

# City of Port Colborne

## Meeting to Consider Agenda

**Date:** Monday, July 7, 2025  
**Time:** 6:30 pm  
**Location:** Council Chambers, 3rd Floor, City Hall  
 66 Charlotte Street, Port Colborne

**Pages**

<b>1. Call to Order</b>	
<b>2. Adoption of Agenda</b>	
<b>3. Disclosures of Interest</b>	
<b>4. Municipal Drain</b>	
Requests to delegate, both written, in person and appearing virtually, will be accepted until noon the day of the meeting by contacting <a href="mailto:deputyclerk@portcolborne.ca">deputyclerk@portcolborne.ca</a> .	
4.1 Presentation: Paul Marsh, P. Eng of EWA Engineering Inc.	
4.2 Delegations	
4.3 Meeting to Consider the Point Abino Drain, 2025-156	1
<b>5. By-laws</b>	
5.1 By-law No. 7364/55/25	133
Being a By-law to Provide for a Section 78 Engineer's Report for Drainage works in the City of Port Colborne In the Regional Municipality of Niagara Known as the Point Abino Municipal Drain	
5.2 By-law No. 7365/56/25	147
Being a by-law to adopt, ratify and confirm the proceedings of the Council of The Corporation of the City of Port Colborne at its Meeting to Consider July 7, 2025	
<b>6. Adjournment</b>	





**Subject: Meeting to Consider the Point Abino Drain Report**

**To: Council**

**From: Public Works Department**

Report Number: 2025-156

Meeting Date: July 7, 2025

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**Recommendation:**

That Public Works Department Report 2025-156 be received; and

That the Mayor and Clerk be directed to execute a by-law to provisionally adopt the Point Abino Drain Engineer's Report, dated February 27, 2025, prepared by Paul Marsh, P. Eng of EWA Engineering Inc. under Section 78, Chapter D. 17 of the Drainage Act R.S.O. 1990; and

That Councillor \_\_\_\_\_ and Councillor \_\_\_\_\_ be appointed to sit on the Court of Revision and that Councillor \_\_\_\_\_ be appointed as alternate. The third seat of the panel will be appointed by the Town of Fort Erie.

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**Purpose:**

At the May 13, 2025, Council Meeting, Council approved Report 2025-91, which allowed staff to proceed to the Meeting to Consider of the Engineer's Point Abino Municipal Drain Report. The purpose of this report is to present the findings of the Point Abino Engineer's Report at the Meeting to Consider and obtain approval to further move the report to the next step, which is the Court of Revision.

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**Background:**

As per the *Drainage Act, R.S.O. 1990* (the Act), municipalities are required to keep Engineer Reports up to date for all Municipal Drains. A revised assessment schedule is required for the Point Abino Drain because of changes to assessment parcels. In addition, various concerns regarding insufficient drainage from residents were raised. Therefore, to investigate possible solutions and update the Municipal Drain Report, the appointment of an engineer was required.



The Point Abino Municipal Drain Report, along with a supplemental Baseline Report and Hydrology and Hydraulics' Report, were completed by the appointed engineer, Paul Marsh, P. Eng., of EWA Engineering Inc. These documents will be discussed at this meeting.

Council Report 2025-91 provided the history and background of the Point Abino Municipal Drain. In the report, staff informed Council of the receipt of the Engineer's Report, which was then filed with the Clerks Division on May 20, 2025, and Council directed staff to proceed to the Meeting to Consider.

The Act requires the Clerk to send a copy of the Engineer's Report to all assessed landowners within 30 days of receipt of the Engineer's report. To meet this requirement, a notification was mailed on May 29, 2025. The notification included instructions on how to review the Engineer's Report. Hard copies of the report were also made available by request.

At the Meeting to Consider, affected property owners are given the opportunity to ask questions to the Engineer or express any concerns identified in the Engineer's Report related to design or gross errors in the written report. Should the Meeting to Consider reveal any gross errors, Council may refer the report back to the Engineer for reconsideration. However, under no circumstances is Council to refer the report back to the Engineer regarding assessments. Concerns related to assessments are a function of the Court of Revision.

As per Section 42 of the Act, anyone requiring additional drainage may petition for it at this time.

Appointment of Councillors for the Court of Revision are to be assigned at this meeting. As per Section 97(3) of the Act, Council is required to appoint two panelists from the City of Port Colborne and one panelist from the Town of Fort Erie. Additionally, one alternate is required from each municipality during the selection. At the Court of Revision, one of the panelists will be selected as chair of the Court of Revision. The Court of Revision is tentatively scheduled for August 21<sup>st</sup>, 2025.

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## **Discussion:**

The Engineer's Report addresses chronic drainage issues within the Point Abino Municipal Drain watershed, which includes the main Point Abino Drain, Haggerty Branch, and East Branch. The Engineer assessed watershed conditions and hydrologic/hydraulic data to determine deficiencies in flow capacity, erosion risks, and infrastructure deterioration within the Drain. The Report presents a preferred design solution involving channel enlargements and structural upgrades of some culverts and outlet structures. Detailed drawings, cost estimates, and an assessment schedule outline how improvements are to be funded among landowners and municipalities. By



proposing this work, the Report aims to enhance drainage performance, protect agricultural and residential properties from flooding and erosion, and ensure long-term reliability.

A summary of the proposed works is included below:

- Replacement of the existing concrete culvert and outlet structure near the outlet of the Point Abino Drain.
  - Fort Erie's routine inspection program identified that the concrete culvert is in a state of failure and in need of full replacement.
  - The total culvert structure is approximately 85 metres in length, with Fort Erie owning 24m as it extends beyond the municipal road allowance.
  - The culvert will be replaced with an open channel design, except for an access culvert serving one property.
  - The reconstructed channel will be supported by concrete retaining walls rather than traditional sloped banks. This represents a substantial but more cost-effective solution over the long term.
- Lowering of the channel grade upstream of Holloway Bay Road.
  - To improve drainage performance for residents in the Pleasant Beach and Holloway Bay Road areas.
- Removal of unnecessary culverts upstream of Pleasant Beach Road.

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## Financial Implications:

All upfront administration and financing have been borne by the City of Port Colborne and most construction costs will also be borne by the City of Port Colborne. The replacement of the culvert on Point Abino Road will be completed and paid for by the Town of Fort Erie. Once the Report is adopted and the construction is completed, the cost of the project will be billed to the assessed landowners according to the assessment schedule contained in the report.

Drainage work costs will be recorded to a drainage account established for the drainage set out in this report. That account will continue to be charged interest at the City's Bank Prime Rate + 2% to temporarily finance the drainage works until the Engineer's certificate of final completion.

The total estimated cost of the project is \$2,555,208.06 as indicated in the assessment summary schedule. Estimated assessments for all works considered through this report are as follows:

Port Colborne:

Privately owned lands – \$472,297.50

Municipal Parcels – \$1643.00



Municipal Roads \$40,635.57

Fort Erie:

Privately owned lands – \$760,545.26

Municipal Roads - \$1,262,860.73

Enbridge - \$17,226.00

The Town of Fort Erie is aware of the cost assessed to them for the reconstruction of the concrete box culvert under Point Abino Road. It has been previously discussed with Fort Erie Staff and has been predetermined that the box culvert structure will be replaced by the Town of Fort Erie under separate contract.

The Point Abino Municipal Drain is completely outside the limit of Port Colborne's Urban Storm Sewer boundary so there will be no charges funded through the Urban Storm Sewer funds.

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### **Public Engagement:**

A Public Information Centre for this report was held on March 21, 2022, via Zoom. This public meeting satisfied the requirements of the Drainage Act. Additional meetings were held with the Town of Fort Erie residents for specific details regarding their properties.

As per the *Drainage Act*, following the Meeting to Consider, a copy of the provisional by-law and notices for appeals will be mailed accordingly by their respective municipality to all landowners assessed in the report.

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### **Strategic Plan Alignment:**

The initiative contained within this report supports the following pillars of the strategic plan:

- Environment and Climate Change
- Sustainable and Resilient Infrastructure

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### **Conclusion:**

The proposed improvements to the Point Abino Municipal Drain will address aging infrastructure, improve drainage performance, and help mitigate the effects on surrounding properties from flooding and erosion. It is recommended that Council approve this report and provisional by-law for the Point Abino Municipal Drainage works



to proceed to the next step of the Drainage Act, the Court of Revision.

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**Appendices:**

- a. Point Abino Municipal Drain Report

Respectfully submitted,

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Drainage Superintendent  
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**Report Approval:**

All reports reviewed and approved by the Department Director and also the City Treasurer when relevant. Final review and approval by the Chief Administrative Officer.



## **Point Abino Municipal Drain Report**



**April 9, 2025**

Project No: EWB-199997

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## Revision and Version Tracking

Title: Point Abino Drain Report

Submission Date: April 9, 2025

Version #	Issued As:	Prepared by	QA/QC	Editor	Date:
100	Issued As Final	P.Marsh	Grammarly	P.Marsh	April 9, 2025
99	Issued As Final (IAF) Draft	P.Marsh	Grammarly	P.Marsh	May 27, 2023
90	IFR90 Draft Report for Comment	P.Marsh	Grammarly	P.Marsh	Oct. 27, 2022
50	Outlet Design Review	P.Marsh			July 5, 2022

Filename: 199997\_PAM\_DrainReport\_100.docx

Seal Page:



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The conclusions, analysis and interpretations are based on the data and information available and in the condition and accuracy provided. EWA Engineering assumes no responsibility for data provided by others and has not reviewed nor verified the reliability, accuracy or representation of the data used in the report.

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# 1 Executive Summary

On October 28, 2019, the City of Port Colborne approved the appointment of a Drainage Engineer, Paul Marsh, P.Eng. from EWA Engineering Inc., in accordance with the Drainage Act, Chapter D.17 of the Revised Statutes of Ontario, Section 74 & 78 to prepare an Engineer's Report for the Point Abino Drain within the City of Port Colborne and the Town of Fort Erie. The City of Port Colborne has the lead agency role on the Drainage Report project.

This Point Abino Drain Report is prepared as a Section 74, Maintenance of drainage works and cost, and as a Section 78, Improving, upon examination and report of engineer. This report provides drawings of proposed works for the Point Abino Drain, the Haggerty Branch Drain, and the East Branch Drain. All three existed as municipal drains before this report. This report provides updated names, drawings and assessments for the three watersheds. The Haggerty Branch has the Point Abino Drain in Port Colborne as its outlet. The East Branch Drain has the Point Abino Drain as its outlet at station 1+900, and the Point Abino Drain outlets into Lake Erie through a passive flap gate across Point Abino Road.

The Point Abino Drain is predominately maintenance work over the length of the drain, with two culvert improvements identified. The Point Abino Drain outlet was identified for replacement by inspection in 2022 (Ellis Engineering Report), and this forms the majority of proposed work under Section 78. The Haggerty Branch Drain originally existed for some distance north of Michener Rd but was removed from the scope during the construction. This Drain Report identifies a new point as the End of the Drain (EOD) for the Haggerty Branch Drain created in response to the lot severance granted at the corner of the original Haggerty farm. The Haggerty Branch Drain work proposed includes a culvert replacement on the west side of Pleasant Beach Rd. providing private access to a field.

The East Branch Drain, the original Point Abino Outlet, is to be converted into a two-stage (low-flow/flood-flow) channel. The low-flow channel is at a positive grade to its current outlet at the Point Abino Drain and may retain water depending on the lake water surface elevation. The grade is based on available survey data and reflects existing conditions. The flood-flow channel is a wide (~3m) shallow channel for runoff events to be contained for a predicted design peak flow. The Drain ends at the property limit of Point Abino Rd S. The roadway drainage remains within the catchment of Point Abino Rd. Pumping Station, but the lands to the west of the road and within the East Branch catchment flow into the Point Abino Drain.

The report provides three assessment tables for each of the watersheds. Assessments are prepared using the landowner information supplied by each municipality as map-based parcel data. MPAC supplies the data from each municipality. Schedule 74 maintenance work costs are distributed using Section 23 of the Drainage Act based on area and a runoff 'C' factor. Culvert improvements are assessed 50% to the serviced landowner (Sect. 24) and 50% to the watershed as outlet liability (Sect. 23), except for the two culverts replaced near the Point Abino outlet. These culverts are assessed 12% to the benefitting landowner and 88% to the watershed.



The original outlet, which consisted of a twin CIP concrete box culvert measuring 87m in length with each chamber roughly 4ftx5ft, is to be replaced by a single precast box culvert 3000mmx1500mm. The portion of the culvert crossing Point Abino Rd S is assessed at 100% of the cost to the Town of Fort Erie and measures 14m in length. The remaining distance of the original twin culvert is replaced by an open channel with block side walls to the average lake level depth. There is no riparian benefit assessment for this work (Section 22), and the whole cost of the conversion is assessed to the watershed, including the cost of remounting the original twin gates into a single flap gate fixed to the new pre-cast concrete box culvert outlet. A new culvert access is proposed for the replacement of the single access lane to 949 Point Abino Rd S from Point Abino Hills Rd (a private road) and assessed 12% to the serviced landowner (Sect. 24) and 88% to the watershed, (Sect 23).

The Haggerty Branch Drain is predominantly maintenance but with the upper segment of the drain to be abandoned, Section 84. The proposed culvert replacement cost is assessed half to the property owner and half to the watershed.

The East Branch Drain is assessed to three adjacent property owners for a benefit from having the two-stage flow channel constructed to replace the currently partially defined flow path. The remaining cost of the work is assessed to the watershed as a Section 23 benefit.

No allowances have been granted within the assessment as all access required for maintenance existed from previous reports where a prior allowance is presumed to have been made.



## 2 Introduction

The City of Port Colborne retained Paul Marsh, P.Eng of EWA Engineers Inc., to prepare a Drainage Report under the Drainage Act R.S.O. 1990 for the Point Abino Drain.

The following Figure identifies the existing drain channels.

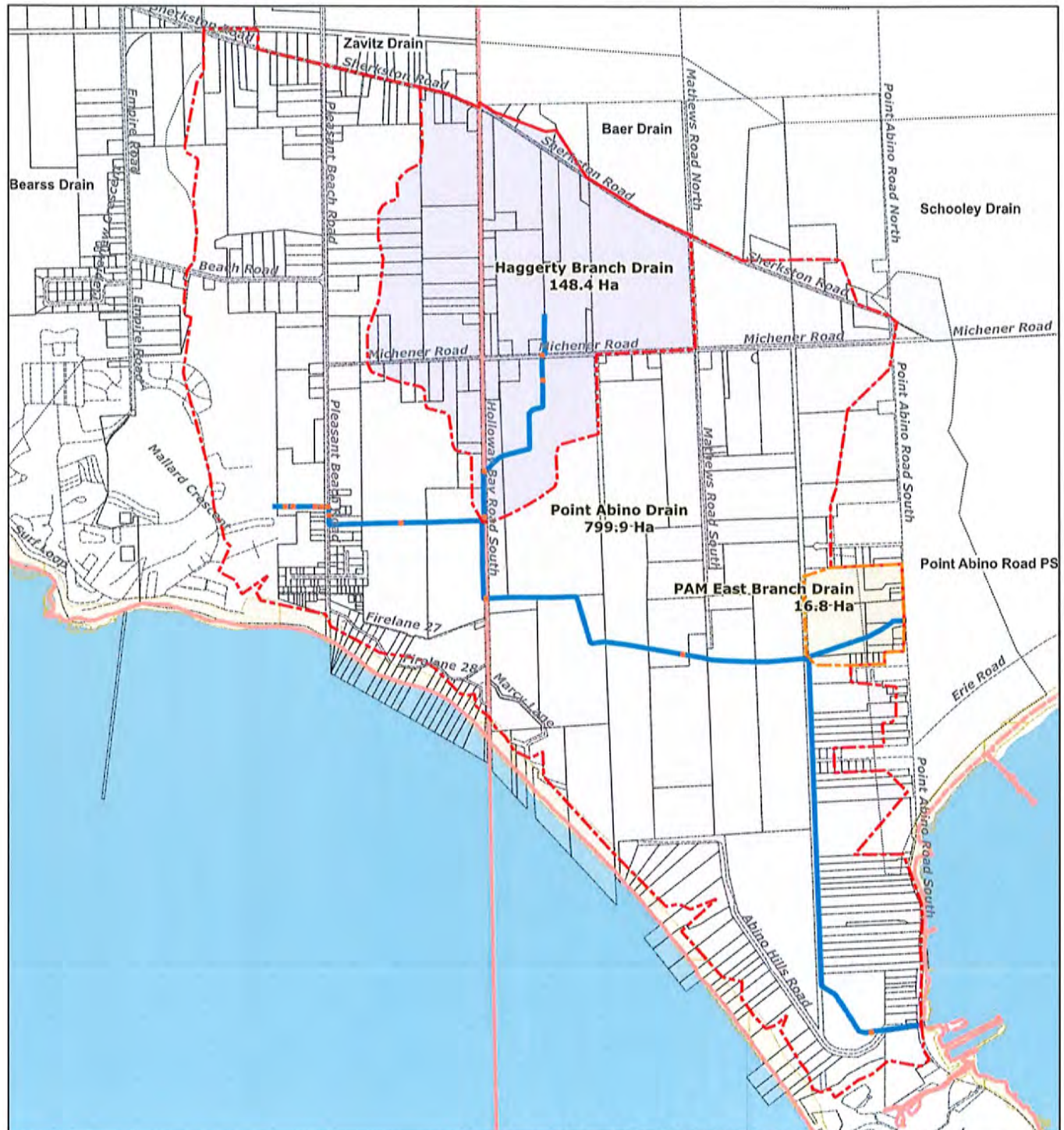


Figure 1 Point Abino Drain

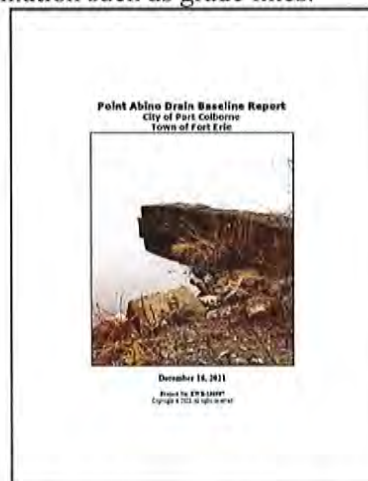


This report includes a description of all work, associated plans, cost estimates, and assessment schedules for the proposed work on the existing Drain and the proposed Branch Drains. The report has been prepared in accordance with the requirements of the Drainage Act, Chapter D.17 of the Revised Statutes of Ontario, Sections 74, 78 and 84.

In previous Drainage Reports, the Point Abino Drain and Point Abino Marsh Drain (PAM) Drain were used interchangeably, and this report continues that tradition. Generally, the portion within the Town of Fort Erie is considered the Point Abino Marsh Drain, while the upper portion within the City of Port Colborne is the Point Abino Drain.

The Point Abino Drain Engineer's Report is prepared as follows:

- **Baseline Drainage Report:** assesses current drainage problems and identifies the extent of the drainage area to be serviced by the municipal drain. The Baseline report includes a history of drainage and presents historical information such as grade lines.



- **Point Abino Watershed Assessment Report:** assesses existing capacity through hydrologic and hydraulic modelling, identifying the options for resolving problems and recommending a preferred option to improve drainage.





The final Engineer's Report comprises the two previous reports, supporting documentation, final drainage cost estimates, and assessment schedule.

The proposed improvement work for the Point Abino Drain is prepared as a Section 78 (1.1) of the Drainage Act. The works are described as grade line maintenance with proposed revisions in design grades and culvert improvements.

In addition to the identified reports, there is also a Preliminary Design Report with respect to the introduction of a pumping system within the Point Abino Drain. Prepared as a draft report for comment in November of 2022.



## 2.1 Objective

The Point Abino Municipal Drain already exists and has for many years. The objective is to maintain the existing drain in a State of Good Repair (SOGR). Changes in land use practices have impacted the drains, shifted from mostly farming plots to some farms with row crops and rural residential lots, which affects the drain's function. The channels have been impacted by vegetation growth within the drain banks along with tree deadfalls. This report addresses the growth and deadfalls through cleaning and clearing. The following were the original identified drainage services to be covered in the final report.

1. The existing outlet will be reviewed for operational improvements. After completing the Baseline Report, it was identified that the current twin concrete culvert requires replacement within a five-year schedule based on structural inspection. Refer to the report from Ellis Engineering, 2020, available from the Town of Fort Erie.
2. Investigate the cost vs benefit of a pump and consider a new pump station.
3. Ensure that the catchment boundaries between adjacent drains are consistent.
4. Review the structural (current condition) and capacity of culverts.
5. In the past, a second outlet was located at Holloway Bay Rd S. This was to be reviewed and assessed to see if it could still be used.



## 3 Background

### 3.1 Drain History and Past Reports

The earliest record of works related to the Point Abino Drain is in 1888, with a report by Geo. Ross to extend the Drain and improve the outlet.

### 3.2 Point Abino Drain Watershed

The Point Abino Drain serves an area of 800 hectares based on the defined drain boundary. The main branch of the drain is 4,720m in length. The Drain watershed is south of the Friendship Trail, with the end of the channel starting west of Pleasant Beach Road at the eastern edge of the Sherkston Shores community. The Point Abino Drain traverses south and east to the Drain outlet into Lake Erie across Point Abino Rd S.

The watershed boundary is along Sherkston Rd, with a high point at the Friendship Trail of 189 m. The lake's outlet varies with the Lake level change, but the recorded mean monthly level is 174.181 IGLD 1985 over the recorded period (1911-2024).

- Watershed average fall (slope) is given as 0.24% or 2.4m per 1000m
- Drain average fall (slope) is given as 0.03% or 0.3m per 1000m

This slope characterizes the Point Abino Drain as a shallow slope or slow watershed. In particular, the last half of the drain has low to no slope to the outlet. The lower portion of the drain is highly influenced by Lake Erie's water elevation with a specially constructed outlet with a flap gate and block break wall.

The Point Abino Drain can be segregated into several distinct geographic areas as follows:

- Haggerty Branch Drain
- Upper West Point Abino
- Upper East Point Abino
- East Branch
- Lower Point Abino (PAM)

These zones are described in more detail as follows.

#### **Haggerty Branch Drain**

Incorporated into the last report as Branch Drain No1, it was shown from the connection to the Point Abino Drain on the west side of Holloway Bay Rd northwards and across Michener Rd east of Holloway Bay Rd. and ending 600m north in the Haggerty farm. The portion north of Michener Rd was removed from the original construction work but still exists as a defined Municipal Drain.

#### **Upper West Point Abino**

The lands west of the Haggerty Branch catchment are drained to the south, generally using roadside drainage conveyance along Pleasant Beach Rd. The



catchment forms the western and northern limits of the Point Abino Watershed. The western limit is along the eastern edge of Sherkston Shores. The general slope of the land is from north to southeast. Roadside swales along Pleasant Beach Rd and Holloway Bay Rd strongly influence this catchment drainage.

#### **Upper East Point Abino**

The lands east of the Haggerty Branch catchment all drain south to the East-West portion of the Point Abino Drain. This part of the Drain has a shallow slope to the outlet, but the lands draining to it have a considerable slope from north to southwest.

#### **East Branch**

This small portion of the catchment exists because this was the original path of the Point Abino Drain outlet. This was diverted south in 1929 to the present-day outlet, and the East Drain portion was not abandoned by a Drain Report. The original channel is easily visible and has a survey identifying original channel paths. This report recognizes the East Drain as providing functional drainage to the 5 Ha catchment west of Point Abino Rd S.

#### **Lower Point Abino (aka Point Abino Marsh)**

The lower portion of the Point Abino Drain catchment contains the west shoreline connecting to Lake Erie. It consists of extensive dunes that form a barrier but also a hydraulic connection to the Lake and the lands behind the dunes. The lands behind the dunes are forested wetlands with almost no evidence of past cultivation (Niagara Navigator 1934 image). The lower reach of the drain and adjacent lands are low-lying lands with poor drainage.



**Figure 2 Point Abino Drain looking west at Matthews Rd S.**

The eastern limit of the catchment is influenced by the road drainage system provided by the Point Abino Road pumping station, located on the east side of the road and services areas to the north and south of the East Branch Drain. Adjacent Drain boundaries are shown in the following figure.



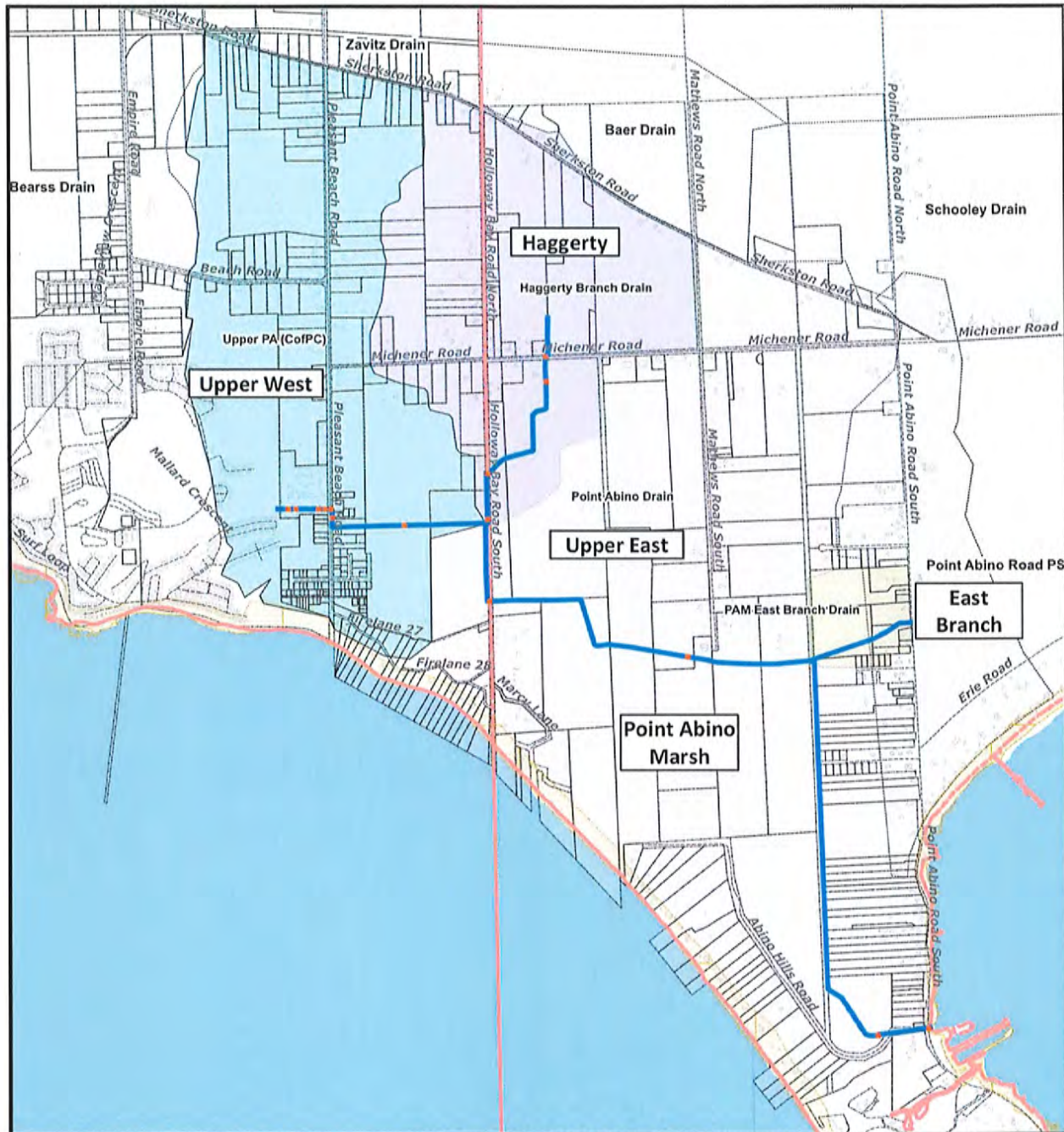


Figure 3 Point Abino Drain



## 4 Design Considerations

The analysis of the Point Abino Watershed is based on Hydrologic and Hydraulic analysis to predict runoff flow requirements and to match channel capacity. Water monitoring measurements have not been practiced in the past, and thus, calibration or validation of the computer-based model results is limited to historical anecdotal comparisons.

Included under a separate copy is the Report Titled “Point Abino Drain Watershed, Hydrology and Hydraulics Report.”

### 4.1 Design Scope

From the Baseline Report, the following are the items identified as part of the design scope for Point Abino Drain.

Review existing drains for improved maintenance where required and identify working zones and access as needed.

1. Consideration for Pumping
2. The 0% Grade to outlet in the South Drain segment.
3. The former outlet to Point Abino Rd S, which was reversed, and the existing Point Abino Road Pumping Station
4. Consideration for improving the drainage service to Sherkston Shores and focused on the areas of Pleasant Beach Rd and Holloway Bay Rd.
5. Investigate options for improving the outlet flows.

Within the context of the Drainage Act, we organize the scope of investigation into the following parts of the Act.

#### Outlet improvements    Sect. 78

Investigate design improvements to the surge/seiche control gate structure. Identify three options for consideration. Provide a Cost vs Benefit analysis and the final design for the preferred option.

Assess Opportunities to restore pumping. Develop preliminary design. Assess costs.

Provide improvements to the trash rack at the outlet.

#### Point Abino Main Branch as Sect. 74

Culvert improvements

Survey investigation and past plan review



## 4.2 Watershed Characterization and Use

The Point Abino Drain Watershed is characterized through land use as a design consideration in the following ways:

These are general descriptions of the watershed areas, and for more details, see the included maps and drawings in Appendix A.

### Lake Erie Levels

In geologic time, Lake Erie levels have varied depending on glaciation and the various flow sills in and out of the Great Lakes basin. These sills have changed in elevation as landforms rebounded from the effects of glaciation. In the modern period, Lake Erie levels are dominated by flows out of Lake Huron and out of Lake Erie into the Niagara River and Welland Canal system.

The historic Lake Erie levels are provided by the Government of Canada Fisheries & Oceans Hydrographic Service based on 100+ years of monitoring data and statistics. The values are quoted in monthly mean water levels referenced to the IGLD 1985.

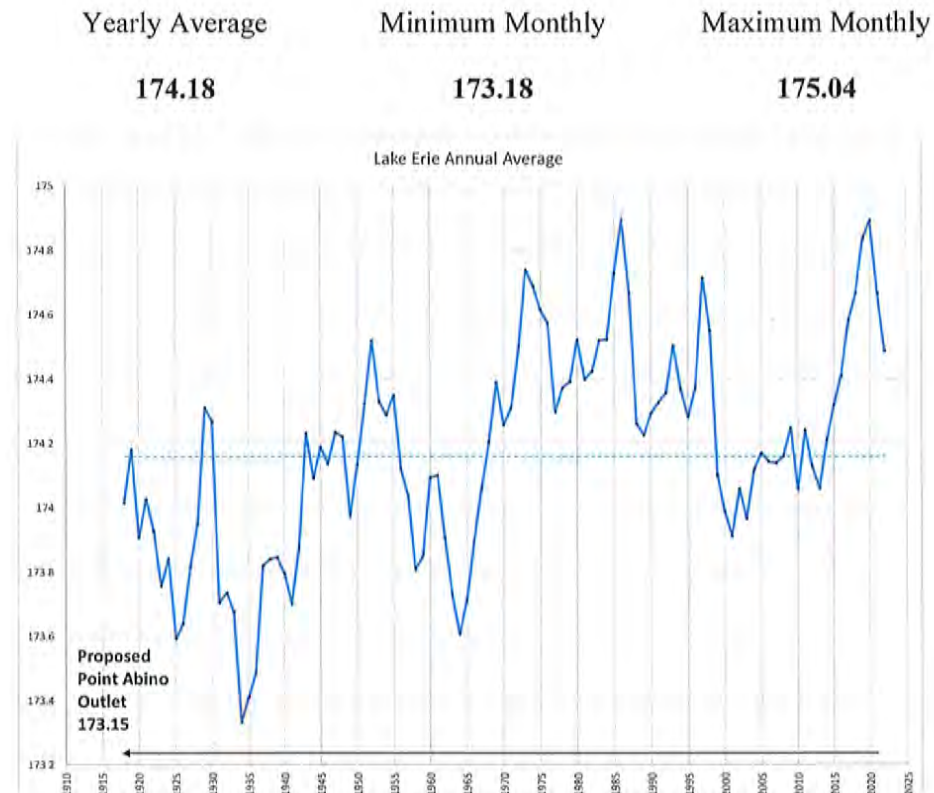


Figure 4 Lake Erie monthly mean water levels, m to IGLD 1985

The Point Abino Drain is affected by the Lake Erie level, and outlet flows are modified by the lake continuously. There are two effects of the lake;



- Flows to outlet. Outflow is unimpeded once the lake level is below the outlet pipe inverts. Once the water surface is above the pipe invert, then the rate of flow out can still be positive but is not free flowing.
- Storm surges, causing flows to run backwards up the Drain.

These effects are influenced and controlled by the outlet gate position.

### 4.3 Point Abino Outlet

The outlet has been a structure since the revised outlet was created in 1927. Modifications have occurred, including replacing the north flap gate mounting hardware in 2021.



**Figure 5 Point Abino Outlet**

This picture shows that the existing gates are typically submerged by lake surface water, impacting the flow out of the twin culverts.

#### 4.3.1 Gate and Outlet Capacity Assessment

The existing outlet is composed of three primary parts;

- The twin concrete cast-in-place box culvert.
- Two swing gates made of steel that covers and protects the outlet.
- Two steel mounting frames that hold the round bar that hinges the steel flap gates into position.



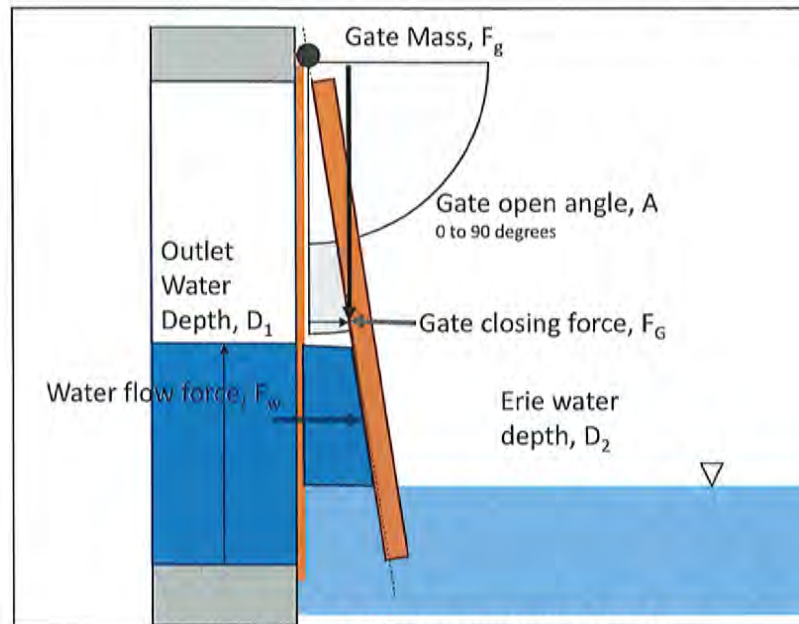


Figure 6 Point Abino Outlet Flap Gate

The steel flap gate is heavy and requires the flow to push the gate open where the pressure of the flow against the gate is greater than the weight of the gate. The backward flow is only prevented if the gate is closed such that it forms a seal against the concrete headwall.

Replacing the existing twin rectangular concrete outlet with a single 3000x1500 precast concrete rectangular outlet requires a new flap gate. The proposed design calls for the reuse of the two existing frames to be joined and an additional 300mm (single row) of steel frame put on the bottom of the two joined gates. The existing steel plate would be replaced or extended (two pieces welded into one) and mounted to the steel frame. It is proposed to include a clevis bolted lifting point to raise the gate using a truck-mounted winch from above.

Calculations of a larger gate were performed to determine the height of water (depth) on the upstream side of the gate that would push the gate open. Those calculations are included in Appendix C.

#### 4.4 East Branch

The East Branch of Point Abino Drain was historically constructed as the drain's outlet. This was changed and re-aligned along the North-South Right of Way (present path) with a low grade to the outlet at Station 0+475 in 1927 as the Point Abino Marsh (PAM) Drain.

With no evidence that the original outlet was abandoned, this report recognizes the existing channel as the East Branch Drain of the Point Abino Drain.



## 4.5 Haggerty Branch Drain

Formerly recognized as Point Abino Branch Drain #1 in the CJ Clarke Report of 1983 for 1050m (3445 ft) of Drain. The original construction and report focused on the section south of Michener Rd. deferring any works north of Michener Rd.

This report abandons the portion of the drain north of the farm severance and recommends maintenance based on a new design grade line.

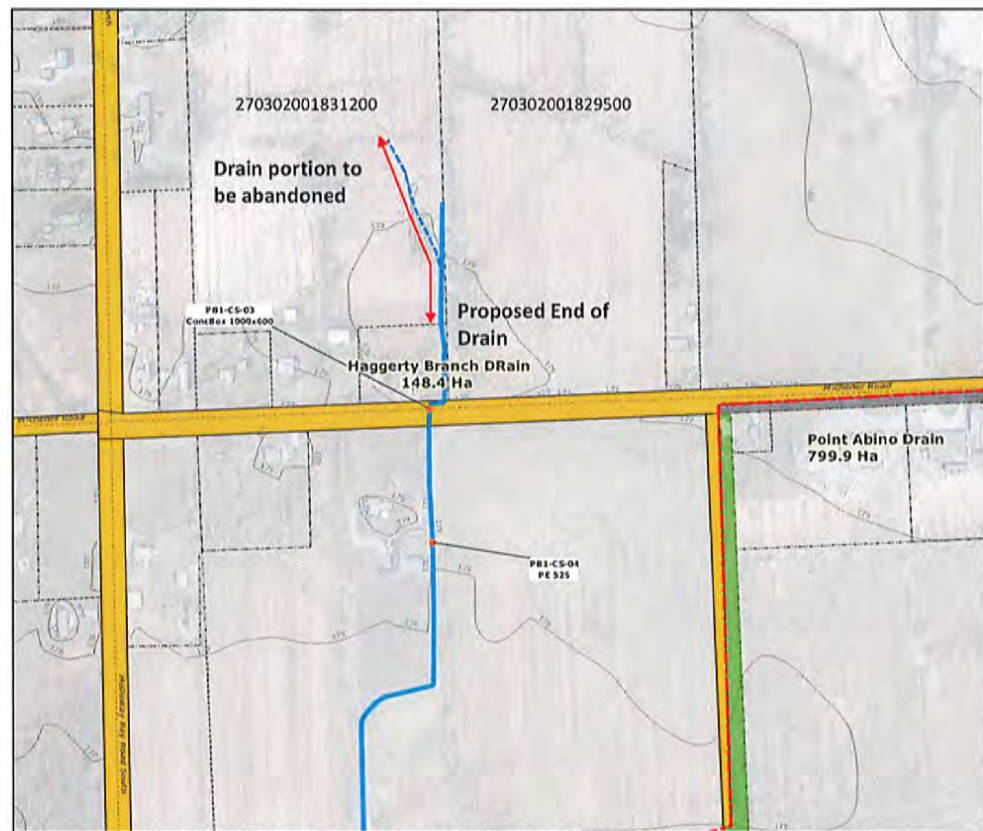


Figure 7 Former Branch Drain #1 (Proposed Haggerty Branch)

The original drain consisted of a defined channel through the agricultural field. This was identified as part of the drain in 1983 but does not appear to have been maintained. The road crossing is well-defined as a concrete box culvert, and the channel extending north is well-defined. The channel is less defined as it progresses to the north away from the road. This report will set the end of the drain at the edge of the farm property (270302001831200) and severed lot (270302001831201).



## 5 Drain Works Recommendations

### 5.1 Design Criteria

Channel size is confirmed to be based on a 1 in 5 year return period storm, which is expressed as a design storm as follows:

- 5-year design storm with a total rainfall of 68.90mm using an SCS Type II 24-hour storm distribution.
- 100-year design storm with a total rainfall amount of 121.1mm using an SCS Type II 24-hour storm distribution.

The 100-year design storm is accepted as the Probable Maximum Precipitation (PMP) event for consideration of impacts.

### 5.2 Description of the Works

The following presents a program of proposed improvement works for the Point Abino Drain. As a program, some works are staged at various times and may not proceed step-by-step but on an as-and-when-available basis that best meets environmental and regulatory requirements.

#### 5.2.1 Municipal and Private Crossings

The culverts are identified for replacement based on structural or capacity requirements.

No culverts were identified for replacement from structural inadequacies on the Port Colborne side of the Point Abino Drain. Culvert PAM-CS-10, requested by 341 Pleasant Beach Rd, is to have a crossing length of 9m to increase the crossing width of the private lane. The replacement culvert will be re-laid with embedded inverts that are consistent with the proposed grade line.

The culvert on the proposed Haggerty Branch Drain, identified as PB1-CS-01 for Roll No. 271104000102800, is proposed for replacement.

The Town of Fort Erie replaced the 2 culverts crossing Holloway Bay Rd within the past five years.

The Cast in Place (CIP) twin concrete culverts at the outlet were assessed by underwater inspection by Ellis Engineering in 2021 and found to have wall deterioration and voids behind the walls. The recommendation was to replace the structure within 1 to 5 years. The estimate for replacement was \$2,000,000.

The inspection report identified two sections for replacement;

- Section 1 is 24m of the CIP Box culvert crossing Point Abino Rd S



- Section 2 is 63m of the CIP Box culvert on Abino Hills Rd

The following table identifies the proposed culvert works for drain improvements.

**Table 1 Culvert Improvements**

Name ID	Crossing	INSP Status	Q 5yr / Q <sub>a</sub>	P/Fail	Diam	Material	Work Description	L, m
<b>City of Port Colborne</b>								
PAM-CS-10	341 Pleasant Beach Rd	Pass	Fail	Pass	1000	CSP	The owner requested a wider access lane; a top width of 7.3m instead of the existing one at 5m. Replace existing with 9m CSP 820x1150 installed on grade embed 20mm. Raise Crossing height to 176.35	6 to 9m
PB1-CS-01	Roll No. 271104000102800	Fail	1.7 cms	Fail	1050	CSP	Replace with CSP 1050MM D - 6M @ 0.24% or approved equivalent. Design Q = 1.713CMS Match INV to Grade Crossing ELEV. 176.53	6m
<b>Town of Fort Erie</b>								
PAM-CS-04	Private Access Lane (Tennis)	Fail		Fail	1200	CSP	Replace existing 1200 CSP (3) culverts with new and construct a concrete headwall with a steel rack to block debris. Raise the crossing height.	6m
PAM-CS-20	Pt Abino Rd.	Fail		Fail	4'x5' (2)	CIP	4ftx5ft (2) Concrete Box to be replaced with 14m precast 3000x1500 box culvert.	14m
	Abino Hills Rd	Fail		Fail		CIP	4ftx5ft (2) concrete box to be replaced by trapezoidal open channel, 63m	64m
PAM-CS-21	Private Access Lane 949 Point Abino Rd S	Fail			4'x5' (2)	CIP	Precast 3000x1500 – 4m with 3.05m top-width lane crossing.	4m

All other culverts meet existing structure or capacity requirements.

## 5.2.2 Drain Grade Improvements

The design grades are redrawn based on the existing Point Abino Drain key elevations. No survey data was collected from STA 0+240 to 3+415 for 3,175m from a total drain length of 4,720m. This represents that 67% of the drain didn't have survey data to consider grade improvements.



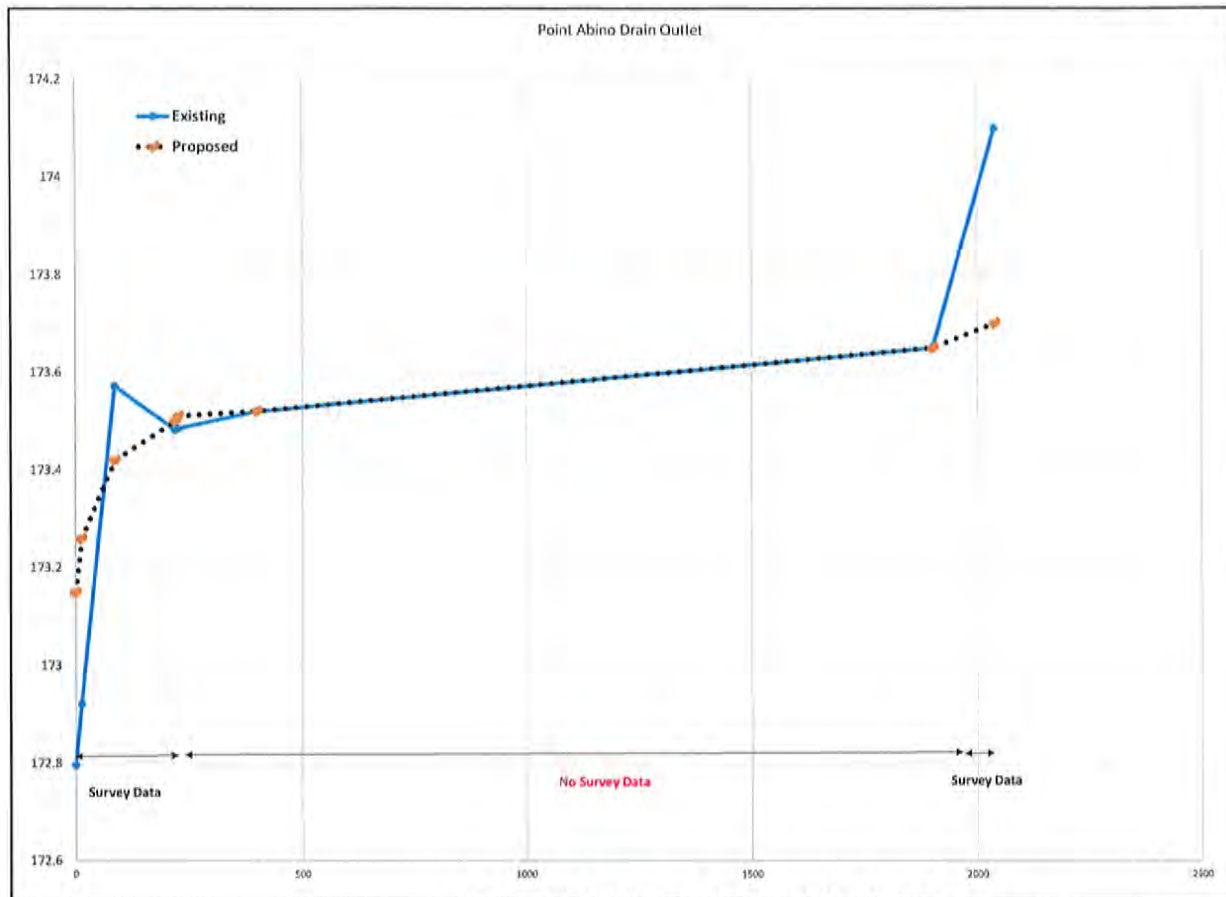


Figure 8 Existing vs Proposed PA Drain Grades

The graph shows the existing grade survey data as the solid blue line, with the dotted line representing the proposed grade line. The sections of the drain missing survey data are shown.

The existing twin box culvert crossing Point Abino Rd S is installed with a steep grade to a submerged outlet in Lake Erie. The existing 87m long twin cast-in-place box culvert is proposed to be replaced with a 16m box culvert crossing Point Abino Rd S. The drain grade is improved through the 87m outlet by converting to a short box culvert road crossing with an open channel section. The existing triple culvert crossing, PAM-CS-04, for access to the tennis courts is to be replaced with new CSP at the same inverts and grades.

### 5.2.3 Drain Integrated Watershed Improvements

The use of siltation basins or stormwater control devices to improve runoff quantity and quality runoff flows can be added to the proposed works as a watershed benefit.

The lower part of Point Abino Drain, the portion crossing through Point Abino Marsh, is a slow-moving, relatively wide trapezoidal channel. The west side of the channel has a connection to the Point Abino Marsh through the west bank of the channel. Overflows from the drain spill into this marshland. The sandbanks



located along the Lake Erie shoreline also provide a hydraulic connection to the marshlands when the lake level is high.

#### 5.2.4 Utility Conflicts & Coordination

Not all utility locations and conflicts are known during design. Where a conflict has been identified, a program cost has been allocated for moving the utility by the contractor during construction. There are two utility conflicts related to the construction of a new culvert crossing Point Abino Rd S. The Enbridge gas line and the Town's watermain both require reconstruction as part of the proposed works. The respective utility owners are responsible for the relocation costs for each.

#### 5.2.5 Plans, Profiles & Specifications

The proposed works are described in the attached Plans, Profile drawings and Specific Design drawings and Standard Detail drawings attached as Appendix A.

Project Specifications are attached in Appendix E.

#### 5.2.6 Outlet Improvements

The planned improvements to the outlet are recommended for consideration as an improvement under Section 78. This is necessitated by the replacement of twin box culverts with a single rectangular box culvert. The two existing steel flap gates are to be reused and converted into a single steel gate with a bottom extension to match the new culvert dimensions of 3000x1500.

For the Point Abino outlet, the control structure functions as a passive device. The pressure of the rising Lake Erie water surface 'pushes' the hinged gate closed. This relies on a smooth concrete face for the gate to 'seal' against. The force of the runoff flow from upstream pushes the gate open.

