

# Notice of Alteration Form



File No. : 1069.10	Environment Act Licence No. : 2716 RR
Legal name of the Licensee: City of Winnipeg	
Name of the development: South End Water Pollution Control Centre	
Category and Type of development per Classes of Development Regulation: Waste Treatment and Storage <input type="button" value="v"/> <SELECT> <input type="button" value="v"/>	
Licensee Contact Person: Chris Carroll Mailing address of the Licensee: 110-1199 Pacific Avenue City: Winnipeg Province: Manitoba Postal Code: R3E 3S8 Phone Number:(204) 986-7435 Fax: Email: ccarroll@winnipeg.ca	
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant): Mike Gaudreau, Municipal Engineer, AECOM	
Phone: (204) 479-6762 Fax:	Mailing address: 99 Commerce Drive, Winnipeg, MB R3P 0Y7
Email address: mike.gaudreau@aecom.com	
Short Description of Alteration ( <i>max 90 characters</i> ): Abandonment of the existing 700 mm and 800 mm siphon crossings of the Red River.	
Alteration fee attached: Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
If No, please explain: Abandonment of failed pipelines with insignificant environmental effects	
Date: 2024-10-31	Signature: Printed name: Mike Gaudreau
<p>A complete Notice of Alteration (<b>NoA</b>) consists of the following components:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Cover letter</b></li> <li><input checked="" type="checkbox"/> <b>Notice of Alteration Form</b></li> <li><input checked="" type="checkbox"/> <b>1 electronic copy of the NoA detailed report</b> (see "<a href="#">Information Bulletin - Alteration to Developments with Environment Act Licences</a>")</li> <li><input type="checkbox"/> <b>\$500 Application fee, if applicable</b> (Cheque, payable to the Minister of Finance)</li> </ul>	
<p><b>Submit the complete NoA to:</b>                  Director, Environmental Approvals Branch                  Environment and Climate Change                  Box 35, 14 Fultz Blvd                  Winnipeg MB R3Y 0L6  <a href="mailto:EABDirector@gov.mb.ca">EABDirector@gov.mb.ca</a>  <b>For more information:</b>                  Toll-Free: 1-800-282-8069                  Phone: 204-945-8321 Fax: 204-945-5229  <a href="https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html">https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html</a></p>	
<p><b>Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an <a href="#">Environment Act Proposal Form</a> (see "<a href="#">Information Bulletin – Environment Act Proposal Report Guidelines</a>")</b></p>	

# St. Vital Existing Siphon Crossing Abandonment

**Fort Garry – St. Vital Existing Siphon Crossing Abandonment – Notice of Alteration**

City of Winnipeg

60728226

October 2024



AECOM Canada Ltd.  
99 Commerce Drive  
Winnipeg, MB R3P 0Y7  
Canada

T: 204.477.5381  
F: 431.800.1210  
www.aecom.com

VIA EMAIL (EABDirector@gov.mb.ca)

October 31, 2024

Ms. Agnes Wittmann  
Director, Environmental Approval Branch  
Environment and Climate Change  
Box 35, 14 Fultz Blvd  
Winnipeg, MB R3Y 0L6

**Project #**  
60728226

**Subject: St. Vital Existing Siphon Crossing Abandonment – Fort Garry – St. Vital Existing Siphon Crossing Abandonment – Notice of Alteration**

Dear Ms. Wittmann:

We respectfully submit this Notice of Alteration (NoA) to the Environment Act Licence No. 2716 RR (Licence) for the abandonment of the existing 700 mm and 800 mm Fort Garry – St. Vital (FGSV) Wastewater Siphon Crossings of the Red River. The proposed works are to commence November 6, 2024, and, on behalf of the City, request the review to undertaken on an urgent basis.

