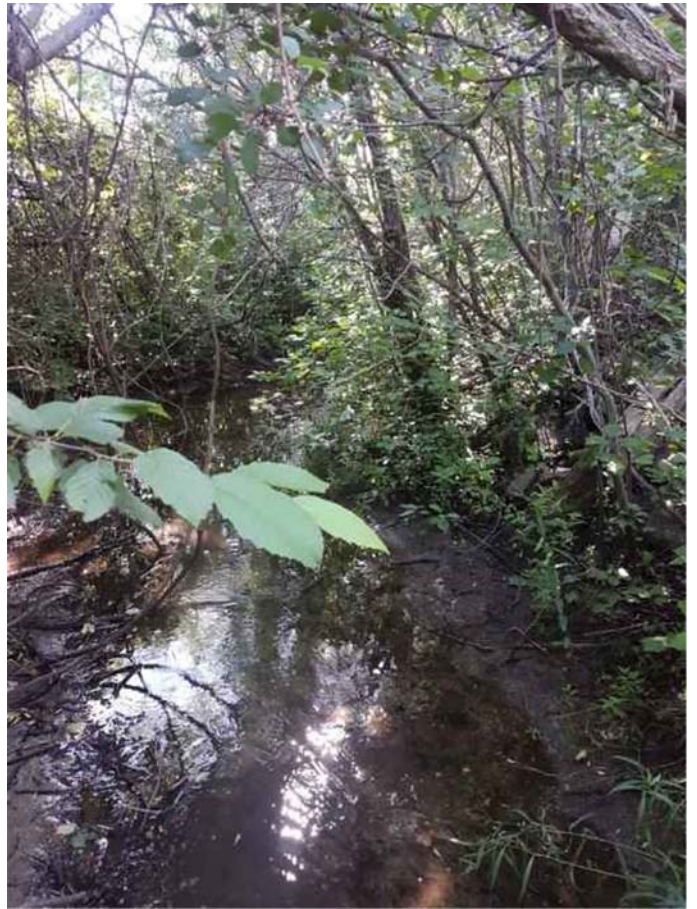
7-1+500 Upstream.jpeg



8-1+500 Downstream.jpeg



9-2+000 Upstream.jpeg



10-2+000 Downstream.jpeg



11-2+500 Upstream.jpeg



12-2+500 Downstream.jpeg



13-Culvert 1+350 - Upstream end ~1000mm CSP poor condition.jpeg



14-Culvert 1+350 - Downstream end.jpeg



15-Culvert 1+350 - Top of Culvert.jpeg



16-Culvert 1+350 - Field Entrance.jpeg



17-Culvert 1+700 - Upstream end ~1400mm CSP good condition.jpeg



18-Culvert 1+700 - Downstream end.jpeg



19-Culvert 1+700 - Field Entrance.jpeg