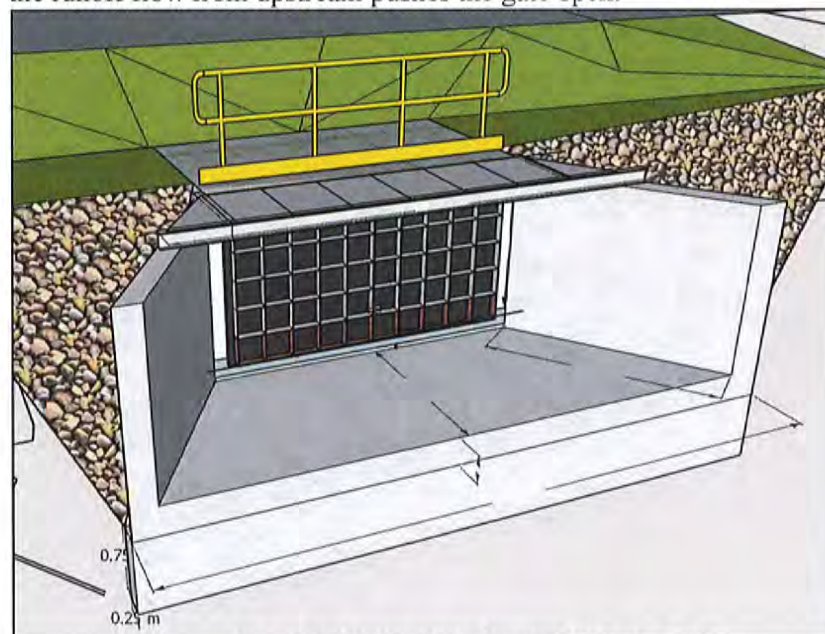


Figure 9 Outlet Gate Passive Flow Changes



The existing structure lacks wing walls, and the existing gate may not seal against the older concrete face. This is proposed for improvement using precast concrete sections as a new wing wall, including an outlet concrete channel bottom. The steel crossing beam with steel cover shields is proposed as removable and to assist with maintenance. The steel beam offers a lifting point using a truck-mounted winch to hold open the gate for future outlet maintenance.

## 5.3 Construction and Constructability

The following describes the specific requirements for drain construction.

### 5.3.1 Vegetation Removal

Any identified vegetation removal will be performed outside of any bird nesting periods. The remaining stumps are to remain in place unless they obstruct flow or are Ash trees with re-growth from the lower trunk. The stump will be ground down to match the existing ground in those cases.

Tree removal from the Top of the Bank to the Top of the Bank is 100 percent; however, tree removal within the work zone is at the discretion of the Contractor and Drainage Superintendent while making every effort to preserve trees where possible. Where trees are removed in the work zone, they qualify for the tree replacement program per the tree qualifying criteria.

The lower reach of the Point Abino Drain provides a particular challenge. Ground conditions are complex, and tracking a machine through this area poses a significant challenge. The extensive vegetation in the area, along with the presence of deadfalls from Ash tree mortality, creates blockages within the Point Abino Drain.

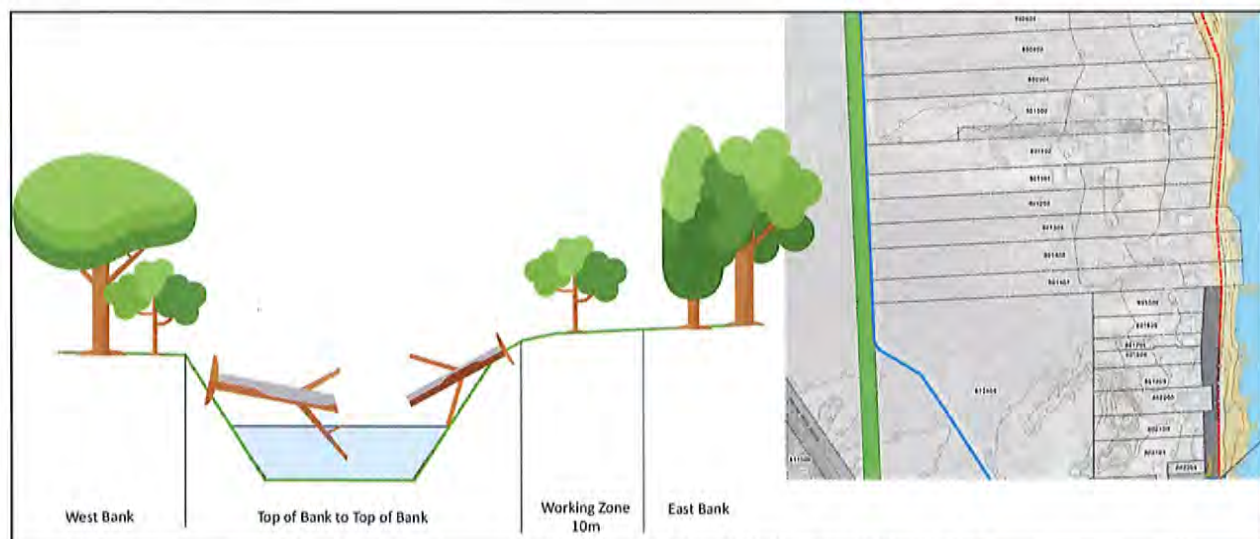


Figure 10 Deadfall Removal Strategies

The existing Right of Way on the west side of the Point Abino Drain should provide the access required for achieving the necessary maintenance; however,



this can also be some very low ground indistinguishable from the wetland. There may be cases where access from the east side for maintenance is required.

Where the deadfalls are removed, the material from the removal must be positioned away from the Drain and not left within 5m of the top of bank to the edge of the 10m working zone.

### 5.3.2 Spoil Material

All spoils and spoil handling practices will comply with applicable legislation, including O. Reg. 406/19: ON-SITE AND EXCESS SOIL MANAGEMENT filed December 4, 2019, under the Environmental Protection Act, R.S.O. 1990, c. E.19

Where specified, excavated spoil material shall be disposed of and levelled a minimum of 2.5 m from the top of the bank to ensure that sediment does not re-enter the drain. Spoil placed next to the drain shall be spread to permit access across the berm area and set to a maximum height of 0.6m. Spoil excavated along existing travelled road allowances and on private property, where requested, shall be disposed of by the Contractor off-site. The benefiting property owner shall bear the cost of spoil trucked from the property.

Where a property owner requires that all or a portion of the spoil be trucked away from their property, the cost of spoil disposal including testing shall be assessed to the property owner requesting the spoil removal and will not form part of the total cost of the drainage works. The cost of trucking away spoil from any future maintenance work will be assessed directly to the property owner requesting the work.

Debris from vegetation removal will remain on the property and be placed adjacent to the drain with the owner's agreement. This is limited to allow the owner to identify specific sites for the debris on their property.

Drain reaches within travelled Municipal Road allowances, the spoil will be trucked away during the initial construction and any future maintenance work where there is no opportunity to dispose of the material on site.

Access channels shall be provided through the levelled spoil material at every location where drainage outlets are visible and/or identified during construction by the Drainage Superintendent. The invert of the access channels shall be consistent with the drain cross-section at that location.

Spoil excavated from the drain shall be levelled in a manner suitable for cultivating crops where crops were previously cultivated. Where the drain is adjacent to a grassed area maintained by the owner, the spoil shall be levelled and re-seeded with grass so that the area is restored to a like or better condition than before construction. All construction costs to restore to a like or better condition is part of the work, and assessed as specified in the assessment tables.



### 5.3.2.1 Contaminated Spoils

Where soils are known to be contaminated but have been assessed to pose no human health risk, on-site spreading adjacent to the drain will be the practice and acknowledge that the soils are not to be 'moved' off the property.

Where soils are to be removed from the property, a sample will be collected and analyzed for contamination before removal. Where that sample is shown to be contaminated and disposal of the soil will require disposal at a registered facility in compliance with O.Reg 406/19, the owner will be responsible for the costs to dispose of the contaminated soil from their property.

Once a contaminated sample is returned, the owner will be allowed to change their request and retain the soil on-site instead of trucking for disposal at their cost. The cost of testing will remain with the owner requesting off site spoil disposal.

### 5.3.3 Revegetation

Drain banks and exposed soil areas within areas disturbed during the maintenance of the drain are to be seeded as quickly as possible by the contractor.

The drain banks should be seeded as quickly as possible after excavating the existing and proposed channels, and the spoil should be seeded on the day of levelling. Seeding should occur in a manner that optimizes seed germination and establishment of vegetation before mid-October and after late April.

Seed mixture used shall be applied at a rate of 40 kg/ha in the following proportions:

Creeping red fescue	20 kg	50%
Perennial ryegrass	8 kg	20%
Birdsfoot trefoil	12 kg	30%
Total	40 kg/ha	100%

### 5.3.4 Private Drain Connections

Where private connections are made to the Municipal Drain, the connections are to be compliant with the City of Port Colborne's private connection design standard. This includes the following connection types:

- Open channel connection – minimal allowance for grade and freeboard.
- Surface water flows – rip rap rock requirements for reducing or amending potential or evident erosion sites.
- Tile drain connections – use PE pipe to connect to a receiving channel with freeboard above drain bottom.
- Berm and Orifice Flow Control - connections designed to control runoff to specified flow rates.

Private connections are not part of the drain, are owned by the landowner, and are the landowner's responsibility for construction and maintenance. Where the Drainage Superintendent or Engineer identifies a deficiency, the landowner is required to make the connection as per the Drainage Superintendent or Engineer's direction. Deficiencies to be rectified can include eroded connections, blocked



connections or poor connections, and displaced pipe outlets. The landowner can accept to have work done on their behalf to make good the connection based on a 50/50 cost-sharing basis with the watershed. Where the City identifies a deficiency and the repairs are not made by the landowner by the next cycle of drain maintenance, the City can make the required repairs, and 100% of the cost will be assessed to the landowner.

## 5.4 Future Maintenance and Repair Provisions

The Drainage Act, Chapter D.17, Sections 74 through 84 governs future maintenance, improvement and repair to any Drainage Works constructed under a By-Law passed under this Act or any predecessor of this Act.

Upon completion of the Point Abino Drain works described in this Report, each municipality will be responsible for future maintenance of the drain with the cost assessed to the upstream lands and roads using the Assessment Schedule in Appendix B and pro-rating the assessment based on the actual cost using the Outlet Liability Assessment – Section 23. Special Assessment shall not apply to maintenance work except where maintenance works are related to culvert/bridge replacement or upgrades.

The following are the identified maintenance sections anticipated to meet the response targets of once every ten years with a site-specific assessment on a five-year schedule.

- Haggerty Branch Drain 220m from 20+000 to 20+220 – Town of Fort Erie.
- Haggerty Branch Drain 73m from 20+230 to 20+962 – Town of Fort Erie.  
Including PB1-CS-03 inspection (OSIM) on a three-year basis.
- Point Abino Drain 1275m from 3+764 to 4+720 – City of Port Colborne – Regular maintenance.
- Point Abino Marsh Drain 3190m from 0+225 to 3+764 – Town of Fort Erie – Regular inspection & spot maintenance.
- Point Abino Drain 225m from 0+000 to 0+225 – Town of Fort Erie: seasonal inspection + post-storm inspection for trash rack cleaning.

These recommended maintenance and inspection cycles are to be adjusted as evidenced by physical conditions within each Drain and Branch Drain.



## 5.5 Construction Summary

The following table lists construction activities by property, starting from the outlet and proceeding upstream for each municipality.



**Table 2 Point Abino Drain Construction Summary**

<b>Point Abino Drain</b>						
<b>City of Port Colborne</b>						
<b>Property / Owner</b>	<b>Drain Side</b>	<b>From STA</b>	<b>To STA</b>	<b>Len</b>	<b>Working Side</b>	<b>Work Description</b>
271104000102800 / D B M E INC; RICHARDS, MARTHA M	Both	3+763	4+000	237	North	Clean and clear to design grade line
271104000108000 / GINTHER, GEORGE EAGAN	Left	4+000	4+276	276		Clean and clear to design grade line
271104000107930 / VONGPHAKDY, SOUPAHONE CHASTITY; GALE, JASON	Right	4+000	4+276	276	North	Clean and clear to design grade line
271104000109000 / ELLIOTT, JORDAN; FULLONE, LAURIE	Left	4+276	4+413	137		Clean and clear to design grade line
271104000108600 / TRACY, TERESA; PARISI, CATERINA; PARISI, GIACOMO	Right	4+276	4+450	174	West	Clean and clear to design grade line
Pleasant Beach Rd ROW	Left	4+413	4+508	95	West	Clean and clear to design grade line. Check culvert for deposition
271104000107800 / SHAUBEL, SOPHIA ANN	Right	4+450	4+458	8	West	Clean and clear to design grade line
271104000108500 / ANDREACCHI, FRANCHINA	Right	4+458	4+488	22	West	Clean and clear to design grade line Replace existing with 9m CSPA 820x1150 installed on grade embed 20mm. Raise Crossing height to 176.35
271104000108400 / LUNGU, ANA	Right	4+488	4+508	9	West	Clean and clear to design grade line
271104000117600 / SSI PROPERTY GP INC	Both	4+508	4+719	211	South	Clean and clear to design grade line including removal of concrete pipes at the end of Drain
<b>Town of Fort Erie</b>						
<b>Property / Owner</b>	<b>Drain Side</b>	<b>From STA</b>	<b>To STA</b>	<b>Length</b>	<b>Working Side</b>	<b>Work Description</b>
Point Abino Rd S	Both	0+000	0+024	24		
Abino Hills Road	Both	0+024	0+195.7	171.7	South	PAM-CS-21, a private Access Lane to 949 Point Abino Rd S that replaces the existing CIP twin concrete culvert cost-shared on a 12 / 88 basis (12 / 88) with 12% assessed to the private access owner and 88% assessed to the watershed.
270302001813400 /	Both	0+195.7	0+580	384.3	South	PAM-CS-04 is a private crossing to Tennis Courts with the cost shared at 12 / 88 with 12% assessed to the owner and 88% assessed to the watershed.
Blind Line Road Allowance	Left	0+530	1+901	1371	West	
270302001801401 / JOHNSON JAY ANTHONY	Right	0+580	0+608			Deadfall Removal and spot grade line cleaning and grading.



270302001801400 / SEUBERT SCOTT BEAL	Right	0+608	0+647		Deadfall Removal and spot grade line cleaning and grading.
270302001801300 / IAFRATE MICHAEL	Right	0+647	0+675.5		Deadfall Removal and spot grade line cleaning and grading.
270302001801200 / GIBSON SHIRLEY	Right	0+675.5	0+708		Deadfall Removal and spot grade line cleaning and grading.
270302001801101 / SCHMITT MAUREEN	Right	0+708	0+738		Deadfall Removal and spot grade line cleaning and grading.
270302001801100 / DICIENZO ANTHONY	Right	0+738	0+775		Deadfall Removal and spot grade line cleaning and grading.
270302001801000 / METGER- HIRSCHMILLER MARY E	Right	0+775	0+830		Deadfall Removal and spot grade line cleaning and grading.
270302001800900 / MES REALTY COMPANY LLC	Right	0+830	0+860		Deadfall Removal and spot grade line cleaning and grading.
270302001800800 / WILSON BRIAN	Right	0+860	0+904		Deadfall Removal and spot grade line cleaning and grading.
270302001800600 / DURRANT GRAHAM	Right	0+904	0+936		Deadfall Removal and spot grade line cleaning and grading.
270302001800500 / POSSLER HEIDI CARMEN	Right	0+936	0+959		Deadfall Removal and spot grade line cleaning and grading.
270302001800400 / PICTOR WILLIAM	Right	0+959	0+982		Deadfall Removal and spot grade line cleaning and grading.
270302001800300 / JOHNSON KAREN	Right	0+982	1+013		Deadfall Removal and spot grade line cleaning and grading.
270302001800200 / VAN BOLDEREN ADOLPHUS L	Right	1+013	1+042.5		Deadfall Removal and spot grade line cleaning and grading.
270302001800250 / RLC POINT ABINO INC	Right	1+042.5	1+073		Deadfall Removal and spot grade line cleaning and grading.
270302001800100 / SHORE OAKS INC	Right	1+073	1+304		Deadfall Removal and spot grade line cleaning and grading.
270302001813500 / EL-SAYED SHERIF FOUAD YACOUT	Right	1+304	1+364		Deadfall Removal and spot grade line cleaning and grading.
270302001813600 / XU AMY	Right	1+364	1+395		Deadfall Removal and spot grade line cleaning and grading.
270302001813700 / RITCH MONKELBAAN MARSHA	Right	1+395	1+425		Deadfall Removal and spot grade line cleaning and grading.
270302001818200 / CULP RICHARD	Right	1+425	1+472.5		Deadfall Removal and spot grade line cleaning and grading.
Bay Road ROW	Right	1+472.5	1+488		Deadfall Removal and spot grade line cleaning and grading.
270302001819600 / FORT ERIE TOWN	Right	1+488	1+530.5		Deadfall Removal and spot grade line cleaning and grading.
270302001813800 / DIFABIO LEONARDO	Right	1+530.5	1+561		Deadfall Removal and spot grade line cleaning and grading.
270302001813900 / TROJNAR RICHARD JOHN	Right	1+561	1+592		Deadfall Removal and spot grade line cleaning and grading.
270302001814000 / SYKES CLARK MANSFIELD	Right	1+592	1+622		Deadfall Removal and spot grade line cleaning and grading.
270302001814100 / MISETICH MILDRED	Right	1+622	1+652		Deadfall Removal and spot grade line cleaning and grading.
270302001814200 / MORRIS LAURIE ANN	Right	1+652	1+681		Deadfall Removal and spot grade line cleaning and grading.
270302001814400 / SPIECE COREY JOHN	Right	1+681	1+805		Deadfall Removal and spot grade line cleaning and grading.
270302001814800 / NIAGARA PENINSULA	Right	1+805	1+901		Deadfall Removal and spot grade line cleaning and grading.
Blind Line Road Allowance	Both	1+901	1+926	25	Deadfall Removal and spot grade line cleaning and grading.



270302001822800 / HOWARD SALLY	Right	1+926	2+130	204	North	
270302001822700 / HAHN CHARLES J IN TRUST	Left	1+926	2+130	204		
270302001822701 / DIETERS INGRID/JACOB HARMANNUS	Both	2+130	2+335	205	North	
270302001824900 / FRETZ KIRK	Both	2+335	2+414		North	
270302001824905 / MACNEIL LORNE CHRISTOPHER	Both	2+414	2+589			
						<p>The culvert crossing located at station 2+440 called PAM-CS-03 is a 2800x1200, which is currently not used for property access and is no longer associated with a road right of way. Visual inspection of the structure does not indicate any immediate indication of failure; without any intended use, no direct cause for removal is determined.</p> <p>If and when the structure is determined to be compromised and a risk to the Drain, it is to be removed by the Town of Fort Erie and the cost is assessed to all upstream owners as maintenance to the Point Abino Drain watershed.</p>
270302001825000 / GREENBERG INTERNATIONAL INC.	Both	2+589	2+773		North	Deadfall Removal and spot grade line cleaning and grading.
270302001825300 / GREENBERG INTERNATIONAL INC	Both	2+773	3+048		North	
270302001825300 / GREENBERG INTERNATIONAL INC	Left	3+048	3+210			
270302001825900 / GREENBERG INTERNATIONAL INC	Right	3+048	3+333	285	North	
270302001826200 / GREENBERG INTERNATIONAL INC	Left	3+210	3+415	205		
270302001826100 / 525230 ONTARIO LTD TRUSTEE	Right	3+333	3+415	82	North	
Holloway Bay Rd ROW	Right	3+415	3+763	328		Clean and clear to design grade line. Check the culvert for deposition.
271104000102800 / D B M E INC; RICHARDS, MARTHA M	Left	3+435	3+763	565	East	Clean and clear to design grade line. Work performed by Town of Fort Erie for property in Port Colborne.

**Haggerty Branch Drain****City of Port Colborne**

Property / Owner	Drain Side	From STA	To STA	Len	Working Side	Work Description
271104000102800 / D B M E INC; RICHARDS, MARTHA M	Left	20+000	20+145	145	West	<p>Clear to grade line.</p> <p>Replace Culvert PB1-CS-01</p> <p>REPLACE WITH CSP 1050MM D - 6M @0.24%</p> <p>DESIGN Q = 1.713CMS</p> <p>MATCH INV TO GRADE</p> <p>CROSSING ELEV. 176.53</p> <p>Work performed by Town of Fort Erie for property in Port Colborne.</p>



271104000102900 / SCARLETT,  
JOHN FREDERICK; SCARLETT,  
VIRGINIA LEE

Left

20+145

20+219

74

West

Clear to Grade line  
Work performed by Town of Fort Erie  
for property in Port Colborne.

**Town of Fort Erie**

Property / Owner	Drain Side	From STA	To STA	Length	Working Side	Work Description
Holloway Bay Rd S. ROW	Both	20+000	20+235	16		Work performed by Town of Fort Erie
270302001826100 / 525230 ONTARIO LTD TRUSTEE	Both	20+235	20+327	92	West	Clean and clear to design grade line
270302001825900 / GREENBERG INTERNATIONAL INC	Both	20+327	20+869	542	West	Clean and clear to design grade line
Michener Rd ROW	Both	20+869	20+900	31		Clean and clear to design grade line. Check culvert for deposition and remove where found.
270302001831201 / HAGGERTY TIMOTHY ROGER	Both	20+900	20+960	60	West	Clean and clear to design grade line
270302001831200 / BERNARD JAMES DOUGLAS	Both	20+960	20+962	2	West	Clean and clear to design grade line

**East Branch Drain****Town of Fort Erie**

Property / Owner	Drain Side	From STA	To STA	Length	Working Side	Work Description
Blind Line ROW	Both	10+000	10+017	17		Confirm that the outlet is free of obstruction.
270302001822710 / FIJAVZ BORIS	Both	10+017	10+276	259	North	Construct low flow channel to design grade line. Construct flood flow channel and seed.
270302001815300 / OUELLET ALAIN LIONEL	Both	10+276	10+398	122	North	Construct low flow channel to design grade line. Construct flood flow channel and seed.
270302001815400 / 1254345 ONTARIO INC	Both	10+398	10+457	59	North	Construct low flow channel to design grade line. Construct flood flow channel and seed.



## 6 Drainage Works Financing

The total cost of the project is estimated to be \$2,555,208.06

### 6.1 Eligible Cost of Works

The Drainage Act stipulates what is or isn't eligible as a construction cost or cost of the proposed works. Many reports are prepared on the basis that a single aspect of construction will be undertaken; however, for the Point Abino Drain, there may be one construction period or several depending on the construction progress selected by the City of Port Colborne or the Town of Fort Erie. The implementation of the proposed works is not detailed in this report. It is by the respective municipality within which the specific proposed works is located to determine the best process for implementing the works. Municipalities will make the most effective use of existing resources and ensure the most cost-effective construction effort is achieved on behalf of the assessed landowners.

As required by the Drainage Act, Chapter D.17, Section 59(1), the Council may call a meeting if the contract price exceeds 133 percent of the estimated construction costs. These costs are estimated and shown in the Estimated Cost of Construction table.

#### 6.1.1 Administration & Engineering Costs

The Administration costs identified with the Point Abino Drain are applicable taxes and the City of Port Colborne interest charges for project costs to date.

A survey of the Point Abino Drain was completed for \$15,394.50. The City of Port Colborne and the Town of Fort Erie performed or provided additional surveys on a contribution basis with no additional fee. EWA Engineering Inc.'s fees for preparing the report and associated consultations are \$161,653.00. A budget for engineering services during construction is set at \$1,500. The total Engineering costs for the Point Abino Drain included in the Assessment Tables is \$175,334.89

Including Interest and Taxes on fees paid for Engineering services, the administration portion of the total Engineering and Administration budget for assessment is **\$212,564.78**.



## 6.2 Capital Construction Cost

The total cost of the project is shown in the following table.

**Table 3 Estimated Cost of Construction**

ID:	Items:	Drain	Item	Estimate
<b>Section 78 - Proposed Improvements for Construction</b>				
PA-O-1		Point Abino Drain	Point Abino Rd S Culvert Replacement	\$877,230
PA-O-2		Point Abino Drain	Point Abino Outlet Gate Improvements	\$102,750
PA-O-3		Point Abino Drain	Point Abino Outlet Conversion to Open	\$684,430
PHB		Haggerty Branch Drain	Haggerty Branch Improvements	\$27,615
PEB		East Branch Drain	East Branch Drain Channel Improvements	\$14,302
<b>Section 74 - Maintenance Works for Construction</b>				
PA-M-PC		Point Abino Drain	Point Abino Drain Maintenance - Port Colborne	\$26,090
PA-M-FE		Point Abino Drain	Point Abino Drain Maintenance - Fort Erie	\$152,500
<b>Construction Management Estimated Costs</b>				
PA-C	01-05	Point Abino Drain	Construction Management Estimated Costs	\$151,000
<b>Section 84 - Abandoning an existing portion of a Municipal Drain by Report</b>				
PHB-A		Haggerty Branch Drain	Haggerty Branch Drain - Fort Erie	\$0
<b>Sub-Total:</b>				<b>\$ 2,035,917</b>
Contingency Allowance, (15%)				<u>\$ 305,387</u>
<b>Total Cost of Construction:</b>				<b>\$ 2,341,304</b>



## 6.3 Drain Maintenance Work

The estimated cost of construction includes allocations for costs related to drain maintenance works, including vegetation removal and re-grading.

Where the previous grade lines are re-stated as metric values using the current survey datum, those works will be completed as Schedule 74 maintenance.

## 6.4 Principles of Assessment

The following are general and specific principles used to assess costs for the Point Abino Drain according to the Regulations formed under the Drainage Act using our understanding of the Act and seeking the fairest methods to share costs to ratepayers within the Point Abino Drain Watershed.

1. Assessments are a method to calculate a contributing property's share of drainage works, hereafter referred to as a Drain.
2. Each Drain is defined by a fixed point of commencement that traverses to a fixed Outlet, which may be a receiver or another Drain.
3. A property contributes to drainage work if any portion of the property directly or indirectly contributes to a runoff flow to the Drain.
4. A Drain is any constructed or existing natural method of conveyance or stormwater management function that moves or controls water from one collection point to a discharge point, an Outlet.
5. The use of a property, farming, residential, or vacant, does not define the benefit of the Drain. The benefit of a drain is realized equally among all properties with runoff to the Drain.
6. An excess or additional benefit is realized for any property or group of properties for which a higher standard of drainage service is required for the specific use of a property for which a higher value is realized.

For example, where a market garden farm requires additional pumping for either irrigation or reducing the water surface in the drain, then the additional costs for that are borne by the benefitting lands.

7. Similarly, where a property or group of properties is provided with a lower standard of drainage service or where such property or properties provides a stormwater management function within the drainage works of the Drain, the value of the lower service or function is determined at a rate commensurate with the benefit to the drain.

As an example, where a property converts a portion of their lands (or the entire property) to a wetland or other stormwater management feature that reduces the peak flow of the runoff, thereby reducing or enhancing the capacity of the Drain



to improve drainage and reduce flooding, then a commensurate benefit is realized to the volume of water removed from the runoff hydrograph.

Where the volume of detained runoff is small relative to the drain capacity, this contribution is deemed negligible. Where the volume detained is below 1% of the total runoff volume for the Drain, there is no real benefit realized for an individual Stormwater Management Feature.

8. The capacity of the Drain is determined based on a hydrologic model forecast of precipitation based runoff. Therefore, each property realizes a drain benefit based on the proportion of predicted runoff for their property. Predicted runoff is a product of the following attributes, which are determined for each property:

- a. Area contributing to runoff;
- b. Land use as it relates to runoff;
- c. Land topography;
- d. Proportion of hard surfaces vs soft surfaces as they relate to infiltration; and
- e. Stormwater management features specially built to reduce the rate of runoff.

9. A benefit is realized for a property that causes a physical change in the Drain works to serve a particular use or surface water benefit to the property. An example is a culvert, which provides access to a property across a drain.

10. A benefit/assessment is realized for Municipal, Regional or Provincial lands held as Rights of Way that cause or require additional infrastructure, effort or costs related to the Drain. (Section 26)

11. Where a cost to the drain is realized through effort during construction or otherwise for the protection of flora, fauna or quantity or quality of stormwater runoff, this cost is born proportionally amongst all watershed contributing owners at the same rate as established for Drain benefit.

12. For the works being considered, a Drain already exists, and the proposed assessment recognizes a service or benefit that already exists and is being confirmed to exist through the creation of the report and assessment schedule.

13. Utilities that require additional works, changes in design or protection during construction, those costs are borne by the owner of the utility.

There is a modern infrastructure concept that is missing from the Drainage Act or is not explicitly directed regarding assessment. That concept is service levels of the drain. For an Urban Area, explicit service levels are documented through municipal design standards and expectations often codified into Manuals of Operation that establish the expected service levels. While there are aspects of this in the Drainage Act, service levels and the possibility that they may vary from property to property or region within a Drain area are not explicitly discussed. The concept is that for a basic service level for a farm, the requirement is for flooding not to be sustained such that plants are drowned. However, there is no direct link from depth to damage, such as what is accepted in an urban area. Rural residential properties are compared with farm properties where the farm service level is to have the flooding removed within 24 to 36 hours while the residential service level expectation is to have no flooding within the property



limits that might enter a building below grade and cause damage. Flooding depth is to be kept below all sill levels.

While efforts have been made to address water quality and quantity in drain design and assessment, the Drainage Act does not directly provide for addressing water quality as a direct benefit of drainage. There may be other legislative considerations that would affect a preferred design to improve water quality within the watershed.

### **Benefit (Section 22)**

This Assessment is based on the creation of land value through the creation of a new or additional drainage system. For Point Abino Drain, the drain has existed for some time (more than 100 years) and no incremental land value is expected.

This report does not contain a change in the existing Point Abino Drain function, and thus there is no assessed Section 22 Benefit to any of the lands within the watershed.

### **Outlet Liability (Section 23)**

This is the primary basis for assessing the maintenance and drain works. Assessment is based on each property's contributing runoff. This is determined by the area flowing to the drain and runoff factor C. The C factor is based on the Rational Method for predicting peak runoff and does not predict the volume of runoff (note that a special benefit can be used for site-specific Stormwater Management Facilities, SWMF).

The C factor for assessing property runoff is selected based on the property zoning. Where a property is not currently farmed but is zoned for farming, then a C factor is selected based on the potential use of the property. C factors are not adjusted for variations in Residential properties. Residential properties with or without buildings are assigned the same C factor. Thus, the C factor is not a current prediction of runoff for an individual property but a Factor to assess the potential runoff based on the property's possible use in the present and the near future. The Table included in Appendix C will be used to determine C Factor values used in the Runoff Outlet Factor assessment.

The following drain features are part of the whole system and are paid for through the outlet assessment:

- Channel Clearing and Re-grading
- Sediment Basins
- Where a channel is re-aligned to improve the function of the drain and not caused by property use, the cost of the channel re-alignment is assessed as an outlet assessment.

### **Special Benefit (Section 24)**

The following are assessed costs considered special benefits:

- Culverts,
- Fordings, and
- Closed Conduit conveyance (piped flow).



The cost of a culvert is assessed against the property owner based on 50/50 split in the cost assessed against the drain watershed. In cases, where the culvert is located near the outlet and is large relative to the crossing benefit, a larger portion of the cost is shared with watershed on a proportional basis.

This is recognized for two culverts in Port Colborne;

- PAM-CS-10 for 341 Pleasant Beach Rd culvert costs are assessed on 50/50 basis between landowner and watershed,
- PB1-CS-01 on the Haggerty Branch Drain for Roll No. 271104000102800, the replacement culvert costs are assessed on a 50/50 basis between landowner and watershed.

Three culverts are recognized as having a special benefit for the portion of the Point Abino Drain within the Town of Fort Erie.

- PAM-CS-04 a private crossing to Tennis Courts with the cost shared at 12% assessed to the landowner and 88% assessed to the watershed.
- PAM-CS-21 a private Access Lane to 949 Point Abino Rd S that replaces the existing CIP twin concrete culvert cost shared on a 12 / 88 basis with 12% assessed to private access owner and 88% assessed to the watershed.

There is an existing culvert crossing located at station 2+440 and identified as PAM-CS-03 as a 2800x1200 which is currently not used for property access and is no longer associated with a road right of way. Visual inspection of the structure does not indicate any immediate indication of failure, and without any intended use, no immediate cause for removal is determined. If and when the structure is determined to be compromised and a risk to the Drain, it is to be removed by the Town of Fort Erie and the cost assessed to all upstream owners as maintenance to the Point Abino Drain watershed.

There is also recognition of Stormwater Management (SWM) facilities using the Special Benefit to reduce peak flow or sediment and this benefit using the outlet liability assessment. At present, no identified facilities are planned in the Point Abino watershed. The Point Abino Marsh, the lands west of the north-south segment of the Drain function in this manner but are not determined or assessed for a benefit.

The benefit of reducing peak flow is determined by the available volume being greater than the 24-hour peak flow volume for the 1:2-year design storm.

- Site Specific Stormwater Management (SWM) Facilities
  - Wetlands,
  - Ponds, (natural and stormwater)
- Natural occurring features
  - Kettle lakes, and
  - Bog lands.
- Artificial runoff capture; such as Quarry lands or other features that collect runoff but do not outlet it to the Drain during the peak flow of the event.



### Special Assessment (Section 26)

There are special assessments, as recognized under the Drainage Act, for public (not private) roads and utilities that have or require additional costs to the drainage system. In addition to the projected assessments for Right of Way lands as determined by the outlet assessment, any other costs for road crossings or protection of utilities during construction are assessed to the road owner or utility owner. Also included are costs related to impacted utilities such as Enbridge. These costs can be additional effort during construction to protect or meet site supervision requirements by the utility. Also included are costs to move infrastructure, if required by site conditions.

This determination is slightly complicated by the provision of parcel data and Right of Way data by The Town of Fort Erie that appears to identify private lands as Right of Way. Some data is shown that appears to be a road Right of Way as private lands with a Roll number and Right of Way without a Roll number that is reported to be private land. In each of these cases, the report is prepared based on the data received from each Municipality.

The following are Section 26 assessments.

- The existing 84m of dual CIP concrete culvert of that length 24m crosses the Point Abino Rd S Right of Way. Of this 24m, 14m is to be converted into a single precast box culvert 3000x1500. The remaining 10m is to be converted into an open trapezoidal channel with reused concrete as a bottom, precast concrete block wall of two rows with a bank stabilized with geoweb material and a top of bank using vegetated rock buttress. All costs to reconstruct the existing channel and roadway crossing are to be assessed to the Town of Fort Erie.

The existing flap gate is proposed to be converted from two flap gates into a single flap gate consistent with the proposed culvert, 3000x1500. The proposed flap gate is to be mounted on a special precast 2m segment with a prepared bolt pattern to fit the reconstructed flap gate. All outlet and flap gate costs are to be assessed to the upstream watershed area owners as a Section 23 assessment.

- The existing gas main within the Point Abino Rd S conflicts with the new proposed culvert crossing and open channel. All costs to relocate the existing gas main will be assessed to the utility owner, Enbridge Gas.
- The existing watermain within the Point Abino Rd S conflicts with the existing concrete box culvert removal and replacement. All costs to relocate the existing watermain are assessed to the Town of Fort Erie.

The remainder of the existing concrete box culvert is shown to be on a road right of way but is known to be owned by the Point Abino Hills Association, and all costs for the removal of the existing box culvert and reconstruction of a trapezoidal open channel as per the design is assessed 100% as a watershed Section 23 assessment.



#### 6.4.1 Allowances:

1. Where a Drain assessment schedule already exists, and a prior maintenance and assessment schedule is known to exist, then a Schedule 29 allowance is accepted and recognized through a past report and schedule unless it can be shown otherwise.
2. Where a Drain is re-aligned to a new path, then a Section 29 allowance for land taken is recognized. This can be amended by the restoration of any lands to the same owner by the same re-alignment. Thus, a net allowance can be recognized where that is shown to be the case.
3. Where previously no Drain was recognized but already existed as a flow path, then a Section 31 allowance can be realized along with a one-time creation of a current and future easement for Drain maintenance activities as a Section 29 allowance. This is specifically for the creation of Branch Drains.
4. All property valuations are based on the same basic valuation as per the Schedule of Costs. Valuations are based on regional agricultural land pricing.
5. Any tree or feature placed within a drainage works right of access for maintenance is not eligible for compensation in any form.

##### **Section 29 Allowance**

(One time payment for land taken)

Where a Drain already exists and has had maintenance in the past, then a work zone is assumed to already exist and a one-time payment for the work zone easement has been made. No further payment for a work zone or easement is deemed to be required based on the pre-existing work zone regardless of whether that is known to exist or shown to exist in an explicit reference in a previous Engineer's report.

Where a Drain re-alignment is proposed, then a Section 29 allowance is determined. The determination is based on a 10m work zone running parallel to one side of the drain commencing at the Top of Bank. The side from which work is done is determined by the Drainage Engineer and shown on the Plans for Construction. The value is based on a single value of land figure as shown in the Schedule of Costs and because the access is intermittent with the owner retaining ownership and access / use of the land for farming or otherwise, then a factor in the assessment value of land is applied. Since the work zone is likely to be occupied on a target 10-year maintenance cycle, a 1/10 factor is applied.

Where a buffer is established that restricts use of the land adjacent to the drain, then a full payment for land taken based on the value established is made.

##### **Section 30 Allowance**

(Payment for damages during construction)

Awarded where work on the drain, such as maintenance, that damages crops which can not be restored. Does not apply to grass or any other ornamental feature that is restored to similar condition as existed pre-construction. All damage calculations are based on agricultural crop losses.



For any trees removed for construction that have a greater diameter than 150mm at breast height, (DBH) a compensation in the form of saplings is offered. Where a tree is removed then 2 saplings of a variety native to the area are offered for planting outside the work zone as compensation and no award for compensation is made.

There is only one allowance for maintenance related damages (Sect. 74) on the Haggerty Drain.

**Section 31 Allowance**  
(Incorporate a Private Drain)

This type of allowance is to credit the construction effort of a private drain as it relates to the private drain being incorporated into a municipal Drain.

The value of the private drain is dependent on condition and contribution to the function of the Drain. For valuation purposes, the cost to construct a similar channel would be made based on the Schedule of Prices. The cost to maintain it would be subtracted.

**Section 32 Allowance**  
(Insufficient Outlet)

This provides compensation to affected owners for whom lands are not sufficiently drained by the service level provided by the Drain or where lands are discharged into instead of having a sufficient outlet.

No allowance is made for Section 32 in the watershed.

**Section 33 Allowance**  
(Loss of Access)

Where a re-aligned Drain crosses property and cuts off access, an allowance can be granted. This is offered as compensation where the landowner accepts the loss of access as the lessor of the cost to construct a culvert, bridge or fording to provide access. It can also be used to recognize a wetland where drainage is deferred in favour of the wetland's use a storage of runoff within the Watershed.

There are no occurrences of this within the Point Abino watershed that are newly recognized within this report. There may be previous occurrences which are assumed to have been recognized in previous reports.

## 6.4.2 Riparian versus Watershed Benefit

The Drainage Act contains several key concepts of which two that are directly relevant determining assessments:

- Injuring liability, Section 23 (1), and Outlet liability, Section 23 (2).
- Special Benefit Assessment, Section 24.



Where there is no extenuating circumstance to the direct flow of the channel, then the whole benefit of the Bank Restoration and Improvement Program, 100% of the cost is assessed to the adjacent landowner as a Special Benefit.

Where there is an extenuating circumstance to the flow of the channel, such as a bend, or other alignment adjustment, a tree or other object that obstructs flow and causes a change in velocity against a bank, then the cost of the Bank Restoration and Improvement Program is split with a portion allocated to the upstream watershed and a portion assigned to the benefiting adjacent landowner(s) as a Special Benefit. The portion is determined by the ratio of upstream area compared as a percentage to the entire watershed area.

It is the Engineer's determination of the external influences of flow impacts that require the application of a bank protection measure. Bank protection measures rely on the acceptance and at the request of the adjacent landowner and are not applied without the landowner's acceptance. It is at the sole choice of the Engineer to select the appropriate measure for the Drain.

There are Special Benefit assessments, Section 24 identified for primarily culvert works within the Point Abino Watershed.

- Roll No. 271104000108500 for the replacement of a private access to 341 PLEASANT BEACH RD requested a wider access. The cost to provide this is to be shared 50% to the landowner and 50% to the Point Abino watershed.
- Roll No. 271104000102800 for the replacement of a private access for structural reasons to 226 Holloway Bay Rd. The cost to provide the replacement is to be shared 50% to the landowner and 50% to the Haggerty Branch watershed.
- Roll No. 270302001813400 for replacing a private access lane to the tennis courts for structural and functional issues. The cost of the construction is to be shared 12% to the landowner and 88% to the Point Abino watershed. The cost of the trash rack to be installed on the upstream face is 100% a watershed cost.
- Roll No. 270302001802200 for reconstruction of a private access to 949 Point Abino Road South and associated culvert crossing measures required for the 3000x1500 concrete box culvert with a 4m length and 3.1m top width on an existing easement for private access use on the Point Abino Hills property. The cost is to be shared 12% to the property benefiting and 88% to the Point Abino watershed.

#### 6.4.3 General Instructions to Property Owners, Road Authorities and Public Utilities

Utilities are responsible for their infrastructure as it exists in the context of the proposed drainage work. Each utility is assessed the cost of re-locating their infrastructure during construction. This applies to any utility within the right of way (ROW) or impacted by a proposed re-alignment on private property.



#### 6.4.4 Grants

Owners of qualifying agricultural land are presently eligible for a grant of up to one-third of the cost of their assessment from the Ontario Ministry of Agriculture and Food. This grant would be applied for by the City of Port Colborne, and applied to the property owners' assessment at the time of final billing. The Assessment Schedule indicates lands that, based on information provided by the municipality, qualify for the agricultural land use rebate. The final determination of eligibility is the decision of the Ontario Ministry of Agriculture and Food. To be eligible for a grant, the property owner must have a Farm Property Class Tax Rate.

For additional information on the Agricultural Drainage Infrastructure Program refer to the OMAFRA website at [www.omafra.gov.on.ca](http://www.omafra.gov.on.ca).

### 6.5 Cost, Allowance and Assessment Schedules

A full package of the Assessment Tables is included in Appendix B. The following sections provide a summary of those calculations.

Construction costs are allocated using the Interval along with the Administration and Engineering Costs. Additional to construction costs are the Administration and Engineering Costs related to the design of the drain and the preparation of the Drain Report.

A Maintenance Schedule is included for each Drain in Appendix E.