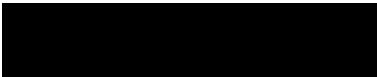
The existing 700 mm and 800 mm high density polyethylene (HDPE) wastewater siphon crossings are approximately 258 m in length (each) and are located between the eastbound and westbound Fort Garry Bridges on the bottom of the Red River. The siphon crossings of the Red River failed in late 2023 and were isolated from the sewer system in February of 2024, effectively isolating any wastewater from leaking into the Red River.

An emergency bypass has been in operation since February 2024. The emergency bypass consists of two (2) 400 mm HDPE forcemains connecting the temporary pumping arrangement at the D'Arcy Lift Station site on the west side of the Red River to the St. Vital Trunk on the east side of the Red River via the eastbound Fort Garry Bridge. The current configuration is able to by-pass the same amount of wastewater as the system prior to failure at an approximate pumping capacity of 820 l/s.

The 800 mm siphon floated in August of 2024, which was believed to have been subsequently re-sunk, and floated again in October 2024. Consequently, the City's River Patrol has advised that the siphons are to be removed as they pose a significant risk to boat traffic safety.

We expect the environmental effects resulting from the abandonment of the existing 700 mm and 800 mm siphons to be insignificant and as such be considered as a minor alteration per Section 14 of *The Environment Act*.

Sincerely,  
**AECOM Canada Ltd.**

  
Mike Gaudreau, P.Eng.  
Municipal Engineer  
Conveyance, Water  
Encl.

cc: R. Lucky, City of Winnipeg, WWD (ryanlucky@winnipeg.ca)  
M. McDonald and M. Krentz, AECOM

## Statement of Qualifications and Limitations

The attached Report (the “Report”) has been prepared by AECOM Canada Ltd. (“AECOM”) for the benefit of the Client (“Client”) in accordance with the agreement between AECOM and Client, including the scope of work detailed therein (the “Agreement”).

The information, data, recommendations and conclusions contained in the Report (collectively, the “Information”):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the “Limitations”);
- represents AECOM’s professional judgement in light of the Limitations and industry standards for the preparation of similar reports;
- may be based on information provided to AECOM which has not been independently verified;
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued;
- must be read as a whole and sections thereof should not be read out of such context;
- was prepared for the specific purposes described in the Report and the Agreement; and
- in the case of subsurface, environmental or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

AECOM shall be entitled to rely upon the accuracy and completeness of information that was provided to it and has no obligation to update such information. AECOM accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

AECOM agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but AECOM makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

Without in any way limiting the generality of the foregoing, any estimates or opinions regarding probable construction costs or construction schedule provided by AECOM represent AECOM’s professional judgement in light of its experience and the knowledge and information available to it at the time of preparation. Since AECOM has no control over market or economic conditions, prices for construction labour, equipment or materials or bidding procedures, AECOM, its directors, officers and employees are not able to, nor do they, make any representations, warranties or guarantees whatsoever, whether express or implied, with respect to such estimates or opinions, or their variance from actual construction costs or schedules, and accept no responsibility for any loss or damage arising therefrom or in any way related thereto. Persons relying on such estimates or opinions do so at their own risk.

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This Statement of Qualifications and Limitations is attached to and forms part of the Report and any use of the Report is subject to the terms hereof.

AECOM: 2015-04-13

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## Revision History

Rev #	Revision Date	Revised By:	Revision Description
0	October 2024	M. Gaudreau	Final

## Distribution List

# Hard Copies	PDF Required	Association / Company Name
	✓	City of Winnipeg
	✓	Environmental Approvals Branch, Province of Manitoba
	✓	AECOM Canada Ltd.

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# 1. Introduction

This NoA to the Licence is for the abandonment of 258 m (each) of failed 700 mm and 800 mm HDPE siphons located at the bottom of the Red River, which will consist of the following activities, and as shown in Appendix A:

- Removing approximately 137 m (each) of the in-river sections.
- Abandonment in place using flowable cement fill of the in slope sections on west and east banks, 54 m and 73 m in length for each, respectively.