Table 4 Point Abino Drain Assessment Summary

Point Abino Municipal Drain  
City of Port Colborne  
Town of Fort Erie  
Regional Municipality of Niagara  
Assessment Summary

PA Drain Assessed Costs

Farm As 'F'	Owner	Legal_Txt	Roll No	ARN ABBREV	Area Ha	Area in Drain Ha	Sect. 22	Section 23	Sect. 24	Total Assessed	Allowances	Net
	City of Port Colborne - Lands Assessed											
	Corless Trevor Alexander	PLAN 45 PT LOT 1 NP804	271104000100100	100100	0.193	0.013		\$12		\$12		\$12
	D B M E Inc	PLAN 45 LOT 2 PT LOT 1 NP804 RP 59R8890 PT 1 D B M E INC 75% INT M RICHARDS 25% INT	271104000100200	100200	1.309	0.0757		\$71		\$71		\$71
	Colyocorvid Inc	PLAN 45 LOT 3 NP804	271104000100300	100300	0.785	0.0766		\$72		\$72		\$72
	Colyocorvid Inc	PLAN 45 PCL A B C NP804	271104000100400	100400	0.509	0.5094		\$476		\$476		\$476
	Vance Beverly Diane	PLAN 45 LOT 4 NP804	271104000100401	100401	0.769	0.1152		\$108		\$108		\$108
	Ressel Charles	PLAN 45 LOT 5 NP804	271104000100500	100500	0.781	0.1492		\$139		\$139		\$139
	Vogelsang Christopher	PLAN 45 LOT 6 NP 804	271104000100600	100600	0.774	0.1672		\$156		\$156		\$156
	Ray David Michael	PLAN 45 LOT 7 + ROW NP804	271104000100700	100700	0.742	0.1156		\$108		\$108		\$108
	O'Hern-Lodge Inc	PLAN 804 LOT 8	271104000100701	100701	0.698	0.047		\$44		\$44		\$44
	Jones Wendy Kelly	PLAN 45 LOT 9 NP804	271104000100800	100800	0.711	0.0352		\$33		\$33		\$33
	Leon Leah	PLAN 45 LOT 10 NP804	271104000100900	100900	0.738	0.0367		\$34		\$34		\$34
	Narciso Wayne	PLAN 45 LOT 11 LOT 12 NP804	271104000101000	101000	1.437	0.033		\$31		\$31		\$31
	DWHA Properties Inc	27 NS CON 1 PT BLKS P K & L PLAN 45 LOT 16 NP804 RP 59R5691 PART 3 RP 59R8356 PART 1	271104000101400	101400	0.921	0.2823		\$278		\$278		\$278
	Simunic Joseph E Jr	PLAN 45 LOT 17 PT PCL P NP804	271104000101500	101500	0.393	0.3246		\$320		\$320		\$320
	MCLP Inc	PLAN 45 LOT 18 LOT 19 PT PCL P & L NP804	271104000101600	101600	0.545	0.5418		\$534		\$534		\$534
	MCLP Inc	PLAN 45 LOT 18 LOT 19 PT PCL P & L NP804	271104000101600	101600	1.161	0.0682		\$91		\$91		\$91
	Buscaglia Carol	PLAN 45 LOT 20 PT PCL P NP804	271104000101700	101700	0.647	0.1042		\$103		\$103		\$103
	Buscaglia Carol	PLAN 45 LOT 20 PT PCL P NP804	271104000101700	101700	0.174	0.174		\$168		\$168		\$168
	Campbell Mary Lou	PLAN 45 LOT 21 PT PCL P PT PCL M NP804	271104000101800	101800	0.658	0.111		\$109		\$109		\$109
	Campbell Mary Lou	PLAN 45 LOT 21 PT PCL P PT PCL M NP804	271104000101800	101800	0.145	0.1453		\$142		\$142		\$142
	Leon Leslie	PLAN 804 LOT 22 PT PCL P NP804 RP 59R13659 PART 1 RP 30R13059 PARTS 2 AND 3	271104000101900	101900	0.653	0.1155		\$114		\$114		\$114
	Leon Leslie	PLAN 804 LOT 22 PT PCL P NP804 RP 59R13659 PART 1 RP 30R13059 PARTS 2 AND 3	271104000101900	101900	0.118	0.1183		\$117		\$117		\$117
	N & J Signs	PLAN 45 PT BLK P NP804	271104000102000	102000	0.177	0.1772		\$175		\$175		\$175
	Sahlem Susan	PLAN 45 LOT 23 NP804	271104000102100	102100	0.535	0.1242		\$122		\$122		\$122
	Marshall-Petty Rebecca Anne	PLAN 804 LOT 24	271104000102200	102200	0.366	0.1426		\$141		\$141		\$141
	Craig Glen Francis	PLAN 804 PT PCL P	271104000102202	102202	0.171	0.1713		\$169		\$169		\$169
	Palumbo Joseph Louis Jr	PLAN 45 LOT 25 NP804	271104000102300	102300	0.501	0.2193		\$216		\$216		\$216
	Pizzo Edward Michael	PLAN 45 LOT 26 PT PCL P NP804	271104000102400	102400	0.450	0.1921		\$189		\$189		\$189
	Williamson Michael Patrick	PLAN 45 PT PCL P NP804	271104000102500	102500	0.301	0.3006		\$296		\$296		\$296
	Holloway Bay Property Owners I	PLAN 45 PT PCL P NP804	271104000102600	102600	5.455	5.1122		\$4,797		\$4,797		\$4,797
	Panto Nicholas	PLAN 45 PT PCL P NP804	271104000102700	102700	0.145	0.1452		\$136		\$136		\$136
	D B M E Inc	CON 1 PT LOT 1 RP 59R8890 PT 2 D B M E INC 75% INT M RICHARDS 25% INT	271104000102800	102800	14.366	14.3692		\$17,028		\$17,028		\$17,028
	Scarlett John Frederick	CON 1 PT LOT 1 RP 59R5913 PARTS 2 TO 4	271104000102900	102900	1.508	1.5084		\$2,181		\$2,181		\$2,181
	Boles Diane Lynn	CON 1 PT LOT 1 RP 59R5913 PART 1	271104000102901	102901	0.470	0.4704		\$662		\$662		\$662
	Phibbs Stephanie Diane	CON 1 PT LOT 1	271104000103100	103100	4.141	4.1423		\$6,777		\$6,777		\$6,777
	Lander Blake	CON 1 PT LOT 1	271104000103200	103200	0.319	0.319		\$447		\$447		\$447
	Nadeau Gerrard	CON 1 PT LOT 1	271104000103300	103300	0.809	0.8092		\$1,135		\$1,135		\$1,135
	Muileboom Ashley Arlene	CON 1 PT LOT 1	271104000103400	103400	0.809	0.8094		\$1,135		\$1,135		\$1,135
	Kennedy Nancy Jane	CON 1 PT LOT 1	271104000103500	103500	1.507	1.507		\$2,113		\$2,113		\$2,113
	Pruyn Kirk	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PART 3	271104000103600	103600	5.400	5.4008		\$8,837		\$8,837		\$8,837



Farm	Owner	Legal_Txt	ARN		Area	Area in Drain				Total	Allowances	Net
			Roll No	ABBREV			Sect. 22	Section 23	Sect. 24			
	Shaubel Brian	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PARTS 1 AND 2	271104000103610	103610	2.596	2.5966		\$3,642		\$3,642		\$3,642
	Harrietha Thomas	HUMBERSTONE CON 1 PT LOT 1 RP 59R10180 PART 1	271104000103700	103700	0.405	0.4047		\$568		\$568		\$568
	2293020 Ontario Ltd	CON 1 PT LOT 1 RP 59R10180 PART 2	271104000103705	103705	0.669	0.6695		\$939		\$939		\$939
	Annett Matthew	CON 1 PT LOT 1 RP 59R10819 PARTS 1 & 2	271104000103800	103800	0.398	0.3985		\$559		\$559		\$559
	Cirone David	CON 1 PT LOT 1 RP 59R10180 PT PART 3	271104000103805	103805	0.475	0.4749		\$666		\$666		\$666
	Lehocki Teresa Mary	CON 1 PT LOT 1 59R-10180 PARTS 4 & 5	271104000103810	103810	9.155	9.1566		\$14,992		\$14,992		\$14,992
	Manuel Robert George	CON 1 PT LOT 1	271104000103900	103900	0.105	0.1046		\$148		\$148		\$148
	Belanger Shayna Michlyn	CON 1 PT LOT 2	271104000104800	104800	0.580	0.5799		\$858		\$858		\$858
	Durant Dylan Tanner	CON 1 PT LOT 2 RP 59R4019 PART 1	271104000104900	104900	0.813	0.813		\$1,203		\$1,203		\$1,203
	Waldram Craig Thomas	CON 1 PT LOT 2	271104000105000	105000	0.714	0.7145		\$1,057		\$1,057		\$1,057
	Lampshire Melanie Dawn	CON 1 PT LOT 2 RP 59R12528 PART 1 641700135 UNREG	271104000105900	105900	0.602	0.6017		\$890		\$890		\$890
	Vanderende Lori Ann	CON 1 PT LOT 2	271104000106000	106000	0.216	0.2165		\$320		\$320		\$320
	Langlois Julie Marie	CON 1 PT LOT 2	271104000106100	106100	0.648	0.6483		\$959		\$959		\$959
	Brennan George	CON 1 PT LOT 2	271104000106101	106101	0.242	0.2421		\$358		\$358		\$358
	Phillips Ralph John	CON 1 PT LOT 2 RP 59R4043 PART 1	271104000106200	106200	1.706	1.7067		\$2,356		\$2,356		\$2,356
	Sergnese Brittany Lennie	CON 1 PT LOT 2	271104000106300	106300	0.431	0.4313		\$638		\$638		\$638
	Marois David Rosaire	CON 1 PT LOT 2	271104000106800	106800	0.162	0.1622		\$240		\$240		\$240
	Grenke Kevin Michael	HIMBERSTONE CON 1 PT LOT 2 RP 59R14932 PART 1	271104000106900	106900	0.974	0.9741		\$1,441		\$1,441		\$1,441
	Pooler Steven	CON 1 PT LOT 2	271104000107000	107000	0.721	0.7213		\$1,067		\$1,067		\$1,067
	Bonenfant Wendy	CON 1 PT LOT 2	271104000107100	107100	0.209	0.209		\$309		\$309		\$309
	Vander Veen John	CON 1 PT LOT 2	271104000107200	107200	0.240	0.2403		\$355		\$355		\$355
	Eberly Michael David	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 5	271104000107300	107300	15.497	15.5003		\$26,517		\$26,517		\$26,517
	Khan Dina	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 4	271104000107305	107305	2.443	2.444		\$3,294		\$3,294		\$3,294
F	Rickman Erin Heather	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 3	271104000107306	107306	2.446	2.4461		\$3,298		\$3,298		\$3,298
	Benvenuti Shane	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 2	271104000107307	107307	2.448	2.4482		\$3,306		\$3,306		\$3,306
	Eberly William Warren	HUMBERSTONE CON 1 PT LOT 2 AND RP 59R14998 PART 1	271104000107400	107400	2.148	2.1487		\$2,901		\$2,901		\$2,901
	Hartley-Rybka Kimberly	CON 1 PT LOT 2 RP 59R6260 PART 1	271104000107500	107500	0.817	0.8176		\$1,209		\$1,209		\$1,209
F	Berry Gordon Albert	CON 1 PT LOT 2	271104000107600	107600	8.624	8.6261		\$14,368		\$14,368		\$14,368
	Willwerth Donald R	CON 1 PT LOT 2	271104000107700	107700	2.641	2.6421		\$3,908		\$3,908		\$3,908
	Thomas Leslie Marilyn	CON 1 PT LOT 2 RP 59R10459 PARTS 1 & 2	271104000107735	107735	1.331	1.3315		\$1,969		\$1,969		\$1,969
F	Shaubel Sophia Ann	CON 1 PT LOT 2 ROW & ESMT	271104000107800	107800	6.668	6.6695		\$11,509		\$11,509		\$11,509
	Robins Jodee Lee	CON 1 PT LOT 2 RP 59R9210 PART 1	271104000107900	107900	0.746	0.746		\$1,084		\$1,084		\$1,084
	Koren Amir	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 1	271104000107901	107901	0.999	0.9997		\$1,402		\$1,402		\$1,402
F	Davies Norman Stewart	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 2	271104000107903	107903	1.524	1.5241		\$2,192		\$2,192		\$2,192
F	Vongphakdy Souphhone Chastity	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R5691 PT PART 1	271104000107930	107930	22.056	22.0607		\$37,847		\$37,847		\$37,847
	Lodomez-Miller Anne Marie	CON 1 PT LOT 1 RP 59R12984 PART 3	271104000107932	107932	2.235	2.2357		\$3,135		\$3,135		\$3,135
	Aquilina Daniel D	CON 1 PT LOT 1 PT LOT 2 RP 59R12984 PART 2	271104000107934	107934	0.667	0.6671		\$936		\$936		\$936
	Aquilina Daniel D	CON 1 PT LOT 1 RP 59R12984 PART 1	271104000107935	107935	0.667	0.6673		\$936		\$936		\$936
	Lee Stephen	HUMBERSTONE CON 1 PT LOT 2 RP 59R15397 PART 1	271104000107937	107937	1.000	1		\$1,438		\$1,438		\$1,438
	Engels Bryan	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R15397 PART 2	271104000107938	107938	1.000	1.0004		\$1,423		\$1,423		\$1,423
	Emonds Ashley	HUMBERSTONE CON 1 PT LOT 1 RP 59R16961 PART 1	271104000107940	107940	1.009	1.0087		\$1,415		\$1,415		\$1,415
	Ginther George Eagan	CON 1 PT LOT 2 RP59R5691 PART 2 PART 4 PT PCL PLAN 45 NP 804	271104000108000	108000	12.239	12.2418		\$15,088		\$15,088		\$15,088
	Andreacchi Giuseppe	CON 1 PT LOT 2	271104000108200	108200	0.072	0.0725		\$143		\$143		\$143
	Ross James J	CON 1 PT LOT 2	271104000108300	108300	0.145	0.1449		\$286		\$286		\$286
	Lungu Ana	CON 1 PT LOT 2	271104000108400	108400	0.209	0.209		\$412		\$412		\$412
	Andreacchi Franchina	HUMBERSTONE CON 1 PT LOT 2	271104000108500	108500	0.183	0.1829		\$361	\$5,638	\$5,999		\$5,999
	Parisi Giacomo	CON 1 PT LOT 2	271104000108600	108600	0.504	0.5036		\$869		\$869		\$869
	Andreacchi Salvatore	CON 1 PT LOT 2	271104000108900	108900	0.078	0.0784		\$155		\$155		\$155
	Elliott Jordan	CON 1 PT LOT 2	271104000109000	109000	0.405	0.405		\$699		\$699		\$699
	Elliott Jordan	CON 1 PT LOT 2	271104000109100	109100	0.363	0.3632		\$627		\$627		\$627
	Elliott Jordan	CON 1 PT LOT 2	271104000109200	109200	0.141	0.1415		\$244		\$244		\$244
	Ariganello Rosina	CON 1 PT LOT 2	271104000109300	109300	0.303	0.303		\$523		\$523		\$523



Farm	Owner	Legal_Txt	ARN		Area	Area in Drain	Sect. 22	Section 23	Sect. 24	Total	Allowances	Net
			Roll No	ABBREV								
	Andreacchi Vito	CON 1 PT LOT 2	271104000109400	109400	0.115	0.1155		\$142		\$142		\$142
	Tompkins Daniel	CON 1 PT LOT 2	271104000109500	109500	0.104	0.1043		\$129		\$129		\$129
	MacDougald Heather Alanna	CON 1 PT LOT 2 AND PLAN 806 LOTS 19 AND 28	271104000109600	109600	0.158	0.1583		\$273		\$273		\$273
	Obeid Nabhan	CON 1 PT LOT 2	271104000109700	109700	0.065	0.0652		\$113		\$113		\$113
	Bihl Dennis Charles	CON 1 PT LOT 2	271104000109800	109800	0.067	0.0669		\$66		\$66		\$66
	Morgado Joseph	PLAN 47 LOT 1 LOT 2 NP806	271104000109900	109900	0.092	0.0922		\$91		\$91		\$91
	Canal Daniel	PLAN 47 LOT 3 LOT 4 NP806	271104000110000	110000	0.093	0.0926		\$91		\$91		\$91
	Maunder Paul	PLAN 47 LOT 5 NP806	271104000110100	110100	0.046	0.0462		\$46		\$46		\$46
	Leffler Gretchen	PLAN 47 LOT 6 PT LOT 7 NP806	271104000110200	110200	0.051	0.0508		\$50		\$50		\$50
	Pasco Philip Albert	PLAN 47 PT LOT 7 NP806	271104000110300	110300	0.046	0.0461		\$45		\$45		\$45
	Pasco Philip Albert	PLAN 47 LOT 9 PT LOT 8 NP806	271104000110400	110400	0.092	0.0921		\$91		\$91		\$91
	Lim Jaime	PLAN 47 LOT 10 NP806	271104000110500	110500	0.047	0.0475		\$59		\$59		\$59
	Palmisano Mark M	PLAN 47 LOT 11 LOT 12 NP806	271104000110501	110501	0.097	0.0967		\$119		\$119		\$119
	Soto Belisario	CON 1 PT LOT 2, LOT 13 PLAN 47 NP 806	271104000110600	110600	0.101	0.1011		\$125		\$125		\$125
	Sacco Andrew	PLAN 47 LOT 14 LOT 15 NP806	271104000110700	110700	0.099	0.0991		\$122		\$122		\$122
	Arruda Victor	PLAN 47 LOT 16 LOT 17 NP806	271104000110800	110800	0.078	0.0775		\$96		\$96		\$96
	Devans Russell	PLAN 47 LOT 18 NP806	271104000110900	110900	0.065	0.0655		\$81		\$81		\$81
	Muraco Frederick	PLAN 47 806 LOTS 20 21 26 AND 27 NP806	271104000111000	111000	0.186	0.1858		\$321		\$321		\$321
	Ariganello Aldo Peter	PLAN 47 LOT 22 TO LOT 25 NP806 CON 1 PT LOT 2	271104000111100	111100	0.352	0.3516		\$607		\$607		\$607
	Williamson Michael Patrick	PLAN 41 LOT 1 LOT 2 NP800 PLAN 47 PT LOT 8 NP806	271104000111200	111200	0.093	0.0928		\$92		\$92		\$92
	Elia Sandro	PLAN 41 LOT 3 PT LOT 4 NP800	271104000111300	111300	0.055	0.055		\$54		\$54		\$54
	Kennedy Kurt	PLAN 800 LOT 5 PT LOTS 4 AND 6	271104000111400	111400	0.055	0.0549		\$54		\$54		\$54
	Elia Sandro	PLAN 41 LOT 7 PT LOT 6 PT LOT 8 NP800	271104000111500	111500	0.055	0.0548		\$54		\$54		\$54
	Vecchi Vittorio	PLAN 41 PT LOT 8 PT LOT 9 NP800	271104000111600	111600	0.055	0.0548		\$54		\$54		\$54
	Pacheco John	PLAN 800 LOT 10 PT LOTS 9 AND 11	271104000111700	111700	0.055	0.0548		\$54		\$54		\$54
	Puntoriero Antonio	PLAN 800 LOT 12 PT LOT 11	271104000111800	111800	0.055	0.0555		\$55		\$55		\$55
	Hibbard David	PLAN 41 LOT 13 NP 800	271104000111900	111900	0.031	0.0307		\$30		\$30		\$30
	Zaparaniuk Judith Grace	PLAN 41 LOT 14 LOT 15 NP800	271104000112000	112000	0.062	0.0622		\$61		\$61		\$61
	Sanderson Linda	PLAN 41 LOT 16 PT LOT 17 NP800	271104000112100	112100	0.049	0.0488		\$48		\$48		\$48
	Webb Ronald Joseph	PLAN 41 LOT 18 PT LOT 17 NP800	271104000112200	112200	0.049	0.0488		\$48		\$48		\$48
	Cardwell Jason	PLAN 41 LOT 19 NP800	271104000112300	112300	0.048	0.0476		\$47		\$47		\$47
	Thuersam Lester	PLAN 41 LOT 20 LOT 21 NP800 PT BLK B	271104000112400	112400	0.070	0.0697		\$69		\$69		\$69
	Paradise Shores Holdings Inc	PLAN 41 BLK A BLK C PT BLK B NP800	271104000112500	112500	0.526	0.5263		\$1,816		\$1,816		\$1,816
	Paradise Shores Holdings Inc	PLAN 41 BLK A BLK C PT BLK B NP800	271104000112500	112500	0.152	0.1525		\$593		\$593		\$593
	Pacheco John	PLAN 800 PT BLK A	271104000112515	112515	0.002	0.0023		\$0		\$0		\$0
	Pleasant Beach Property Owners Corporation Ltd	CON 1 PT LOT 3 2000 NOV29 TAX CLASS REVIEW CT STANDS SEE DOCU FILE 1869	271104000112600	112600	0.367	0.3668		\$362		\$362		\$362
	Comazzolo Mary	CON 1 PT LOT 3	271104000112700	112700	0.030	0.0299		\$29		\$29		\$29
	De Sousa Mariette	CON 1 PT LOT 3 SIMON SKETCH LOT 2	271104000112800	112800	0.030	0.0298		\$29		\$29		\$29
	Eimiller Thomas Keith	CON 1 PT LOT 3 SIMON SKETCH	271104000112900	112900	0.030	0.0298		\$29		\$29		\$29
	Eimiller Sandra Ann	CON 1 PT LOT 3 (SIMON SKETCH LOT 4 - FOR REFERENCE ONLY)	271104000113000	113000	0.030	0.0298		\$29		\$29		\$29
	McLintock Ann	CON 1 PT LOT 3 SIMON SKETCH LOT 5 TO LOT 7	271104000113100	113100	0.090	0.0895		\$88		\$88		\$88
	Van Patten Shawn	CON 1 PT LOT 3 SIMON SKETCH LOT 8 PT LOT 9	271104000113400	113400	0.045	0.0446		\$44		\$44		\$44
	Sacco Anthony Thomas	HUMBERSTONE CON 1 PT LOT 3	271104000113600	113600	0.045	0.0447		\$44		\$44		\$44
	Paolini Richard John	CON 1 PT LOT 3 SIMON SKETCH LOT 11 LOT 12	271104000113700	113700	0.060	0.0596		\$59		\$59		\$59
	Armao Matilda Kathryn	CON 1 PT LOT 3 SIMON SKETCH LOT 13	271104000113800	113800	0.030	0.0298		\$29		\$29		\$29
	Gigliotti Anthony	CON 1 PT LOT 3 RP 59R2535 PART 1	271104000113900	113900	0.047	0.0469		\$46		\$46		\$46
	Lozovoi Gueorgui	CON 1 PT LOT 3 RP 59R2535 PART 2	271104000114000	114000	0.054	0.0543		\$54		\$54		\$54
	Hudi Martin	CON 1 PT LOT 3	271104000114200	114200	0.107	0.1068		\$105		\$105		\$105
	Allen Troy Edmund	CON 1 PT LOT 3	271104000114300	114300	0.090	0.0896		\$88		\$88		\$88
	Shomers John Peter	CON 1 PT LOT 3	271104000114400	114400	0.052	0.0523		\$52		\$52		\$52
	Labarber Louis P	CON 1 PT LOT 3	271104000114500	114500	0.057	0.0572		\$56		\$56		\$56
	Palumbo Vito	CON 1 PT LOT 3	271104000114600	114600	0.062	0.0622		\$61		\$61		\$61
	Catherine Ruby Josephine	CON 1 PT LOT 3	271104000114700	114700	0.067	0.0672		\$66		\$66		\$66
	Brown Judith Evelyn	CON 1 PT LOT 3	271104000114800	114800	0.058	0.0577		\$57		\$57		\$57



Farm	Owner	Legal_Txt	ARN		Area	Area in Drain	Sect. 22	Section 23	Sect. 24	Total	Allowances	Net
			Roll No	ABBREV								
	Browne Michael Robert	CON 1 PT LOT 3	271104000114900	114900	0.058	0.0577		\$57		\$57		\$57
	Hildreth Ronald James	CON 1 PT LOT 3	271104000115000	115000	0.038	0.0385		\$38		\$38		\$38
	1000609385 Ontario Inc	CON 1 PT LOT 3	271104000115100	115100	0.089	0.0894		\$88		\$88		\$88
	Saulnier Neil	PLAN 46 LOT 1 LOT 2 NP805 ROW OVER BLKS A & B	271104000115300	115300	0.093	0.0931		\$92		\$92		\$92
	Eimiller Thomas Wayne	PLAN 46 LOT 3 NP805	271104000115400	115400	0.047	0.0467		\$46		\$46		\$46
	Bull Joanna	PLAN 46 LOT 4 NP805	271104000115500	115500	0.047	0.0468		\$46		\$46		\$46
	Wojcik Daniel Stanley	PLAN 46 LOT 5 LOT 6 NP805	271104000115600	115600	0.094	0.0938		\$92		\$92		\$92
	Sacco Jo-Ann Mary	PLAN 46 LOT 7 NP805	271104000115700	115700	0.047	0.047		\$46		\$46		\$46
	Vizzari Sara	PLAN 46 LOT 8 NP805	271104000115800	115800	0.047	0.0473		\$47		\$47		\$47
	Clements Alton W	PLAN 805 BLKS A AND B	271104000115810	115810	0.461	0.461		\$1,705		\$1,705		\$1,705
	Vizzari Sara	PLAN 46 LOT 9 LOT 10 NP805	271104000115900	115900	0.079	0.0792		\$78		\$78		\$78
	Yots Jason	PLAN 46 PT LOT 13 LOT 11,12 NP805	271104000116000	116000	0.147	0.1467		\$145		\$145		\$145
	Solanes Fernando	PLAN 46 PT LOT 13 LOT 14,15 NP805	271104000116100	116100	0.119	0.119		\$117		\$117		\$117
	Vizzari Diego	PLAN 46 LOT 16 LOT 17 NP805	271104000116200	116200	0.078	0.078		\$77		\$77		\$77
	Clunie Thomas	PLAN 46 LOT 18 NP805	271104000116300	116300	0.046	0.0464		\$46		\$46		\$46
	Machado Rosa	PLAN 46 LOT 19 NP805	271104000116400	116400	0.046	0.0464		\$46		\$46		\$46
	Bull James Todd	PLAN 46 LOT 20 TO LOT 22 NP805	271104000116500	116500	0.139	0.1393		\$137		\$137		\$137
	Barone Sylvester Cosmo	PLAN 805 LOTS 23 TO 25	271104000116700	116700	0.139	0.1393		\$137		\$137		\$137
	Demunda Richard Anthony	CON 1 PT LOT 3	271104000116800	116800	0.056	0.0557		\$55		\$55		\$55
	Janik Edward Matthew In Trust	CON 1 PT LOT 3	271104000116900	116900	2.809	2.8101		\$2,771		\$2,771		\$2,771
	Potter Danny Mark	CON 1 PT LOT 3	271104000117000	117000	0.139	0.1393		\$275		\$275		\$275
	Janik Edward Matthew In Trust	CON 1 PT LOT 3	271104000117100	117100	0.139	0.1393		\$275		\$275		\$275
	Smith Gordon Franklin	CON 1 PT LOT 3	271104000117200	117200	0.223	0.2229		\$440		\$440		\$440
	Mitro Dominic	CON 1 PT LOT 3	271104000117300	117300	0.111	0.1115		\$220		\$220		\$220
	Senese Thomas Anthony	CON 1 PT LOT 3	271104000117500	117500	0.111	0.1115		\$220		\$220		\$220
	SSI Property GP INC	HUMBERSTONE CON 1 PT LOT 3 RP 59R16901 PART 1	271104000117600	117600	4.694	4.6952		\$10,417		\$10,417		\$10,417
	Sider Roger	CON 1 PT LOT 3	271104000117700	117700	0.747	0.7475		\$1,106		\$1,106		\$1,106
	Malandrino Paola	CON 1 PT LOT 3	271104000117701	117701	0.260	0.2602		\$385		\$385		\$385
	MacDonald Gordon Ross	CON 1 PT LOT 3	271104000117800	117800	0.314	0.3142		\$465		\$465		\$465
F	Pleasant Beach Sherkston Estates Inc	CON 1 PT LOT 3	271104000117900	117900	6.111	6.1121		\$9,041		\$9,041		\$9,041
	O'Shea Noreen	CON 1 PT LOT 3	271104000118200	118200	0.269	0.269		\$398		\$398		\$398
F	Ventresca Mary Yollanda	HUMBERSTONE CON 1 PT LOT 3 RP 59R16488 PART 2	271104000118300	118300	3.486	3.4871		\$5,158		\$5,158		\$5,158
	Lukasavitch Diane	HUMBERSTONE CON 1 PT LOT 3 RP 59R16488 PART 1	271104000118303	118303	1.214	1.2143		\$1,796		\$1,796		\$1,796
	Pavao Dennis	HUMBERSTONE CON 1 PT LOT 3 RP 59R15358 PART 2	271104000118400	118400	0.995	0.9953		\$1,472		\$1,472		\$1,472
	Winney James	HUMBERSTONE CON 1 PT LOT 3 RP 59R13237 PART 1 RP 59R15358 PART 1	271104000118450	118450	1.407	1.4076		\$2,082		\$2,082		\$2,082
	PC City Hall	CON 1 PT LOTS 3,4 PLAN 35 LOTS 1-108,LANES NP794 RP59R4679 PARTS 1,2,4,5	271104000118501	118501	0.738	0.7386		\$1,093		\$1,093		\$1,093
	Marr Gerald Murray	CON 1 PT LOT 3	271104000118502	118502	0.860	0.8604		\$1,273		\$1,273		\$1,273
	Franklin Adam	CON 1 PT LOT 3 RP 59R11998 PART 2	271104000118503	118503	0.661	0.6614		\$978		\$978		\$978
	Nan Kenneth Henry	CON 1 PT LOT 3 RP 59R11998 PART 1	271104000118504	118504	0.658	0.6577		\$973		\$973		\$973
	O'Quinn Christopher Leonard	PLAN 59M365 LOT 1	271104000118510	118510	0.798	0.7984		\$1,181		\$1,181		\$1,181
	Kelley Scott Andrew	PLAN 59M365 LOT 2	271104000118514	118514	0.930	0.9302		\$1,376		\$1,376		\$1,376
	Senra Shawn Cordeiro	PLAN 59M365 LOT 3	271104000118518	118518	0.861	0.8613		\$1,274		\$1,274		\$1,274
	Ward Lisa	PLAN 59M365 LOT 4	271104000118522	118522	0.847	0.8475		\$1,254		\$1,254		\$1,254
	Paladino Alfredo	PLAN 59M365 LOT 5	271104000118526	118526	0.805	0.8056		\$1,192		\$1,192		\$1,192
	Pruyn Joe	PLAN 59M365 LOT 6	271104000118530	118530	0.662	0.6623		\$980		\$980		\$980
F	Belperio Enrico	HUMBERSTONE CON 1 PT LOT 4 RP 59R15508 PART 1	271104000118600	118600	20.534	7.4077		\$12,783		\$12,783		\$12,783
	Shisler Stanley Bruce	CON 1 PT LOT 4	271104000118602	118602	0.414	0.0394		\$58		\$58		\$58
	Shisler Stanley Bruce	CON 1 PT LOT 4	271104000118603	118603	0.074	0.0441		\$65		\$65		\$65
	Hoover David Allan	CON 1 PT LOT 3	271104000118604	118604	1.138	1.1384		\$1,684		\$1,684		\$1,684
	Hoover David Allan	CON 1 PT LOT 3	271104000118800	118800	0.856	0.8564		\$1,267		\$1,267		\$1,267
	Kramer Ryan	CON 1 PT LOT 3	271104000118900	118900	0.794	0.7939		\$1,174		\$1,174		\$1,174
F	Marlatt Brandon	HUMBERSTONE CON 1 PT LOT 3	271104000119000	119000	15.573	15.5763		\$26,880		\$26,880		\$26,880
	Scrada Stephen	HUMBERSTONE CON 1 PT LOT 3 RP 59R17643 PART 1	271104000119002	119002	1.004	1.004		\$1,485		\$1,485		\$1,485
	Topa Anne Shirley	HUMBERSTONE CON 1 PT LOT 3 RP 59R15804 PART 2	271104000119100	119100	0.409	0.4096		\$606		\$606		\$606



Farm	Owner	Legal_Txt	ARN		Area	Area in Drain	Sect. 22	Section 23	Sect. 24	Total	Allowances	Net
			Roll No	ABBREV								
	Topa Travis	HUMBERSTONE CON 1 PT LOT 3 RP 59R15804 PART 1	271104000119102	119102	0.834	0.8345		\$1,234		\$1,234		\$1,234
	Young Samuel Bare	CON 1 PT LOT 3 RP 59R5195 PART 2	271104000119105	119105	1.409	1.4097		\$1,946		\$1,946		\$1,946
	O'Neal Aaron	CON 1 PT LOT 3 RP 59R5195 PART 3	271104000119200	119200	1.168	1.1683		\$1,728		\$1,728		\$1,728
	Rowland Jeffrey Alan	CON 1 PT LOT 3 RP 59R5195 PART 1	271104000119201	119201	0.854	0.8546		\$1,264		\$1,264		\$1,264
	Lostracco Douglas Edward	CON 1 PT LOT 3 RP 59R11965 PART 1	271104000119300	119300	0.473	0.4729		\$699		\$699		\$699
	Serniak Greg	CON 1 PT LOT 3 RP59R5431 PART 1	271104000119400	119400	0.529	0.5289		\$782		\$782		\$782
	Jaskolka Edward Joseph	CON 1 PT LOT 3 RP 59R5431 PART 2	271104000119401	119401	0.476	0.4757		\$704		\$704		\$704
	Johnson Robert Alexander	CON 1 PT LOT 3 RP 59R5431 PART 3	271104000119402	119402	0.422	0.4224		\$625		\$625		\$625
	Frost Paul William	CON 1 PT LOT 3 RP 59R5431 PART 4	271104000119403	119403	0.454	0.4538		\$671		\$671		\$671
	Vorstenbosch Cathy Marie	CON 1 PT LOT 3	271104000119800	119800	0.235	0.2348		\$347		\$347		\$347
	Woelke Helena	HUMBERSTONE CON 1 PT LOT 3 RP 59R14079 PART 1	271104000119900	119900	0.110	0.1096		\$162		\$162		\$162
	Buick Robert	HUMBERSTONE CON 1 PT LOT 3	271104000120000	120000	0.124	0.1242		\$184		\$184		\$184
	Kirkwood Graeme Scott	CON 1 PT LOT 3 PT LOT 4	271104000120100	120100	0.187	0.1868		\$276		\$276		\$276
F	Damude Raymond Harold Jr	CON 1 PT LOT 4	271104000120400	120400	4.206	1.6133		\$2,784		\$2,784		\$2,784
	Priebe James Arthur	CON 1 PT LOT 4 AND RP59R10512 PARTS 1 AND 5	271104000120700	120700	1.635	1.5865		\$2,190		\$2,190		\$2,190
	Dykstra David Gary	CON 1 PT LOT 3	271104000120800	120800	0.573	0.573		\$848		\$848		\$848
	Penny William John	CON 1 PT LOT 3	271104000120900	120900	0.889	0.8896		\$1,316		\$1,316		\$1,316
	Robison Darlene Raye	CON 1 PT LOT 3	271104000121000	121000	1.660	1.6604		\$2,292		\$2,292		\$2,292
	Kostuk William Roger	CON 1 PT LOT 3	271104000121100	121100	0.382	0.3823		\$565		\$565		\$565
	Desrochers Christina Maria	CON 1 PT LOT 3 RP 59R10512 PARTS 3 AND 8	271104000123496	123496	1.196	1.1965		\$1,652		\$1,652		\$1,652
	Gillis Nicole Jennifer	HUMBERSTONE CON 1 PT LOTS 3 AND 4 RP 59R10512 PARTS 4 7 AND 11	271104000123498	123498	2.046	2.0464		\$2,825		\$2,825		\$2,825
	Godla Jiri	CON 1 PT LOT 4 RP 59R10512 PARTS 2 6 AND 10	271104000123500	123500	2.609	2.6101		\$3,603		\$3,603		\$3,603
	Shisler Terry	CON 1 PT LOT 4 RP59R4654 PART 1	271104000123900	123900	2.554	0.0827		\$122		\$122		\$122
	SSI Property GP Inc	HUMBERSTONE CON 1 PT LOTS 3 TO 8 PT RD ALLOW PT BED LAKE ERIE RP 59R5042 PARTS 6 TO 12 PT PART 5 RP 59R4991 PART 1 RP 59R9347 PART 1 RP 59R16102 PART 1 RP 59R16103 PART 1	271104000124600	124600	82.769	39.772		\$88,242		\$88,242		\$88,242
	Canadian Niagara Power Inc	HUMBERSTONE CON 1 PT LOT 4 59R13714 PART 1	271104000124610	124610	0.208	0.2078		\$307		\$307		\$307
	PC City Hall	CON 1 PT LOTS 1-22	271104000499900	499900	0.992	0.248		\$550		\$550		\$550
Town of Fort Erie												
	SHORE OAKS INC	683 POINT ABINO ROAD SOUTH	270302001800100	800100	9.418	6.161		\$8,640		\$8,640	\$0	\$8,640
	VAN BOLDEREN ADOLPHUS L	725 POINT ABINO ROAD SOUTH	270302001800200	800200	1.232	1.1984		\$1,681		\$1,681	\$0	\$1,681
	RLC POINT ABINO INC	715 POINT ABINO ROAD SOUTH	270302001800250	800250	1.189	1.0806		\$1,515		\$1,515	\$0	\$1,515
	JOHNSON KAREN	739 POINT ABINO ROAD SOUTH	270302001800300	800300	1.187	1.1873		\$1,665		\$1,665	\$0	\$1,665
	PICTOR WILLIAM	745 POINT ABINO ROAD SOUTH	270302001800400	800400	0.894	0.8942		\$1,254		\$1,254	\$0	\$1,254
	POSSLER HEIDI CARMEN	753 POINT ABINO ROAD SOUTH	270302001800500	800500	0.920	0.9204		\$1,291		\$1,291	\$0	\$1,291
	DURRANT GRAHAM	761 POINT ABINO ROAD SOUTH	270302001800600	800600	1.297	1.2969		\$1,819		\$1,819	\$0	\$1,819
	WILSON BRIAN	781 POINT ABINO ROAD SOUTH	270302001800800	800800	1.859	1.8592		\$2,607		\$2,607	\$0	\$2,607
	MES REALTY COMPANY LLC	787 POINT ABINO ROAD SOUTH	270302001800900	800900	1.319	1.3196		\$1,851		\$1,851	\$0	\$1,851
	DICIENZO ALYSSA MARIE	801 POINT ABINO ROAD SOUTH	270302001801000	801000	1.981	2.3795		\$3,337		\$3,337	\$0	\$3,337
	DICIENZO ANTHONY	819 POINT ABINO ROAD SOUTH	270302001801100	801100	1.570	1.5702		\$2,202		\$2,202	\$0	\$2,202
	SCHMITT MAUREEN	829 POINT ABINO ROAD SOUTH	270302001801101	801101	1.294	1.2947		\$1,816		\$1,816	\$0	\$1,816
	GIBSON SHIRLEY	839 POINT ABINO ROAD SOUTH	270302001801200	801200	1.282	1.282		\$1,798		\$1,798	\$0	\$1,798
	IAFRATE MICHAEL	849 POINT ABINO ROAD SOUTH	270302001801300	801300	1.375	1.3007		\$1,824		\$1,824	\$0	\$1,824
	SEUBERT SCOTT BEAL	857 POINT ABINO ROAD SOUTH	270302001801400	801400	1.713	1.6088		\$2,256		\$2,256	\$0	\$2,256
	JOHNSON DAVID / MOSIER AMY	873 POINT ABINO ROAD SOUTH	270302001801401	801401	1.346	1.2632		\$1,772		\$1,772	\$0	\$1,772
	GREGORY K M / GREGORY M M	879 POINT ABINO ROAD SOUTH	270302001801500	801500	0.417	0.4169		\$585		\$585	\$0	\$585
	CRABTREE ROBERT	891 POINT ABINO ROAD SOUTH	270302001801600	801600	0.343	0.3433		\$481		\$481	\$0	\$481
	FERRONI RICHARD JOSEPH	897 POINT ABINO ROAD SOUTH	270302001801700	801700	0.211	0.2108		\$296		\$296	\$0	\$296
	LISI ANTHONY	903 POINT ABINO ROAD SOUTH	270302001801800	801800	0.284	0.2836		\$398		\$398	\$0	\$398
	FAIRFIELD BRENNAN DOROTHY D	913 POINT ABINO ROAD SOUTH	270302001801900	801900	0.382	0.3817		\$535		\$535	\$0	\$535
	SANDERS STEPHEN	921 POINT ABINO ROAD SOUTH	270302001802000	802000	0.445	0.4447		\$624		\$624	\$0	\$624
	MCCABE REGINA ANNE	931 POINT ABINO ROAD SOUTH	270302001802100	802100	0.410	0.41		\$575		\$575	\$0	\$575



Farm	Owner	Legal_Txt	ARN			Area in Drain				Total	Allowances	Net
			Roll No	ABBREV	Area		Sect. 22	Section 23	Sect. 24			
	GEPHARDT HELENE H	4874 ABINO HILLS ROAD	270302001802101	802101	0.566	0.566		\$794		\$794	\$0	\$794
	MATHEWSON CHRISTOPHER	949 POINT ABINO ROAD SOUTH	270302001802200	802200	0.067	0.0675		\$95	\$15,725	\$15,820	\$0	\$15,820
	BUFFALO YACHT CLUB	917 POINT ABINO ROAD SOUTH	270302001802500	802500	4.589	2.2632		\$2,116		\$2,116	\$0	\$2,116
	ABINO DUNES CORPORATION	0-9865 POINT ABINO ROAD SOUTH	270302001802950	802950	22.925	1.1273		\$1,054		\$1,054	\$0	\$1,054
		0 4961-1 ABINO HILLS ROAD	270302001811000	811000	0.613	0.2147		\$201		\$201	\$0	\$201
	MUNSCHAUER EDWIN A JR	4961 ABINO HILLS ROAD	270302001811000	811000	1.786	1.7868		\$1,671		\$1,671	\$0	\$1,671
	IAFRATE BRUNO	4971 ABINO HILLS ROAD	270302001811100	811100	0.807	0.4641		\$434		\$434	\$0	\$434
	FWGB CORP	4981 ABINO HILLS ROAD	270302001811200	811200	1.550	0.5618		\$525		\$525	\$0	\$525
	BUTSCH JOHN LORD O'BRIAN	4991 ABINO HILLS ROAD	270302001811400	811400	1.521	0.5207		\$487		\$487	\$0	\$487
	BUTSCH D / BUTSCH J	5003 ABINO HILLS ROAD	270302001811401	811401	2.047	0.6774		\$633		\$633	\$0	\$633
	BECHTEL LURA HESS	5047 ABINO HILLS ROAD	270302001811500	811500	2.901	1.2961		\$1,212		\$1,212	\$0	\$1,212
	BRANTHAM HOLDINGS INC	5077 ABINO HILLS ROAD	270302001811600	811600	2.208	1.4733		\$1,377		\$1,377	\$0	\$1,377
	LEON JULIE ANNE	0-9960 ABINO HILLS ROAD	270302001811700	811700	0.743	0.5017		\$469		\$469	\$0	\$469
	LEON JULIE ANNE	5109 ABINO HILLS ROAD	270302001811800	811800	1.248	0.8388		\$784		\$784	\$0	\$784
	BERGEVIN ANNE	5125 ABINO HILLS ROAD	270302001811900	811900	0.952	0.5344		\$500		\$500	\$0	\$500
	5141 ABINO HILLS RD INC	5141 ABINO HILLS ROAD	270302001812000	812000	0.754	0.438		\$410		\$410	\$0	\$410
	5141 ABINO HILLS RD INC	0-9964 ABINO HILLS ROAD	270302001812100	812100	0.753	0.5132		\$480		\$480	\$0	\$480
	LFPB INC	5161 ABINO HILLS ROAD	270302001812200	812200	1.147	0.8417		\$787		\$787	\$0	\$787
	FITZPATRICK MOLLY	5179 ABINO HILLS ROAD	270302001812400	812400	1.573	0.8706		\$814		\$814	\$0	\$814
	FERGUSON DOROTHYMAE TRUSTEE	5189 ABINO HILLS ROAD	270302001812500	812500	2.653	1.5082		\$1,410		\$1,410	\$0	\$1,410
	CLICK JAMES HARLAN	5223 ABINO HILLS ROAD	270302001812600	812600	2.977	1.4033		\$1,312		\$1,312	\$0	\$1,312
	816176 ONTARIO INC	5243 ABINO HILLS ROAD	270302001812700	812700	3.434	1.7357		\$1,623		\$1,623	\$0	\$1,623
	HUMASON ELIZABETH	5271 ABINO HILLS ROAD	270302001812800	812800	3.260	2.5109		\$2,348		\$2,348	\$0	\$2,348
	JARDINE TANYA	5321 ABINO HILLS ROAD	270302001812900	812900	2.749	2.3702		\$2,216		\$2,216	\$0	\$2,216
	PATTERSON WAYNE	5349 ABINO HILLS ROAD	270302001813000	813000	1.327	1.1401		\$1,066		\$1,066	\$0	\$1,066
	NORRIS BRADLEY WILLIAM	5379 ABINO HILLS ROAD	270302001813100	813100	1.145	0.9456		\$884		\$884	\$0	\$884
	LEON JOSEPH	5395 ABINO HILLS ROAD	270302001813200	813200	0.997	0.7996		\$748		\$748	\$0	\$748
	1000880232 ONTARIO INC	5459 ABINO HILLS ROAD	270302001813300	813300	0.927	0.6782		\$634		\$634	\$0	\$634
	PERE ABINEAU PARK	0-9976 POINT ABINO ROAD SOUTH	270302001813400	813400	19.776	19.78		\$23,117		\$23,117	\$0	\$23,117
		0 0-18321 POINT ABINO ROAD SOUTH	270302001813400	813400	7.998	7.9998		\$9,349	\$14,658	\$24,007	\$0	\$24,007
	EL-SAYED SHERIF FOUAD YACOUT	633 POINT ABINO ROAD SOUTH	270302001813500	813500	2.544	2.3204		\$3,254		\$3,254	\$0	\$3,254
	XU AMY	609 POINT ABINO ROAD SOUTH	270302001813600	813600	1.337	1.1127		\$1,560		\$1,560	\$0	\$1,560
	RITCH MONKELBAAN MARSHA	599 POINT ABINO ROAD SOUTH	270302001813700	813700	1.192	0.9496		\$1,332		\$1,332	\$0	\$1,332
	DIFABIO LEONARDO	557 POINT ABINO ROAD SOUTH	270302001813800	813800	1.248	0.9273		\$1,300		\$1,300	\$0	\$1,300
	TROJNAR RICHARD JOHN	551 POINT ABINO ROAD SOUTH	270302001813900	813900	1.263	0.9212		\$1,292		\$1,292	\$0	\$1,292
	SYKES CLARK MANSFIELD	537 POINT ABINO ROAD SOUTH	270302001814000	814000	1.242	0.9198		\$1,290		\$1,290	\$0	\$1,290
	MISETICH MILDRED	531 POINT ABINO ROAD SOUTH	270302001814100	814100	1.235	1.0331		\$1,449		\$1,449	\$0	\$1,449
	MORRIS LAURIE ANN	511 POINT ABINO ROAD SOUTH	270302001814200	814200	1.759	1.4425		\$2,023		\$2,023	\$0	\$2,023
	THOMSON FLORENCE MARIE	497 POINT ABINO ROAD SOUTH	270302001814300	814300	0.176	0.0652		\$91		\$91	\$0	\$91
	SPIECE COREY JOHN	491 POINT ABINO ROAD SOUTH	270302001814400	814400	3.900	3.6792		\$5,160		\$5,160	\$0	\$5,160
	WEAVER JOSEPH	463 POINT ABINO ROAD SOUTH	270302001814500	814500	0.081	0.0813		\$114		\$114	\$0	\$114
	KNIBLOE WAYNE	487 POINT ABINO ROAD SOUTH	270302001814600	814600	0.180	0.0397		\$56		\$56	\$0	\$56
	NIAGARA PENINSULA	0-9990 WILDWOOD AVENUE	270302001814800	814800	2.069	2.069		\$2,902		\$2,902	\$0	\$2,902
	DRULLARD DAVID W	0-9991 POINT ABINO ROAD SOUTH	270302001814900	814900	0.149	0.1476		\$207		\$207	\$0	\$207
	WILDWOOD PROPERTIES INC	0-9992 POINT ABINO ROAD SOUTH	270302001815000	815000	0.340	0.3384		\$475		\$475	\$0	\$475
	FLYNN GREGORY JAMES	421 POINT ABINO ROAD SOUTH	270302001815100	815100	0.135	0.1133		\$159		\$159	\$0	\$159
	WARD DANIEL F	413 POINT ABINO ROAD SOUTH	270302001815200	815200	0.274	0.2382		\$334		\$334	\$0	\$334
	ASIP HOLDINGS INC	393 POINT ABINO ROAD SOUTH	270302001815300	815300	1.160	1.1522		\$1,616		\$1,616	\$0	\$1,616
	1254345 ONTARIO INC	371 POINT ABINO ROAD SOUTH	270302001815400	815400	1.495	1.491		\$2,091		\$2,091	\$0	\$2,091
	357 POINT ABINO ROAD INC	357 POINT ABINO ROAD SOUTH	270302001815500	815500	0.187	0.1838		\$258		\$258	\$0	\$258
	STARCK COTTAGE LLC	349 POINT ABINO ROAD SOUTH	270302001815600	815600	0.110	0.1084		\$152		\$152	\$0	\$152
	PAGE DONALD STEWART	329 POINT ABINO ROAD SOUTH	270302001815800	815800	1.479	6.1417		\$8,613		\$8,613	\$0	\$8,613
	LAROCQUE WAYNE LAWRENCE	203 POINT ABINO ROAD SOUTH	270302001816600	816600	4.527	1.8697		\$3,059		\$3,059	\$0	\$3,059
	THE NATURE CONSERVANCY OF	155 POINT ABINO ROAD SOUTH	270302001816601	816601	12.157	5.3483		\$8,751		\$8,751	\$0	\$8,751
F	WOODS ELEANOR DEBELTGENS	31 POINT ABINO ROAD SOUTH	270302001816800	816800	10.977	9.3419		\$15,285		\$15,285	\$0	\$15,285
	HUGHES WILLIAM	0-10029 BAY WOODS	270302001818000	818000	0.143	0.1428		\$200		\$200	\$0	\$200



Farm	Owner	Legal_Txt	ARN			Area in Drain				Total	Allowances	Net
			Roll No	ABBREV	Area		Sect. 22	Section 23	Sect. 24			
	FORT ERIE TOWN	0-10030 BAY WOODS	270302001818100	818100	0.144	0.1436		\$201		\$201	\$0	\$201
	CULP RICHARD	0-10031 BAY WOODS	270302001818200	818200	0.145	0.1451		\$203		\$203	\$0	\$203
	LOU AMIN	0-10043 BAY WOODS	270302001819400	819400	0.130	0.1302		\$183		\$183	\$0	\$183
	LOU AMIN	0-10044 BAY WOODS	270302001819500	819500	0.130	0.1298		\$182		\$182	\$0	\$182
	FORT ERIE TOWN	0-10045 BAY WOODS	270302001819600	819600	0.130	0.1299		\$182		\$182	\$0	\$182
	WILDWOOD PROPERTIES INC	4882 WILDWOOD AVENUE	270302001820900	820900	0.123	0.1205		\$169		\$169	\$0	\$169
	ROYAL ROBERT JAMES	4894 WILDWOOD AVENUE	270302001821000	821000	0.123	0.1209		\$170		\$170	\$0	\$170
	WEINERT DIANNE LOGAN	0-10060 WILDWOOD AVENUE	270302001821100	821100	0.123	0.1206		\$169		\$169	\$0	\$169
	CYR RUSSELL NORMAN	0-10061 WILDWOOD AVENUE	270302001821200	821200	0.123	0.1203		\$169		\$169	\$0	\$169
	CYR RUSSELL NORMAN	4920 WILDWOOD AVENUE	270302001821300	821300	0.123	0.12		\$168		\$168	\$0	\$168
	CYR RUSSELL NORMAN	0-10063 WILDWOOD AVENUE	270302001821400	821400	0.123	0.1198		\$168		\$168	\$0	\$168
	WARREN WILLIAM DAVID	4958 ORIOLE LANE	270302001822100	822100	0.814	0.9513		\$1,334		\$1,334	\$0	\$1,334
	MCCORMICK JEAN CAROL	0-10070 ORIOLE LANE	270302001822500	822500	0.342	0.1979		\$278		\$278	\$0	\$278
	WRIGHT ALLAN	4959 ORIOLE LANE	270302001822600	822600	1.141	1.1415		\$1,601		\$1,601	\$0	\$1,601
	HAHN CHARLES J IN TRUST	0-10072 POINT ABINO ROAD SOUTH	270302001822700	822700	14.523	14.5257		\$16,976		\$16,976	\$0	\$16,976
	DIETERS KARIN	366 MATHEWS ROAD SOUTH	270302001822701	822701	18.909	18.9133		\$22,104		\$22,104	\$0	\$22,104
	BRETON TEUNIS ADRIANIS	340 MATHEWS ROAD SOUTH	270302001822702	822702	1.243	1.2432		\$1,744		\$1,744	\$0	\$1,744
	FIJAVZ BORIS	0-10075 POINT ABINO ROAD SOUTH	270302001822710	822710	5.287	5.2881		\$7,416		\$7,416	\$0	\$7,416
	HOWARD SALLY	391 POINT ABINO ROAD SOUTH	270302001822800	822800	5.981	5.9823		\$8,390		\$8,390	\$0	\$8,390
	RIITTNER CHARLES	328 MATHEWS ROAD SOUTH	270302001822900	822900	0.994	0.9938		\$1,394		\$1,394	\$0	\$1,394
	5009865 ONTARIO LTD.	300 MATHEWS ROAD SOUTH	270302001822901	822901	0.658	0.6583		\$923		\$923	\$0	\$923
	CROWN LANDSCAPING LTD	0-10079 MATHEWS ROAD SOUTH	270302001823000	823000	6.915	6.9164		\$9,700		\$9,700	\$0	\$9,700
	GGP INVESTMENTS INC	0-10080 MATHEWS ROAD SOUTH	270302001823100	823100	3.876	3.8772		\$5,438		\$5,438	\$0	\$5,438
F	FAZZARI ALEXANDER / SEBASTIANO	200 MATHEWS ROAD SOUTH	270302001823101	823101	8.180	8.1819		\$13,387		\$13,387	\$0	\$13,387
	GARVIN RANDALL CHARLES	158 MATHEWS ROAD SOUTH	270302001823200	823200	2.354	2.3547		\$3,302		\$3,302	\$0	\$3,302
	ADAMS LAWRENCE KENNETH	150 MATHEWS ROAD SOUTH	270302001823300	823300	0.152	0.1525		\$214		\$214	\$0	\$214
	WAINMAN MARK WILLIAM	142 MATHEWS ROAD SOUTH	270302001823400	823400	0.271	0.2712		\$380		\$380	\$0	\$380
	BORKOVSKY BARBARA	32 MATHEWS ROAD SOUTH	270302001823500	823500	3.699	3.7		\$5,189		\$5,189	\$0	\$5,189
	FOX GORDON ALLEN STANLEY	5085 MICHENER ROAD	270302001823600	823600	0.405	0.4047		\$568		\$568	\$0	\$568
	DARBYSON DOUGLAS ALLEN	5045 MICHENER ROAD	270302001823601	823601	6.134	6.1355		\$10,039		\$10,039	\$0	\$10,039
	DARBYSON DOUGLAS ALLEN	5045 MICHENER ROAD	270302001823603	823603	0.099	0.0987		\$138		\$138	\$0	\$138
	LEWIS PAUL KENNEDY	5005 MICHENER ROAD	270302001823610	823610	6.190	6.1915		\$10,130		\$10,130	\$0	\$10,130
	PINO JAVIER	5115 MICHENER ROAD	270302001823700	823700	0.416	0.4162		\$584		\$584	\$0	\$584
	GREENBERG INTERNATIONAL INC	0-10090 MARCY LANE	270302001823800	823800	12.443	8.3694		\$7,825		\$7,825	\$0	\$7,825
	GREENBERG INTERNATIONAL INC	0-10091 MARCY LANE	270302001823900	823900	3.247	0.1673		\$156		\$156	\$0	\$156
	1992293 ONTARIO INC	478 MARCY LANE	270302001824100	824100	0.976	0.1171		\$109		\$109	\$0	\$109
	D B M E INC	0-10094 MARCEY LANE	270302001824200	824200	0.451	0.0469		\$44		\$44	\$0	\$44
	D B M E INC	0-10095 HOLLOWAY BAY ROAD SOUTH	270302001824300	824300	1.794	0.1403		\$131		\$131	\$0	\$131
	GREENBERG INTERNATIONAL INC	476 MARCY LANE	270302001824400	824400	2.599	2.39		\$2,235		\$2,235	\$0	\$2,235
	D B M E INC	0-10097 MARCY LANE	270302001824500	824500	0.543	0.5432		\$508		\$508	\$0	\$508
	0	0-19827 MARCY LANE	270302001824600	824600	0.462	0.4617		\$432		\$432	\$0	\$432
	D B M E INC	466 MARCY LANE	270302001824700	824700	2.291	2.2238		\$2,079		\$2,079	\$0	\$2,079
	D B M E INC	400 HOLLOWAY BAY ROAD SOUTH	270302001824700	824700	7.554	7.5556		\$8,830		\$8,830	\$0	\$8,830
	PATTERSON WAYNE	0-10100 ABINO HILLS ROAD	270302001824800	824800	5.422	5.4232		\$5,070		\$5,070	\$0	\$5,070
	FRETZ KIRK	411 MATHEWS ROAD NORTH	270302001824900	824900	13.720	13.7229		\$16,038		\$16,038	\$0	\$16,038
	MACNEIL LORNE CHRISTOPHER	339 MATHEWS ROAD SOUTH	270302001824905	824905	6.084	6.0854		\$8,534		\$8,534	\$0	\$8,534
F	GREENBERG INTERNATIONAL INC.	0-10103 MATHEWS ROAD SOUTH	270302001825000	825000	24.411	24.2198		\$28,305		\$28,305	\$0	\$28,305
	GREENBERG INTERNATIONAL INC.	0-10104 MATHEWS ROAD SOUTH	270302001825100	825100	3.771	3.7716		\$5,289		\$5,289	\$0	\$5,289
F	GIGONE JUSTIN GIANCARLO	291 MATHEWS ROAD SOUTH	270302001825200	825200	3.409	3.4099		\$4,782		\$4,782	\$0	\$4,782
	GREENBERG INTERNATIONAL INC	0-10106 MATHEWS ROAD SOUTH	270302001825300	825300	15.982	15.9851		\$18,682		\$18,682	\$0	\$18,682
	CARVER ANDREW	5145 MICHENER ROAD	270302001825400	825400	10.422	10.4246		\$17,056		\$17,056	\$0	\$17,056
	ORCUTT WAYNE DARREN	5183 MICHENER ROAD	270302001825500	825500	0.335	0.335		\$470		\$470	\$0	\$470
	CHEN MEI FENG	5197 MICHENER ROAD	270302001825600	825600	1.012	1.0118		\$1,419		\$1,419	\$0	\$1,419
	SIDER BROS BUILDERS LTD	5199 MICHENER ROAD	270302001825650	825650	1.431	1.4315		\$2,008		\$2,008	\$0	\$2,008
	GREENBERG INTERNATIONAL INC	0-10111 MICHENER ROAD	270302001825700	825700	16.550	16.5539		\$27,085		\$27,085	\$0	\$27,085
	PIRSON WANDA	5263 MICHENER ROAD	270302001825800	825800	0.101	0.1014		\$142		\$142	\$0	\$142



Farm	Owner	Legal_Txt	ARN			Area in Drain				Total	Allowances	Net
			Roll No	ABBREV	Area		Sect. 22	Section 23	Sect. 24			
F	GREENBERG INTERNATIONAL INC	5353 MICHENER ROAD	270302001825900	825900	40.368	40.3768		\$66,063		\$66,063	\$0	\$66,063
	VANDERENDE MICHAEL PETER	5381 MICHENER ROAD	270302001826000	826000	0.818	0.8177		\$1,147		\$1,147	\$0	\$1,147
	525230 ONTARIO LTD TRUSTEE	0-10115 HOLLOWAY BAY ROAD SOUTH	270302001826100	826100	6.134	6.1352		\$8,604		\$8,604	\$0	\$8,604
	GREENBERG INTERNATIONAL INC	0-10116 HOLLOWAY BAY ROAD SOUTH	270302001826200	826200	1.140	1.1405		\$1,066		\$1,066	\$0	\$1,066
	BENNETT KLARA LEE	30 HOLLOWAY BAY ROAD SOUTH	270302001826300	826300	1.002	1.0291		\$1,443		\$1,443	\$0	\$1,443
	SEELEY COREY JAMES	4831 SHERKSTON ROAD	270302001827400	827400	0.480	0.0447		\$63		\$63	\$0	\$63
F	DAY JOHN MARTIN HARLOW	4924 SHERKSTON ROAD	270302001828100	828100	28.716	1.3082		\$2,140		\$2,140	\$0	\$2,140
	ASHBY BRIAN CHRISTOPHER	4869 SHERKSTON ROAD	270302001828300	828300	1.038	1.0384		\$1,456		\$1,456	\$0	\$1,456
	EBERLY ALFRED GERALD	4894 SHERKSTON ROAD	270302001828400	828400	0.562	0.2005		\$281		\$281	\$0	\$281
F	WINGER CLINTON ROSS	0-10146 SHERKSTON ROAD	270302001828500	828500	4.470	1.5825		\$2,589		\$2,589	\$0	\$2,589
	DE MEL JULIAN FREDRIK	4911 SHERKSTON ROAD	270302001828600	828600	1.579	1.5792		\$2,215		\$2,215	\$0	\$2,215
F	HOUSE ARNOLD GARY	4963 SHERKSTON ROAD	270302001828700	828700	4.343	4.3439		\$7,107		\$7,107	\$0	\$7,107
	CLARKE PAIGE CORA	5069 SHERKSTON ROAD	270302001828710	828710	14.327	14.3297		\$23,446		\$23,446	\$0	\$23,446
	SIMMONS BETTY DOROTHY	4998 SHERKSTON ROAD	270302001829000	829000	2.045	0.7957		\$1,116		\$1,116	\$0	\$1,116
F	SAHS-MEYER EVA-LYN	5187 SHERKSTON ROAD	270302001829200	829200	24.610	24.6149		\$40,274		\$40,274	\$0	\$40,274
F	O'HEARN PATRICK JAMES	5286 SHERKSTON ROAD	270302001829300	829300	4.199	0.7809		\$1,095		\$1,095	\$0	\$1,095
	DRURY STEVEN / DRURY DAYNA	5277 SHERKSTON ROAD	270302001829400	829400	0.401	0.4015		\$563		\$563	\$0	\$563
	ROWLAND SHAWN	5297 SHERKSTON ROAD	270302001829500	829500	11.885	11.8873		\$19,450		\$19,450	\$0	\$19,450
	GRANT STEVEN CRAIG	5321 SHERKSTON ROAD	270302001829700	829700	3.377	3.3779		\$5,527		\$5,527	\$0	\$5,527
	BRETHREN IN CHRIST CHURCH	5348 SHERKSTON ROAD	270302001829800	829800	1.992	0.9189		\$1,289		\$1,289	\$0	\$1,289
	WALL JACOB	5384 SHERKSTON ROAD	270302001829900	829900	0.564	0.1733		\$243		\$243	\$0	\$243
	SCHINKEL BRUCE VICTOR C	5398 SHERKSTON ROAD	270302001830000	830000	0.369	0.0884		\$124		\$124	\$0	\$124
	OSINGA MARK	5409 SHERKSTON ROAD	270302001830100	830100	2.247	2.2474		\$3,677		\$3,677	\$0	\$3,677
	SERADA MARK	5365 SHERKSTON ROAD	270302001830200	830200	7.587	7.5883		\$12,416		\$12,416	\$0	\$12,416
	VAN HOECKEL MAARTEN JOOST	184 HOLLOWAY BAY ROAD NORTH	270302001830300	830300	0.934	0.9346		\$1,311		\$1,311	\$0	\$1,311
	ZUCCHET MICHAEL FRANK	170 HOLLOWAY BAY ROAD NORTH	270302001830400	830400	0.158	0.1579		\$221		\$221	\$0	\$221
	BENNETT LAWRENCE WILLIAM	148 HOLLOWAY BAY ROAD NORTH	270302001830500	830500	0.644	0.6438		\$903		\$903	\$0	\$903
	CULP JENNIFER ELIZABETH	124 HOLLOWAY BAY ROAD NORTH	270302001830600	830600	0.295	0.2951		\$414		\$414	\$0	\$414
	MARACLE ELIZABETH GRACE	104 HOLLOWAY BAY ROAD NORTH	270302001830700	830700	0.138	0.1381		\$194		\$194	\$0	\$194
	1784413 ONTARIO LTD	78 HOLLOWAY BAY ROAD NORTH	270302001830800	830800	0.672	0.6723		\$943		\$943	\$0	\$943
	WARWICK DARBY ROYCE	5414 MICHENER ROAD	270302001830900	830900	0.510	0.5097		\$715		\$715	\$0	\$715
	HARDY DEREK DENIS	5404 MICHENER ROAD	270302001831000	831000	0.522	0.5223		\$732		\$732	\$0	\$732
	KUCY RODNEY ALLEN	5392 MICHENER ROAD	270302001831100	831100	0.371	0.3716		\$521		\$521	\$0	\$521
F	BERNARD JAMES DOUGLAS	5378 MICHENER ROAD	270302001831200	831200	9.829	9.8312		\$16,085		\$16,085	\$0	\$16,085
	HAGGERTY TIMOTHY ROGER	5354 MICHENER ROAD	270302001831201	831201	0.431	0.4311		\$605		\$605	\$0	\$605
	GUENTHER PETER	5274 MICHENER ROAD	270302001831300	831300	0.479	0.4793		\$672		\$672	\$0	\$672

\$1,135,383\$0\$1,135,383

Roads

City of Port Colborne	Municipal	OBJECTID	PA_Area
Beach Rd From Watershed To Pleasant Beach Rd	City of Port Colborne	150498	1.1757
Firelane (No Name) From Firelane 22 To End	City of Port Colborne	149593	0.2387
Firelane 22 From Pleasant Beach Rd. To No Name	City of Port Colborne	149574	0.2786
Firelane 23 From Firelane 22 To End	City of Port Colborne	149573	0.1949
Firelane 28 27 From Pleasant Beach Rd. To Holloway Bay Rd South	City of Port Colborne	149692	0.6895
Michener Rd From Pleasant Beach Rd To Holloway Bay Rd South	City of Port Colborne	150592	0.8798
NW Beach and Pleasant Beach Rd From To	City of Port Colborne	150616	0.0112
Pleasant Beach Rd From Michener Rd To Sherkston Rd	City of Port Colborne	150545	2.5693
Pleasant Beach Rd From Watershed Bndy. To Michener Rd	City of Port Colborne	149550	2.1516
Sherkston Rd From Empire Rd To Pleasant Beach Rd	City of Port Colborne	150488	0.572
Sherkston Rd From Pleasant Beach Rd To Holloway Bay Rd N	City of Port Colborne	150563	0.5682
\$37,607			
Town of Fort Erie			
Abino Hills Rd From Blind Line To Point Abino Rd	Town of Fort Erie	1000002	1.4236
Abino Hills Rd From Blind Line To	Town of Fort Erie	152091	3.8542



Farm	Owner	Legal_Txt	Roll No	ARN		Area in Drain	Sect. 22	Section 23	Sect. 24	Total	Allowances	Net
				ABBREV	Area							
	Bay Woods From Point Abino Rd S To Blind Line ROW	Town of Fort Erie	1000000			0.1387		\$259.36				
	Blind Line From Abino Hills Rd To Michener Rd	Town of Fort Erie	1000001			5.7427		\$10,738.31				
	Marcy Lane From Holloway Bay Rd S To Part 1	Town of Fort Erie	1000006			0.4592		\$1,502.66				
	Holloway Bay Rd From Watershed Bndy. To Michener Rd	Town of Fort Erie	151906			3.0335		\$12,762.81				
	Holloway Bay Road North From Michener Rd To Sherkston Rd	Town of Fort Erie	151585			2.1285		\$8,955.21				
	Marcy Lane From To Part 2	Town of Fort Erie	152042			0.6317		\$2,067.13				
	Mathews Rd S From S Part 1 To	Town of Fort Erie	152189			0.6702		\$2,506.42				
	Mathews Rd S From S Part 2 To	Town of Fort Erie	152260			0.0746		\$278.99				
	Mathews Rd S From S Part 3 To	Town of Fort Erie	152253			0.1158		\$433.07				
	Mathews Rd S From S Part 4 To	Town of Fort Erie	152256			0.4322		\$1,616.35				
	Mathews Rd S From S Part 5 To	Town of Fort Erie	152190			0.2242		\$838.47				
	Mathews Rd S From S Part 6 To	Town of Fort Erie	151919			0.2369		\$885.96				
	Mathews Rd S From S Part 7 To	Town of Fort Erie	152258			0.4114		\$1,538.56				
	Mathews Road North From Michener Rd To Sherkston Rd	Town of Fort Erie	151651			0.9566		\$1,788.75				
	Michener Rd From Holloway Bay Rd South To Point Abino Rd	Town of Fort Erie	151781			3.6017		\$15,153.39				
	Oriole Lane From To	Town of Fort Erie	1000004			0.1647		\$538.95				
	Point Abino Rd From Michener Rd To Sherkston Rd	Town of Fort Erie	1000005			0.1835		\$772.04				
	Point Abino Rd From To	Town of Fort Erie	1000003			0.5731		\$2,411.20				
	Sherkston Rd From Mathews Rd. N To Point Abino Rd N	Town of Fort Erie	151726			1.1423		\$4,805.99				
	Sherkston Rd From Mathews Rd. N To Holloway Bay Rd North	Town of Fort Erie	151701			1.2335		\$5,189.69				
	Unopened Road Allowance Between Holloway Bay Rd. and Mathews Rd	Town of Fort Erie	151913			2.2918		\$4,285.45				
									\$99,067			
											\$136,673	

Section 26 - Special Assessments			
Utilities - Enbridge	Move existing Gas Line for construction of Point Abino Rd. Crossing.	\$17,226	\$17,226.00
Town of Fort Erie	PA-02 & PA-03 Demolition of existing concrete box culvert with construction of new concrete box culvert crossing Point Abino Rd.	\$1,035,131	\$1,035,131.40
	Move Watermain move or protect	\$5,940	\$5,940.00
		\$0	\$0.00
		\$1,058,297	\$1,058,297.40
Point Abino Drain			
Total Assessed:			\$2,330,353.77
Notes:			
1. The above lands marked "F" are currently classified as agricultural according to the OMAFRA and are therefore entitled to a 1/3 grant.			
2. Section 21 of the Drainage Act, RSO 1990 requires that assessments be shown for each parcel of land and road affected. The affected parcels of land are identified using the			
3. The value of the assessments identified in this schedule are estimates only, and should not be considered final.			



Table 5 Haggerty Branch Drain Assessment Summary

Haggerty Branch Drain

Farm As 'F'	Owner	Legal_Txt	Roll No	ARN ABBREV	Area Ha	Area in Drain Ha	Sect. 22	Section 23	Sect. 24	Total Assessed	Allowances	Net
Port Colborne												
	Customer_N	Legal_Desc	Roll_Numbe		Area_ha	Catch_Ha						
	D B M E Inc	CON 1 PT LOT 1 RP 59R8890 PT 2 D B M E INC 75% INT M RICHARDS 25% INT	271104000102800	102800	14.366	0.4678		\$138.89	\$8,228.44	\$8,367		\$8,367.33
	Scarlett John Frederick	CON 1 PT LOT 1 RP 59R5913 PARTS 2 TO 4	271104000102900	102900	1.508	0.6494		\$221.97		\$222		\$221.97
	Boles Diane Lynn	CON 1 PT LOT 1 RP 59R5913 PART 1	271104000102901	102901	0.470	0.4365		\$166.03		\$166		\$166.03
	Phibbs Stephanie Diane	CON 1 PT LOT 1	271104000103100	103100	4.141	4.1423		\$1,721.71		\$1,722		\$1,721.71
	Lander Blake	CON 1 PT LOT 1	271104000103200	103200	0.319	0.3190		\$113.66		\$114		\$113.66
	Nadeau Gerrard	CON 1 PT LOT 1	271104000103300	103300	0.809	0.8092		\$288.24		\$288		\$288.24
	Muileboom Ashley Arlene	CON 1 PT LOT 1	271104000103400	103400	0.809	0.8094		\$288.24		\$288		\$288.24
	Kennedy Nancy Jane	CON 1 PT LOT 1	271104000103500	103500	1.507	1.5070		\$536.93		\$537		\$536.93
	Pruyn Kirk	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PART 3	271104000103600	103600	5.400	5.4008		\$2,245.04		\$2,245		\$2,245.04
	Shaubel Brian	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PARTS 1 AND 2	271104000103610	103610	2.596	2.5966		\$925.28		\$925		\$925.28
	Harriettha Thomas	HUMBERSTONE CON 1 PT LOT 1 RP 59R10180 PART 1	271104000103700	103700	0.405	0.4047		\$144.30		\$144		\$144.30
	2293020 Ontario Ltd	CON 1 PT LOT 1 RP 59R10180 PART 2	271104000103705	103705	0.669	0.6695		\$238.36		\$238		\$238.36
	Annett Matthew	CON 1 PT LOT 1 RP 59R10819 PARTS 1 & 2	271104000103800	103800	0.398	0.3985		\$142.16		\$142		\$142.16
	Cirone David	CON 1 PT LOT 1 RP 59R10180 PT PART 3	271104000103805	103805	0.475	0.4749		\$169.24		\$169		\$169.24
	Lehocki Teresa Mary	CON 1 PT LOT 1 59R-10180 PARTS 4 & 5	271104000103810	103810	9.155	9.0234		\$3,684.51		\$3,685		\$3,684.51
	Manuel Robert George	CON 1 PT LOT 1	271104000103900	103900	0.105	0.0918		\$32.78		\$33		\$32.78
	Eberly Michael David	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 5	271104000107300	107300	15.497	2.5843		\$1,046.66		\$1,047		\$1,046.66
	Khan Dina	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 4	271104000107305	107305	2.443	1.1164		\$356.48		\$356		\$356.48
F	Rickman Erin Heather	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 3	271104000107306	107306	2.446	1.1007		\$386.41		\$386		\$386.41
	Benvenuti Shane	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 2	271104000107307	107307	2.448	1.0304		\$365.46		\$365		\$365.46
	Eberly William Warren	HUMBERSTONE CON 1 PT LOT 2 AND RP 59R14998 PART 1	271104000107400	107400	2.148	0.9102		\$297.62		\$298		\$297.62
F	Berry Gordon Albert	CON 1 PT LOT 2	271104000107600	107600	8.624	5.7849		\$2,136.55		\$2,137		\$2,136.55
	Robins Jodee Lee	CON 1 PT LOT 2 RP 59R9210 PART 1	271104000107900	107900	0.746	0.2518		\$89.79		\$90		\$89.79
	Koren Amir	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 1	271104000107901	107901	0.999	0.9997		\$352.37		\$352		\$352.37
F	Davies Norman Stewart	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 2	271104000107903	107903	1.524	0.8187		\$255.10		\$255		\$255.10
F	Vongphakdy Soupahone Chastity	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R5691 PT PART 1	271104000107930	107930	22.056	2.4822		\$778.14		\$778		\$778.14
	Lodomez-Miller Anne Marie	CON 1 PT LOT 1 RP 59R12984 PART 3	271104000107932	107932	2.235	2.2357		\$796.66		\$797		\$796.66
	Aquilina Daniel D	CON 1 PT LOT 1 PT LOT 2 RP 59R12984 PART 2	271104000107934	107934	0.667	0.6671		\$237.65		\$238		\$237.65
	Aquilina Daniel D	CON 1 PT LOT 1 RP 59R12984 PART 1	271104000107935	107935	0.667	0.6673		\$237.65		\$238		\$237.65
	Lee Stephen	HUMBERSTONE CON 1 PT LOT 2 RP 59R15397 PART 1	271104000107937	107937	1.000	0.5307		\$208.79		\$209		\$208.79
	Engels Bryan	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R15397 PART 2	271104000107938	107938	1.000	0.7449		\$265.79		\$266		\$265.79
	Emonds Ashley	HUMBERSTONE CON 1 PT LOT 1 RP 59R16961 PART 1	271104000107940	107940	1.009	1.0087		\$323.51		\$324		\$323.51

Town of Fort Erie

	OWNER1	LOCATION	ARN		Shape_Area	Catch_Ha						
F	GREENBERG INTERNATIONAL INC	5353 MICHENER ROAD	270302001825900	825900	40.368	19.4046		\$6,714.64		\$6,715	\$1,339	\$5,375.33
	VANDERENDE MICHAEL PETER	5381 MICHENER ROAD	270302001826000	826000	0.818	0.8177		\$340.02		\$340		\$340.02
	525230 ONTARIO LTD TRUSTEE	0-10115 HOLLOWAY BAY ROAD SOUTH	270302001826100	826100	6.134	3.5077		\$1,249.86		\$1,250		\$1,249.86
	BENNETT KLARA LEE	30 HOLLOWAY BAY ROAD SOUTH	270302001826300	826300	0.000	1.0291		\$416.50		\$417		\$416.50
F	SAHS-MEYER EVA-LYN	5187 SHERKSTON ROAD	270302001829200	829200	24.610	24.6149		\$8,775.06		\$8,775		\$8,775.06
F	O'HEARN PATRICK JAMES	5286 SHERKSTON ROAD	270302001829300	829300	4.199	0.7809		\$278.26		\$278		\$278.26
	DRURY STEVEN / DRURY DAYNA	5277 SHERKSTON ROAD	270302001829400	829400	0.401	0.4015		\$166.68		\$167		\$166.68
	ROWLAND SHAWN	5297 SHERKSTON ROAD	270302001829500	829500	11.885	11.8873		\$4,235.22		\$4,235		\$4,235.22



Farm	Owner	Legal_Txt	Roll No	ARN	Area	Area in Drain	Sect. 22	Section 23	Sect. 24	Total	Allowances	Net	
				ABBREV									
	GRANT STEVEN CRAIG	5321 SHERKSTON ROAD	270302001829700	829700	3.377	3.3779		\$1,404.14		\$1,404		\$1,404.14	
	BRETHREN IN CHRIST CHURCH	5348 SHERKSTON ROAD	270302001829800	829800	1.992	0.9189		\$382.00		\$382		\$382.00	
	WALL JACOB	5384 SHERKSTON ROAD	270302001829900	829900	0.564	0.1733		\$61.64		\$62		\$61.64	
	SCHINKEL BRUCE VICTOR C	5398 SHERKSTON ROAD	270302001830000	830000	0.369	0.0884		\$36.58		\$37		\$36.58	
	OSINGA MARK	5409 SHERKSTON ROAD	270302001830100	830100	2.247	2.2474		\$800.58		\$801		\$800.58	
	SERADA MARK	5365 SHERKSTON ROAD	270302001830200	830200	7.587	7.5883		\$2,703.53		\$2,704		\$2,703.53	
	VAN HOECKEL MAARTEN JOOST	184 HOLLOWAY BAY ROAD NORTH	270302001830300	830300	0.934	0.9346		\$388.65		\$389		\$388.65	
	ZUCCHET MICHAEL FRANK	170 HOLLOWAY BAY ROAD NORTH	270302001830400	830400	0.158	0.1579		\$65.68		\$66		\$65.68	
	BENNETT LAWRENCE WILLIAM	148 HOLLOWAY BAY ROAD NORTH	270302001830500	830500	0.644	0.6438		\$229.45		\$229		\$229.45	
	CULP JENNIFER ELIZABETH	124 HOLLOWAY BAY ROAD NORTH	270302001830600	830600	0.295	0.2951		\$105.11		\$105		\$105.11	
	MARACLE ELIZABETH GRACE	104 HOLLOWAY BAY ROAD NORTH	270302001830700	830700	0.138	0.1381		\$49.17		\$49		\$49.17	
	1784413 ONTARIO LTD	78 HOLLOWAY BAY ROAD NORTH	270302001830800	830800	0.672	0.6723		\$279.33		\$279		\$279.33	
	WARWICK DARBY ROYCE	5414 MICHENER ROAD	270302001830900	830900	0.510	0.5097		\$211.99		\$212		\$211.99	
	HARDY DEREK DENIS	5404 MICHENER ROAD	270302001831000	831000	0.522	0.5223		\$185.98		\$186		\$185.98	
	KUCY RODNEY ALLEN	5392 MICHENER ROAD	270302001831100	831100	0.371	0.3716		\$132.54		\$133		\$132.54	
F	BERNARD JAMES DOUGLAS	5378 MICHENER ROAD	270302001831200	831200	9.829	9.8312		\$3,502.68		\$3,503		\$3,502.68	
	HAGGERTY TIMOTHY ROGER	5354 MICHENER ROAD	270302001831201	831201	0.431	0.4311		\$153.56		\$154		\$153.56	
	GUENTHER PETER	5274 MICHENER ROAD	270302001831300	831300	0.479	0.4793		\$170.66		\$171		\$170.66	
											\$60,460		\$59,121
Roads													
City of Port Colborne													
Michener Rd From Pleasant Beach Rd To Hollowway Bay Rd South		City of Port Colborne				0.6698		\$715.93		\$716			
Sherkston Rd From Pleasant Beach Rd To Holloway Bay Rd N		City of Port Colborne				0.2392		\$255.67		\$256			
											\$972		
Town of Fort Erie													
Mathews Road North From Michener Rd To Sherkston Rd		Town of Fort Erie				0.4867		\$231.21		\$231			
Michener Rd From Holloway Bay Rd South To Point Abino Rd		Town of Fort Erie				1.4477		\$1,547.40		\$1,547			
Holloway Bay Rd From Watershed To Michener Rd		Town of Fort Erie				1.3732		\$1,467.77		\$1,468			
Holloway Bay Road North From Michener Rd To Sherkston Rd		Town of Fort Erie				2.1285		\$2,275.09		\$2,275			
Sherkston Rd From Mathews Rd. N To Holloway Bay Rd North		Town of Fort Erie				1.2239		\$1,308.19		\$1,308			
Unopened Road Allowance From Holloway Bay Rd. To Mathews Rd		Town of Fort Erie				0.2774		\$131.78		\$132			
											\$6,961		
\$7,933													

Section 26 - Special Assessments		
Regional Municipality of Niagara		\$0.00
MINISTRY OF TRANSPORTATION ONTARIO		\$0.00
City of Port Colborne		\$0.00
Town of Fort Erie		\$0.00
Utilities - Enbridge		\$0.00
Utilities - other		
		\$0
Haggerty Branch Drain		
Total Assessed:		\$68,393
Notes:		
1. The above lands marked "F" are currently classified as agricultural according to the OMAFRA and are therefore entitled to a 1/3 grant.		
2. Section 21 of the Drainage Act, RSO 1990 requires that assessments be shown for each parcel of land and road affected. The affected parcels of land are identified using the		
3. The value of the assessments identified in this schedule are estimates only, and should not be considered final.		



Table 6 East Branch Drain Assessment Summary

East Branch Drain

Farm As 'F'	Owner	Legal_Txt	Roll No	ARN ABBREV	Area Ha	Area in Drain Ha	Sect. 22	Section 23	Sect. 24	Total Assessed	Allowances	Net
Town of Fort Erie												
	OWNER1	LOCATION	ARN		PA_area							
	NIAGARA PENINSULA	0-9990 WILDWOOD AVENUE	270302001814800	814800	20.693	0.6676		\$658		\$658		\$658.40
	DRULLARD DAVID W	0-9991 POINT ABINO ROAD SOUTH	270302001814900	814900	1.492	0.1476		\$146		\$146		\$145.57
	WILDWOOD PROPERTIES INC	0-9992 POINT ABINO ROAD SOUTH	270302001815000	815000	3.401	0.3384		\$334		\$334		\$333.74
	FLYNN GREGORY JAMES	421 POINT ABINO ROAD SOUTH	270302001815100	815100	1.353	0.1133		\$112		\$112		\$111.74
	WARD DANIEL F	413 POINT ABINO ROAD SOUTH	270302001815200	815200	2.741	0.2382		\$235		\$235		\$234.92
	ASIP HOLDINGS INC	393 POINT ABINO ROAD SOUTH	270302001815300	815300	11.596	1.1522	\$589	\$1,136		\$1,725		\$1,724.82
	1254345 ONTARIO INC	371 POINT ABINO ROAD SOUTH	270302001815400	815400	14.954	1.491	\$153	\$1,470		\$1,623		\$1,623.45
	357 POINT ABINO ROAD INC	357 POINT ABINO ROAD SOUTH	270302001815500	815500	1.866	0.1838		\$181		\$181		\$181.27
	STARCK COTTAGE LLC	349 POINT ABINO ROAD SOUTH	270302001815600	815600	1.100	0.1084		\$107		\$107		\$106.91
	PAGE DONALD STEWART	329 POINT ABINO ROAD SOUTH	270302001815800	815800	14.795	5.9736		\$5,891		\$5,891		\$5,891.28
	WILDWOOD PROPERTIES INC	4882 WILDWOOD AVENUE	270302001820900	820900	1.226	0.1205		\$119		\$119		\$118.84
	ROYAL ROBERT JAMES	4894 WILDWOOD AVENUE	270302001821000	821000	1.226	0.1209		\$119		\$119		\$119.23
	WEINERT DIANNE LOGAN	0-10060 WILDWOOD AVENUE	270302001821100	821100	1.226	0.1206		\$119		\$119		\$118.94
	CYR RUSSELL NORMAN	0-10061 WILDWOOD AVENUE	270302001821200	821200	1.226	0.1203		\$119		\$119		\$118.64
	CYR RUSSELL NORMAN	4920 WILDWOOD AVENUE	270302001821300	821300	1.226	0.12		\$118		\$118		\$118.35
	CYR RUSSELL NORMAN	0-10063 WILDWOOD AVENUE	270302001821400	821400	1.226	0.1198		\$118		\$118		\$118.15
	FIJAVZ BORIS	0-10075 POINT ABINO ROAD SOUTH	270302001822710	822710	52.870	5.2879	\$1,430	\$5,215		\$6,645		\$6,645.03
												\$18,369

Roads

City of Port Colborne

No CofPC roads

Town of Fort Erie

Blind Line From To	Town of Fort Erie	1000001	0	0	0.2934	\$0	\$385.81		\$386	\$0	\$385.81
											\$386

Section 26 - Special Assessments			
Regional Municipality of Niagara		\$0	\$0.00
MINISTRY OF TRANSPORTATION ONTARIO		\$0	\$0.00
City of Port Colborne		\$0	\$0.00
Town of Fort Erie		\$0	\$0.00
Utilities - Enbridge		\$0	\$0.00
Utilities - other			
		\$0	\$0.00
East Branch Drain			
Total Assessed:			\$18,755.08
Notes:			
1. The above lands marked "F" are currently classified as agricultural according to the OMAFRA and are therefore entitled to a 1/3 grant.			
2. Section 21 of the Drainage Act, RSO 1990 requires that assessments be shown for each parcel of land and road affected. The affected parcels of land are identified using the roll number received from the City. For convenience only, the owners' names are shown by the last revised assessment roll.			
3. The value of the assessments identified in this schedule are estimates only, and should not be considered final.			



## 7 Point Abino Drain Report Conclusions

This report has identified a series of drain improvements, including maintenance, to ensure suitable channel design flows are achieved.

The following are summary descriptions of the planned improvements:

1. The existing Point Abino Outlet requires replacement based on the structural assessment completed by inspection. The existing 84m twin concrete box culvert is to be replaced by a single Point Abino Rd S culvert consisting of precast concrete box segments 3000x1500 of a total length of 14m, with the remainder of the 24m Point Abino Rd S allowance converted to a trapezoidal open channel cross-section using precast concrete blocks. The Point Abino Rd S crossing is wholly paid for by the Town of Fort Erie; however, the replacement of the existing flap gate is assessed to the watershed.
2. Two proposed access culvert crossings, a 3000x1500 – 4m box culvert and a triple 1200 CSP – 6m with inlet grate, are located near the existing outlet and costs are shared 12% to the benefitting landowner and 88% to the watershed.
3. A culvert is to be reconstructed for a wider access lane to 341 Pleasant Beach Rd, Roll No. 271104000108500 and those costs are shared 50% to the benefitting landowner and 50% to the Point Abino watershed.
4. A culvert is to be replaced for private access to 226 Holloway Bay Rd, Roll No. 271104000102800 and those costs are shared 50% to the benefitting landowner and 50% to the Haggerty Branch Drain watershed.
5. Proposed Haggerty Branch maintenance from station 20+010 to 20+960, 950m of clearing and excavation to design grade.
6. The former Branch #1, referred to in this report as the Haggerty Branch Drain, is proposed to be abandoned as a municipal drain north of station 20+960. This portion of the Drain was introduced in the previous report but removed from construction.
7. The portion of the Drain that once was the original Point Abino Drain outlet, is proposed as the Point Abino Drain East Branch. From the review of documents covering the history of the Drain, it would appear that this portion of the Drain was not formerly abandoned by a report. The proposed East Branch Drain It extends from the existing confluence as the outlet on the Point Abino Drain at station 1+902 for 457m west of the Point Abino Rd S allowance property line. The East Branch does not include the Point Abino Rd S runoff and serves the properties adjacent to the Drain. The proposed Drain cross-section is a two-stage channel of low and flood flow banks so that the flood flow channel can be mowed.
8. Point Abino Drain maintenance in the City of Port Colborne from station 3+345 to 4+719, 1,374m of clearing and excavation to design grade. Includes the removal of existing pipes from the end of the drain.
9. Point Abino Drain spot maintenance in the Town of Fort Erie from station 0+225 to 3+345 is a program to remove tree falls and other flow obstructions.



The best method for access and performance is to be determined by the Drainage Superintendent.



**Appendix A:**  
**Drainage Design Drawings;**  
**Plans, Profiles**



# POINT ABINO MUNICIPAL DRAIN

CITY OF PORT COLBORNE AND THE TOWN OF FORT ERIE

APRIL 9, 2025

## DRAWING INDEX

DWG I.D.	DWG Title
DWG-001	POINT ABINO DRAIN WATERSHED PLAN OF CONSTRUCTION
<del>DWG-002</del>	<del>OVERALL WATERSHED PLAN - ENLARGEMENT</del>
DWG-003	POINT ABINO DRAIN - OVERALL PROFILE
DWG-004	POINT ABINO DRAIN PROFILE 1 OF 3
DWG-005	POINT ABINO DRAIN PROFILE 2 OF 3
DWG-006	POINT ABINO DRAIN PROFILE 3 OF 3
DWG-007	HAGGERTY BRANCH DRAIN PROFILE
DWG-008	EAST BRANCH PLAN AND PROFILE
DWG-009	POINT ABINO DRAIN PLAN/PROFILE - OUTLET CULVERT
DWG-010	PAM-CS-04 TRIPLE CULVERT REPLACEMENT WITH HEADWALL -DETAILS
DWG-011	POINT ABINO DRAIN OUTLET CONTROL STRUCTURE - DETAILS
DWG-GD01	GENERAL DETAILS
DWG-GD02	GENERAL NOTES
DWG-CS01	POINT ABINO CONSTRUCTION STAGING - EXISTING AND PROPOSED
DWG-CS02	POINT ABINO CONSTRUCTION STAGING - STAGES 1, 2A AND 2B
DWG-CS03	POINT ABINO CONSTRUCTION STAGING -STAGES 3A, 3B AND 3C

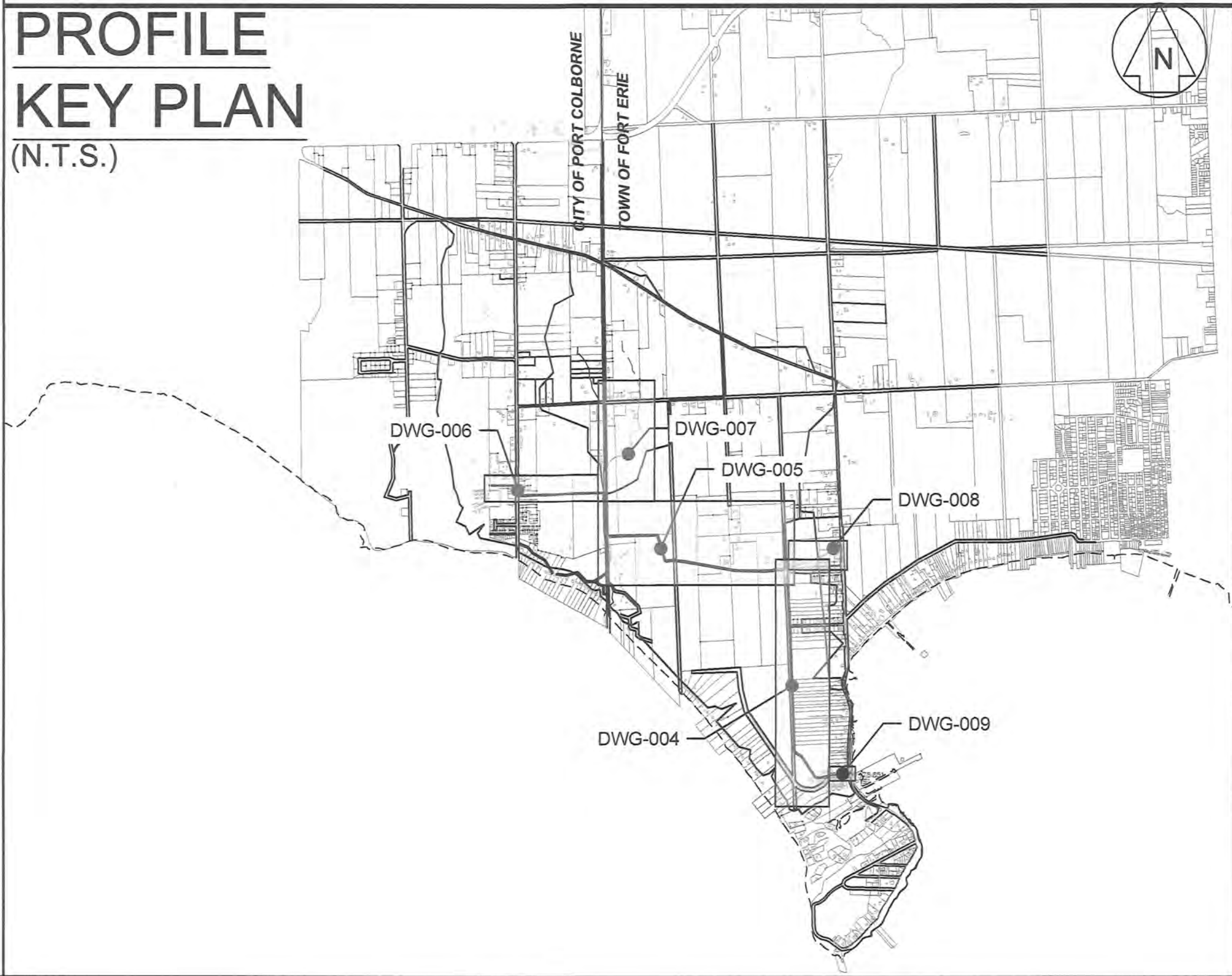
## LOCATION PLAN

(N.T.S.)



## PROFILE KEY PLAN

(N.T.S.)

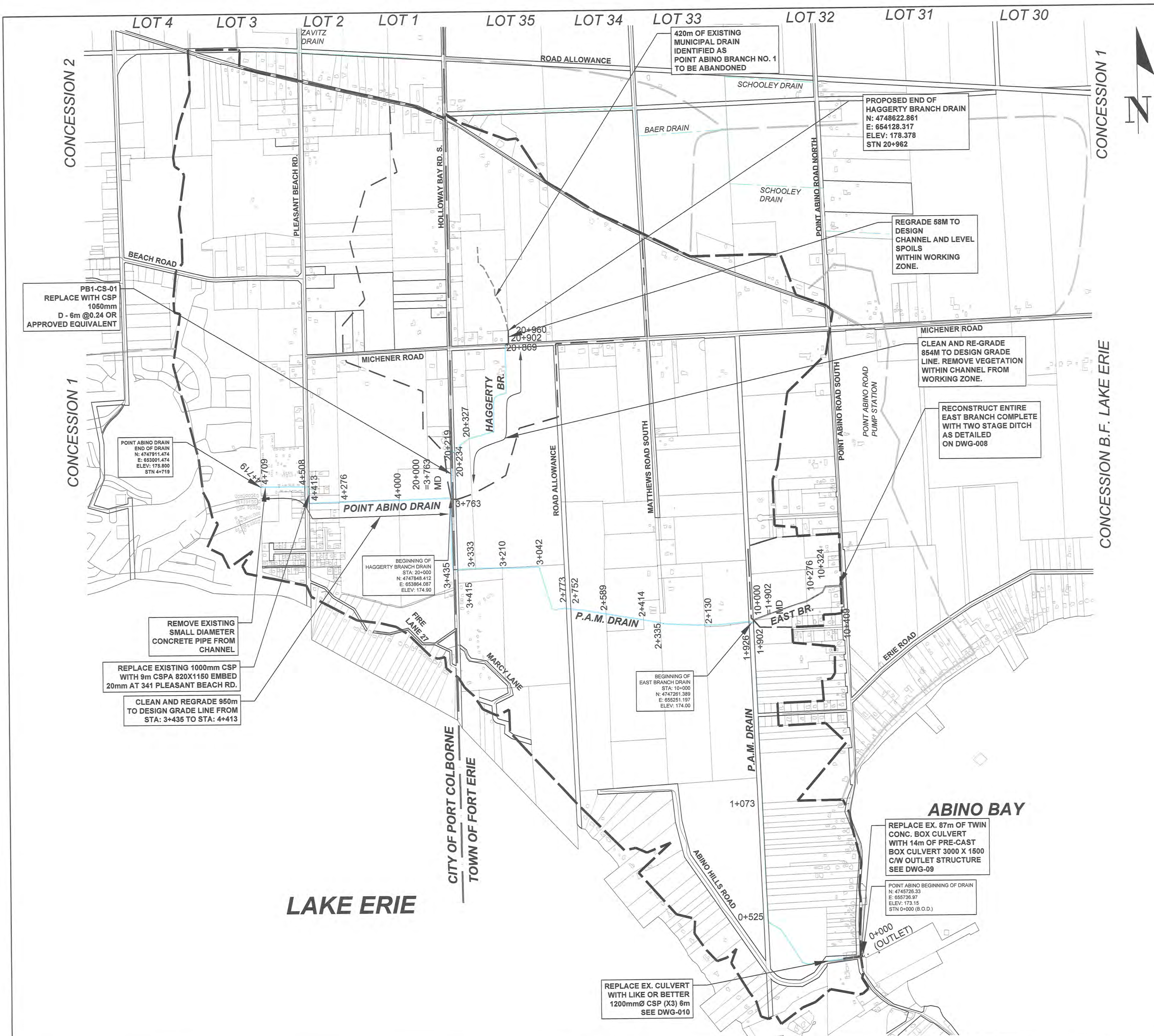


BYLAW APPOINTMENT BY CITY OF PORT COLBORNE  
6729/93/19

DRAINAGE ENGINEER: PAUL C. MARSH, P. ENG  
ISSUED WITH POINT ABINO DRAIN REPORT DATED:  
APRIL 9, 2025







LEGEND

- PROJECT DRAIN CENTRELINE
- ADJACENT DRAIN CENTRELINE
- WATERSHED BOUNDARY
- INTERIOR WATERSHED LINES
- ADJACENT WATERSHED BOUNDARIES
- 1983 CLARKE REPORT WATERSHED
- ROAD/STREET
- ROAD ALLOWANCE LIMITS
- PROPERTY ASSESSMENT ROLL NUMBERS
- LIMITS OF EX. HAGGERTY BRANCH TO BE ABANDONED

NOTES

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ISSUED FOR REPORT	01	2025/04/09	PM
ISSUED FOR/REVISIONS	No.	YYYY/MM/DD	BY

CONTROL POINTS:

CONSULTANT:



DESIGN BY: P.M.  
DRAWN BY: A.J.L/P.M.  
CHECKED BY: P.M.  
APPROVED BY: P.M.  
DATE: DEC 20, 2024

STAMP:



POINT ABINO DRAIN

WATERSHED PLAN OF  
CONSTRUCTION

HOR. SCALE - F.T.P. VERT. SCALE - N/A

STN: N/A TO: N/A

PROJECT NO: 19-9997

DWG NO: DWG-001







LEGEND

- EX. WATER LEVEL  
PROPOSED DRAIN BOTTOM  
EX. DITCH BOTTOM  
EX. TOP OF BANK

NOTES

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STAMP:



POINT ABINO DRAIN

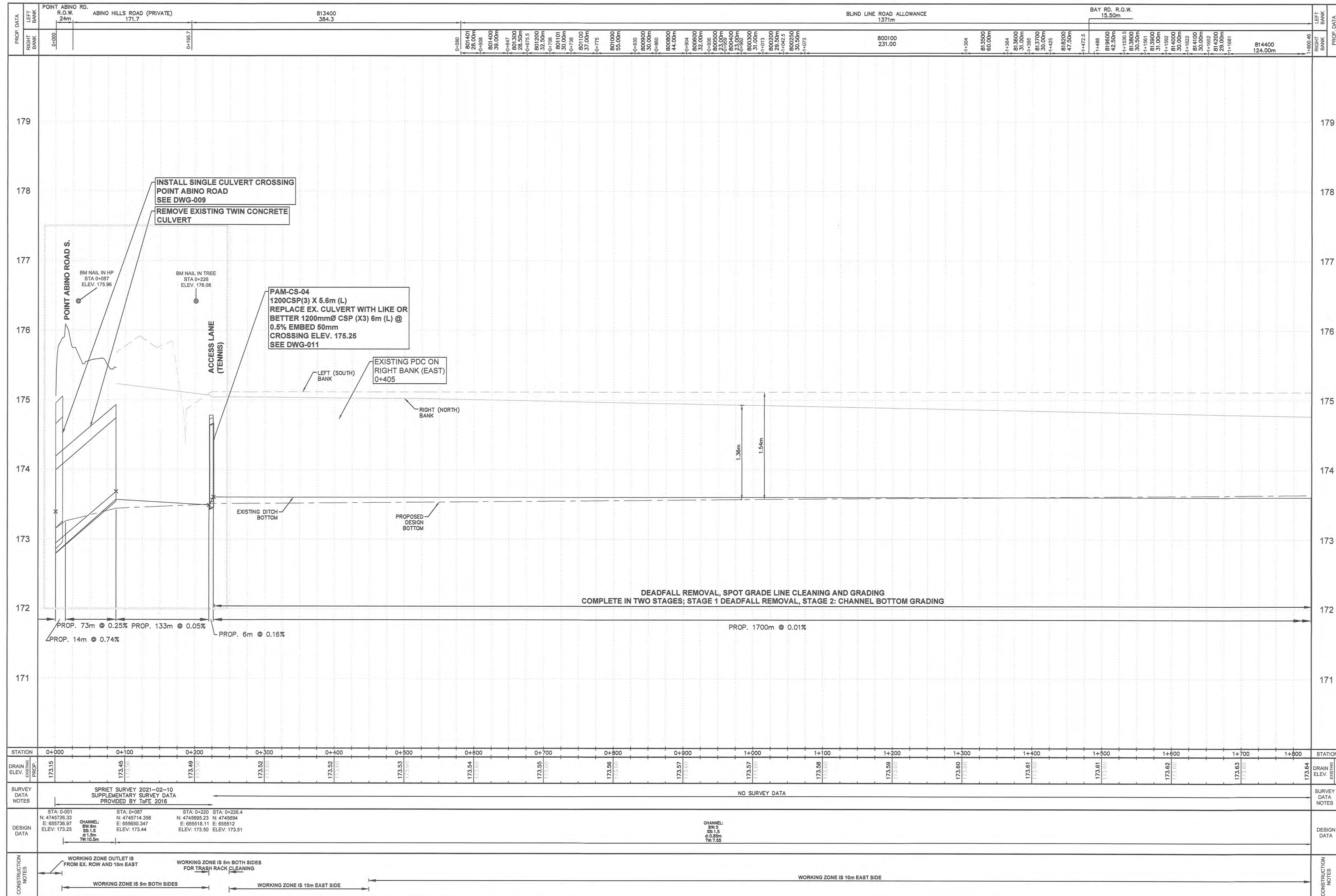
POINT ABINO DRAIN  
PROFILE 1 OF 3

HOR. SCALE - 1:2500 VERT. SCALE - 1:25

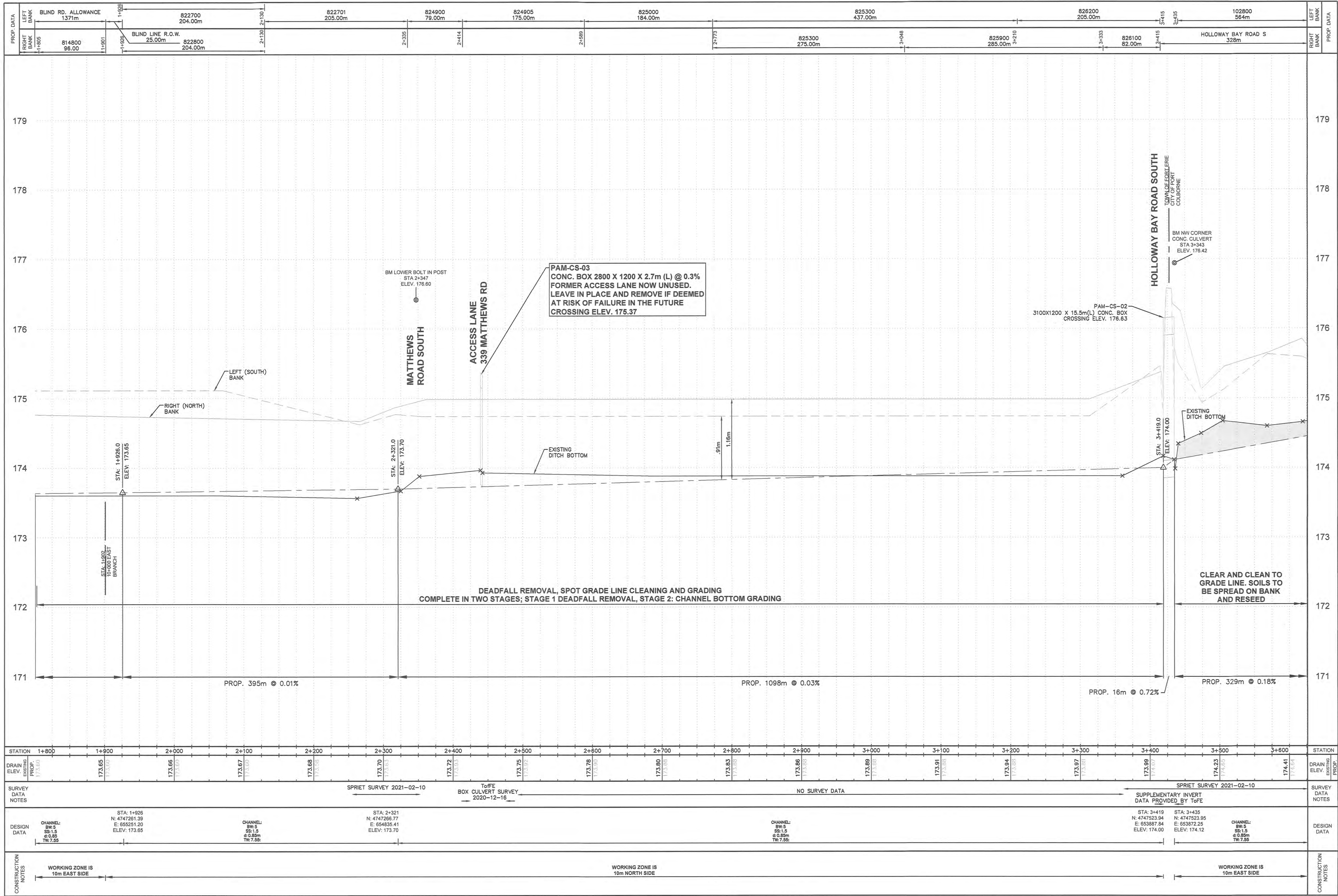
STN: 0+000 TO: 1+800

PROJECT NO: 19-9997

DWG NO: DWG-004







LEGEND

- EX. WATER LEVEL
- PROPOSED DRAIN BOTTOM
- EX. DITCH BOTTOM
- EX. TOP OF BANK

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ISSUED FOR REVISIONS	No.	YYYY/MM/DD	BY

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CHECKED BY: P.M.