The in-river section of the siphons are also fitted with concrete weights at approximately 6 m (20') spacing that are 1,124 mm wide by 1,124 mm tall, and 241 mm and 342 mm in depth (Appendix B). We expect the majority of these weights will be removed; however, some weights may be left at the bottom of the river to accommodate the removal methodology (as described in Section 3).

Discussion on project background, abandonment methodology, and other regulatory requirements are discussed in the following sections.

# 2. Project Background

During planned inspections in late 2023, the original 700 mm and 800 mm HDPE FGSV siphons crossing the Red River were found to be in poor condition, where one (1) of the siphons was assessed to be leaking and put out of service. Subsequent to assessment of the siphons, planning was immediately commenced to install an emergency bypass system across the Red River, via the east bound Fort Garry Road Bridge on Abinojii Mikanah. On February 7, 2024, a sinkhole on the west bank of the river was observed, which indicated the partial collapse and subsequent failure of the second siphon.

The design and implementation of an emergency bypass system began in December 2023 initiated by the discovery of the leaking siphon. Construction on site of the bypass commenced on February 5, 2024, and now consists of a system capable of replicating the existing D'Arcy Lift Station flows to approximately 820 l/s. The pumps connect into two (2) 400 mm DR 17 HDPE emergency bypass force mains, which are routed on the north side of the eastbound Abinojii Mikanah Bridge, and discharge to the original downstream siphon chamber.

The original 700 mm and 800 mm siphons were isolated from the wastewater sewer (WWS) system via structural concrete plugs in February of 2024. Consequently, the siphons are not able to collect and/or leak any additional wastewater to the environment. However, these siphons have floated twice within the Red River since their isolation from the WWS system in August of 2024 and again in October of 2024, and the exposed sections along the river bottom are proposed to be removed due to boat safety concerns and the remaining in-slope sections will be abandoned by filling with flowable cement.

A new subsurface crossing of the Red River serving as the permanent replacement of the failed original crossing is in the final stages of Preliminary Design, where a separate NoA to the Licence will be made upon finalization of design.

### 3. Methodology

The removal process for the of the 137 m river sections of the siphon will be done by cutting the siphons at both ends where it is exposed in the river bottom while remaining fastened to equipment on the bank to prevent the siphon from floating downstream. The lines will then be floated by either installation of air bags by divers, or, if not feasible, removal of sufficient concrete weights to allow the siphon to become buoyant. Once the siphon is floated, it will be pulled to the riverbank for removal and disposal. Any concrete weights that remain on the pipe as it is brought to the shoreline will be removed and disposed off site.

The existing shoreline on the east bank where the siphons will be removed was reinforced with approximately 1 m thick stone rip rap in the early 2010s between the winter water level and summer water level. As such, the approximately 145 kg/m and 190 kg/m siphons are not expected to adversely impact the bank.

Any concrete weights that are removed by divers within the river section to facilitate floatation will remain at the river bottom. It is expected that the environmental or health impacts of leaving the weights on the bottom will be negligible as they have been in place for approximately 40 to 50 years (installed in the late 1970s).

As the siphons are pulled, the contents may evacuate into the Red River. It is unknown how much air, water or solids remain in the siphons, but a total volume of 0.195 ML<sup>1</sup> may discharge into the Red River. As previously indicated, the siphons are isolated from the operating WWS system and additional discharge from the operating WWS system through the 700 mm and 800 mm siphons is not expected.

Upon removal of the 137 m river sections, the bank sections (121 m of each) will be abandoned using cement stabilized flowable fill or alternate products suitable for contact with water. The exposed ends of the siphons will be plugged to prevent inadvertent release of the fill material to the environment.

The Contractor will be responsible for developing a safe work plan and adhering to Workplace Safety and Health requirements. Site restoration will be completed by the Contractor, where extent will be determined subsequent to the abandonment work.