APPROVED BY: P.M.

DATE: DEC 20, 2024

STAMP:



POINT ABINO DRAIN

POINT ABINO DRAIN  
PROFILE 2 OF 3

HOR. SCALE - 1:2500 VERT. SCALE - 1:25

STN: 1+800 TO: 3+600

PROJECT NO: 19-9997

DWG NO: DWG-005



LEGEND

- EX. WATER LEVEL  
EX. DESIGN BOTTOM  
EX. DITCH BOTTOM  
EX. TOP OF BANK

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CHECKED BY: P.M.

APPROVED BY: P.M.

DATE: DEC 20, 2024

STAMP:



POINT ABINO DRAIN

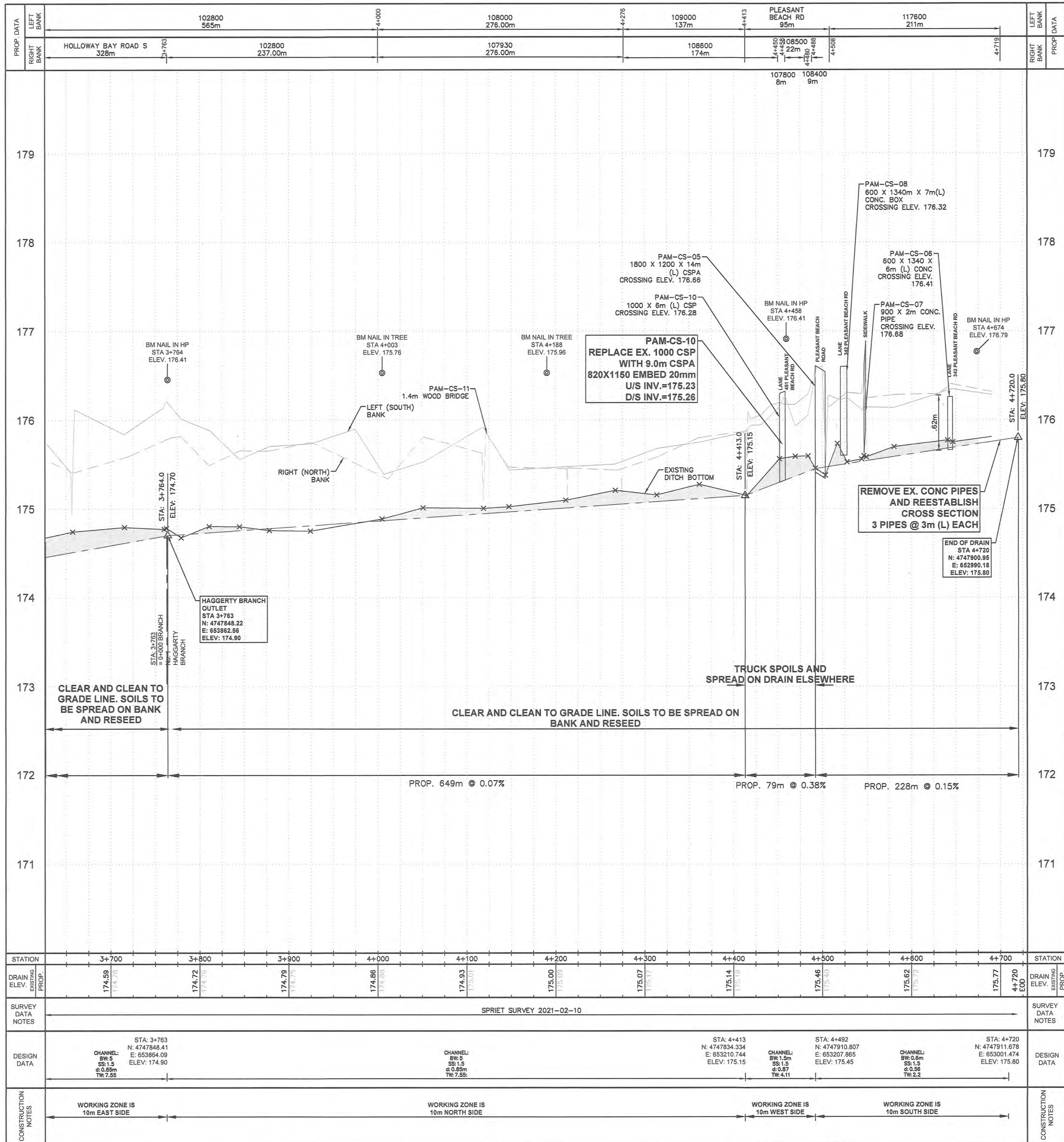
POINT ABINO DRAIN  
PROFILE 3 OF 3

HOR. SCALE - 1:2500 VERT. SCALE - 1:25

STN: 3+600 TO: 4+700

PROJECT NO: 19-9997

DWG NO: DWG-006





LEGEND

EX. WATER LEVEL  
EX. DESIGN BOTTOM  
EX. DITCH BOTTOM  
EX. TOP OF BANK

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CHECKED BY: P.M.

APPROVED BY: P.M.

DATE: DEC 20, 2024



POINT ABINO DRAIN

HAGGERTY BRANCH DRAIN  
PROFILE

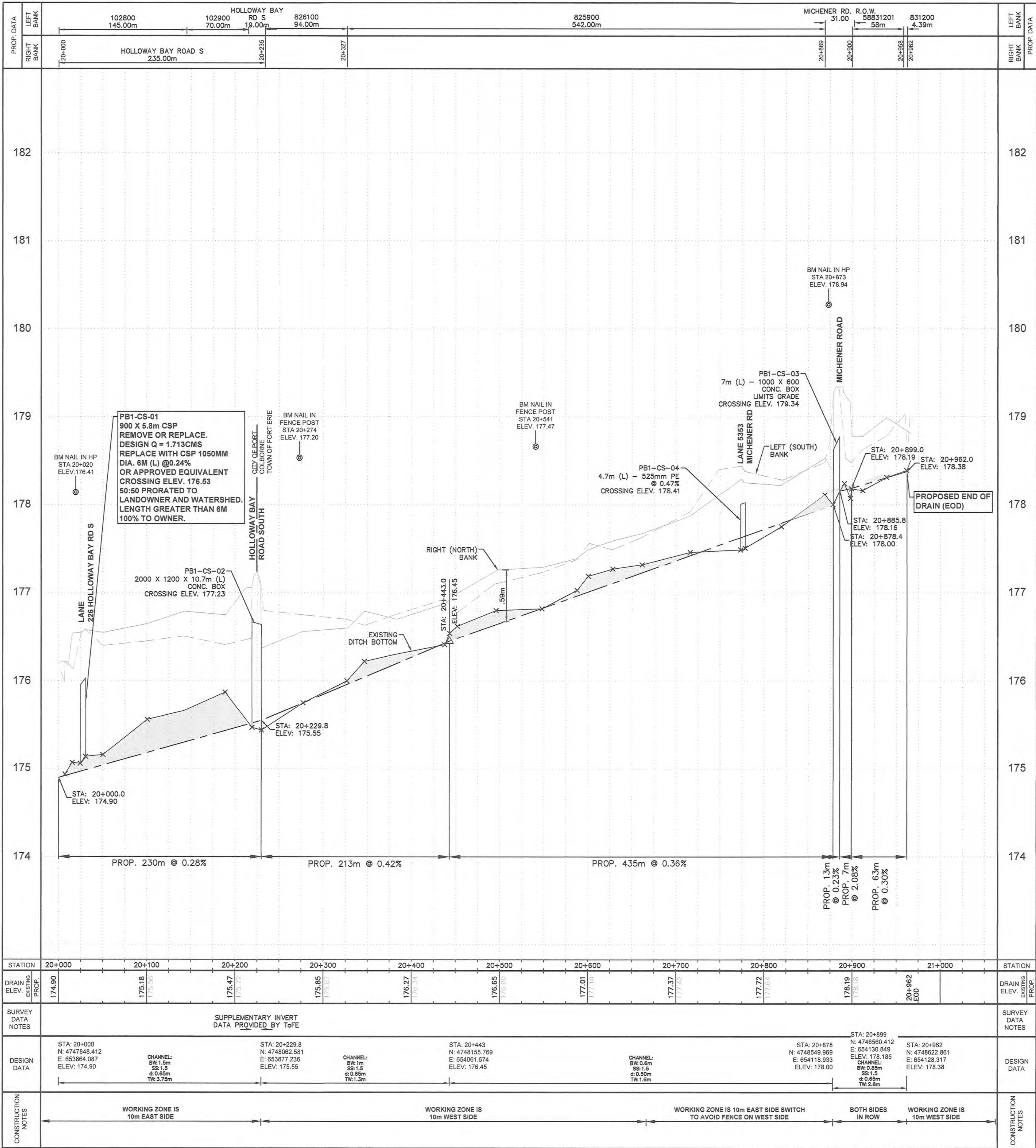
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STN: 20+000 TO: 21+000

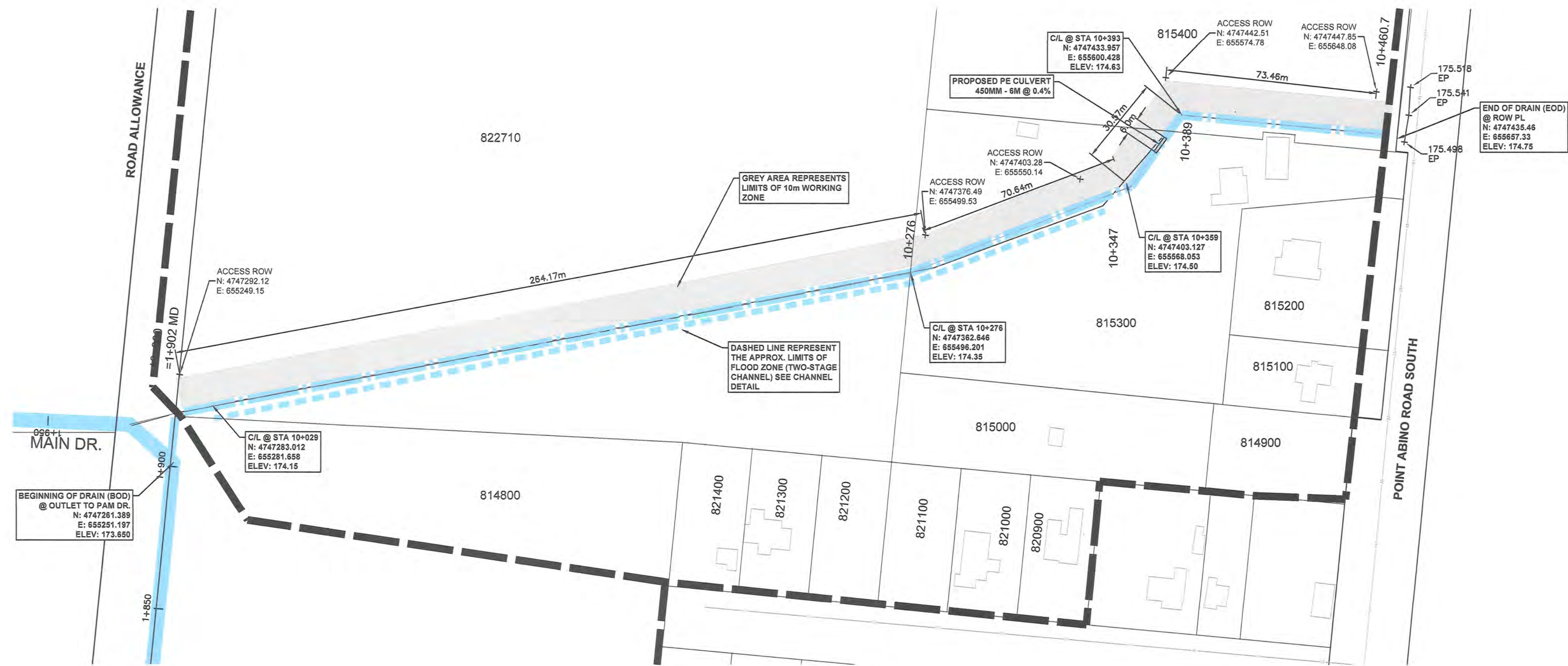
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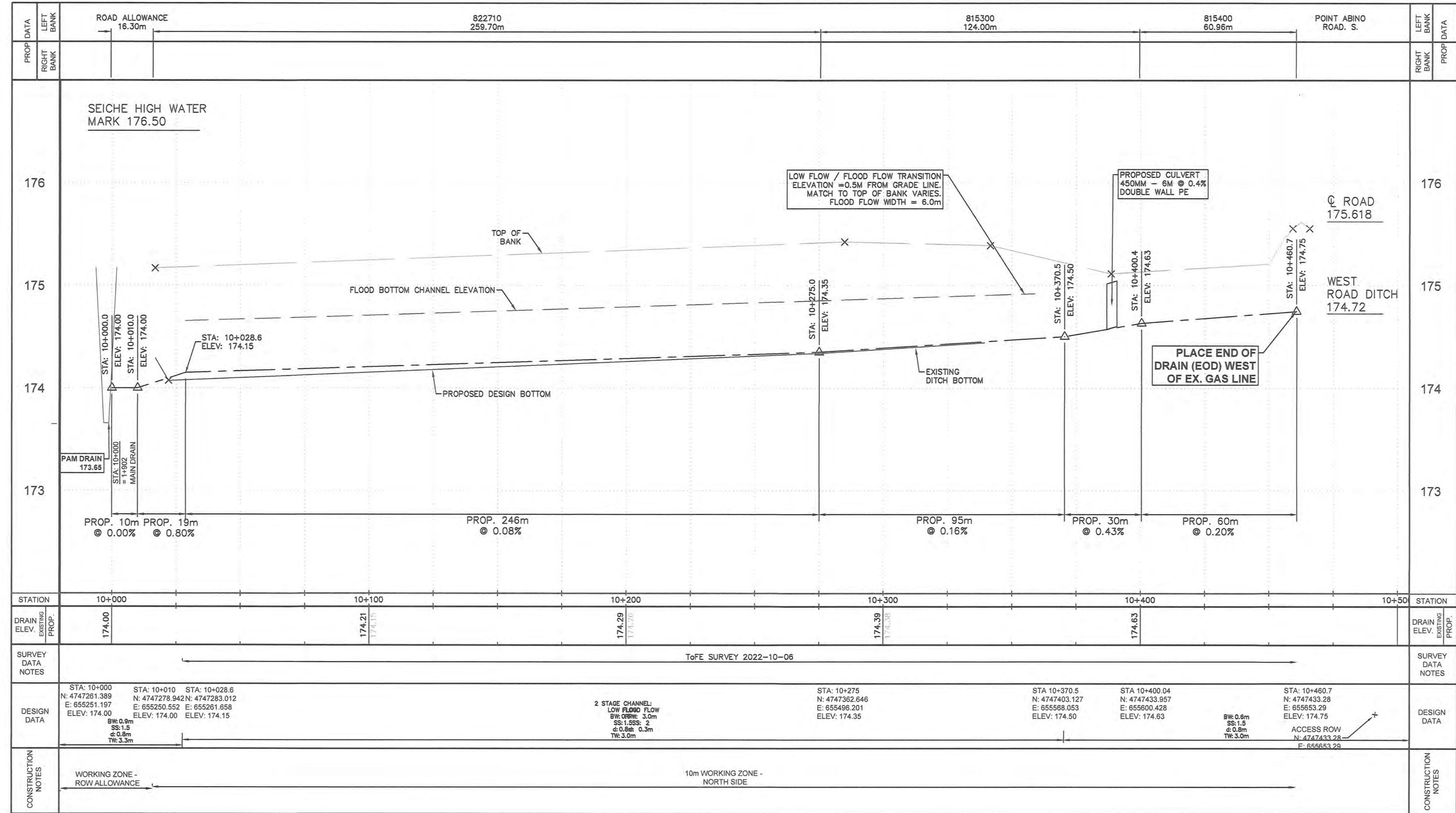
HAGGERTY BRANCH DRAIN



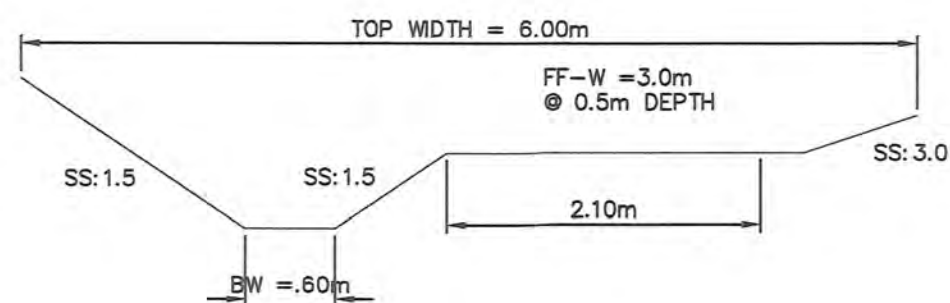




EAST BRANCH



WORKING ZONE:  
10m



LOW FLOW/FLOOD FLOW  
CHANNEL DETAIL - EAST  
BRANCH  
SCALE: NTS

LEGEND

- EX. WATER LEVEL
- EX. DESIGN BOTTOM
- EX. DITCH BOTTOM
- EX. TOP OF BANK

NOTES

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CHECKED BY: P.M.

APPROVED BY: P.M.

DATE: DEC 20, 2024

STAMP:



POINT ABINO DRAIN

EAST BRANCH PLAN AND  
PROFILE

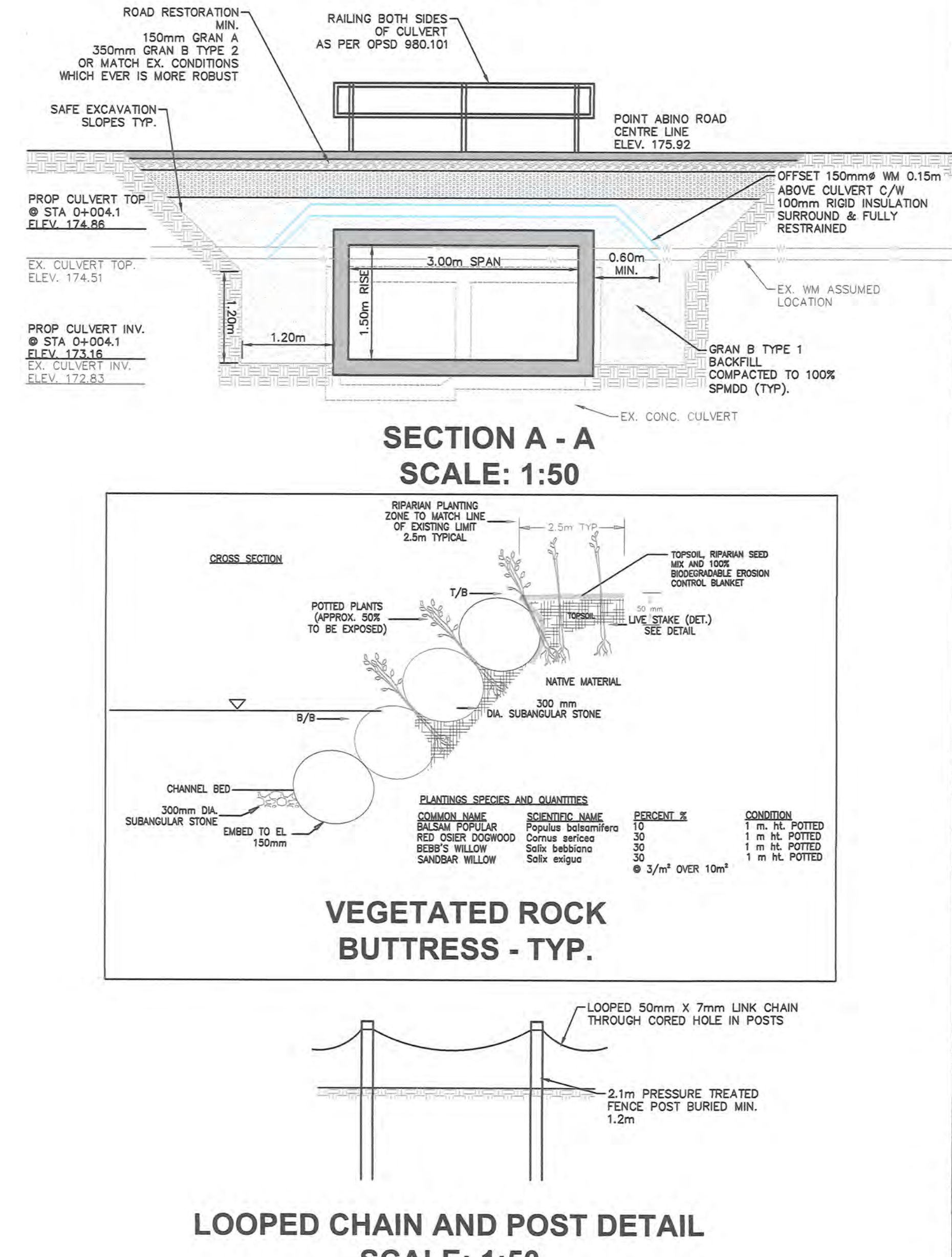
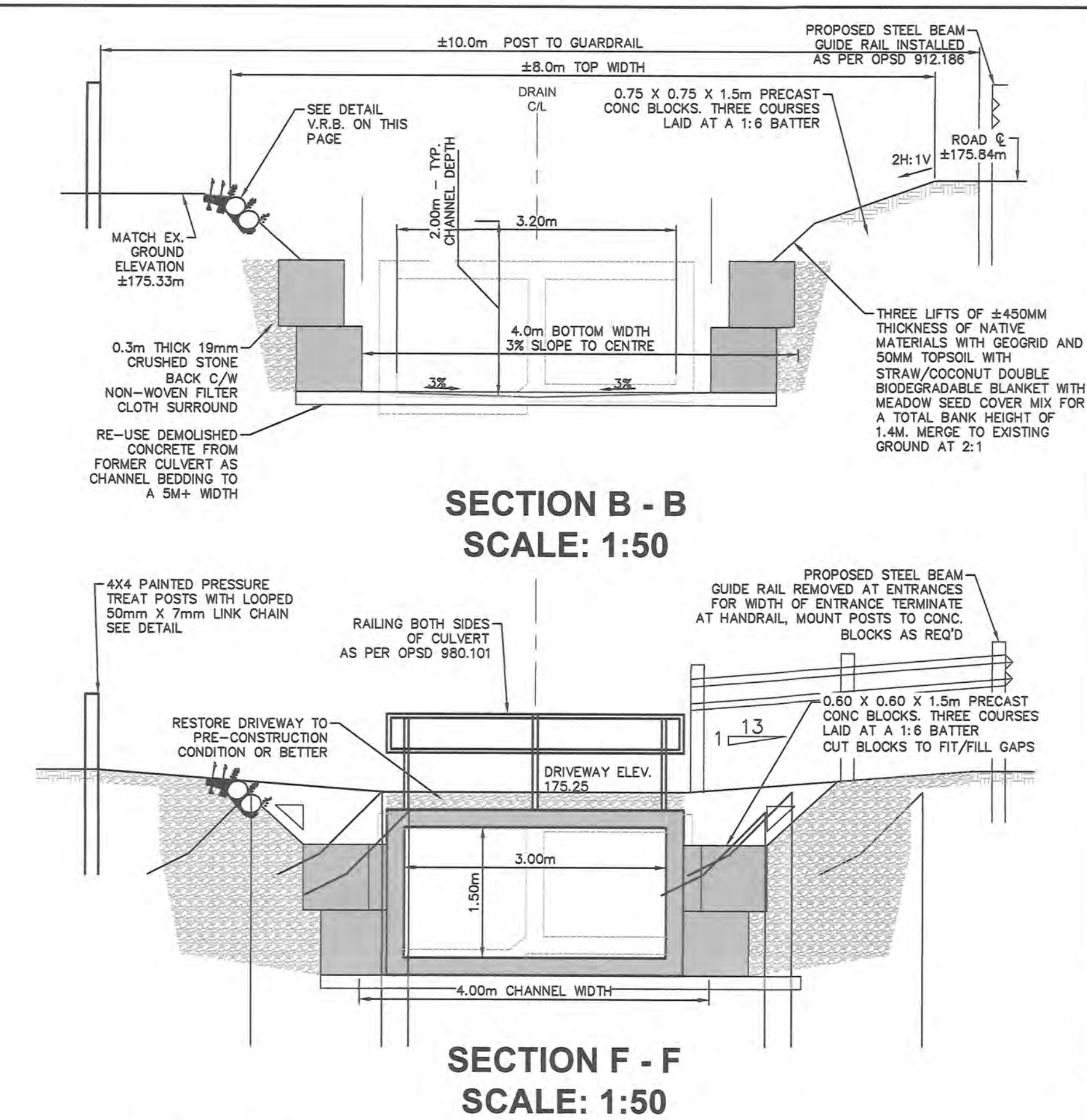
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PROJECT NO: 19-9997

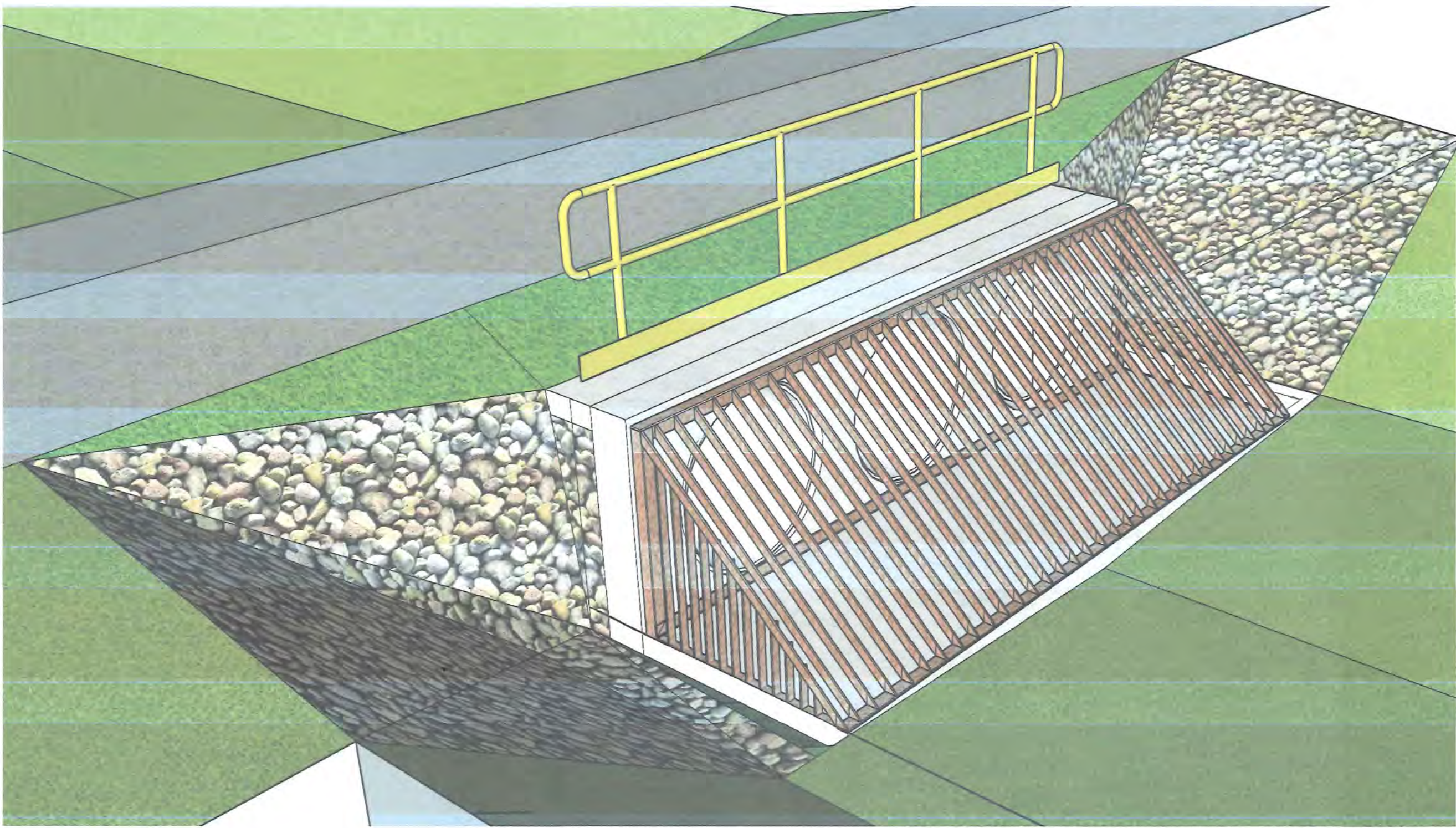
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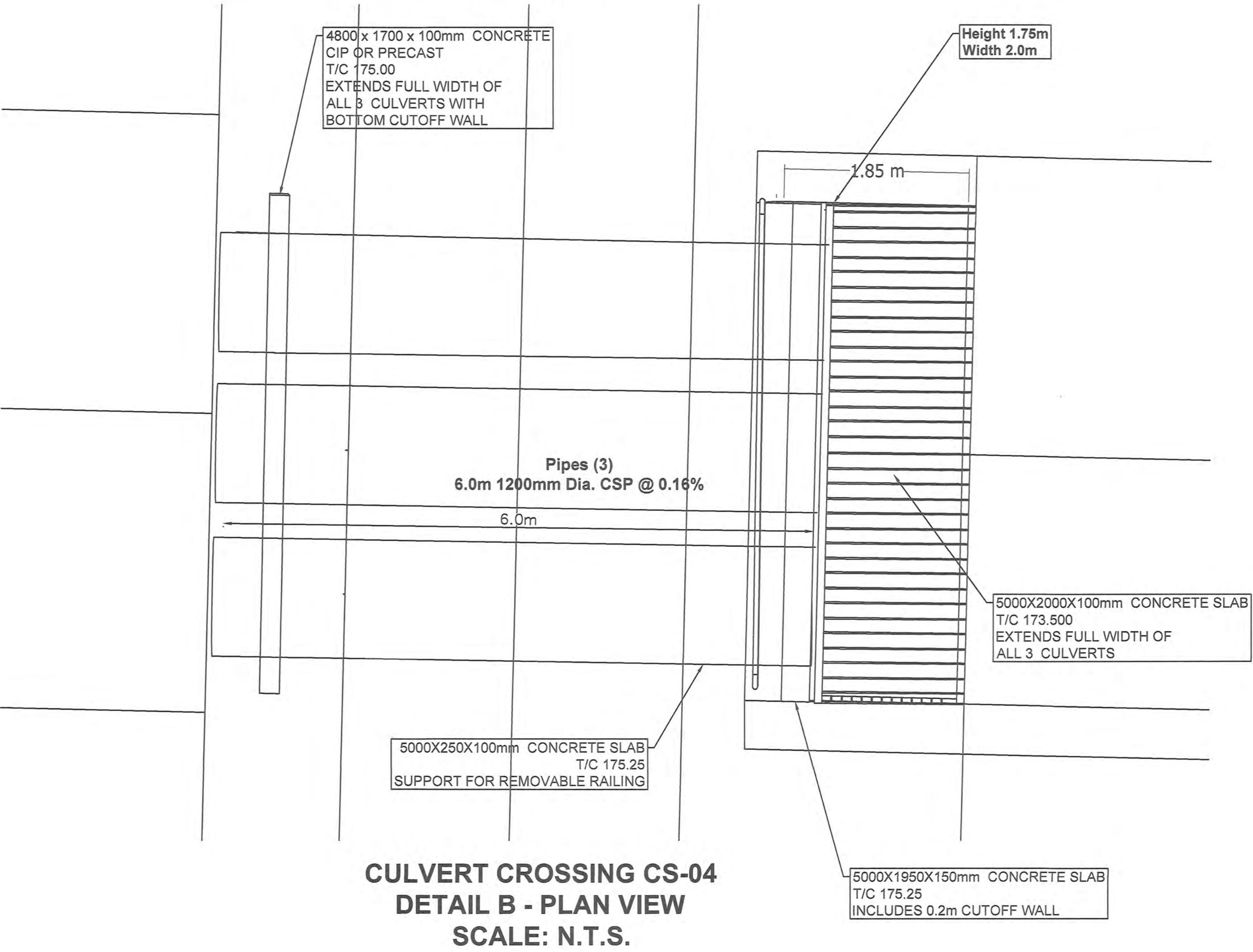


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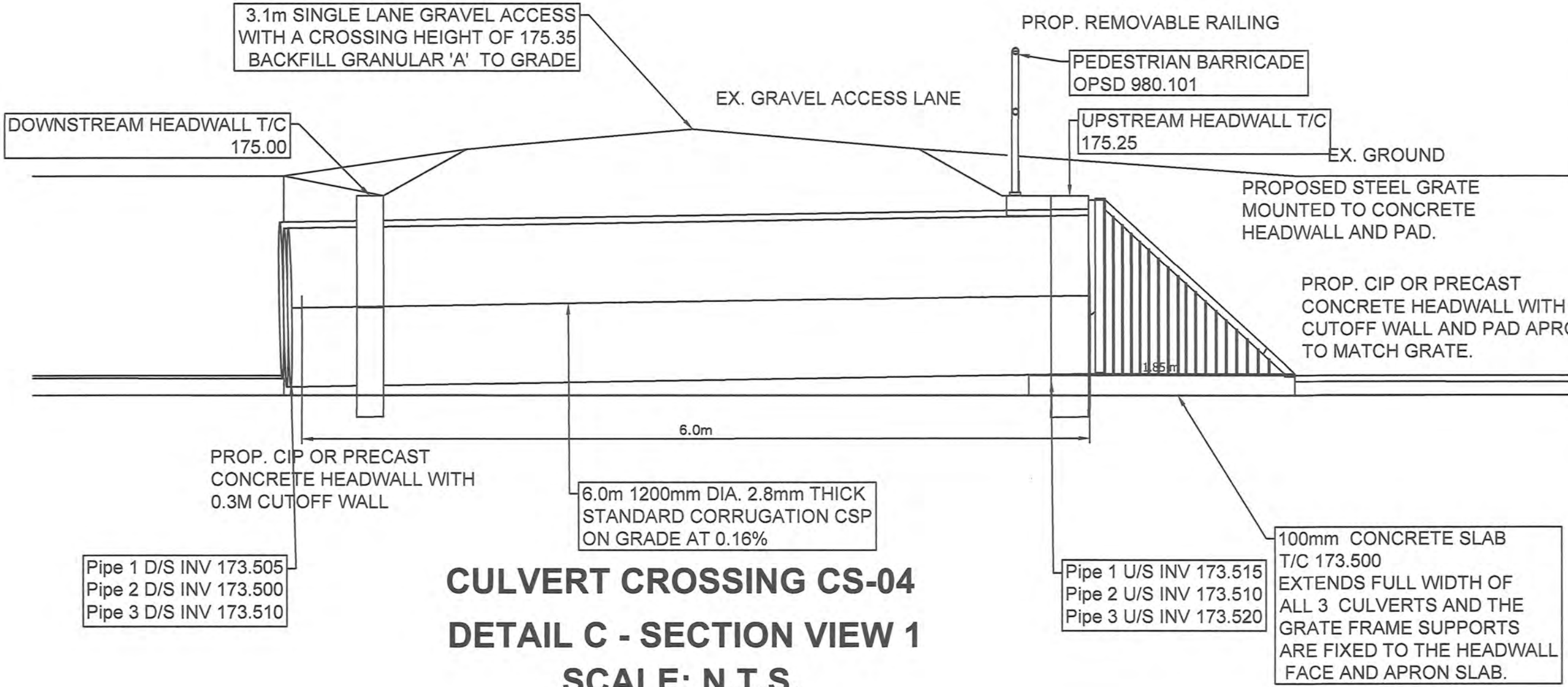
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DETAIL A - PERSPECTIVE VIEW  
SCALE: N.T.S.



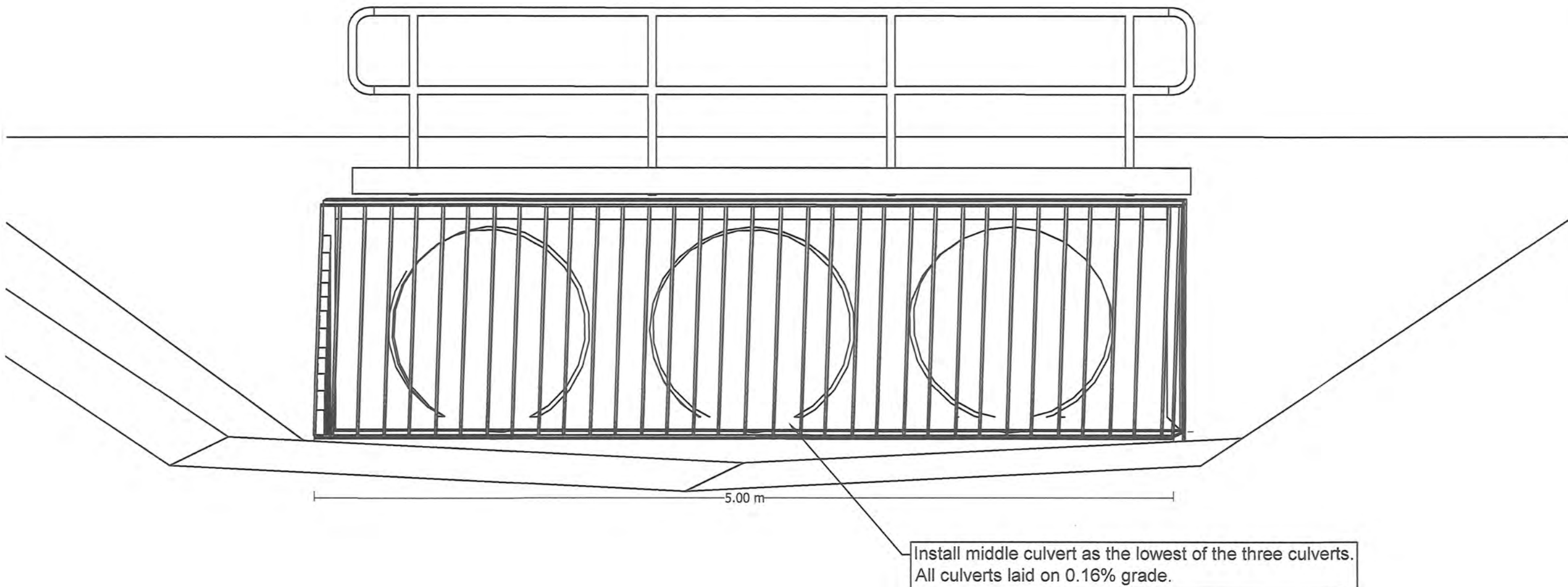
CULVERT CROSSING CS-04  
DETAIL B - PLAN VIEW  
SCALE: N.T.S.

PAM-CS-04 TENNIS COURTS TRIPLE CULVERT ACCESS LANE

- A. CSP IS TO BE STANDARD 6M LENGTH. CORRUGATED STEEL PIPE (CSP) 68MM X 13MM CORRUGATED WITH 2.8MM THICKNESS. OTHER CULVERT MATERIALS ARE ACCEPTABLE THROUGH THE SUBMISSION FOR EQUIVALENCY PROCESS USING A SHOP DRAWING.
- B. THREE STANDARD CSP SIZED AT 1200MM DIAMETER ACHIEVING A 4 CMS FLOW INLET CONDITION WITH 0.3M FREE BOARD ON THE CROSSING HEIGHT.
- C. THE HEADWALL ON THE UPSTREAM SIDE OF THE CULVERTS IS REQUIRED AS PER OPSD 804.040. DIMENSIONS 'B' AND 'C' ARE MODIFIED TO 2000MM AND 2400MM RESPECTIVELY. PRECAST IS PREFERRED BUT ALTERNATE METHODS CAN BE CONSIDERED USING THE SHOP DRAWING SUBMITTAL PROCESS. UPSTREAM HEADWALL TO HAVE A FINISHED HEIGHT OF 175.25 ELEVATION.
- D. THE STEEL GRATE IS TO BE SUPPLIED FOR THE UPSTREAM HEADWALL. THE STEEL GRATE IS TO BE REMOVABLE. THE GRATE IS TO BE ATTACHED TO THE TOP OF THE HEADWALL 175.25 ELEVATION FITTING A HEIGHT OF 1.75M AND A BASE OF 2M WITH A LENGTH OF 2.66M OF VERTICAL INSTALL SLATS OF 0.313 X 1.500 MILD STEEL HOT ROLLED FLAT BAR. GRATE BAR SPACING IS TO BE NO GREATER THAN 100MM. THE GRATE IS SUPPLIED AS 3 SECTIONS THAT ARE REMOVABLE USING TWO LIFTING HOOKS, (ONE AT THE TOP AND ONE AT MIDPOINT BETWEEN THE TOP AND THE BOTTOM) FOR EACH GRATE. THE TWO END GRATES ARE TO HAVE SIDE BARS TO MATCH THE WING WALLS.
- E. THE HEADWALL ON THE DOWNSTREAM SIDE OF THE CULVERT IS REQUIRED AS PER OPSD 804.030 INSTALLED WITH A TOP HEIGHT OF 175.00. THERE IS NO GRATE REQUIRED ON THE DOWNSTREAM HEADWALL.
- F. CONSTRUCT WITH APPROVED GRAVEL MATERIALS AND PROVIDE A 3.1M WIDE GRANULAR 'A' SINGLE CROSSING LANE WITH A 100MM DEPTH AND GRADED WITH A 3% CROWN ON A MINIMUM 175.35M CROSSING HEIGHT GRADED TO MATCH THE ENTRANCE LOCATED ON POINT ABINO HILLS ROAD.
- G. RIP RAP CULVERT ENTRANCE BANKS. GRADE BANKS TO 1.5:1 SIDE SLOPE.



CULVERT CROSSING CS-04  
DETAIL C - SECTION VIEW 1  
SCALE: N.T.S.



CULVERT CROSSING CS-04  
DETAIL D - SECTION VIEW 2  
SCALE: N.T.S.

LEGEND

NOTES

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CONTROL POINTS: BENCHMARK: NAIL IN TREE pt. 104 N 4745675.094 E 655522.139 Elev. 176.082			

CONSULTANT:



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CHECKED BY: P.M.	
APPROVED BY: P.M.	
DATE: DEC 20, 2024	

POINT ABINO DRAIN	
PAM-CS-04 TRIPLE CULVERT REPLACEMENT WITH HEADWALL - DETAILS	
HOR. SCALE -	VERT. SCALE -
STN: -	TO:
PROJECT NO: 19-9997	
DWG NO: DWG-010	



ORIGIN BM: 999  
N: 4745725.300  
E: 655735.902  
ELEV: 175.045  
DESC: CUT CROSS TOP  
OF HEAD WALL

REF. BENCHMARK: 1859  
N: 4745711.383  
E: 655713.997  
ELEV: 175.841  
DESC: FH

ABINO HILLS RD.

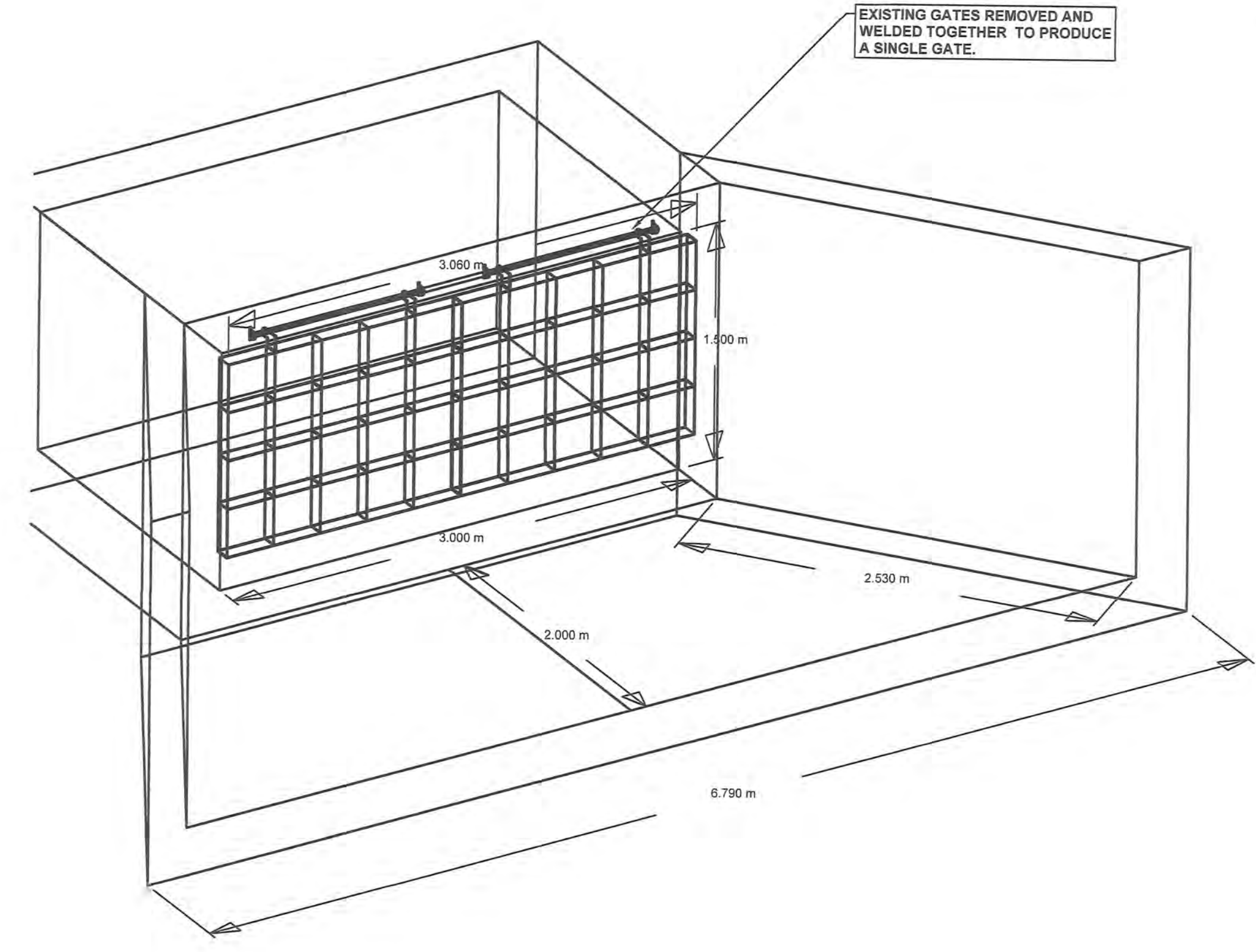
INSTALL STEEL GRATE ON UPSTREAM SIDE OF  
POINT ABINO RD CULVERT CROSSING.  
STEEL GRATE TO BE SUPPLIED AS A REMOVABLE  
GRATE. CONFIRM CONFIGURATION WITH SHOP  
DRAWING SUBMITTALS.  
GATE TO BE NOT LESS THAN 3.4m WIDE AND 1.7m  
TALL.  
GRATE BAR SPACING TO BE 100mm MAXIMUM.