### 4. Other Regulatory Requirements

The following regulatory requirements will be addressed separate to this NoA:

- Department of Fisheries and Oceans Canada (DFO):
  - AECOM has contacted DFO previously regarding the removal of the siphon crossing, and they have indicated preliminary support for this methodology.
  - AECOM will submit additional details regarding the abandonment of the existing siphons for DFO approval.
- Transport Canada:
  - The work is considered a Minor Works Order under the *Canadian Navigable Waters Act*, and notice of the work will be provided through the Government of Canada Project Registry and on the Navigation Protection Program external submission site.
- Waterway Permit:
  - AECOM will submit a waterway permit application under the City of Winnipeg's Waterway By-law No. 5888/92 as work is occurring within 106.7 m of the regulated summer water level of the Red River.

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<sup>1</sup> ML = Million Liters



## 5. Conclusion

The original 700 mm and 800 mm HDPE wastewater siphon crossings of the Red River are proposed to be abandoned in-place in the Red River (121 m of each), whereas the 137 m (each) of in-river sections will be removed from the river. The proposed methodology requires cutting the siphons near the banks, floating and subsequent removal of the pipelines and, as much as practical, the removal of their concrete weights.

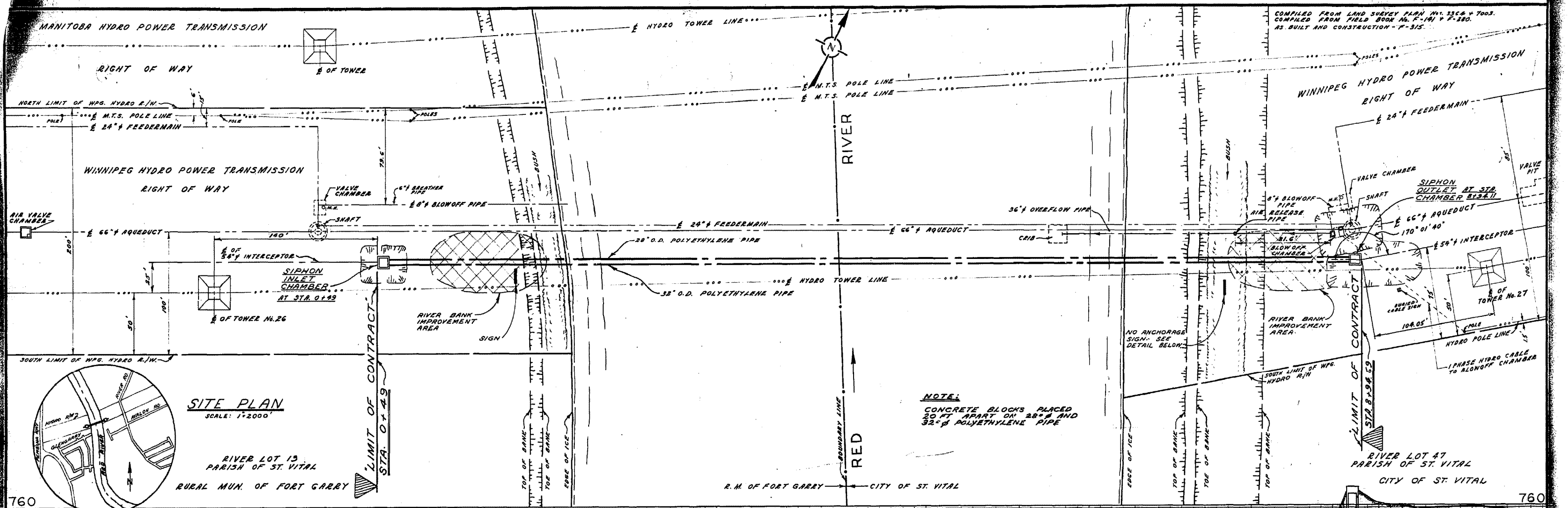
The 121 m of each of the 700 mm and 800 mm HDPE left in the bank will be abandoned in place using cement stabilized fill, or other environmentally appropriate product. The exposed sections of the siphons will be plugged during the filling procedure to prevent inadvertent release of the fill material to the environment.

Given the proposed methods for abandonment existing wastewater siphon crossings, environmental effects are assessed as insignificant, and the risk to public/boat safety will be mitigated.

# Appendix **A**

## Abandonment Mark-Up



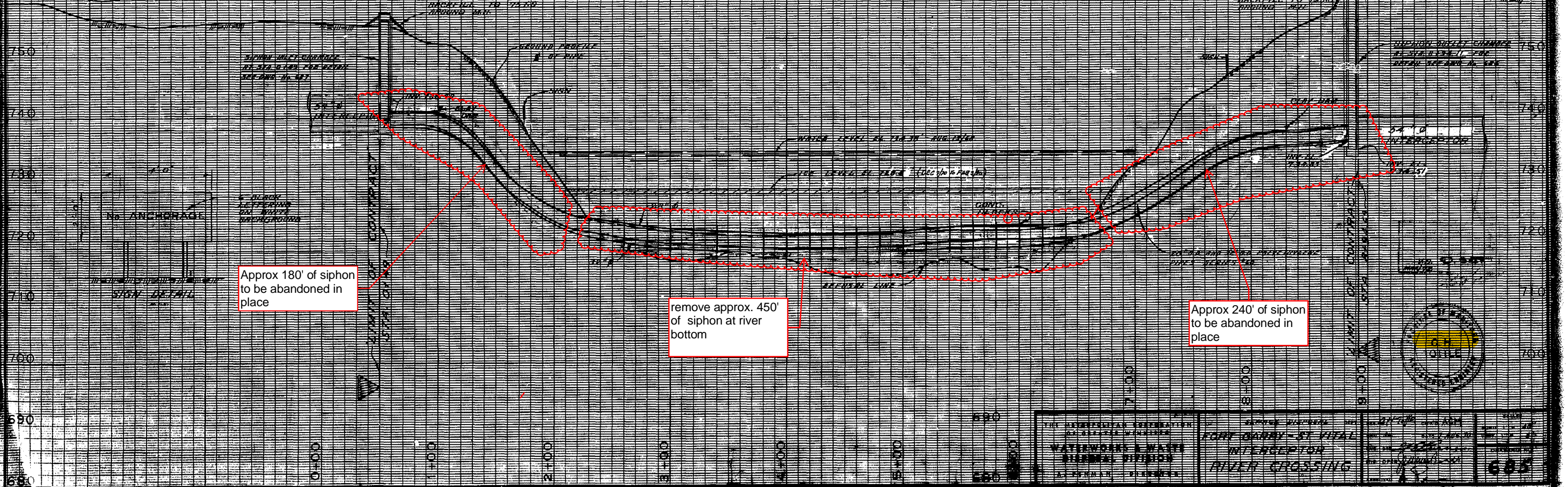


**SITE PLAN**  
SCALE: 1"=2000'

RIVER LOT 13  
PARISH OF ST. VITAL  
RURAL MUN. OF FORT GARRY

**NOTE:**  
CONCRETE BLOCKS PLACED  
20 FT APART ON 28" & AND  
32" & POLYETHYLENE PIPE

760



Approx 180' of siphon to be abandoned in place

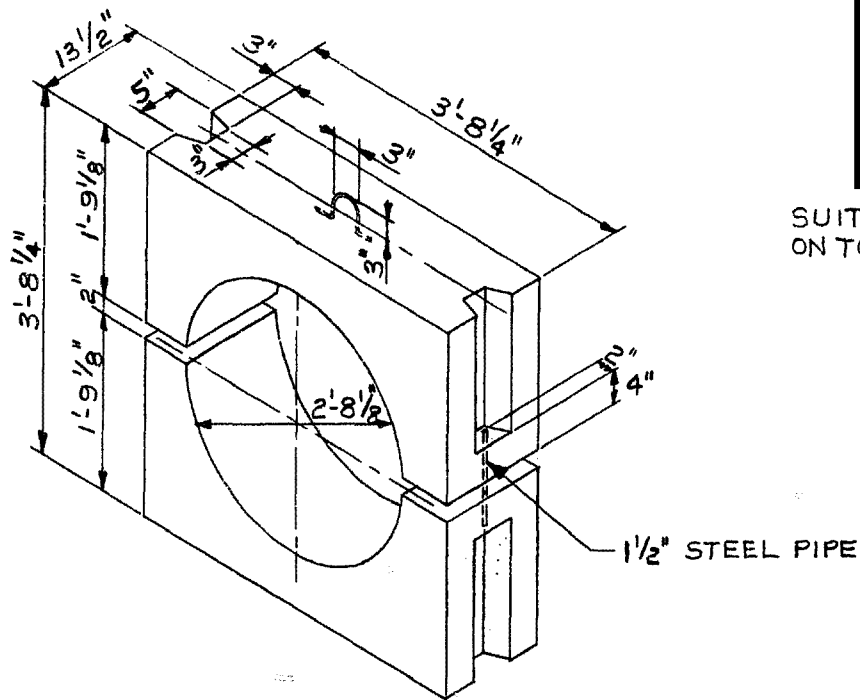