PROPOSED OUTLET  
STRUCTURE WITH WING  
WALLS AND UNDERFLOW  
CUTOFF WALL.  
REMOVE EXISTING STEEL  
SWING GATES AND REMOUNT  
AS A SINGLE GATE ON  
PROPOSED 3000X1500  
PRECAST OUTLET.

ABINO  
BAY

POINT ABINO RD. S.

POINT ABINO DRAIN OUTLET  
DETAIL F- OUTLET PLAN VIEW  
SCALE: 1:250



OUTLET HEADWALL &  
FLAP GATE ELEVATION  
PERSPECTIVE VIEW  
SCALE: 1:25

PAM-CS-10  
PROPOSED POINT ABINO DRAIN OUTLET  
STRUCTURE WITH GATE

- A. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO COMMENCING CONSTRUCTION. ALL PRE-CAST CONCRETE TO MEET CPCI STRUCTURAL PRECAST CONCRETE, SECTION 03 41 00, SEPTEMBER 2023. CONCRETE MIXES: DESIGN TO CSA A23.4 INCLUDING SUBMISSIONS AND TESTING.
- B. THE CONTRACTOR SHALL COORDINATE WITH THE PRE-CAST CULVERT SUPPLIER TO ENSURE THAT FASTENERS FOR THE GATE ARE INSTALLED PRIOR TO THE PRE-CAST CULVERT SECTION BEING DELIVERED TO SITE.
- C. THE NEW GATE IS TO REUSE THE EXISTING GATES WITHOUT THE FRAMES BY JOINING THE GRID STEEL STRUCTURE TOGETHER AND EXTENDING TO THE REQUIRED HEIGHT TO MATCH THE PRE-CAST CULVERT. THE CONTRACTOR SHALL SUBMIT A WELDING SHOP DRAWING FOR REVIEW PRIOR TO GATE ASSEMBLY.
- D. THE OUTLET STRUCTURE CONSISTS OF THE FOLLOWING KEY ELEMENTS:  
D.1. PRE-CAST CULVERT SEGMENT 1.5M HIGH X 3.0M WIDE WITH PRE-CONFIGURED MOUNTING RECEIVERS FOR THE GATE.  
D.2. STEEL GATE TO PASSIVELY OPEN AND CLOSE BASED ON HEAD.  
D.3. WING WALLS AND AN OUTLET APRON 2M X 6.8M WITH A MINIMUM THICKNESS OF 250MM.  
D.4. A 750MM DEEP CUTOFF WALL TO MATCH BEARING SOIL OR ROCK.
- E. THE OUTLET APRON AND WING WALLS ARE TO BEAR ON SUITABLE SOIL-BEARING CAPACITY OR ROCK. NON-SHRINK BACKFILL MATERIAL ONLY. GROUT AS PER APPROVED SHOP DRAWINGS.
- F. ALL STEEL TO COMPLY WITH CSA G40.20-04, "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL". THIS STANDARD SETS OUT THE GENERAL REQUIREMENTS AND RELATED DEFINITIONS GOVERNING THE DELIVERY OF STRUCTURAL STEEL CONFORMING TO CSA G40.21. THESE REQUIREMENTS INCLUDE VARIATIONS IN DIMENSIONS, MARKING, REPAIR OF DEFECTS, AND METHODS AND FREQUENCY OF TESTING. NEW STEEL IS TO COMPLY WITH TYPE W WELDABLE STEEL 350W.
- G. RIP RAP STONE TO BE PLACED ON SIDE SLOPES WITH A 1.5:1 GRADE.

LEGEND

- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- WATER SERVICE
- NATURAL GAS LINE
- UNDERGROUND POWER LINE
- OVERHEAD POWER LINE
- UNDERGROUND FIBRE OPTIC LINE
- UNDERGROUND BELL LINE
- UNDERGROUND CABLE LINE
- DITCH/SWALE
- TOE OF SLOPE, TOP OF BANK
- FENCE
- EDGE OF GRAVEL
- CURB, DROPPED CURB
- EDGE OF PAVEMENT
- MAINTENANCE HOLE
- CLEAN OUT
- CATCH BASIN
- WATER VALVE
- CURB STOP
- HYDRANT
- GUY WIRE, UTILITY POLE
- LIGHT STANDARD
- TRAFFIC SIGNAL
- SIGN
- GAS VALVE
- UTILITY PEDESTAL
- TRANSFORMER
- SURVEY BARS
- CONIFEROUS, DECIDUOUS TREE
- SHRUB
- EDGE OF BUSH/DRIP LINE

NOTES

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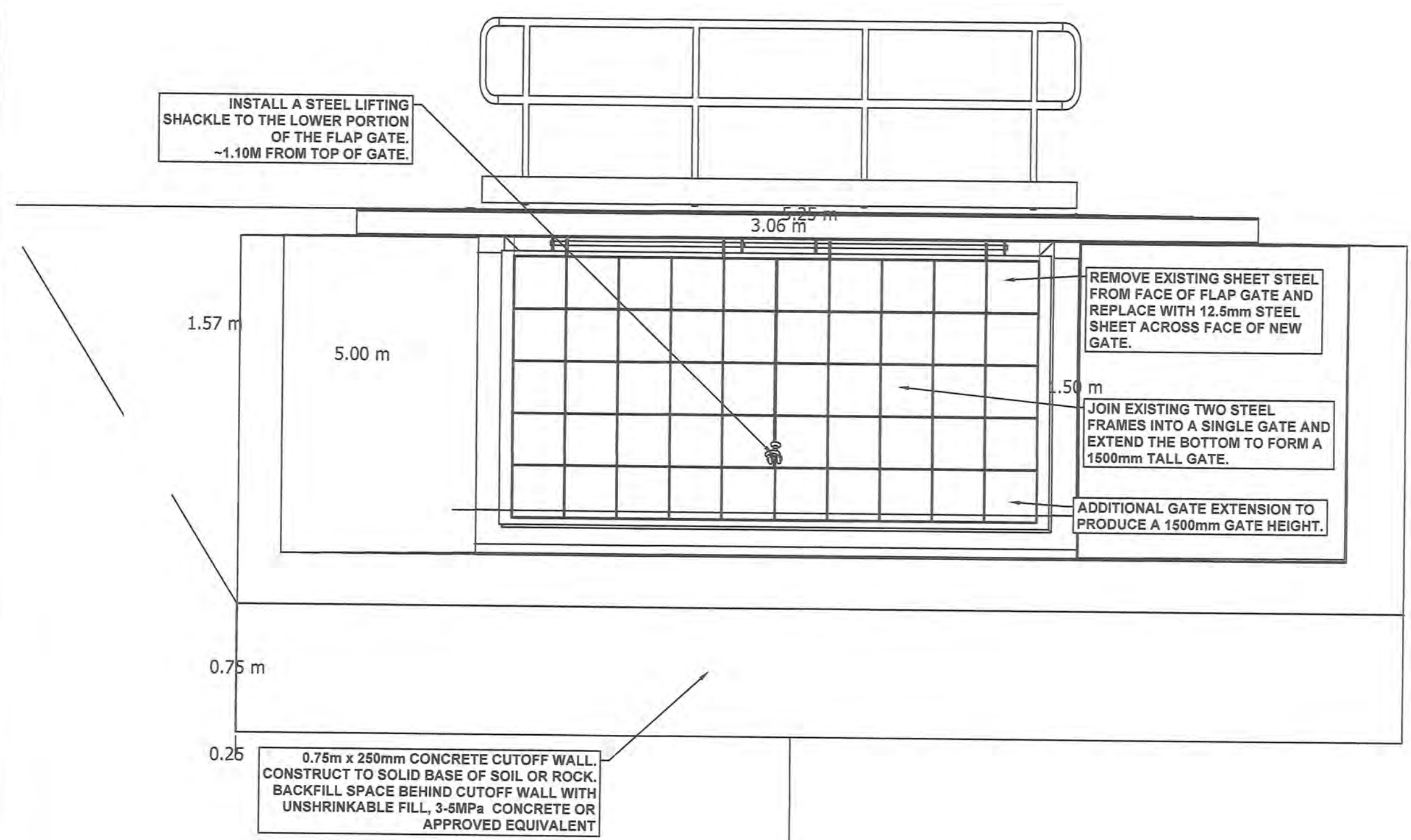


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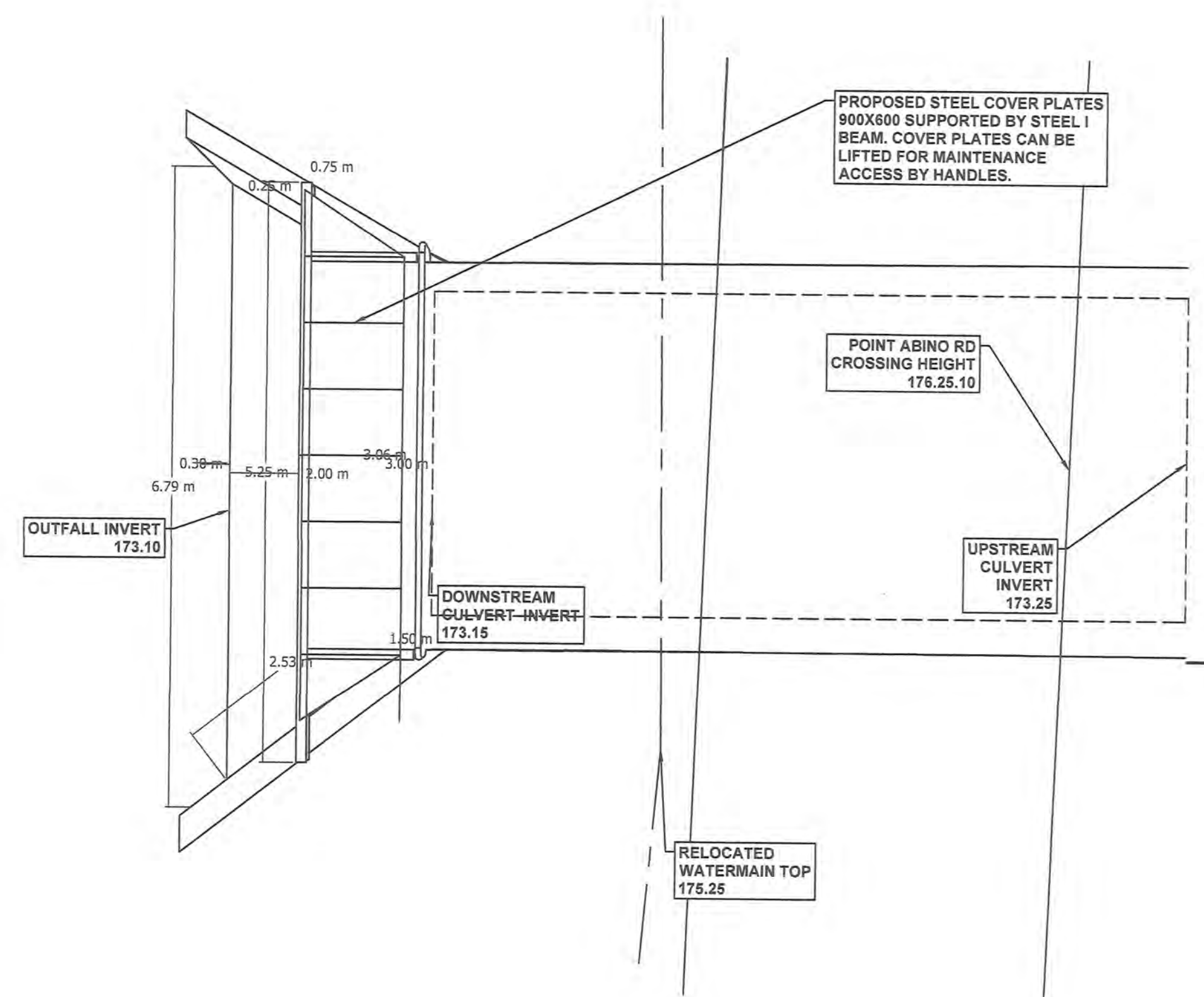
POINT ABINO DRAIN

POINT ABINO DRAIN OUTLET  
CONTROL STRUCTURE -  
DETAILS

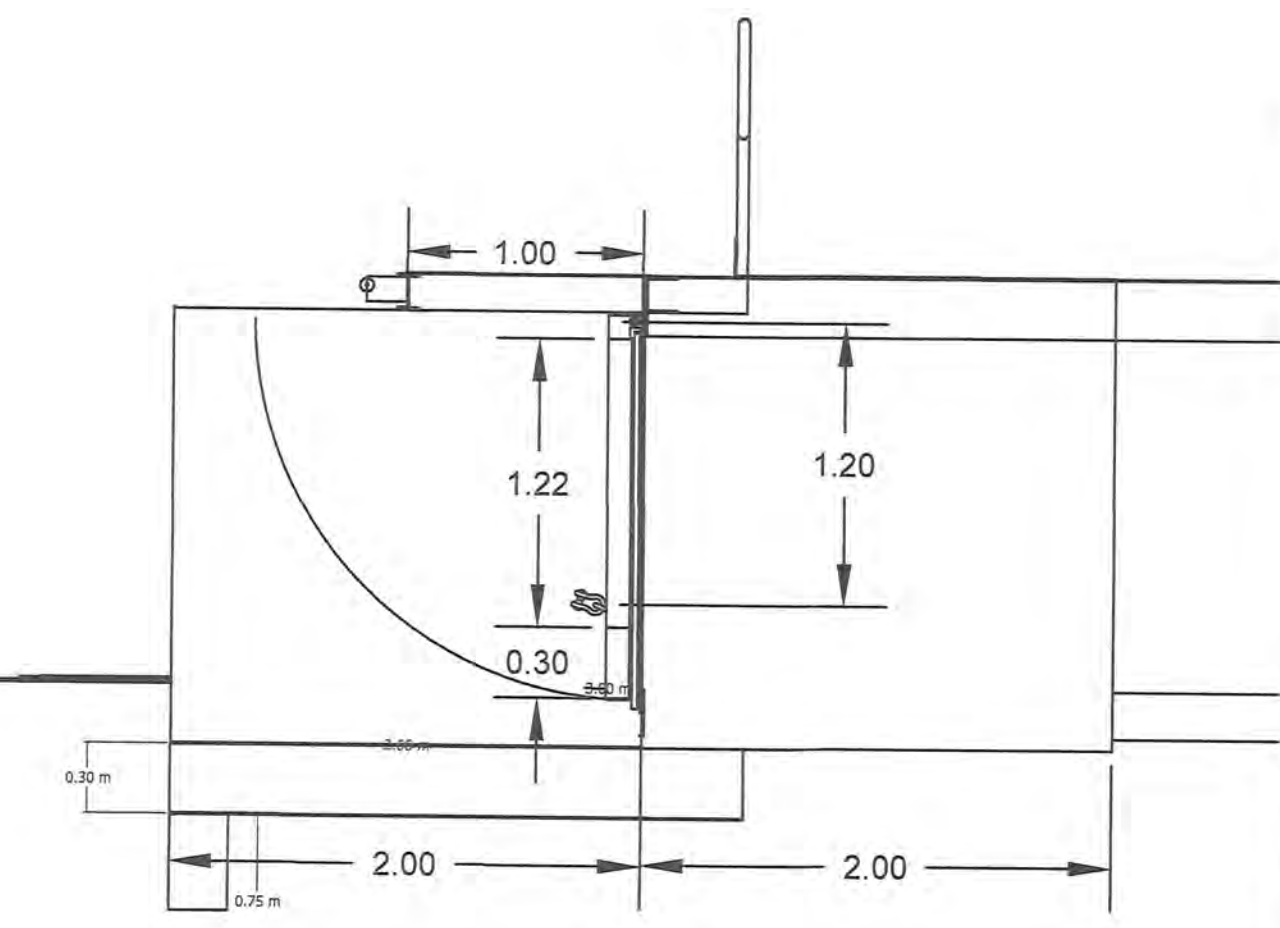
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STN:	TO:
PROJECT NO: 19-9997	
DWG NO: DWG-011	



POINT ABINO DRAIN OUTLET  
DETAIL F- OUTLET SECTION VIEW  
SCALE: N.T.S.

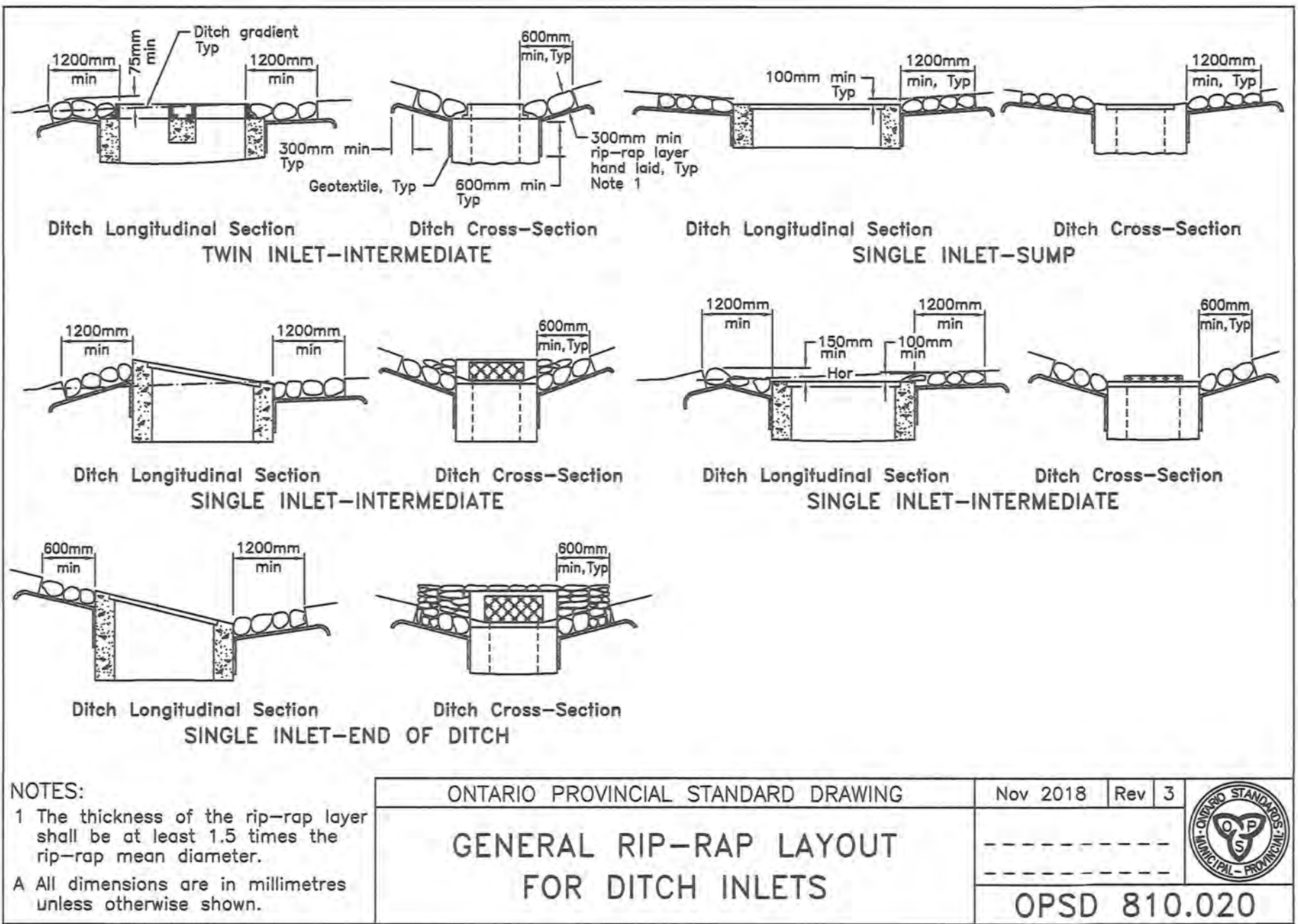
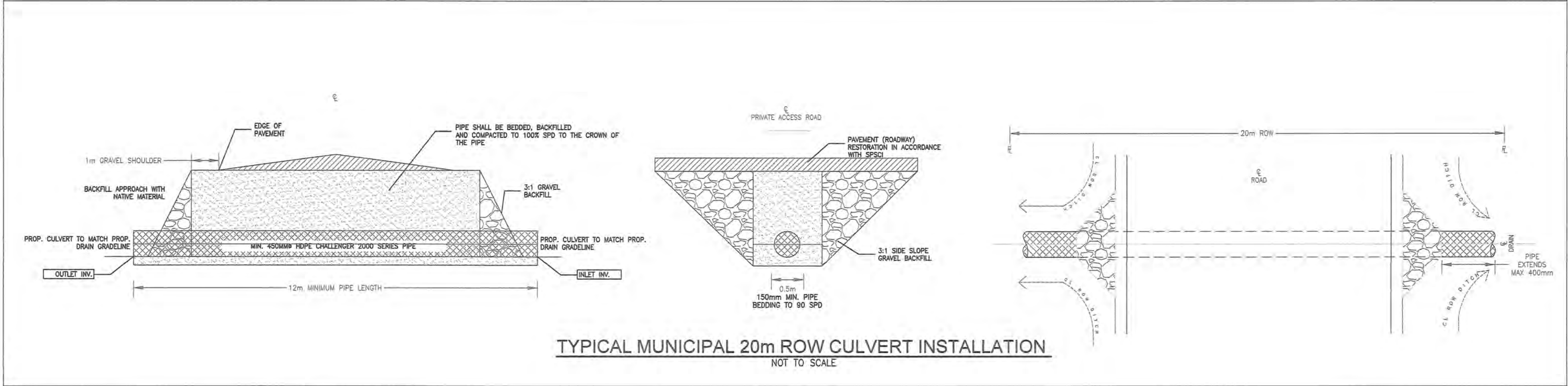
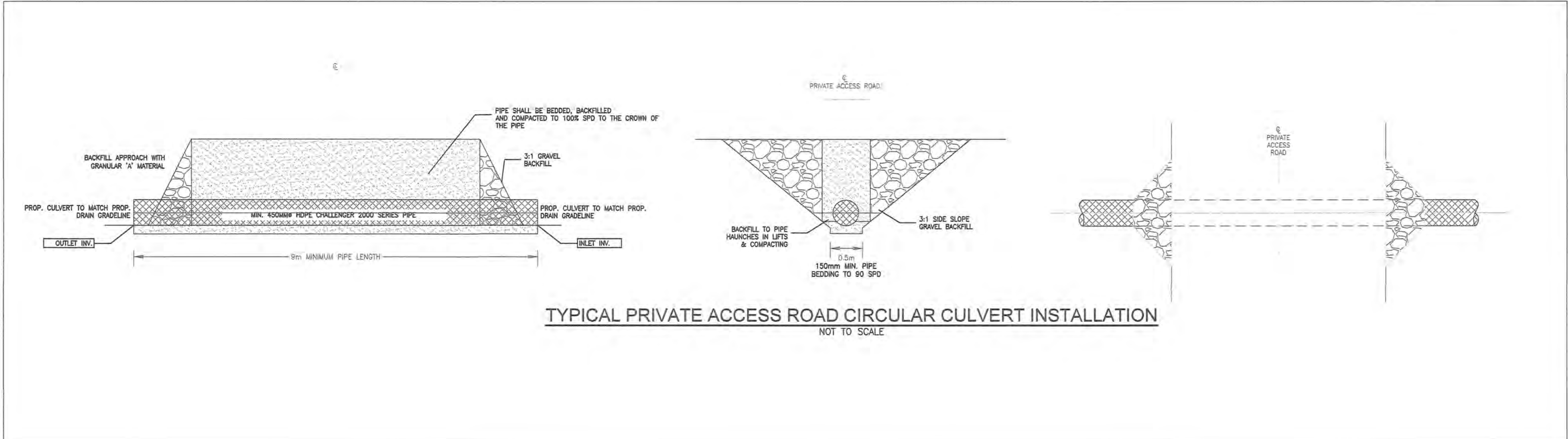
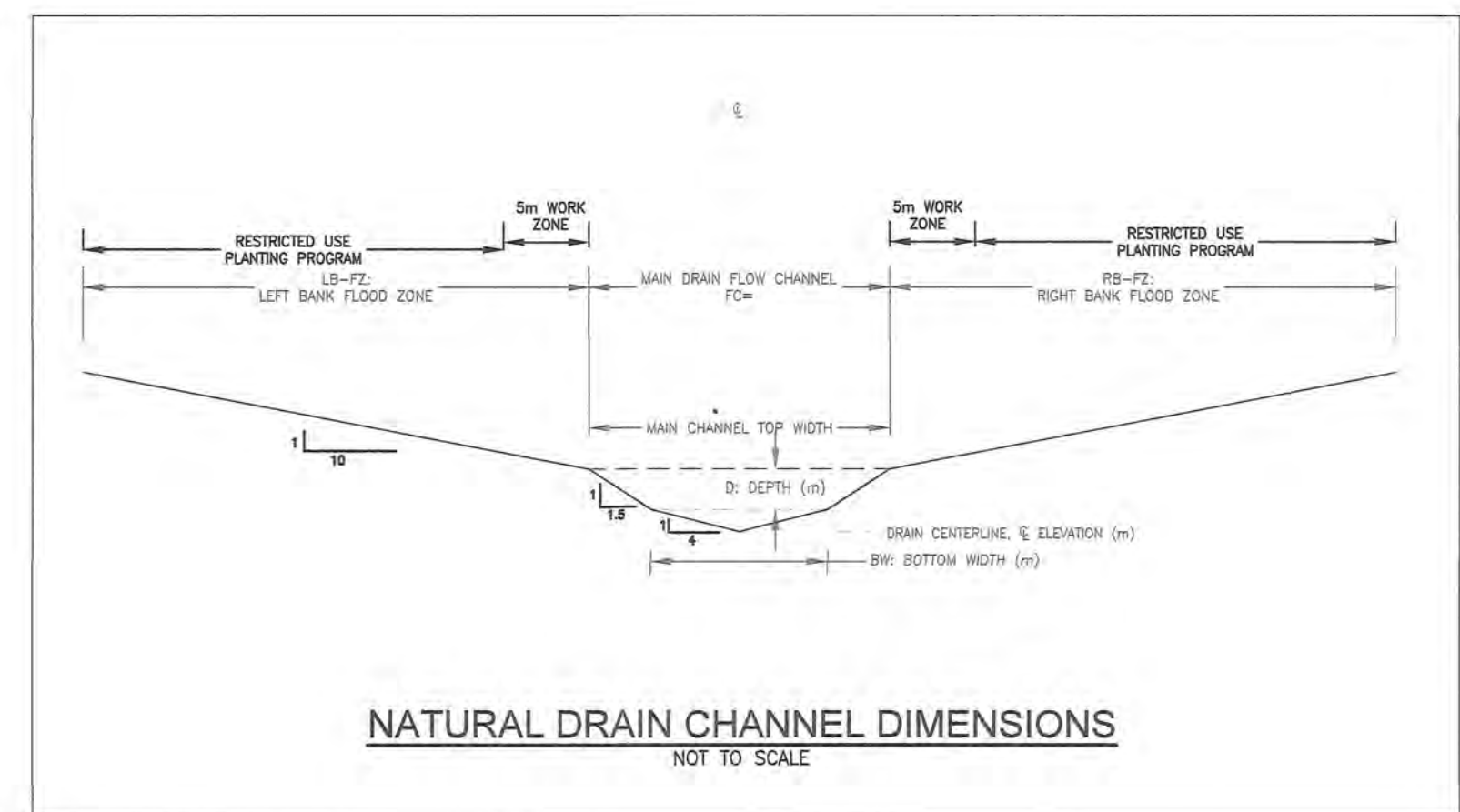
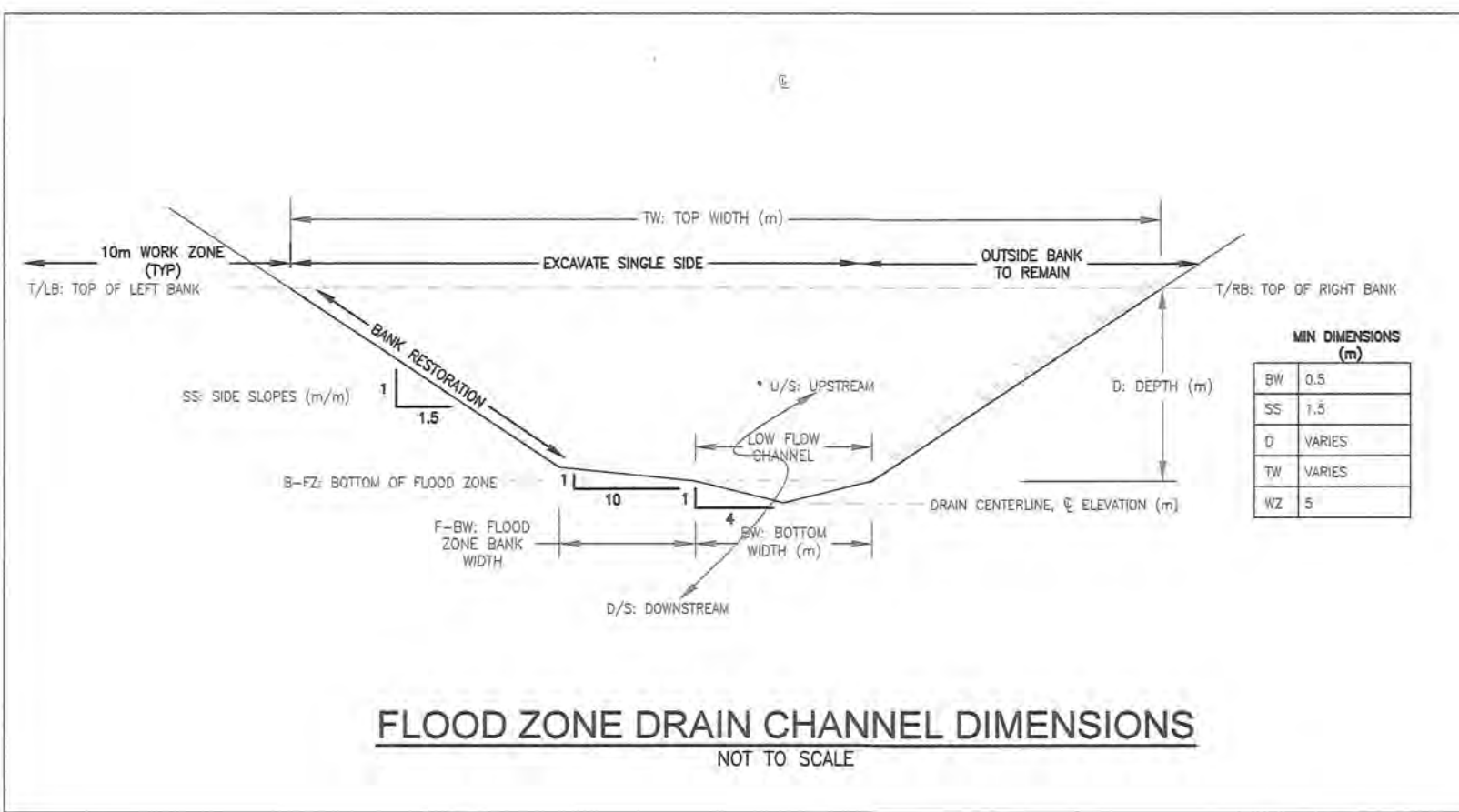
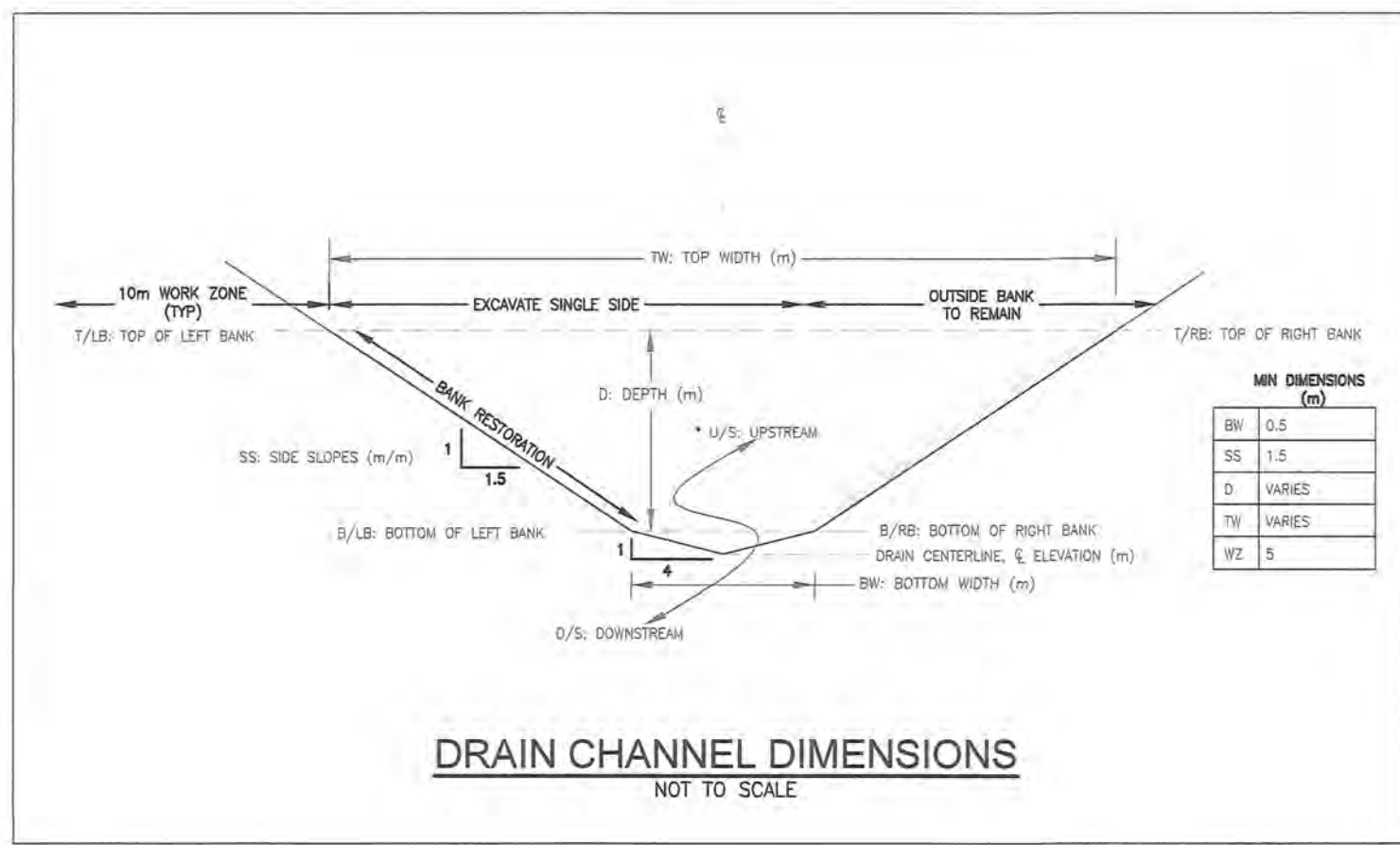


POINT ABINO DRAIN OUTLET  
DETAIL F- OUTLET PLAN VIEW  
SCALE: N.T.S.



POINT ABINO DRAIN OUTLET  
DETAIL G - OUTLET GATE  
SCALE: N.T.S.





NOTES

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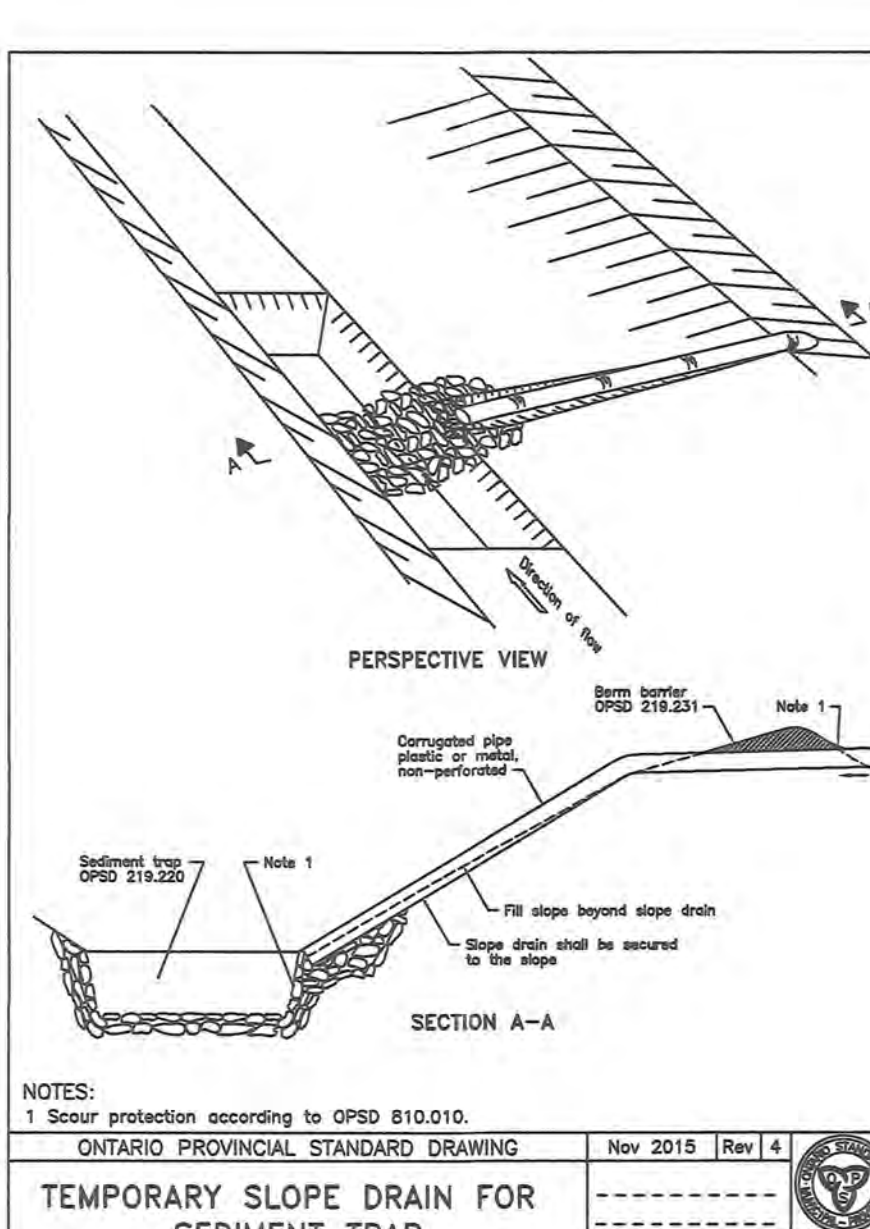
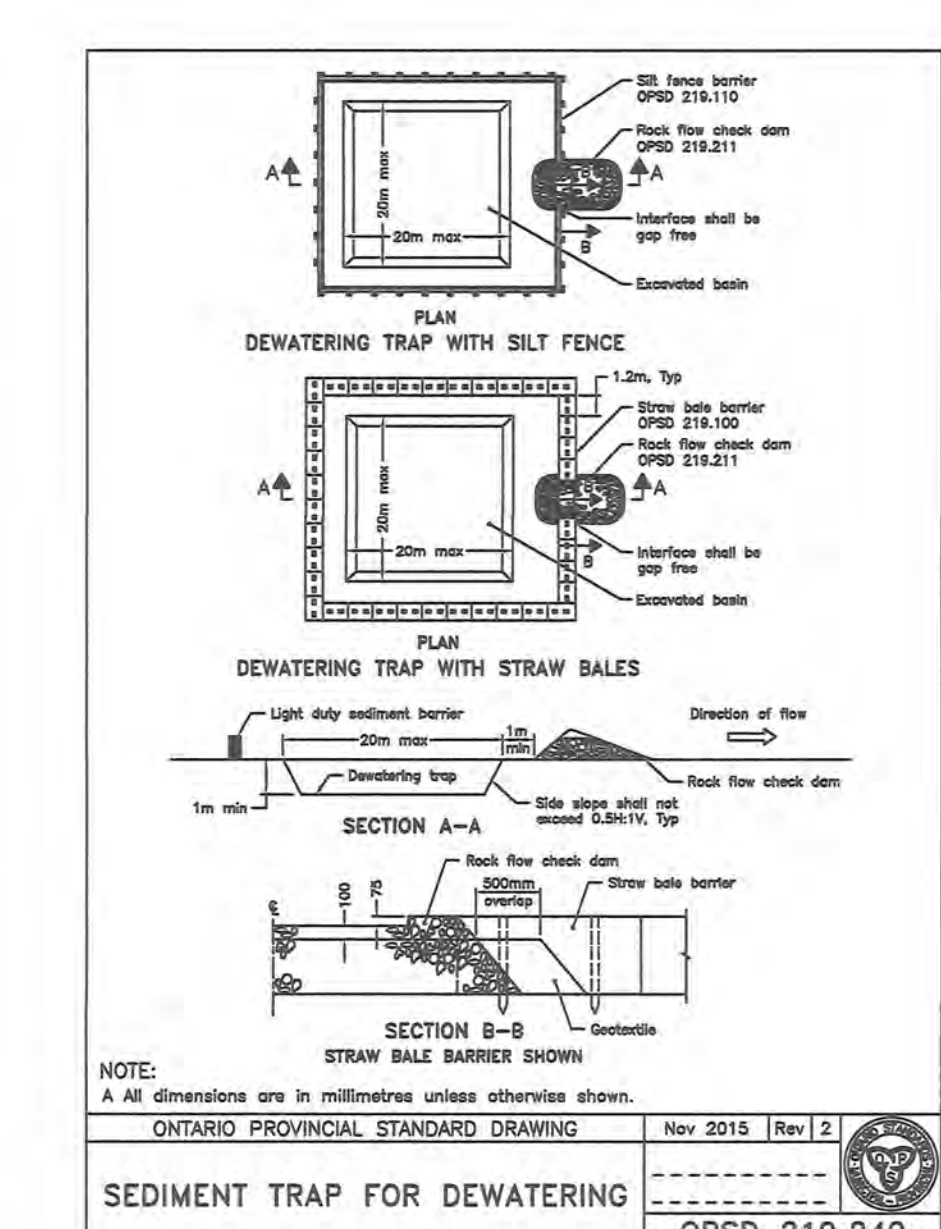
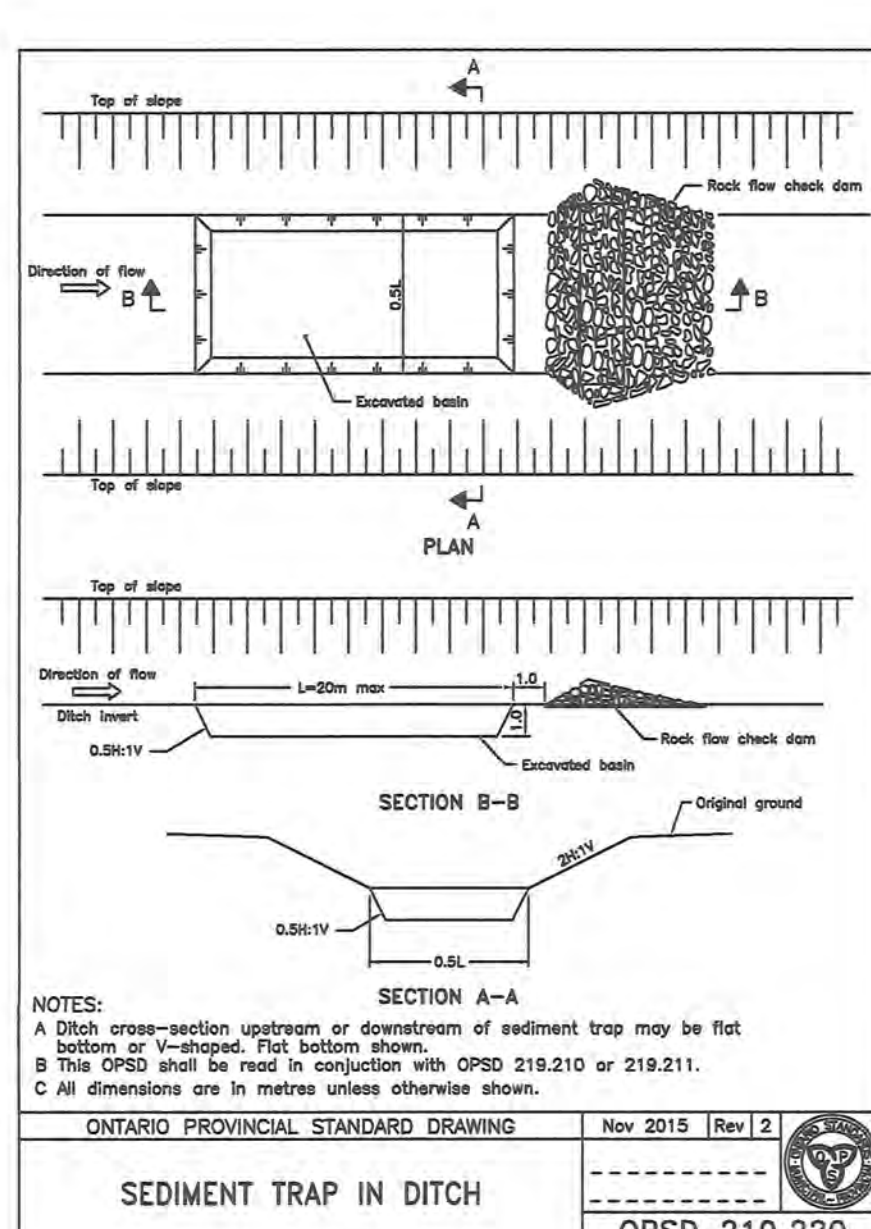
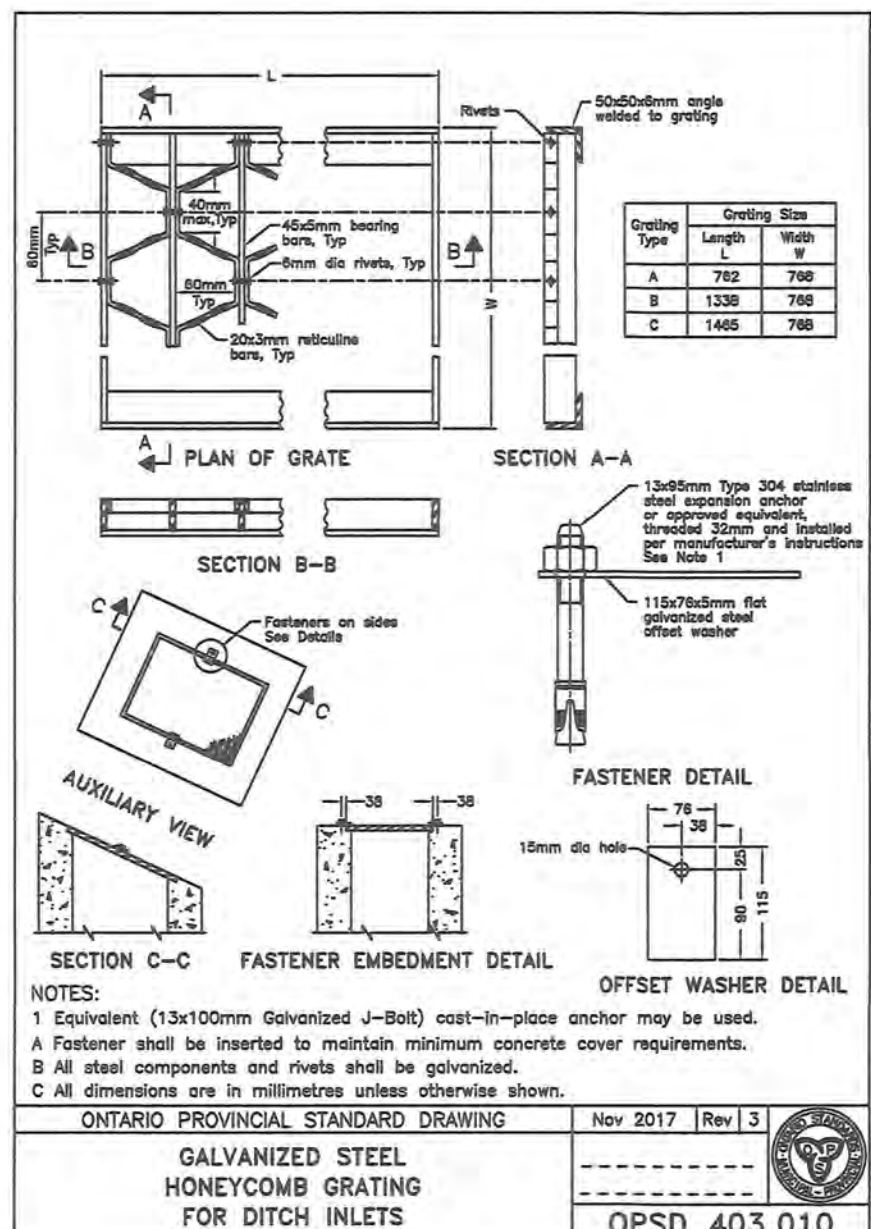
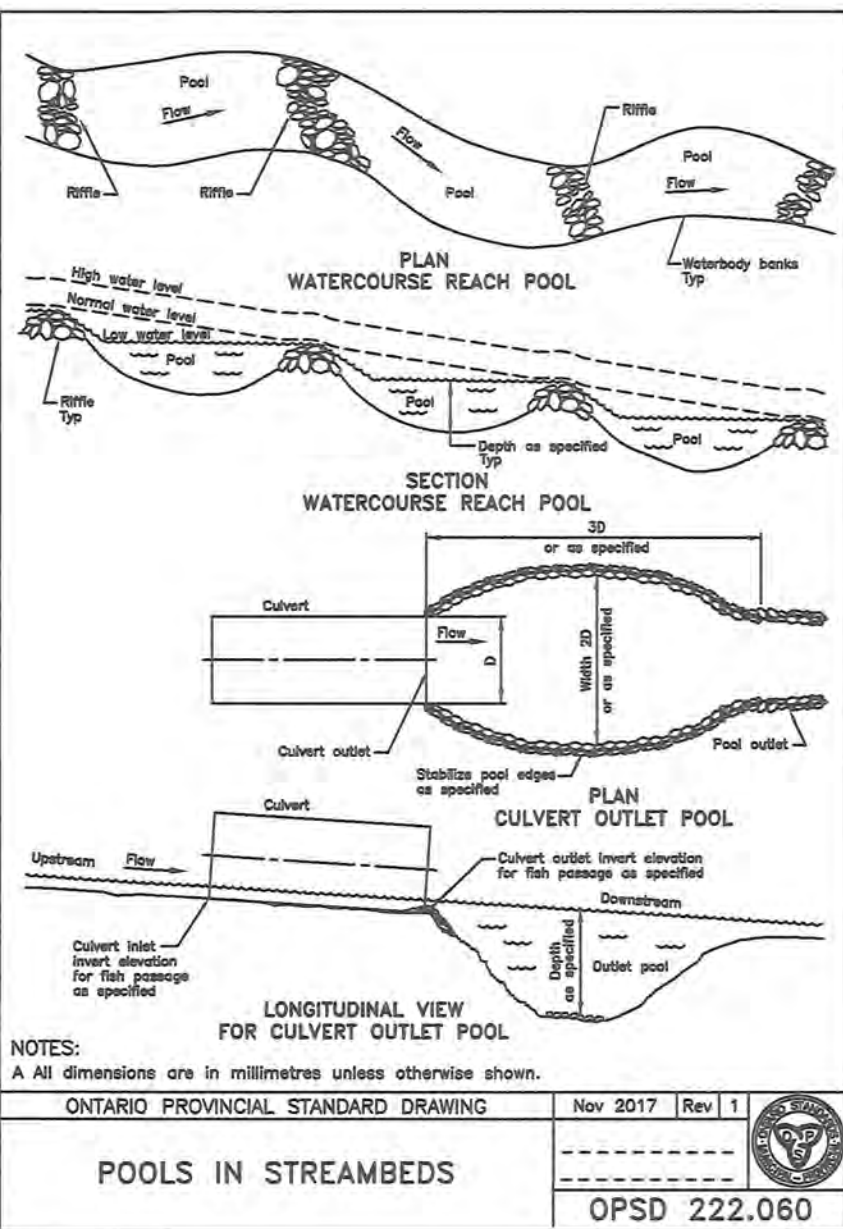
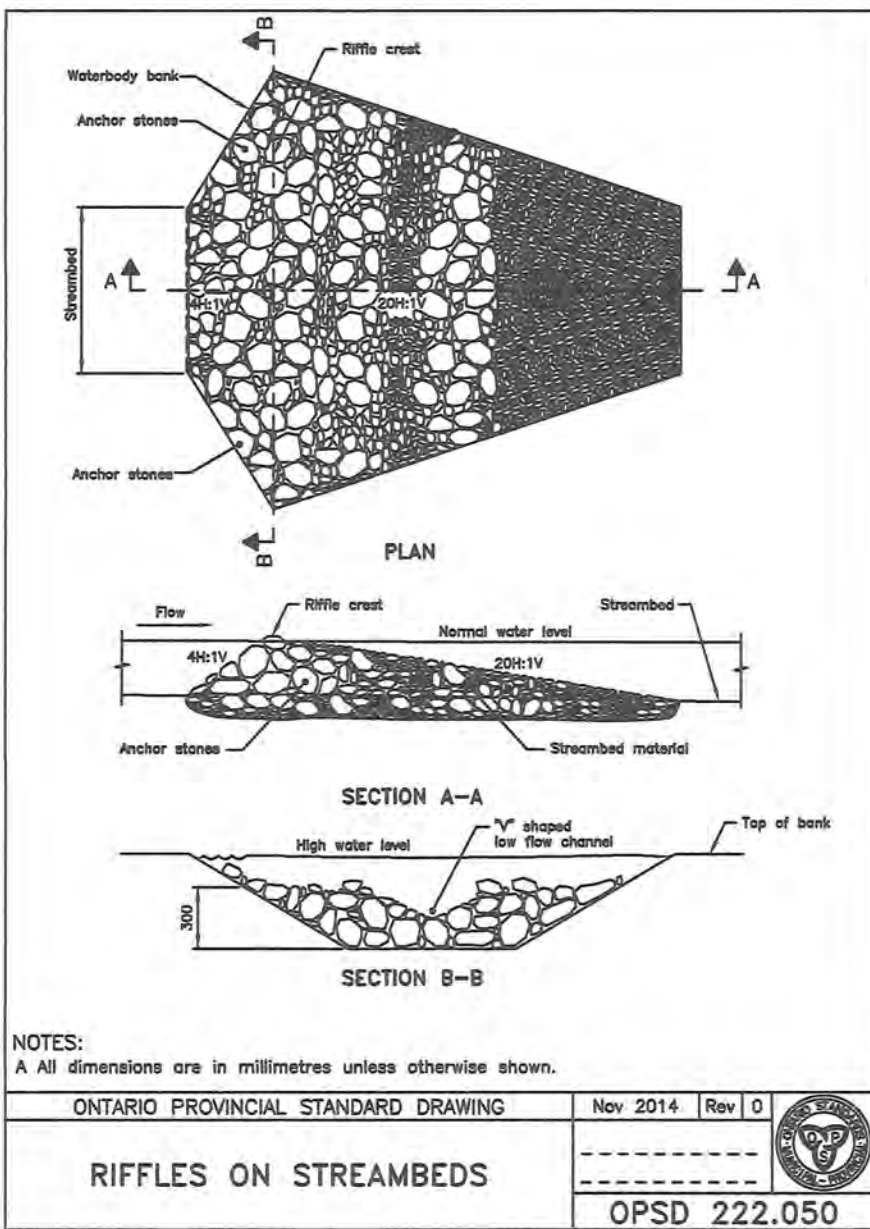
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POINT ABINO DRAIN

GENERAL DETAILS

HOR. SCALE - VERT. SCALE -  
STN: TO:  
PROJECT NO: 19-9997  
DWG NO: DWG-GD-01





CITY OF PORT COLBORNE CONTACT:

DRAINAGE SUPERINTENDENT:  
ALANA VANDER VEEN  
DRAINAGE SUPERINTENDENT  
1 KILLALY STREET WEST, PORT COLBORNE, ONTARIO L3K 6H1  
TEL: 905-228-8127  
ALANA.VANDERVEEN@PORTCOLBORNE.CA

TOWN OF FORT ERIE CONTACT:

DRAINAGE SUPERINTENDENT:  
TROY DAVIDSON  
TOWN OF FORT ERIE  
INFRASTRUCTURE SERVICES  
DRAINAGE SUPERINTENDENT  
1 MUNICIPAL CENTRE DRIVE  
(905) 871-1600,ext 2405  
tdavidson@forterie.on.ca

PROJECT DRAINAGE CONTACTS:

APPOINTED DRAINAGE ENGINEER:  
MR. PAUL C. MARSH, P.ENG.  
EWA ENGINEERING INC.  
27 CHADWICK AVENUE, GUELPH, ON N1G 3E7  
PCMARSH@EWAENG.COM  
647.400.2824

DEPARTMENT OF FISHERIES AND OCEANS:

867 LAKESHORE RD  
BURLINGTON ON L7S 1A1  
TELEPHONE: 905-336-4999  
EMAIL: INFO@DFO-MPO.GC.CA

MINISTRY OF NATURAL RESOURCES

ELIZABETH REIMER  
ADMINISTRATION BUILDING  
4890 VICTORIA AVE N  
VINELAND STATION, ON L0R 2E0  
905-562-4147

NIAGARA PARKS CONSERVATION AUTHORITY, NPCA

DAVID DELUCE, MCIP, RPP  
DIRECTOR, PLANNING AND DEVELOPMENT  
NIAGARA PENINSULA CONSERVATION AUTHORITY  
250 THOROLD ROAD WEST, 3RD FLOOR  
WELLAND, ON, L3C 3W2  
P: 905-788-3135  
F: 905-788-1121  
WWW.NPCA.CA

GENERAL NOTES:

THE CITY SHALL ARRANGE A PRE-CONSTRUCTION MEETING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

ALL CONSTRUCTION MATERIALS AND METHODOLOGIES SHALL BE IN ACCORDANCE WITH:

- SPECIAL PROVISIONS – SUPPLEMENTARY GENERAL CONDITIONS (SPSGC)
- SPECIAL PROVISIONS – SUPPLEMENTARY CONTRACT ITEMS (SPSCI)
- NIAGARA PENINSULA STANDARD CONTRACT DOCUMENTS (NPSCD)
- ONTARIO PROVINCIAL STANDARDS FOR ROADS & PUBLIC WORKS (OPSS & OPSD)

AND ANY OTHER APPLICABLE STANDARDS THAT MAY APPLY.

IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THESE MATERIALS AND METHODOLOGIES ARE STRICTLY ADHERED TO.

THE CITY OF PORT COLBORNE AND STAFF DISCLAIMS ANY LIABILITY AS TO THE CURRENT ACCURACY OF THE DRAWINGS PROVIDED. IN USING THE INFORMATION SHOWN OR CONTAINED ON THESE DRAWINGS, THE USER AGREES IMPLICITLY AND EXPLICITLY THAT THE CITY OF PORT COLBORNE AND STAFF SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES ARISING FOR THE USE OF SUCH INFORMATION. THE USER SHALL DO AN IN-FIELD VERIFICATION OF THE INFORMATION SHOWN ON OR CONTAINED WITHIN THESE DRAWINGS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY APPROVALS WHICH MAY BE REQUIRED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION UNLESS DIRECTED OTHERWISE BY THE CONTRACT ADMINISTRATOR.

DIMENSIONING SHALL GOVERN OVER SCALED DIMENSIONS.

ANY WORKS COMPLETED IN SET-BACK AREAS, AND DISCHARGE TO CREEKS, STREAMS AND WATERCOURSES MAY BE SUBJECT TO FEDERAL AND PROVINCIAL APPROVALS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN SUCH APPROVALS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION IF REQUIRED FOR THE PROJECT.

PUBLIC UTILITIES:

THE CONTRACTOR SHALL NOTE THAT PUBLIC UTILITIES SHALL INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING, HYDRO, GAS, BELL, CABLE AND FIBRE OPTIC.

IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE NECESSARY CLEARANCES FROM SAID PUBLIC UTILITIES WHICH MAY BE IN DIRECT CONFLICT WITH THIS PROJECT.

ANY WORK REQUIRING EITHER RELOCATION/LOWERING OF SAID PUBLIC UTILITY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY, AND ANY WORKS WILL BE REQUIRED TO BE COMPLETE PRIOR TO THE INSTALLATION OF THE WORK.

ENVIRONMENTAL COMPLIANCE:

THE CONTRACTOR SHALL PREPARE AN ENVIRONMENTAL MANAGEMENT PLAN (EMP) PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. THE EMP WILL ADDRESS THE FOLLOWING MAJOR SUBJECT AREAS:

- EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION
- TREE PROTECTION & REMOVAL (SAR – BUTTERNUT)
- MINIMIZE AND/OR MITIGATION MEASURES FOR CONSTRUCTION IMPACTS ON SPECIES AND SPECIES HABITAT INCLUDING STOPPING CONSTRUCTION PROCEDURES.
- AGENCY CONTACTS – IDENTIFY RESOURCES & CONTACT INFO.

THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH SPECIES AT RISK (SAR) LEGISLATION. BY LAW, YOU MUST IMMEDIATELY:

- AVOID DRAINAGE WORK DURING REPRODUCTION AND REARING SEASONS
- PREVENT A SPECIES FROM ENTERING THE WORK AREA (E.G. PUTTING UP A FENCE)
- GIVE THE SPECIES ADEQUATE TIME TO LEAVE THE AREA, BEFORE STARTING WORK
- GET ADVICE/HELP BEFORE YOU MOVE IT
- PROTECT AREAS THAT ARE IMPORTANT TO THE SPECIES (E.G. SPAWNING AREAS)
- CONTROL EROSION AND SEDIMENT
- STABILIZE WATER BANKS IN AFFECTED AREAS

TURTLES:

- YOU CANNOT REDUCE THE AMOUNT OF WATER IN A DRAIN OR DITCH WHERE A TURTLE IS HIBERNATING.

ABREVIATIONS USED:

- BD – SEDIMENT BASIN BOTTOM DEPTH (FROM GRADE LINE)
- BL – SEDIMENT BASIN LENGTH
- BOD – BEGINNING OF DRAIN
- BW – BOTTOM WIDTH OF CHANNEL
- CL – CENTRELINE OF ROAD, CHANNEL
- CLCK – CENTRELINE OF CREEK OR CHANNEL
- D – DEPTH
- E – EASTING
- ELEV – ELEVATION
- EX. – EXISTING
- INV – INVERT
- LB – LEFT BANK, LOOKING UPSTREAM
- N – NORTHING
- PL – PROPERTY LINE
- PR. – PROPOSED
- RB – RIGHT BANK, LOOKING UPSTREAM
- RH – RIFFLE HEIGHT
- ROW – RIGHT OF WAY
- SS – SIDE SLOPE; RUN(m)/RISE, WHERE RISE=1m
- SB – SEDIMENT BASIN
- T/C – TOP OF CONCRETE
- T/B – TOP OF BANK
- TW – TOP WIDTH OF CHANNEL
- TYP – TYPICAL
- WZ – WORK ZONE
- EOD – END OF DRAIN
- U/S – UPSTREAM
- D/S – DOWNSTREAM

OPSD REFERENCED DETAILS:

- OPSD 219.200
- OPSD 219.220
- OPSD 222.050
- OPSD 400.020
- OPSD 403.010
- OPSD 705.040
- OPSD 803.010



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POINT ABINO DRAIN

GENERAL NOTES

HOR. SCALE -	VERT. SCALE -
STN:	TO:
PROJECT NO: 19-9997	
DWG NO: DWG-GD-02	



## **Appendix B:**

# **Cost Estimates & Assessment Schedules**



Point Abino Municipal Drain  
City of Port Colborne and Town of Fort Erie  
Regional Municipality of Niagara

Section 74/78 & Section 84 Works under the Municipal Drainage Act.

Point Abino Drain Summary of Proposed Works		
Eligible Administration Costs	\$212,564.78	
Total Cost of Administration and Engineering in PAM Watershed		\$212,564.78
Previous Construction Works Completed but not Assessed		\$0.00
Estimated Cost of Construction		
Construction Management Estimated Costs	\$151,000.00	
Section 78 - Proposed Improvements for Construction		
Haggerty Branch Improvements	\$27,615.00	
East Branch Drain Channel Improvements	\$14,301.50	
Point Abino Outlet Improvements		
Point Abino Rd Culvert Replacement	\$877,230.00	
Point Abino Outlet Gate Improvements	\$102,750.00	
Point Abino Outlet Conversion to Open	\$684,430.00	
Section 74 - Maintenance Works for Construction		
Point Abino Drain Maintenance - Port Colborne	\$26,090.00	
Point Abino Drain Maintenance - Fort Erie	\$152,500.00	
Sub-Total Estimated Cost of Construction		\$2,035,916.50
Contingency Allowance, (15%)	\$305,387.48	
Total Estimated Cost of Construction		\$2,341,303.98
Drain Allowances		
Point Abino Drain - Port Colborne		
Point Abino Drain - Fort Erie		
Haggerty Branch - Port Colborne		
Haggerty Branch - Fort Erie	\$1,339.31	
East Branch	\$0.00	
Sub-Total Drain Allowances		\$1,339.31
		\$2,555,208.06

Point Abino Drain

Estimated Cost of Construction		
Estimate of Captial Construction Costs		
Construction Management Costs		
Contingency		\$2,299,387.48
Previous Construction		\$0.00
Share of Admin & Engineering		\$168,672.56
Drain Allowances		\$0.00
Total Drain Costs to be Assessed:		\$2,468,060.03
Benefit Assessment (Section 22)		
subTotal - Benefit Assessment (Section 22)	\$0.00	
Outlet Liability Assessment (Section 23)		
City of Port Colborne		
Private Lands	\$449,110.54	
Road Right of Way Lands	\$39,663.97	
Town of Fort Erie		
Private Lands	\$670,524.98	
Road Right of Way Lands	\$99,066.74	
subTotal - Outlet Liability Assessment (Section 23)		\$1,258,366.23
Special Benefit Assessment (Section 24)		
City of Port Colborne		
271104000108500 Andreacchi Franchina	\$5,638.00	
Town of Fort Erie		
270302001802200 MATHEWSON CHRISTOPHER	\$15,725.46	
270302001813200 5395 ABINO HILLS ROAD	\$14,657.59	
subTotal - Special Benefit Assessment (Section 24)		\$36,021.05
Special Assessments (Section 26)		
City of Port Colborne		
Town of Fort Erie	\$1,156,446.74	
Utilities - Enbridge	\$17,226.00	
subTotal - Special Assessments (Section 26)		\$1,173,672.74
Total Benefits Assessed:		\$2,468,060.03



Haggerty Branch Drain

Estimated Cost of Construction			
	Estimate of Captial Construction Costs	\$27,615.00	
	Construction Management Costs		
	Contingency		
			\$27,615.00
Previous Construction			\$0.00
Share of Admin & Engineering			\$39,438.64
Drain Allowances			\$1,339.31
Total Drain Costs to be Assessed:			\$68,392.95
Benefit Assessment (Section 22)			\$0.00
Outlet Liability Assessment (Section 23)			
City of Port Colborne			
	Private Lands	\$19,191.95	
	Road Right of Way Lands	\$971.60	
Town of Fort Erie			
	Private Lands	\$33,039.52	
	Road Right of Way Lands	\$6,961.44	
			\$60,164.51
Special Benefit Assessment (Section 24)			
	271104000102800 D B M E Inc	\$8,228.44	
			\$8,228.44
Special Assessments (Section 26)			
City of Port Colborne		\$0.00	
Town of Fort Erie		\$0.00	
			\$0.00
Total Benefits Assessed:			\$68,392.95

East Branch Drain

Estimated Cost of Construction			
	Estimate of Captial Construction Costs	\$ 14,301.50	
	Construction Management Costs		
	Contingency		
			\$14,301.50
Previous Construction			\$0.00
Share of Admin & Engineering			\$4,453.58
Drain Allowances			\$0.00
Total Drain Costs to be Assessed:			\$18,755.08
Benefit Assessment (Section 22)			
	Riparian benefit for two stage channel assessed to three properties.	\$2,171.50	
			\$2,171.50
Outlet Liability Assessment (Section 23)			
Town of Fort Erie			
	Private Lands	\$16,197.77	
	Road Right of Way Lands	\$385.81	
			\$16,583.58
Special Benefit Assessment (Section 24)			
			\$0.00
Special Assessments (Section 26)			
City of Port Colborne		\$0.00	
Town of Fort Erie		\$0.00	
			\$0.00
Total Benefits Assessed:			\$18,755.08

\$2,555,208.06  
\$0.00

Prepared by: \_\_\_\_\_ Paul C. Marsh, P.Eng.

Dated: \_\_\_\_\_  
Seal





**Point Abino Municipal Drain**  
City of Port Colborne  
Regional Municipality of Niagara

**Administration Costs**

Categories	Eligible Costs as per Act	Items	Cost	HST	Sub-totals, \$	Totals, \$
<b>ENGINEERING</b>						
	Report Preparation by EWA Engineering Inc.	Study, Analysis and Report	\$161,653.00	\$21,014.89		
		Progress Tracking, Disb. and Mgmt.				
	Spriet Associates	Survey - Topographic	\$12,181.89	\$2,001.29		
		CAD Services				
		CAD Services				
		CAD Services				
	Tribunal Costs (not estimated and assumed to be zero)		\$0.00			
	Engineering services during Tendering, Contract Administration and Construction Inspection (estimated)		\$1,500.00			
		<b>Total - ENGINEERING</b>			<b>\$175,334.89</b>	
<b>ADMINISTRATION</b>						
	Interim Financing Allowance	Interest on Project	\$30,276.49			
	Legal and Permitting Fees					
	Expenses, where applicable					
	Applicable Taxes	HST from Engineering fees		\$6,953.40		
		<b>Total - ADMINISTRATION</b>			<b>\$37,229.89</b>	
	<b>Total Administration Cost</b>					<b>\$212,564.78</b>

**Pro-rated Admin Costs by Area**

	Area, Ha	Area, Ha	Area Ratio		
Point Abino Total Area	799.9		1	\$212,564.78	
Point Abino Drain	799.897		100.00%		\$168,672.56
Haggerty Branch Drain	148.411		18.55%		\$39,438.64
East Branch Drain	16.759		2.10%		\$4,453.58
					\$212,564.78
			0.00%		



**Point Abino Municipal Drain**  
City of Port Colborne  
Town of Fort Erie  
Regional Municipality of Niagara

**Proposed Construction - Cost Estimate**

**Construction Management Estimated Costs**

PA-C						Linear, Each or Lump Sum							
Cost ID:	Drain	From STA	To STA	Work	Description	Cost Type	Length	\$/m	Qty	/each	\$	Notes	
PAC-01	Point Abino Drain			Bonding							\$ 60,000.00	Budget @ 3.0% of total	
PAC-02	Point Abino Drain			Environmental Management - Compliance with legislative requirements	Preparation of Environmental Management Plan - Exclusions for SAR incidents that require on site expertise.	Lump Sum					\$ 12,500.00	Program budget - actual cost will vary	
PAC-03	Point Abino Drain			Erosion Control During construction -		Lump Sum					\$ 3,500.00	Program budget - actual cost will vary	
PAC-04	Point Abino Drain			Construction Management	Traffic Control, Layout, and all compliance items for submission on construction startup.	pro-rated lump sum					\$ 70,000.00	Budget @ 3.5% of total	
PAC-05	Point Abino Drain			Tree Replacement Program	Where private trees are removed for the drain and in lieu of compensation a 2 for 1 tree planting program is available for owners.	Each			100	\$ 50.00	\$ 5,000.00	Program budget - actual cost will vary	

**Section 78 - Proposed Improvements for Construction**

PA-O-1 Point Abino Rd Culvert Replacement						Linear, Each or Lump Sum							
Cost ID:	Drain	From STA	To STA	Work	Description	Cost Type	Length	\$/m	Qty	/each	\$	Notes	
PA-02	Point Abino Drain				existing concrete demolition and removal		64	\$1,150.00			\$ 73,600.00		
				Point Abino Rd Culvert	site preparation	lump sum	0	\$32,500.00	1	\$ 45,000.00	\$ 45,000.00		
											\$ -		
PA-03				DFO compliance for construction of works within water.	install pumping bypass and coffer dams as per staging drawing during construction				90	\$550.00	\$ 49,500.00		
				Removal of existing Box culvert as per staging.			24	\$445.00	20	\$225.00	\$ 15,180.00		
				Move Gas line			34	\$175.00	1	\$ 10,000.00	\$ 15,950.00		
				Move Watermain move or protect			20	\$275.00			\$ 5,500.00		
				Culvert Base prep					1	\$ 15,000.00	\$ 15,000.00		
				Purchase & install pre-cast box segments	3000x1500x 2m segments				6	\$ 85,000.00	\$ 510,000.00		
				Purchase & install pre-cast box segment with preconfigured metal frame for the flap gate.					1	\$ 95,000.00	\$ 95,000.00		
				Top cast in place slab					1	\$ 8,500.00	\$ 8,500.00		
				includes steel trash rack on upstream side of the Point Abino Rd Culvert					1	\$ 11,000.00	\$ 11,000.00		
PA-05				Road restoration					600	\$ 55.00	\$ 33,000.00		
											\$ -		
											\$ -		
											\$ -		
											\$ -		
											\$ -		
											\$ -		
											\$ -		
SubTotal for: Point Abino Rd Culvert Replacement												\$ 877,230.00	



PA-O-2    Point Abino Outlet Gate Improvements						Linear, Each or Lump Sum						
Cost ID:	Drain	From STA	To STA	Work	Description	Cost Type	Length	\$/m	Qty	/each	\$	Notes
PA-01				Flap Gate Improvements	conversion from two steel gates to a single steel gate	lump sum			1	\$ 25,000.00	\$ 25,000.00	
					control replacement of winch - additional	each			1	\$ 18,500.00	\$ 18,500.00	
				Outlet concrete works	Wing walls, cutoff wall and base	lump			1	\$82,750.00	\$ 82,750.00	
				Restoration					1	\$ 3,500.00	\$ 3,500.00	
				Special work to include frame mounting	insert frame mount on outside pre-cast culvert	lump sum			1	\$ 16,500.00	\$ 16,500.00	
SubTotal for: Point Abino Outlet Gate Improvements											\$ 102,750.00	

PA-O-3    Point Abino Outlet Conversion to Open						Linear, Each or Lump Sum						
Cost ID:	Drain	From STA	To STA	Work	Description	Cost Type	Length	\$/m	Qty	/each	\$	Notes
PA-08				DFO compliance for construction of works within water.	install pumping bypass and coffer dams as per staging drawing during construction				90	\$550.00	\$ 49,500.00	
				Removal of existing Box culvert as per staging.			24	\$445.00	20	\$225.00	\$ 15,180.00	
				Open Channel	reuse concrete demo slabs as base layer				360	\$ 55.00	\$ 19,800.00	
					Construct 2 level concrete box wall, 2ft x 4t x 6ft		120	\$1,450.00			\$ 174,000.00	
					2 – 375mm lifts of geogrid backfill with soil (site material) and cover seed		240	\$885.00			\$ 212,400.00	
					0.2m vegetated rock buttress at Top of Bank. TOB		130	\$45.00			\$ 5,850.00	
PA-04				Point Abino Private Access		both	1	\$32,500.00	1	\$ 75,000.00	\$ 107,500.00	
PA-06				Replace three culverts with new CSP pipe and install a concrete headwall with a steel trashrack.		both	18	\$3,650.00	1	\$ 34,500.00	\$ 100,200.00	
SubTotal for: Point Abino Outlet Conversion to Open											\$ 684,430.00	

\$ 97,775.71    Town of Fort Erie portion

PHB    Haggerty Branch Improvements						Linear, Each or Lump Sum						
Cost ID:	Drain	From STA	To STA	Work	Description	Cost Type	Length	\$/m	Qty	/each	\$	Notes
											\$ -	
				PB1-CS-01 900 X 5.8m CSP existing REMOVE and REPLACE. 226 Holloway Bay Rd S Private Access	DESIGN Q = 1.713CMS REPLACE WITH CSP 1050MM DIA. 6M (L) @0.24% OR APPROVED EQUIVALENT CROSSING ELEV. 176.53	both	6	\$1,500.00	1	\$ 4,500.00	\$ 13,500.00	
				Clean and clear to grade line.			230	\$15.00			\$ 3,450.00	
				Clean and clear to grade line.			213	\$15.00			\$ 3,195.00	
				Clean and clear to grade line.			435	\$15.00			\$ 6,525.00	
				Clean and clear to grade line.			63	\$15.00			\$ 945.00	
											\$ -	
											\$ -	
SubTotal for: Haggerty Branch Improvements											\$ 27,615.00	

PEB    East Branch Drain Channel Improvements
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Linear, Each or  
Lump Sum



Cost ID:	Drain	From STA	To STA	Work	Description	Cost Type	Length	\$/m	Qty	/each	\$	Notes
East Branch Drain												
PAE-01	East Branch Low flow channel			Clear existing to proposed grade	457m of excavation including spreading of material adjacent to the drain		456.8	17.5			\$ 7,994.00	
PAE-02	East Branch Flood Flow channel				350m of flood way channel construction		347	15			\$ 5,205.00	
PAE-03					Seeding				4410	\$ 0.25	\$ 1,102.50	
SubTotal for: East Branch Drain Channel Improvements											\$ 14,301.50	

Section 74 - Maintenance Works for Construction

PA-M-PC	Point Abino Drain Maintenance - Port Colborne					Linear, Each or Lump Sum						
Cost ID:	Drain	From STA	To STA	Work	Description	Cost Type	Length	\$/m	Qty	/each	\$	Notes
PA-M1		3+763	4+719									
				Clean and clear to design grade		per m	956	15			\$ 14,340.00	
				PAM - CS- 10	Extend existing culvert to 10m	both	9	750	1	\$ 2,500.00	\$ 9,250.00	
				remove existing concrete pipe debris and dispose.		each			5	\$ 500.00	\$ 2,500.00	
						each					\$ -	
						each					\$ -	
SubTotal for: Point Abino Drain Maintenance - Port Colborne											\$ 26,090.00	

PA-M-FE	Point Abino Drain Maintenance - Fort Erie					Linear, Each or Lump Sum						
Cost ID:	Drain	From STA	To STA	Work	Description	Cost Type	Length	\$/m	Qty	/each	\$	Notes
PA-M2												
		0+250	2+750	Clean and clear	spot repairs on an as needed where needed basis. Estimated to be 50.		3193	0	50	\$ 1,250.00	\$ 62,500.00	
				Deadfall removals	Significant removals required mostly ash trees. Disposal to prevent beaver use				300	\$ 250.00	\$ 75,000.00	
		2+750	3+750				1000	15			\$ 15,000.00	
SubTotal for: Point Abino Drain Maintenance - Fort Erie											\$ 152,500.00	

Section 84 - Abandoning an existing portion of a Municipal Drain by Report

PHB-A	Haggerty Branch Drain - Fort Erie										
SubTotal for: Section 84 - Abandoning an existing portion of a Municipal Drain by Report											\$0.00
Sub-Total Cost of Construction											\$ 2,035,916.50
Contingency Allowance, (15%)											\$ 305,387.48
Cost of Construction:											\$ 2,341,303.98



Point Abino Municipal Drain  
City of Port Colborne  
Town of Fort Erie  
Regional Municipality of Niagara  
Future Maintenance Table

PA Drain Assessed Benefit

Farm As 'F'	Owner	Legal_Txt	Municipal Addres	Roll No	Area Ha	Area in Drain Ha	Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CoFPC QRF	QRF Ratio
City of Port Colborne - Lands Assessed														
	Customer_N	Legal_Desc	Municipal_	Roll_Numbe	Area_ha	Catch_Ha	C_Factor							
	Corless Trevor Alexander	PLAN 45 PT LOT 1 NP804	FIRELANE 29	271104000100100	0.19296331	0.013	20	0.016962	0	0	0.016962	0.000010	0.000	0.0000
	D B M E Inc	PLAN 45 LOT 2 PT LOT 1 NP804 RP 59R8890 PT 1 D B M E INC 75% INT M RICHARDS 25% INT	FIRELANE 29	271104000100200	1.308703691	0.0757	20	0.098773	0	0	0.098773	0.000057	0.000	0.0000
	Colyocorvid Inc	PLAN 45 LOT 3 NP804	5949 FIRELANE 29	271104000100300	0.784703381	0.0766	20	0.099948	0	0	0.099948	0.000058	0.000	0.0000
	Colyocorvid Inc	PLAN 45 PCL A B C NP804	5971 FIRELANE 29	271104000100400	0.509245401	0.5094	20	0.664665	0	0	0.664665	0.000385	0.000	0.0000
	Vance Beverly Diane	PLAN 45 LOT 4 NP804	5941 FIRELANE 29	271104000100401	0.76885272	0.1152	20	0.150313	0	0	0.150313	0.000087	0.000	0.0000
	Ressel Charles	PLAN 45 LOT 5 NP804	5921 FIRELANE 29	271104000100500	0.781451768	0.1492	20	0.194676	0	0	0.194676	0.000113	0.000	0.0000
	Vogelsang Christopher	PLAN 45 LOT 6 NP 804	5913 FIRELANE 28	271104000100600	0.773825503	0.1672	20	0.218163	0	0	0.218163	0.000126	0.000	0.0000
	Ray David Michael	PLAN 45 LOT 7 + ROW NP804	5893 FIRELANE 28	271104000100700	0.742147252	0.1156	20	0.150835	0	0	0.150835	0.000087	0.000	0.0000
	O'Hern-Lodge Inc	PLAN 804 LOT 8	5867 FIRELANE 28	271104000100701	0.698363262	0.047	20	0.061326	0	0	0.061326	0.000035	0.000	0.0000
	Jones Wendy Kelly	PLAN 45 LOT 9 NP804	5855 FIRELANE 28	271104000100800	0.71117439	0.0352	20	0.045929	0	0	0.045929	0.000027	0.000	0.0000
	Leon Leah	PLAN 45 LOT 10 NP804	5823 FIRELANE 28	271104000100900	0.737706402	0.0367	20	0.047886	0	0	0.047886	0.000028	0.000	0.0000
	Narciso Wayne	PLAN 45 LOT 11 LOT 12 NP804	5807 FIRELANE 28	271104000101000	1.437491031	0.033	20	0.043058	0	0	0.043058	0.000025	0.000	0.0000
	DWHA Properties Inc	27 NS CON 1 PT BLKS P K & L PLAN 45 LOT 16 NP804 RP 59R5691 PART 3 RP 59R8356 PART 1	5727 FIRELANE 27	271104000101400	0.920713223	0.2823	20	0.368345	0	0	0.368345	0.000213	0.368	0.0007
	Simunic Joseph E Jr	PLAN 45 LOT 17 PT PCL P NP804	5687 FIRELANE 27	271104000101500	0.393325519	0.3246	20	0.423538	0	0	0.423538	0.000245	0.424	0.0008
	MCLP Inc	PLAN 45 LOT 18 LOT 19 PT PCL P & L NP804	5685 FIRELANE 27	271104000101600	0.544738758	0.5418	20	0.706941	0	0	0.706941	0.000409	0.707	0.0014
	MCLP Inc	PLAN 45 LOT 18 LOT 19 PT PCL P & L NP804	5685 FIRELANE 27	271104000101600	1.16140389	0.0682	20	0.088987	0	0	0.088987	0.000052	0.707	0.0014
	Buscaglia Carol	PLAN 45 LOT 20 PT PCL P NP804	5605 FIRELANE 27	271104000101700	0.646603929	0.1042	20	0.135960	0	0	0.135960	0.000079	0.136	0.0003
	Buscaglia Carol	PLAN 45 LOT 20 PT PCL P NP804	5605 FIRELANE 27	271104000101700	0.174009837	0.174	20	0.227035	0	0	0.227035	0.000131	0.136	0.0003
	Campbell Mary Lou	PLAN 45 LOT 21 PT PCL P PT PCL M NP804	5603 FIRELANE 27	271104000101800	0.657787237	0.111	20	0.144833	0	0	0.144833	0.000084	0.145	0.0003
	Campbell Mary Lou	PLAN 45 LOT 21 PT PCL P PT PCL M NP804	5603 FIRELANE 27	271104000101800	0.145307902	0.1453	20	0.189587	0	0	0.189587	0.000110	0.145	0.0003
	Leon Leslie	PLAN 804 LOT 22 PT PCL P NP804 RP 59R13659 PART 1 RP 30R13059 PARTS 2 AND 3	5543 FIRELANE 27	271104000101900	0.653466147	0.1155	20	0.150704	0	0	0.150704	0.000087	0.151	0.0003
	Leon Leslie	PLAN 804 LOT 22 PT PCL P NP804 RP 59R13659 PART 1 RP 30R13059 PARTS 2 AND 3	5543 FIRELANE 27	271104000101900	0.118295538	0.1183	20	0.154358	0	0	0.154358	0.000089	0.151	0.0003
	N & J Signs	PLAN 45 PT BLK P NP804	5520 FIRELANE 27	271104000102000	0.177186725	0.1772	20	0.231211	0	0	0.231211	0.000134	0.231	0.0004
	Sahlem Susan	PLAN 45 LOT 23 NP804	5531 FIRELANE 27	271104000102100	0.535224469	0.1242	20	0.162056	0	0	0.162056	0.000094	0.162	0.0003
	Marshall-Petty Rebecca Anne	PLAN 804 LOT 24	5515 FIRELANE 27	271104000102200	0.365881803	0.1426	20	0.186064	0	0	0.186064	0.000108	0.186	0.0004
	Craig Glen Francis	PLAN 804 PT PCL P	FIRELANE 27	271104000102202	0.171277138	0.1713	20	0.223512	0	0	0.223512	0.000129	0.224	0.0004
	Palumbo Joseph Louis Jr	PLAN 45 LOT 25 NP804	5511 FIRELANE 27	271104000102300	0.500822071	0.2193	20	0.286143	0	0	0.286143	0.000166	0.286	0.0005
	Pizzo Edward Michael	PLAN 45 LOT 26 PT PCL P NP804	239 PLEASANT BEACH RD	271104000102400	0.4495903	0.1921	20	0.250652	0	0	0.250652	0.000145	0.251	0.0005
	Williamson Michael Patrick	PLAN 45 PT PCL P NP804	PLEASANT BEACH RD	271104000102500	0.300511303	0.3006	20	0.392223	0	0	0.392223	0.000227	0.392	0.0008
	Holloway Bay Property Owners I	PLAN 45 PT PCL P NP804	HOLLOWAY BAY RD	271104000102600	5.455342765	5.1122	20	6.670399	0	0	6.670399	0.003861	0.431	0.0008
	Panto Nicholas	PLAN 45 PT PCL P NP804	212 HOLLOWAY BAY RD	271104000102700	0.145123269	0.1452	20	0.189457	0	0	0.189457	0.000110	0.000	0.0000
	D B M E Inc	CON 1 PT LOT 1 RP 59R8890 PT 2 D B M E INC 75% INT M RICHARDS 25% INT	226 HOLLOWAY BAY RD	271104000102800	14.36603592	14.3692	25	23.436165	0	0	23.436165	0.013566	5.979	0.0115
	Scarlett John Frederick	CON 1 PT LOT 1 RP 59R5913 PARTS 2 TO 4	370 HOLLOWAY BAY RD	271104000102900	1.508069476	1.5084	30	2.952240	0	0	2.952240	0.001709	1.662	0.0032
	Boles Diane Lynn	CON 1 PT LOT 1 RP 59R5913 PART 1	386 HOLLOWAY BAY RD	271104000102901	0.470327714	0.4704	30	0.920667	0	0	0.920667	0.000533	0.066	0.0001
	Phibbs Stephanie Diane	CON 1 PT LOT 1	5930 MICHENER RD	271104000103100	4.141347314	4.1423	35	9.458528	0	0	9.458528	0.005475	0.000	0.0000
	Lander Blake	CON 1 PT LOT 1	534 HOLLOWAY BAY RD	271104000103200	0.31896273	0.319	30	0.624347	0	0	0.624347	0.000361	0.000	0.0000
	Nadeau Gerrard	CON 1 PT LOT 1	542 HOLLOWAY BAY RD	271104000103300	0.809001097	0.8092	30	1.583766	0	0	1.583766	0.000917	0.000	0.0000
	Muilleboom Ashley Arlene	CON 1 PT LOT 1	554 HOLLOWAY BAY RD	271104000103400	0.809204495	0.8094	30	1.584158	0	0	1.584158	0.000917	0.000	0.0000
	Kennedy Nancy Jane	CON 1 PT LOT 1	566 HOLLOWAY BAY RD	271104000103500	1.506676678	1.507	30	2.949500	0	0	2.949500	0.001707	0.000	0.0000
	Pruyn Kirk	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PART 3	614 HOLLOWAY BAY RD	271104000103600	5.399598462	5.4008	35	12.332187	0	0	12.332187	0.007138	0.000	0.0000
	Shaubel Brian	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PARTS 1 AND 2	588 HOLLOWAY BAY RD	271104000103610	2.596061856	2.5966	30	5.082066	0	0	5.082066	0.002942	0.000	0.0000
	Harriettha Thomas	HUMBERSTONE CON 1 PT LOT 1 RP 59R10180 PART 1	5987 SHERKSTON RD	271104000103700	0.404592354	0.4047	30	0.792079	0	0	0.792079	0.000458	0.000	0.0000
	2293020 Ontario Ltd	CON 1 PT LOT 1 RP 59R10180 PART 2	5961 SHERKSTON RD	271104000103705	0.669331113	0.6695	30	1.310345	0	0	1.310345	0.000758	0.000	0.0000
	Annett Matthew	CON 1 PT LOT 1 RP 59R10819 PARTS 1 & 2	5891 SHERKSTON RD	271104000103800	0.39841988	0.3985	30	0.779944	0	0	0.779944	0.000451	0.000	0.0000
	Cirone David	CON 1 PT LOT 1 RP 59R10180 PT PART 3	5841 SHERKSTON RD	271104000103805	0.474789753	0.4749	30	0.929474	0	0	0.929474	0.000538	0.000	0.0000
	Lehocki Teresa Mary	CON 1 PT LOT 1 59R-10180 PARTS 4 & 5	HOLLOWAY BAY RD	271104000103810	9.154561189	9.1566	35	20.908180	0	0	20.908180	0.012102	0.268	0.0005



Farm As 'F'	Owner	Legal_Txt	Municipal Addres	Roll No	Area Ha	Area in					QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC	
						Drain Ha	Runoff Factor 'C'	QRF	SWM	SWMF			QRF	QRF Ratio
	Manuel Robert George	CON 1 PT LOT 1	5795 SHERKSTON RD	271104000103900	0.1045604	0.1046	30	0.204723	0	0	0.204723	0.000119	0.024	0.0000
	Belanger Shayna Michlyn	CON 1 PT LOT 2	5676 SHERKSTON RD	271104000104800	0.579785779	0.5799	30	1.134980	0	0	1.134980	0.000657	1.135	0.0022
	Durant Dylan Tanner	CON 1 PT LOT 2 RP 59R4019 PART 1	5713 SHERKSTON RD	271104000104900	0.812815493	0.813	30	1.591204	0	0	1.591204	0.000921	1.591	0.0030
	Waldram Craig Thomas	CON 1 PT LOT 2	5755 SHERKSTON RD	271104000105000	0.714374035	0.7145	30	1.398419	0	0	1.398419	0.000809	1.398	0.0027
	Lampshire Melanie Dawn	CON 1 PT LOT 2 RP 59R12528 PART 1 641700135 UNREG	5457 SHERKSTON RD	271104000105900	0.60160436	0.6017	30	1.177647	0	0	1.177647	0.000682	1.178	0.0023
	Vanderende Lori Ann	CON 1 PT LOT 2	5489 SHERKSTON RD	271104000106000	0.216479199	0.2165	30	0.423734	0	0	0.423734	0.000245	0.424	0.0008
	Langlois Julie Marie	CON 1 PT LOT 2	5549 SHERKSTON RD	271104000106100	0.648193455	0.6483	30	1.268853	0	0	1.268853	0.000734	1.269	0.0024
	Brennan George	CON 1 PT LOT 2	5571 SHERKSTON RD	271104000106101	0.242056348	0.2421	30	0.473838	0	0	0.473838	0.000274	0.474	0.0009
	Phillips Ralph John	CON 1 PT LOT 2 RP 59R4043 PART 1	5613 SHERKSTON RD	271104000106200	1.70636311	1.7067	28	3.117663	0	0	3.117663	0.001805	3.118	0.0060
	Sergnese Brittany Lennie	CON 1 PT LOT 2	5651 SHERKSTON RD	271104000106300	0.431199193	0.4313	30	0.844140	0	0	0.844140	0.000489	0.844	0.0016
	Marois David Rosaire	CON 1 PT LOT 2	781 PLEASANT BEACH RD	271104000106800	0.162147758	0.1622	30	0.317458	0	0	0.317458	0.000184	0.317	0.0006
	Grenke Kevin Michael	HIMBERSTONE CON 1 PT LOT 2 RP 59R14932 PART 1	765 PLEASANT BEACH RD	271104000106900	0.973891665	0.9741	30	1.906509	0	0	1.906509	0.001104	1.907	0.0037
	Pooler Steven	CON 1 PT LOT 2	755 PLEASANT BEACH RD	271104000107000	0.721166279	0.7213	30	1.411728	0	0	1.411728	0.000817	1.412	0.0027
	Bonenfant Wendy	CON 1 PT LOT 2	743 PLEASANT BEACH RD	271104000107100	0.208929036	0.209	30	0.409055	0	0	0.409055	0.000237	0.409	0.0008
	Vander Veen John	CON 1 PT LOT 2	737 PLEASANT BEACH RD	271104000107200	0.240261725	0.2403	30	0.470315	0	0	0.470315	0.000272	0.470	0.0009
	Eberly Michael David	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 5	727 PLEASANT BEACH RD	271104000107300	15.49682866	15.5003	35	35.393385	0	0	35.393385	0.020487	29.492	0.0565
	Khan Dina	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 4	PLEASANT BEACH RD	271104000107305	2.44349372	2.444	28	4.464504	0	0	4.464504	0.002584	2.425	0.0046
	Rickman Erin Heather	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 3	635 PLEASANT BEACH RD	271104000107306	2.445571445	2.4461	28	4.468340	0	0	4.468340	0.002586	2.458	0.0047
	Benvenuti Shane	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 2	625 PLEASANT BEACH RD	271104000107307	2.447630514	2.4482	28	4.472176	0	0	4.472176	0.002589	2.590	0.0050
	Eberly William Warren	HUMBERSTONE CON 1 PT LOT 2 AND RP 59R14998 PART 1	603 PLEASANT BEACH RD	271104000107400	2.148189418	2.1487	28	3.925073	0	0	3.925073	0.002272	2.262	0.0043
	Hartley-Rybka Kimberly	CON 1 PT LOT 2 RP 59R6260 PART 1	591 PLEASANT BEACH RD	271104000107500	0.817403414	0.8176	30	1.600207	0	0	1.600207	0.000926	1.600	0.0031
	Berry Gordon Albert	CON 1 PT LOT 2	569 PLEASANT BEACH RD	271104000107600	8.624192751	8.6261	35	19.696837	0	0	19.696837	0.011401	6.488	0.0124
	Willwerth Donald R	CON 1 PT LOT 2	545 PLEASANT BEACH RD	271104000107700	2.641495017	2.6421	30	5.171118	0	0	5.171118	0.002993	5.171	0.0099
	Thomas Leslie Marilyn	CON 1 PT LOT 2 RP 59R10459 PARTS 1 & 2	5449 MICHENER RD	271104000107735	1.331246211	1.3315	30	2.606012	0	0	2.606012	0.001508	2.606	0.0050
	Shaubel Sophia Ann	CON 1 PT LOT 2 ROW & ESMT	451 PLEASANT BEACH RD	271104000107800	6.668048207	6.6695	35	15.229136	0	0	15.229136	0.008815	15.229	0.0292
	Robins Jodee Lee	CON 1 PT LOT 2 RP 59R9210 PART 1	5591 MICHENER RD	271104000107900	0.745861217	0.746	30	1.460071	0	0	1.460071	0.000845	0.967	0.0019
	Koren Amir	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 1	5670 MICHENER RD	271104000107901	0.99946194	0.9997	30	1.956613	0	0	1.956613	0.001133	0.000	0.0000
	Davies Norman Stewart	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 2	5650 MICHENER RD	271104000107903	1.52373046	1.5241	30	2.982969	0	0	2.982969	0.001727	1.381	0.0026
	Vongphakdy Souphhone Chastity	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R5691 PT PART 1	5685 MICHENER RD	271104000107930	22.05588334	22.0607	35	50.373402	0	0	50.373402	0.029158	44.706	0.0857
	Lodomez-Miller Anne Marie	CON 1 PT LOT 1 RP 59R12984 PART 3	454 HOLLOWAY BAY RD	271104000107932	2.235170878	2.2357	30	4.375712	0	0	4.375712	0.002533	0.000	0.0000
	Aquilina Daniel D	CON 1 PT LOT 1 PT LOT 2 RP 59R12984 PART 2	MICHENER RD	271104000107934	0.666926923	0.6671	30	1.305648	0	0	1.305648	0.000756	0.000	0.0000
	Aquilina Daniel D	CON 1 PT LOT 1 RP 59R12984 PART 1	5963 MICHENER RD	271104000107935	0.667180811	0.6673	30	1.306040	0	0	1.306040	0.000756	0.000	0.0000
	Lee Stephen	HUMBERSTONE CON 1 PT LOT 2 RP 59R15397 PART 1	MICHENER RD	271104000107937	0.999741135	1	30	1.957200	0	0	1.957200	0.001133	0.919	0.0018
	Engels Bryan	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R15397 PART 2	5831 MICHENER RD	271104000107938	1.000218077	1.0004	30	1.957983	0	0	1.957983	0.001133	0.500	0.0010
	Emonds Ashley	HUMBERSTONE CON 1 PT LOT 1 RP 59R16961 PART 1	MICHENER RD	271104000107940	1.008511504	1.0087	30	1.974228	0	0	1.974228	0.001143	0.000	0.0000
	Ginther George Eagan	CON 1 PT LOT 2 RP59R5691 PART 2 PART 4 PT PCL PLAN 45 NP 804	5714 FIRELANE 27	271104000108000	12.23911855	12.2418	25	19.966376	0	0	19.966376	0.011557	19.915	0.0382
	Andreacchi Giuseppe	CON 1 PT LOT 2	361 PLEASANT BEACH RD	271104000108200	0.072458832	0.0725	40	0.189196	0	0	0.189196	0.000110	0.189	0.0004
	Ross James J	CON 1 PT LOT 2	357 PLEASANT BEACH RD	271104000108300	0.144875379	0.1449	40	0.378131	0	0	0.378131	0.000219	0.378	0.0007
	Lungu Ana	CON 1 PT LOT 2	345 PLEASANT BEACH RD	271104000108400	0.209000631	0.209	40	0.545406	0	0	0.545406	0.000316	0.545	0.0010
	Andreacchi Franchina	HUMBERSTONE CON 1 PT LOT 2	341 PLEASANT BEACH RD	271104000108500	0.182862068	0.1829	40	0.477296	0	0	0.477296	0.000276	0.477	0.0009
	Parisi Giacomo	CON 1 PT LOT 2	333 PLEASANT BEACH RD	271104000108600	0.503527917	0.5036	35	1.149920	0	0	1.149920	0.000666	1.150	0.0022
	Andreacchi Salvatore	CON 1 PT LOT 2	341 1/2 PLEASANT BEACH RD	271104000108900	0.078361238	0.0784	40	0.204593	0	0	0.204593	0.000118	0.205	0.0004
	Elliott Jordan	CON 1 PT LOT 2	PLEASANT BEACH RD	271104000109000	0.404932748	0.405	35	0.924777	0	0	0.924777	0.000535	0.925	0.0018
	Elliott Jordan	CON 1 PT LOT 2	PLEASANT BEACH RD	271104000109100	0.363083239	0.3632	35	0.829331	0	0	0.829331	0.000480	0.829	0.0016
	Elliott Jordan	CON 1 PT LOT 2	311 PLEASANT BEACH RD	271104000109200	0.141438877	0.1415	35	0.323101	0	0	0.323101	0.000187	0.323	0.0006
	Ariganello Rosina	CON 1 PT LOT 2	307 PLEASANT BEACH RD	271104000109300	0.302955156	0.303	35	0.691870	0	0	0.691870	0.000400	0.692	0.0013
	Andreacchi Vito	CON 1 PT LOT 2	PLEASANT BEACH RD	271104000109400	0.115444129	0.1155	25	0.188381	0	0	0.188381	0.000109	0.188	0.0004
	Tompkins Daniel	CON 1 PT LOT 2	275 PLEASANT BEACH RD	271104000109500	0.104290657	0.1043	25	0.170113	0	0	0.170113	0.000098	0.170	0.0003
	MacDougald Heather Alanna	CON 1 PT LOT 2 AND PLAN 806 LOTS 19 AND 28	5474 FIRELANE 22	271104000109600	0.158259949	0.1583	35	0.361462	0	0	0.361462	0.000209	0.361	0.0007
	Obeld Nabhan	CON 1 PT LOT 2	5548 FIRELANE 22	271104000109700	0.065212246	0.0652	35	0.148878	0	0	0.148878	0.000086	0.149	0.0003
	Bihl Dennis Charles	CON 1 PT LOT 2	5565 FIRELANE 22	271104000109800	0.066837543	0.0669	20	0.087291	0	0	0.087291	0.000051	0.087	0.0002
	Morgado Joseph	PLAN 47 LOT 1 LOT 2 NP806	5537 FIRELANE 22	271104000109900	0.09213453	0.0922	20	0.120303	0	0	0.120303	0.000070	0.120	0.0002
	Canal Daniel	PLAN 47 LOT 3 LOT 4 NP806	5521 FIRELANE 22	271104000110000	0.09255865	0.0926	20	0.120824	0	0	0.120824	0.000070	0.121	0.0002
	Maunder Paul	PLAN 47 LOT 5 NP806	5501 FIRELANE 22	271104000110100	0.046212781	0.0462	20	0.060282	0	0	0.060282	0.000035	0.060	0.0001
	Leffler Gretchen	PLAN 47 LOT 6 PT LOT 7 NP806	5479 FIRELANE 22	271104000110200	0.050780606	0.0508	20	0.066284	0	0	0.066284	0.000038	0.066	0.0001
	Pasco Philip Albert	PLAN 47 PT LOT 7 NP806	5465 FIRELANE 22	271104000110300	0.04611968	0.0461	20	0.060151	0	0	0.060151	0.000035	0.060	0.0001
	Pasco Philip Albert	PLAN 47 LOT 9 PT LOT 8 NP806	267 PLEASANT BEACH RD	271104000110400	0.09210318	0.0921	20	0.120172	0	0	0.120172	0.000070	0.120	0.0002
	Lim Jaime	PLAN 47 LOT 10 NP806	PLEASANT BEACH RD	271104000110500	0.047494199	0.0475	25	0.077473	0	0	0.077473	0.000045	0.077	0.0001
	Palmisano Mark M	PLAN 47 LOT 11 LOT 12 NP806	PLEASANT BEACH RD	271104000110501	0.096628538	0.0967	25	0.157718	0	0	0.157718	0.000091	0.158	0.0003
	Soto Belisario	CON 1 PT LOT 2, LOT 13 PLAN 47 NP 806	296 FIRELANE 23	271104000110600	0.10104397	0.1011	25	0.164894	0	0	0.164894	0.000095	0.165	0.0003