remove approx. 450' of siphon at river bottom

Approx 240' of siphon to be abandoned in place

THE MANITOBA CORPORATION WATERWORKS & WASTE SERVICES DIVISION A. J. ...	FORT GARRY - ST. VITAL INTERCEPTOR RIVER CROSSING	685
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# Appendix **B**

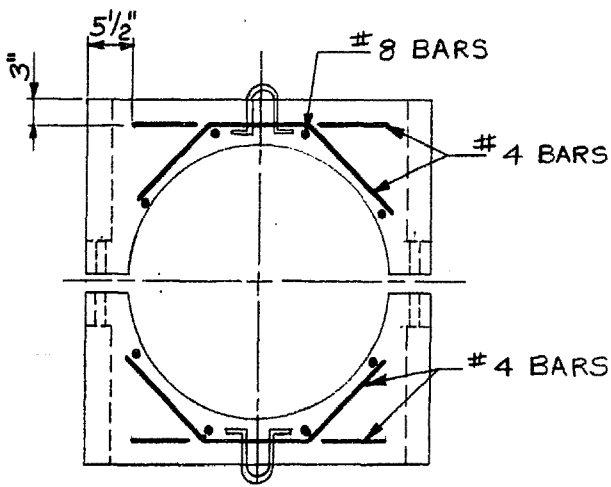
## Record Drawings – Concrete Weights



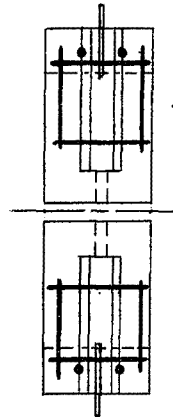
SUITABLE LIFTING LUGS ON TOP AND BOTTOM BLOCKS

NOTE: WEIGHTS FOR 32"  $\phi$  PIPE TO WEIGH 1220 LBS.

**MICROFILMED** APR 12 1979



FRONT VIEW



SIDE VIEW

**The City Of Winnipeg**  
**Waterworks, Waste & Disposal Division**

**Branch:**  
**ENGINEERING**

FORT GARRY - ST. VITAL INTERCEPTOR  
 RIVER CROSSING  
 ANCHOR WEIGHTS  
 FOR 32"  $\phi$  "SCLAIR" PIPE

**Designed By:**

**Drawn By:**

**Scale:**

$\frac{1}{2}'' = 1'-0''$

**Checked By:**

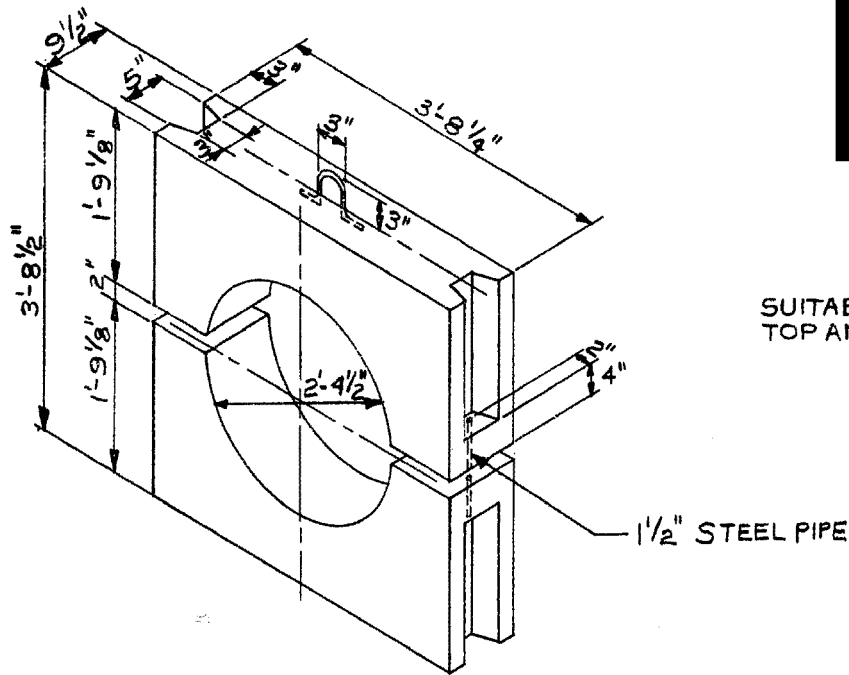
**Date:**

JULY 7, 1978

**Drawing No.**

**Approved:**

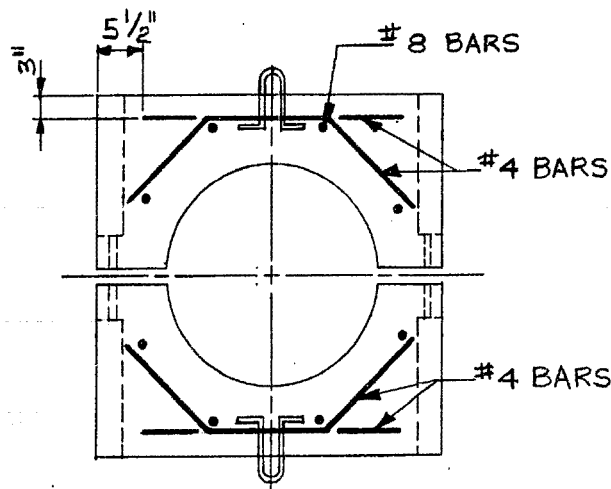
SK-401



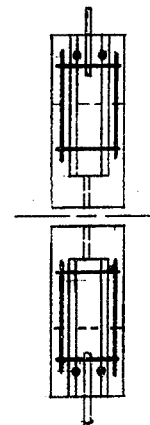
SUITABLE LIFTING LUGS ON TOP AND BOTTOM BLOCKS

1/2" STEEL PIPE

NOTE: WEIGHTS FOR 28"  $\phi$  PIPE TO WEIGH 1000 LBS.



FRONT VIEW



SIDE VIEW

**MICROFILMED** APR 12 1979

**The City of Winnipeg**  
Waterworks, Waste & Disposal Division

Branch:  
ENGINEERING

PORT GARRY - ST. VITAL INTERCEPTOR  
RIVER CROSSING  
ANCHOR WEIGHTS  
FOR 28"  $\phi$  "SCLAIR PIPE"

Designed By:

Drawn By:

Scale:

1/2" = 1'-0"

Checked By:

Date:

JULY 7, 1978

Drawing No.

Approved:

SK-402