Farm As 'F'	Owner	Legal_Txt	Municipal Address	Roll No	Area Ha	Area in		QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC	
						Drain Ha	Runoff Factor 'C'						QRF	
	Sacco Andrew	PLAN 47 LOT 14 LOT 15 NP806	288 FIRELANE 23	271104000110700	0.099058393	0.0991	25	0.161632	0	0	0.161632	0.000094	0.162	0.0003
	Arruda Victor	PLAN 47 LOT 16 LOT 17 NP806	282 FIRELANE 23	271104000110800	0.077509177	0.0775	25	0.126403	0	0	0.126403	0.000073	0.126	0.0002
	Devans Russell	PLAN 47 LOT 18 NP806	277 FIRELANE 23	271104000110900	0.065486216	0.0655	25	0.106831	0	0	0.106831	0.000062	0.107	0.0002
	Muraco Frederick	PLAN 47 806 LOTS 20 21 26 AND 27 NP806	289 FIRELANE 23	271104000111000	0.185747943	0.1858	35	0.424256	0	0	0.424256	0.000246	0.424	0.0008
	Ariganello Aldo Peter	PLAN 47 LOT 22 TO LOT 25 NP806 CON 1 PT LOT 2	297 FIRELANE 23	271104000111100	0.351565161	0.3516	35	0.802843	0	0	0.802843	0.000465	0.803	0.0015
	Williamson Michael Patrick	PLAN 41 LOT 1 LOT 2 NP800 PLAN 47 PT LOT 8 NP806	259 PLEASANT BEACH RD	271104000111200	0.092771774	0.0928	20	0.121085	0	0	0.121085	0.000070	0.121	0.0002
	Elia Sandro	PLAN 41 LOT 3 PT LOT 4 NP800	5468 FIRELANE 25	271104000111300	0.054950566	0.055	20	0.071764	0	0	0.071764	0.000042	0.072	0.0001
	Kennedy Kurt	PLAN 800 LOT 5 PT LOTS 4 AND 6	5488 FIRELANE 25	271104000111400	0.054905584	0.0549	20	0.071634	0	0	0.071634	0.000041	0.072	0.0001
	Elia Sandro	PLAN 41 LOT 7 PT LOT 6 PT LOT 8 NP800	5502 FIRELANE 25	271104000111500	0.054792199	0.0548	20	0.071503	0	0	0.071503	0.000041	0.072	0.0001
	Vecchi Vitorrio	PLAN 41 PT LOT 8 PT LOT 9 NP800	5516 FIRELANE 25	271104000111600	0.054791474	0.0548	20	0.071503	0	0	0.071503	0.000041	0.072	0.0001
	Pacheco John	PLAN 800 LOT 10 PT LOTS 9 AND 11	5534 FIRELANE 25	271104000111700	0.05479118	0.0548	20	0.071503	0	0	0.071503	0.000041	0.072	0.0001
	Puntoriero Antonio	PLAN 800 LOT 12 PT LOT 11	FIRELANE 25	271104000111800	0.05545927	0.0555	20	0.072416	0	0	0.072416	0.000042	0.072	0.0001
	Hibbard David	PLAN 41 LOT 13 NP 800	5551 FIRELANE 25	271104000111900	0.030644672	0.0307	20	0.040057	0	0	0.040057	0.000023	0.040	0.0001
	Zaparaniuk Judith Grace	PLAN 41 LOT 14 LOT 15 NP800	249 FIRELANE 26	271104000112000	0.062222562	0.0622	20	0.081159	0	0	0.081159	0.000047	0.081	0.0002
	Sanderson Linda	PLAN 41 LOT 16 PT LOT 17 NP800	243 FIRELANE 26	271104000112100	0.048755805	0.0488	20	0.063674	0	0	0.063674	0.000037	0.064	0.0001
	Webb Ronald Joseph	PLAN 41 LOT 18 PT LOT 17 NP800	239 FIRELANE 26	271104000112200	0.048756381	0.0488	20	0.063674	0	0	0.063674	0.000037	0.064	0.0001
	Cardwell Jason	PLAN 41 LOT 19 NP800	237 FIRELANE 26	271104000112300	0.047566946	0.0476	20	0.062108	0	0	0.062108	0.000036	0.062	0.0001
	Thuersam Lester	PLAN 41 LOT 20 LOT 21 NP800 PT BLK B	5515 FIRELANE 25	271104000112400	0.069650245	0.0697	20	0.090945	0	0	0.090945	0.000053	0.091	0.0002
	Paradise Shores Holdings Inc	PLAN 41 BLK A BLK C PT BLK B NP800	PLEASANT BEACH RD	271104000112500	0.526216342	0.5263	70	2.403507	0	0	2.403507	0.001391	2.404	0.0046
	Paradise Shores Holdings Inc	PLAN 41 BLK A BLK C PT BLK B NP800	PLEASANT BEACH RD	271104000112500	0.152430612	0.1525	70	0.696437	0	0	0.696437	0.000403	2.404	0.0046
	Pacheco John	PLAN 800 PT BLK A	FIRELANE 25	271104000112515	0.002321029	0.0023	0	0.000000	0	0	0.000000	0.000000	0.000	0.0000
	Pleasant Beach Property Owners Corporation Ltd	CON 1 PT LOT 3 2000 NOV29 TAX CLASS REVIEW CT STANDS SEE DOCU FILE 1869	238 PLEASANT BEACH RD	271104000112600	0.366669232	0.3668	20	0.478601	0	0	0.478601	0.000277	0.479	0.0009
	Comazzolo Mary	CON 1 PT LOT 3	260 PLEASANT BEACH RD	271104000112700	0.029874534	0.0299	20	0.039014	0	0	0.039014	0.000023	0.039	0.0001
	De Sousa Mariette	CON 1 PT LOT 3 SIMON SKETCH LOT 2	258 PLEASANT BEACH RD	271104000112800	0.029778317	0.0298	20	0.038883	0	0	0.038883	0.000023	0.039	0.0001
	Eimiller Thomas Keith	CON 1 PT LOT 3 SIMON SKETCH	FIRELANE 24	271104000112900	0.029775782	0.0298	20	0.038883	0	0	0.038883	0.000023	0.039	0.0001
	Eimiller Sandra Ann	CON 1 PT LOT 3 (SIMON SKETCH LOT 4 - FOR REFERENCE ONLY)	FIRELANE 24	271104000113000	0.02977354	0.0298	20	0.038883	0	0	0.038883	0.000023	0.039	0.0001
	McLintock Ann	CON 1 PT LOT 3 SIMON SKETCH LOT 5 TO LOT 7	5384 FIRELANE 24	271104000113100	0.089524733	0.0895	20	0.116780	0	0	0.116780	0.000068	0.117	0.0002
	Van Patten Shawn	CON 1 PT LOT 3 SIMON SKETCH LOT 8 PT LOT 9	5364 FIRELANE 24	271104000113400	0.044594249	0.0446	20	0.058194	0	0	0.058194	0.000034	0.058	0.0001
	Sacco Anthony Thomas	HUMBERSTONE CON 1 PT LOT 3	5350 FIRELANE 24	271104000113600	0.044660075	0.0447	20	0.058325	0	0	0.058325	0.000034	0.058	0.0001
	Paolini Richard John	CON 1 PT LOT 3 SIMON SKETCH LOT 11 LOT 12	5340 FIRELANE 24	271104000113700	0.059550429	0.0596	20	0.077766	0	0	0.077766	0.000045	0.078	0.0001
	Armao Matilda Kathryn	CON 1 PT LOT 3 SIMON SKETCH LOT 13	5330 FIRELANE 24	271104000113800	0.02977351	0.0298	20	0.038883	0	0	0.038883	0.000023	0.039	0.0001
	Gigliotti Anthony	CON 1 PT LOT 3 RP 59R2535 PART 1	5320 FIRELANE 24	271104000113900	0.046894175	0.0469	20	0.061195	0	0	0.061195	0.000035	0.061	0.0001
	Lozovoi Gueorgui	CON 1 PT LOT 3 RP 59R2535 PART 2	5304 FIRELANE 24	271104000114000	0.054265285	0.0543	20	0.070851	0	0	0.070851	0.000041	0.071	0.0001
	Hudi Martin	CON 1 PT LOT 3	5323 FIRELANE 24	271104000114200	0.106736308	0.1068	20	0.139353	0	0	0.139353	0.000081	0.139	0.0003
	Allen Troy Edmund	CON 1 PT LOT 3	5333 FIRELANE 24	271104000114300	0.089627758	0.0896	20	0.116910	0	0	0.116910	0.000068	0.117	0.0002
	Shomers John Peter	CON 1 PT LOT 3	5345 FIRELANE 24	271104000114400	0.052254326	0.0523	20	0.068241	0	0	0.068241	0.000040	0.068	0.0001
	Labarber Louis P	CON 1 PT LOT 3	5351 FIRELANE 24	271104000114500	0.057218004	0.0572	20	0.074635	0	0	0.074635	0.000043	0.075	0.0001
	Palumbo Vito	CON 1 PT LOT 3	5357 FIRELANE 24	271104000114600	0.062177546	0.0622	20	0.081159	0	0	0.081159	0.000047	0.081	0.0002
	Catherine Ruby Josephine	CON 1 PT LOT 3	FIRELANE 24	271104000114700	0.067139902	0.0672	20	0.087683	0	0	0.087683	0.000051	0.088	0.0002
	Brown Judith Evelyn	CON 1 PT LOT 3	5373 FIRELANE 24	271104000114800	0.057670098	0.0577	20	0.075287	0	0	0.075287	0.000044	0.075	0.0001
	Browne Michael Robert	CON 1 PT LOT 3	5385 FIRELANE 24	271104000114900	0.057672542	0.0577	20	0.075287	0	0	0.075287	0.000044	0.075	0.0001
	Hildreth Ronald James	CON 1 PT LOT 3	5395 FIRELANE 24	271104000115000	0.038450238	0.0385	20	0.050235	0	0	0.050235	0.000029	0.050	0.0001
	1000609385 Ontario Inc	CON 1 PT LOT 3	5401 FIRELANE 24	271104000115100	0.089338431	0.0894	20	0.116649	0	0	0.116649	0.000068	0.117	0.0002
	Saulnier Neil	PLAN 46 LOT 1 LOT 2 NP805 ROW OVER BLKS A & B	262 PLEASANT BEACH RD	271104000115300	0.093099781	0.0931	20	0.121477	0	0	0.121477	0.000070	0.121	0.0002
	Eimiller Thomas Wayne	PLAN 46 LOT 3 NP805	5399 FIRELANE 21	271104000115400	0.046661949	0.0467	20	0.060934	0	0	0.060934	0.000035	0.061	0.0001
	Bull Joanna	PLAN 46 LOT 4 NP805	5389 FIRELANE 21	271104000115500	0.046751766	0.0468	20	0.061065	0	0	0.061065	0.000035	0.061	0.0001
	Wojcik Daniel Stanley	PLAN 46 LOT 5 LOT 6 NP805	5373 FIRELANE 21	271104000115600	0.09377452	0.0938	20	0.122390	0	0	0.122390	0.000071	0.122	0.0002
	Sacco Jo-Ann Mary	PLAN 46 LOT 7 NP805	5359 FIRELANE 21	271104000115700	0.047023816	0.047	20	0.061326	0	0	0.061326	0.000035	0.061	0.0001
	Vizzari Sara	PLAN 46 LOT 8 NP805	FIRELANE 21	271104000115800	0.047302317	0.0473	20	0.061717	0	0	0.061717	0.000036	0.062	0.0001
	Clements Alton W	PLAN 805 BLKS A AND B	PLEASANT BEACH RD											



Farm As 'F'	Owner	Legal_Txt	Municipal Address	Roll No	Area Ha	Area in		Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC	
						Drain Ha								QRF	QRF Ratio
	Janik Edward Matthew In Trust	CON 1 PT LOT 3	312 PLEASANT BEACH RD	271104000117100	0.139307277	0.1393		40	0.363517	0	0	0.363517	0.000210	0.364	0.0007
	Smith Gordon Franklin	CON 1 PT LOT 3	328 PLEASANT BEACH RD	271104000117200	0.222897766	0.2229		40	0.581680	0	0	0.581680	0.000337	0.582	0.0011
	Mitro Dominic	CON 1 PT LOT 3	332 PLEASANT BEACH RD	271104000117300	0.11144736	0.1115		40	0.290970	0	0	0.290970	0.000168	0.291	0.0006
	Senese Thomas Anthony	CON 1 PT LOT 3	338 PLEASANT BEACH RD	271104000117500	0.111446417	0.1115		40	0.290970	0	0	0.290970	0.000168	0.291	0.0006
	SSI Property GP INC	HUMBERSTONE CON 1 PT LOT 3 RP 59R16901 PART 1	342 PLEASANT BEACH RD	271104000117600	4.694129605	4.6952		45	13.784168	0	0	13.784168	0.007979	13.784	0.0264
	Sider Roger	CON 1 PT LOT 3	434 PLEASANT BEACH RD	271104000117700	0.747294493	0.7475		30	1.463007	0	0	1.463007	0.000847	1.463	0.0028
	Malandrino Paola	CON 1 PT LOT 3	480 PLEASANT BEACH RD	271104000117701	0.26013655	0.2602		30	0.509263	0	0	0.509263	0.000295	0.509	0.0010
	MacDonald Gordon Ross	CON 1 PT LOT 3	484 PLEASANT BEACH RD	271104000117800	0.314098265	0.3142		30	0.614952	0	0	0.614952	0.000356	0.615	0.0012
	Pleasant Beach Sherkston Estates Inc	CON 1 PT LOT 3	478 PLEASANT BEACH RD	271104000117900	6.110766107	6.1121		30	11.962602	0	0	11.962602	0.006924	11.963	0.0229
	O'Shea Noreen	CON 1 PT LOT 3	488 PLEASANT BEACH RD	271104000118200	0.268902964	0.269		30	0.526487	0	0	0.526487	0.000305	0.526	0.0010
	Ventresca Mary Yollanda	HUMBERSTONE CON 1 PT LOT 3 RP 59R16488 PART 2	534 PLEASANT BEACH RD	271104000118300	3.48631306	3.4871		30	6.824952	0	0	6.824952	0.003951	6.825	0.0131
	Luckasavitch Diane	HUMBERSTONE CON 1 PT LOT 3 RP 59R16488 PART 1	542 PLEASANT BEACH RD	271104000118303	1.213993253	1.2143		30	2.376628	0	0	2.376628	0.001376	2.377	0.0046
	Pavao Dennis	HUMBERSTONE CON 1 PT LOT 3 RP 59R15358 PART 2	5293 BEACH RD	271104000118400	0.995121537	0.9953		30	1.948001	0	0	1.948001	0.001128	1.948	0.0037
	Winney James	HUMBERSTONE CON 1 PT LOT 3 RP 59R13237 PART 1 RP 59R15358 PART 1	566 PLEASANT BEACH RD	271104000118450	1.407309532	1.4076		30	2.754955	0	0	2.754955	0.001595	2.755	0.0053
	PC City Hall	CON 1 PT LOTS 3,4 PLAN 35 LOTS 1-108,LANES NP794 RP59R4679 PARTS 1,2,4,5	BEACH RD	271104000118501	0.73844658	0.7386		30	1.445588	0	0	1.445588	0.000837	1.446	0.0028
	Marr Gerald Murray	CON 1 PT LOT 3	634 PLEASANT BEACH RD	271104000118502	0.860214005	0.8604		30	1.683975	0	0	1.683975	0.000975	1.684	0.0032
	Franklin Adam	CON 1 PT LOT 3 RP 59R11998 PART 2	622 PLEASANT BEACH RD	271104000118503	0.661284621	0.6614		30	1.294492	0	0	1.294492	0.000749	1.294	0.0025
	Nan Kenneth Henry	CON 1 PT LOT 3 RP 59R11998 PART 1	612 PLEASANT BEACH RD	271104000118504	0.657505476	0.6577		30	1.287250	0	0	1.287250	0.000745	1.287	0.0025
	O'Quinn Christopher Leonard	PLAN 59M365 LOT 1	5416 BEACH RD	271104000118510	0.798236065	0.7984		30	1.562628	0	0	1.562628	0.000905	1.563	0.0030
	Kelley Scott Andrew	PLAN 59M365 LOT 2	5294 BEACH RD	271104000118514	0.930012685	0.9302		30	1.820587	0	0	1.820587	0.001054	1.821	0.0035
	Senra Shawn Cordeiro	PLAN 59M365 LOT 3	5278 BEACH RD	271104000118518	0.861068322	0.8613		30	1.685736	0	0	1.685736	0.000976	1.686	0.0032
	Ward Lisa	PLAN 59M365 LOT 4	5256 BEACH RD	271104000118522	0.847293448	0.8475		30	1.658727	0	0	1.658727	0.000960	1.659	0.0032
	Paladino Alfredo	PLAN 59M365 LOT 5	5226 BEACH RD	271104000118526	0.805371502	0.8056		30	1.576720	0	0	1.576720	0.000913	1.577	0.0030
	Pruyn Joe	PLAN 59M365 LOT 6	5196 BEACH RD	271104000118530	0.662175954	0.6623		30	1.296254	0	0	1.296254	0.000750	1.296	0.0025
	Belperio Enrico	HUMBERSTONE CON 1 PT LOT 4 RP 59R15508 PART 1	671 EMPIRE RD	271104000118600	20.53358629	7.4077		35	16.914742	0	0	16.914742	0.009791	16.909	0.0324
	Shisler Stanley Bruce	CON 1 PT LOT 4	5063 BEACH RD	271104000118602	0.414195393	0.0394		30	0.077114	0	0	0.077114	0.000045	0.077	0.0001
	Shisler Stanley Bruce	CON 1 PT LOT 4	BEACH RD	271104000118603	0.074012085	0.0441		30	0.086313	0	0	0.086313	0.000050	0.086	0.0002
	Hoover David Allan	CON 1 PT LOT 3	5201 BEACH RD	271104000118604	1.138131556	1.1384		30	2.228076	0	0	2.228076	0.001290	2.228	0.0043
	Hoover David Allan	CON 1 PT LOT 3	5251 BEACH RD	271104000118800	0.856252839	0.8564		30	1.676146	0	0	1.676146	0.000970	1.676	0.0032
	Kramer Ryan	CON 1 PT LOT 3	5289 BEACH RD	271104000118900	0.793750003	0.7939		30	1.553821	0	0	1.553821	0.000899	1.554	0.0030
	Marlatt Brandon	HUMBERSTONE CON 1 PT LOT 3	700 PLEASANT BEACH RD	271104000119000	15.572804	15.5763		35	35.566923	0	0	35.566923	0.020587	35.567	0.0682
	Scrada Stephen	HUMBERSTONE CON 1 PT LOT 3 RP 59R17643 PART 1	690 PLEASANT BEACH RD	271104000119002	1.003787175	1.004		30	1.965029	0	0	1.965029	0.001137	1.965	0.0038
	Topa Anne Shirley	HUMBERSTONE CON 1 PT LOT 3 RP 59R15804 PART 2	742 PLEASANT BEACH RD	271104000119100	0.409496826	0.4096		30	0.801669	0	0	0.801669	0.000464	0.802	0.0015
	Topa Travis	HUMBERSTONE CON 1 PT LOT 3 RP 59R15804 PART 1	730 PLEASANT BEACH RD	271104000119102	0.83435607	0.8345		30	1.633283	0	0	1.633283	0.000945	1.633	0.0031
	Young Samuel Bare	CON 1 PT LOT 3 RP 59R5195 PART 2	754 PLEASANT BEACH RD	271104000119105	1.409417971	1.4097		28	2.575127	0	0	2.575127	0.001491	2.575	0.0049
	O'Neal Aaron	CON 1 PT LOT 3 RP 59R5195 PART 3	762 PLEASANT BEACH RD	271104000119200	1.168020376	1.1683		30	2.286597	0	0	2.286597	0.001324	2.287	0.0044
	Rowland Jeffrey Alan	CON 1 PT LOT 3 RP 59R5195 PART 1	778 PLEASANT BEACH RD	271104000119201	0.85444894	0.8546		30	1.672623	0	0	1.672623	0.000968	1.673	0.0032
	Lostracco Douglas Edward	CON 1 PT LOT 3 RP 59R11965 PART 1	788 PLEASANT BEACH RD	271104000119300	0.472793355	0.4729		30	0.925560	0	0	0.925560	0.000536	0.926	0.0018
	Serniak Greg	CON 1 PT LOT 3 RP59R5431 PART 1	5323 SHERKSTON RD	271104000119400	0.528780854	0.5289		30	1.035163	0	0	1.035163	0.000599	1.035	0.0020
	Jaskolka Edward Joseph	CON 1 PT LOT 3 RP 59R5431 PART 2	5353 SHERKSTON RD	271104000119401	0.475543771	0.4757		30	0.931040	0	0	0.931040	0.000539	0.931	0.0018
	Johnson Robert Alexander	CON 1 PT LOT 3 RP 59R5431 PART 3	5375 SHERKSTON RD	271104000119402	0.422308881	0.4224		30	0.826721	0	0	0.826721	0.000479	0.827	0.0016
	Frost Paul William	CON 1 PT LOT 3 RP 59R5431 PART 4	796 PLEASANT BEACH RD	271104000119403	0.453677703	0.4538		30	0.888177	0	0	0.888177	0.000514	0.888	0.0017
	Vorstenbosch Cathy Marie	CON 1 PT LOT 3	5248 SHERKSTON RD	271104000119800	0.235077213	0.2348		30	0.459551	0	0	0.459551	0.000266	0.460	0.0009
	Woelke Helena	HUMBERSTONE CON 1 PT LOT 3 RP 59R14079 PART 1	5232 SHERKSTON RD	271104000119900	0.109553356	0.1096		30	0.214509	0	0	0.214509	0.000124	0.215	0.0004
	Buick Robert	HUMBERSTONE CON 1 PT LOT 3	5212 SHERKSTON RD	271104000120000	0.124212147	0.1242		30	0.243084	0	0	0.243084	0.000141	0.243	0.0005
	Kirkwood Graeme Scott	CON 1 PT LOT 3 PT LOT 4	5188 SHERKSTON RD	271104000120100	0.186733933	0.1868		30	0.365605	0	0	0.365605	0.000212	0.366	0.0007
	Damude Raymond Harold Jr	CON 1 PT LOT 4	SHERKSTON RD	271104000120400	4.205696562	1.6133		35	3.683809	0	0	3.683809	0.002132	3.684	0.0071
	Priebe James Arthur	CON 1 PT LOT 4 AND RP59R10512 PARTS 1 AND 5	5151 SHERKSTON RD	271104000120700	1.635361555	1.5865		28	2.898091	0	0	2.898091	0.001678	2.897	0.0056
	Dykstra David Gary	CON 1 PT LOT 3	5231 SHERKSTON RD	271104000120800	0.572887665	0.573		30	1.121476	0	0	1.121476	0.000649	1.121	0.0021
	Penny William John	CON 1 PT LOT 3	5249 SHERKSTON RD	271104000120900	0.889396962	0.8896		30	1.741125	0	0	1.741125	0.001008	1.741	0.0033
	Robison Darlene Raye	CON 1 PT LOT 3	5305 SHERKSTON RD	271104000121000	1.659984799	1.6604		28	3.033086	0	0	3.033086	0.001756	3.033	0.0058
	Kostuk William Roger	CON 1 PT LOT 3	5307 SHERKSTON RD	271104000121100	0.38222804	0.3823		30	0.748238	0	0	0.748238	0.000433	0.748	0.0014
	Desrochers Christina Maria	CON 1 PT LOT 3 RP 59R10512 PARTS 3 AND 8	5215 SHERKSTON RD	271104000123496	1.196243619	1.1965		28	2.185670	0	0	2.185670	0.001265	2.186	0.0042
	Gillis Nicole Jennifer	HUMBERSTONE CON 1 PT LOTS 3 AND 4 RP 59R10512 PARTS 4 7 AND 11	5199 SHERKSTON RD	271104000123498	2.045954345	2.0464		28	3.738200	0	0	3.738200	0.002164	3.738	0.0072
	Godla Jiri	CON 1 PT LOT 4 RP 59R10512 PARTS 2 6 AND 10	5183 SHERKSTON RD	271104000123500	2.609459797	2.6101		28	4.767922	0	0	4.767922	0.002760	4.768	0.0091
	Shisler Terry	CON 1 PT LOT 4 RP59R4654 PART 1	577 EMPIRE RD	271104000123900	2.554297427	0.0827		30	0.161860	0	0	0.161860	0.000094	0.162	0.0003
	SSI Property GP Inc	HUMBERSTONE CON 1 PT LOTS 3 TO 8 PT RD ALLOW PT BED LAKE ERIE RP 59R5042 PARTS 6 TO 12 PT PART 5 RP 59R4991 PART 1 RP 59R9347 PART 1 RP 59R16102 PART 1 RP 59R16103 PART 1	EMPIRE RD	271104000124600	82.76897452	39.772		45	116.762638	0	0	116.762638	0.067586	116.738	0.2238



Farm As 'F'	Owner	Legal_Txt	Municipal Addres	Roll No	Area Ha	Area in		Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC	
						Drain Ha								QRF	QRF Ratio
	Canadian Niagara Power Inc	HUMBERSTONE CON 1 PT LOT 4 59R13714 PART 1	BEACH RD	271104000124610	0.207783782	0.2078		30	0.406706	0	0	0.406706	0.000235	0.407	0.0008
	PC City Hall	CON 1 PT LOTS 1-22	1-12 DUNNVILLE SUBD	271104000499900	0.99236855	0.248		45	0.728078	0	0	0.728078	0.000421	0.728	0.0014
Town of Fort Erie															
	OWNER1	Not provided	LOCATION	ARN	Shape_Area	Catch_Ha	C_Factor								
	SHORE OAKS INC		683 POINT ABINO ROAD SOUTH	270302001800100	94182.338	6.161	30		12.058309	0	0	12.058309	0.006980		
	VAN BOLDEREN ADOLPHUS L		725 POINT ABINO ROAD SOUTH	270302001800200	12321.589	1.198	30		2.345508	0	0	2.345508	0.001358		
	RLC POINT ABINO INC		715 POINT ABINO ROAD SOUTH	270302001800250	11890.470	1.081	30		2.114950	0	0	2.114950	0.001224		
	JOHNSON KAREN		739 POINT ABINO ROAD SOUTH	270302001800300	11870.336	1.187	30		2.323784	0	0	2.323784	0.001345		
	PICTOR WILLIAM		745 POINT ABINO ROAD SOUTH	270302001800400	8940.515	0.894	30		1.750128	0	0	1.750128	0.001013		
	POSSLER HEIDI CARMEN		753 POINT ABINO ROAD SOUTH	270302001800500	9202.109	0.920	30		1.801407	0	0	1.801407	0.001043		
	DURRANT GRAHAM		761 POINT ABINO ROAD SOUTH	270302001800600	12966.336	1.297	30		2.538293	0	0	2.538293	0.001469		
	WILSON BRIAN		781 POINT ABINO ROAD SOUTH	270302001800800	18587.776	1.859	30		3.638826	0	0	3.638826	0.002106		
	MES REALTY COMPANY LLC		787 POINT ABINO ROAD SOUTH	270302001800900	13192.842	1.320	30		2.582721	0	0	2.582721	0.001495		
	DICIENZO ALYSSSA MARIE		801 POINT ABINO ROAD SOUTH	270302001801000	19808.609	2.380	30		4.657157	0	0	4.657157	0.002696		
	DICIENZO ANTHONY		819 POINT ABINO ROAD SOUTH	270302001801100	15698.854	1.570	30		3.073195	0	0	3.073195	0.001779		
	SCHMITT MAUREEN		829 POINT ABINO ROAD SOUTH	270302001801101	12944.330	1.295	30		2.533987	0	0	2.533987	0.001467		
	GIBSON SHIRLEY		839 POINT ABINO ROAD SOUTH	270302001801200	12817.364	1.282	30		2.509130	0	0	2.509130	0.001452		
	IAFRATE MICHAEL		849 POINT ABINO ROAD SOUTH	270302001801300	13749.030	1.301	30		2.545730	0	0	2.545730	0.001474		
	SEUBERT SCOTT BEAL		857 POINT ABINO ROAD SOUTH	270302001801400	17131.131	1.609	30		3.148743	0	0	3.148743	0.001823		
	JOHNSON DAVID / MOSIER AMY		873 POINT ABINO ROAD SOUTH	270302001801401	13462.692	1.263	30		2.472335	0	0	2.472335	0.001431		
	GREGORY K M / GREGORY M M		879 POINT ABINO ROAD SOUTH	270302001801500	4168.426	0.417	30		0.815957	0	0	0.815957	0.000472		
	CRABTREE ROBERT		891 POINT ABINO ROAD SOUTH	270302001801600	3431.982	0.343	30		0.671907	0	0	0.671907	0.000389		
	FERRONI RICHARD JOSEPH		897 POINT ABINO ROAD SOUTH	270302001801700	2107.237	0.211	30		0.412578	0	0	0.412578	0.000239		
	LISI ANTHONY		903 POINT ABINO ROAD SOUTH	270302001801800	2835.600	0.284	30		0.555062	0	0	0.555062	0.000321		
	FAIRFIELD BRENNAN DOROTHY D		913 POINT ABINO ROAD SOUTH	270302001801900	3816.539	0.382	30		0.747063	0	0	0.747063	0.000432		
	SANDERS STEPHEN		921 POINT ABINO ROAD SOUTH	270302001802000	4446.544	0.445	30		0.870367	0	0	0.870367	0.000504		
	MCCABE REGINA ANNE		931 POINT ABINO ROAD SOUTH	270302001802100	4099.537	0.410	30		0.802452	0	0	0.802452	0.000464		
	GEPHARDT HELENE H		4874 ABINO HILLS ROAD	270302001802101	5658.889	0.566	30		1.107775	0	0	1.107775	0.000641		
	MATHEWSON CHRISTOPHER		949 POINT ABINO ROAD SOUTH	270302001802200	674.845	0.068	30		0.132111	0	0	0.132111	0.000076		
	BUFFALO YACHT CLUB		917 POINT ABINO ROAD SOUTH	270302001802500	45891.149	2.263	20		2.953023	0	0	2.953023	0.001709		
	ABINO DUNES CORPORATION		0-9865 POINT ABINO ROAD SOUTH	270302001802950	229247.360	1.127	20		1.470901	0	0	1.470901	0.000851		
	0		4961-1 ABINO HILLS ROAD	270302001811000	6126.365	0.215	20		0.280141	0	0	0.280141	0.000162		
	MUNSCHAUER EDWIN A JR		4961 ABINO HILLS ROAD	270302001811000	17864.512	1.787	20		2.331417	0	0	2.331417	0.001350		
	IAFRATE BRUNO		4971 ABINO HILLS ROAD	270302001811100	8071.777	0.464	20		0.605558	0	0	0.605558	0.000351		
	FWGB CORP		4981 ABINO HILLS ROAD	270302001811200	15496.830	0.562	20		0.733037	0	0	0.733037	0.000424		
	BUTSCH JOHN LORD O'BRIAN		4991 ABINO HILLS ROAD	270302001811400	15208.433	0.521	20		0.679409	0	0	0.679409	0.000393		
	BUTSCH D / BUTSCH J		5003 ABINO HILLS ROAD	270302001811401	20472.913	0.677	20		0.883872	0	0	0.883872	0.000512		
	BECHTEL LURA HESS		5047 ABINO HILLS ROAD	270302001811500	29006.505	1.296	20		1.691151	0	0	1.691151	0.000979		
	BRANTHAM HOLDINGS INC		5077 ABINO HILLS ROAD	270302001811600	22082.830	1.473	20		1.922362	0	0	1.922362	0.001113		
	LEON JULIE ANNE		0-9960 ABINO HILLS ROAD	270302001811700	7429.706	0.502	20		0.654618	0	0	0.654618	0.000379		
	LEON JULIE ANNE		5109 ABINO HILLS ROAD	270302001811800	12479.958	0.839	20		1.094466	0	0	1.094466	0.000634		
	BERGEVIN ANNE		5125 ABINO HILLS ROAD	270302001811900	9522.292	0.534	20		0.697285	0	0	0.697285	0.000404		
	5141 ABINO HILLS RD INC		5141 ABINO HILLS ROAD	270302001812000	7538.582	0.438	20		0.571502	0	0	0.571502	0.000331		
	5141 ABINO HILLS RD INC		0-9964 ABINO HILLS ROAD	270302001812100	7530.870	0.513	20		0.669623	0	0	0.669623	0.000388		
	LFPB INC		5161 ABINO HILLS ROAD	270302001812200	11467.476	0.842	20		1.098250	0	0	1.098250	0.000636		
	FITZPATRICK MOLLY		5179 ABINO HILLS ROAD	270302001812400	15732.567	0.871	20		1.135959	0	0	1.135959	0.000658		
	FERGUSON DOROTHYMAE TRUSTEE		5189 ABINO HILLS ROAD	270302001812500	26530.263	1.508	20		1.967899	0	0	1.967899	0.001139		
	CLICK JAMES HARLAN		5223 ABINO HILLS ROAD	270302001812600	29774.536	1.403	20		1.831026	0	0	1.831026	0.001060		
	816176 ONTARIO INC		5243 ABINO HILLS ROAD	270302001812700	34339.425	1.736	20		2.264741	0	0	2.264741	0.001311		
	HUMASON ELIZABETH		5271 ABINO HILLS ROAD	270302001812800	32599.987	2.511	20		3.276222	0	0	3.276222	0.001896		
	JARDINE TANYA		5321 ABINO HILLS ROAD	270302001812900	27487.938	2.370	20		3.092637	0	0	3.092637	0.001790		
	PATTERSON WAYNE		5349 ABINO HILLS ROAD	270302001813000	13266.553	1.140	20		1.487602	0	0	1.487602	0.000861		
	NORRIS BRADLEY WILLIAM		5379 ABINO HILLS ROAD	270302001813100	11449.132	0.946	20		1.233819	0	0	1.233819	0.000714		
	LEON JOSEPH		5395 ABINO HILLS ROAD	270302001813200	9973.978	0.800	20		1.043318	0	0	1.043318	0.000604		
	1000880232 ONTARIO INC		5459 ABINO HILLS ROAD	270302001813300	9265.727	0.678	20		0.884915	0	0	0.884915	0.000512		
	PERE ABINEAU PARK		0-9976 POINT ABINO ROAD SOUTH	270302001813400	197758.534	19.780	25		32.261180	0	0	32.261180	0.018674		
	0		0-18321 POINT ABINO ROAD SOUTH	270302001813400	79981.746	8.000	25		13.047674	0	0	13.047674	0.007552		
	EL-SAYED SHERIF FOUAD YACOUT		633 POINT ABINO ROAD SOUTH	270302001813500	25438.301	2.320	30		4.541487	0	0	4.541487	0.002629		
	XU AMY		609 POINT ABINO ROAD SOUTH	270302001813600	13372.548	1.113	30		2.177776	0	0	2.177776	0.001261		
	RITCH MONKELBAAN MARSHA		599 POINT ABINO ROAD SOUTH	270302001813700	11924.878	0.950	30		1.858557	0	0	1.858557	0.001076		
	DIFABIO LEONARDO		557 POINT ABINO ROAD SOUTH	270302001813800	12478.964	0.927	30		1.814912	0	0	1.814912	0.001051		
	TROJNAR RICHARD JOHN		551 POINT ABINO ROAD SOUTH	270302001813900	12627.056	0.921	30		1.802973	0	0	1.802973	0.001044		



Farm As 'F'	Owner	Legal_Txt	Municipal Addres	Roll No	Area Ha	Area in					QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC	
						Drain Ha	Runoff Factor 'C'	QRF	SWM	SWMF			QRF	QRF Ratio
	SYKES CLARK MANSFIELD		537 POINT ABINO ROAD SOUTH	270302001814000	12423.907	0.920	30	1.800233	0	0	1.800233	0.001042		
	MISETCH MILDRED		531 POINT ABINO ROAD SOUTH	270302001814100	12346.210	1.033	30	2.021983	0	0	2.021983	0.001170		
	MORRIS LAURIE ANN		511 POINT ABINO ROAD SOUTH	270302001814200	17588.015	1.443	30	2.823261	0	0	2.823261	0.001634		
	THOMSON FLORENCE MARIE		497 POINT ABINO ROAD SOUTH	270302001814300	1762.241	0.065	30	0.127609	0	0	0.127609	0.000074		
	SPIECE COREY JOHN		491 POINT ABINO ROAD SOUTH	270302001814400	38998.364	3.679	30	7.200930	0	0	7.200930	0.004168		
	WEAVER JOSEPH		463 POINT ABINO ROAD SOUTH	270302001814500	812.789	0.081	30	0.159120	0	0	0.159120	0.000092		
	KNIBLOE WAYNE		487 POINT ABINO ROAD SOUTH	270302001814600	1800.341	0.040	30	0.077701	0	0	0.077701	0.000045		
	NIAGARA PENINSULA		0-9990 WILDWOOD AVENUE	270302001814800	20692.655	2.069	30	4.049447	0	0	4.049447	0.002344		
	DRULLARD DAVID W		0-9991 POINT ABINO ROAD SOUTH	270302001814900	1491.734	0.148	30	0.288883	0	0	0.288883	0.000167		
	WILDWOOD PROPERTIES INC		0-9992 POINT ABINO ROAD SOUTH	270302001815000	3400.579	0.338	30	0.662316	0	0	0.662316	0.000383		
	FLYNN GREGORY JAMES		421 POINT ABINO ROAD SOUTH	270302001815100	1353.334	0.113	30	0.221751	0	0	0.221751	0.000128		
	WARD DANIEL F		413 POINT ABINO ROAD SOUTH	270302001815200	2741.201	0.238	30	0.466205	0	0	0.466205	0.000270		
	ASIP HOLDINGS INC		393 POINT ABINO ROAD SOUTH	270302001815300	11596.491	1.152	30	2.255086	0	0	2.255086	0.001305		
	1254345 ONTARIO INC		371 POINT ABINO ROAD SOUTH	270302001815400	14953.776	1.491	30	2.918185	0	0	2.918185	0.001689		
	357 POINT ABINO ROAD INC		357 POINT ABINO ROAD SOUTH	270302001815500	1866.163	0.184	30	0.359733	0	0	0.359733	0.000208		
	STARCK COTTAGE LLC		349 POINT ABINO ROAD SOUTH	270302001815600	1099.870	0.108	30	0.212160	0	0	0.212160	0.000123		
	PAGE DONALD STEWART		329 POINT ABINO ROAD SOUTH	270302001815800	14794.759	6.142	30	12.020535	0	0	12.020535	0.006958		
	LAROCQUE WAYNE LAWRENCE		203 POINT ABINO ROAD SOUTH	270302001816600	45270.411	1.870	35	4.269273	0	0	4.269273	0.002471		
	THE NATURE CONSERVANCY OF		155 POINT ABINO ROAD SOUTH	270302001816601	121570.166	5.348	35	12.212308	0	0	12.212308	0.007069		
F	WOODS ELEANOR DEBELTGENS		31 POINT ABINO ROAD SOUTH	270302001816800	109773.880	9.342	35	21.331294	0	0	21.331294	0.012347		
	HUGHES WILLIAM		0-10029 BAY WOODS	270302001818000	1427.483	0.143	30	0.279488	0	0	0.279488	0.000162		
	FORT ERIE TOWN		0-10030 BAY WOODS	270302001818100	1435.227	0.144	30	0.281054	0	0	0.281054	0.000163		
	CULP RICHARD		0-10031 BAY WOODS	270302001818200	1450.878	0.145	30	0.283990	0	0	0.283990	0.000164		
	LOU AMIN		0-10043 BAY WOODS	270302001819400	1301.443	0.130	30	0.254827	0	0	0.254827	0.000148		
	LOU AMIN		0-10044 BAY WOODS	270302001819500	1297.247	0.130	30	0.254045	0	0	0.254045	0.000147		
	FORT ERIE TOWN		0-10045 BAY WOODS	270302001819600	1299.061	0.130	30	0.254240	0	0	0.254240	0.000147		
	WILDWOOD PROPERTIES INC		4882 WILDWOOD AVENUE	270302001820900	1226.084	0.121	30	0.235843	0	0	0.235843	0.000137		
	ROYAL ROBERT JAMES		4894 WILDWOOD AVENUE	270302001821000	1226.082	0.121	30	0.236625	0	0	0.236625	0.000137		
	WEINERT DIANNE LOGAN		0-10060 WILDWOOD AVENUE	270302001821100	1226.095	0.121	30	0.236038	0	0	0.236038	0.000137		
	CYR RUSSELL NORMAN		0-10061 WILDWOOD AVENUE	270302001821200	1226.095	0.120	30	0.235451	0	0	0.235451	0.000136		
	CYR RUSSELL NORMAN		4920 WILDWOOD AVENUE	270302001821300	1226.070	0.120	30	0.234864	0	0	0.234864	0.000136		
	CYR RUSSELL NORMAN		0-10063 WILDWOOD AVENUE	270302001821400	1226.120	0.120	30	0.234473	0	0	0.234473	0.000136		
	WARREN WILLIAM DAVID		4958 ORIOLE LANE	270302001822100	8144.902	0.951	30	1.861884	0	0	1.861884	0.001078		
	MCCORMICK JEAN CAROL		0-10070 ORIOLE LANE	270302001822500	3423.395	0.198	30	0.387330	0	0	0.387330	0.000224		
	WRIGHT ALLAN		4959 ORIOLE LANE	270302001822600	11412.342	1.142	30	2.234144	0	0	2.234144	0.001293		
	HAHN CHARLES J IN TRUST		0-10072 POINT ABINO ROAD SOUTH	270302001822700	145226.441	14.526	25	23.691417	0	0	23.691417	0.013713		
	DIETERS KARIN		366 MATHEWS ROAD SOUTH	270302001822701	189092.956	18.913	25	30.847592	0	0	30.847592	0.017856		
	BRETON TEUNIS ADRIANIS		340 MATHEWS ROAD SOUTH	270302001822702	12429.311	1.243	30	2.433191	0	0	2.433191	0.001408		
	FIJAVZ BORIS		0-10075 POINT ABINO ROAD SOUTH	270302001822710	52870.152	5.288	30	10.349869	0	0	10.349869	0.005991		
	HOWARD SALLY		391 POINT ABINO ROAD SOUTH	270302001822800	59810.353	5.982	30	11.708558	0	0	11.708558	0.006777		
	RIITNER CHARLES		328 MATHEWS ROAD SOUTH	270302001822900	9936.209	0.994	30	1.945065	0	0	1.945065	0.001126		
	5009865 ONTARIO LTD.		300 MATHEWS ROAD SOUTH	270302001822901	6581.974	0.658	30	1.288425	0	0	1.288425	0.000746		
	CROWN LANDSCAPING LTD		0-10079 MATHEWS ROAD SOUTH	270302001823000	69149.860	6.916	30	13.536778	0	0	13.536778	0.007836		
	GGP INVESTMENTS INC		0-10080 MATHEWS ROAD SOUTH	270302001823100	38764.176	3.877	30	7.588456	0	0	7.588456	0.004392		
F	FAZZARI ALEXANDER / SEBASTIANO		200 MATHEWS ROAD SOUTH	270302001823101	81802.414	8.182	35	18.682550	0	0	18.682550	0.010814		
	GARVIN RANDALL CHARLES		158 MATHEWS ROAD SOUTH	270302001823200	23542.377	2.355	30	4.608619	0	0	4.608619	0.002668		
	ADAMS LAWRENCE KENNETH		150 MATHEWS ROAD SOUTH	270302001823300	1524.534	0.153	30	0.298473	0	0	0.298473	0.000173		
	WAINMAN MARK WILLIAM		142 MATHEWS ROAD SOUTH	270302001823400	2711.699	0.271	30	0.530793	0	0	0.530793	0.000307		
	BORKOVSKY BARBARA		32 MATHEWS ROAD SOUTH	270302001823500	36991.805	3.700	30	7.241640	0	0	7.241640	0.004192		
	FOX GORDON ALLEN STANLEY		5085 MICHENER ROAD	270302001823600	4045.988	0.405	30	0.792079	0	0	0.792079	0.000458		
	DARBYSON DOUGLAS ALLEN		5045 MICHENER ROAD	270302001823601	61342.003	6.136	35	14.009801	0	0	14.009801	0.008109		
	DARBYSON DOUGLAS ALLEN		5045 MICHENER ROAD	270302001823603	986.845	0.099	30	0.193176	0	0	0.193176	0.000112		
	LEWIS PAUL KENNEDY		5005 MICHENER ROAD	270302001823610	61902.186	6.192	35	14.137671	0	0	14.137671	0.008183		
	PINO JAVIER		5115 MICHENER ROAD	270302001823700	4160.681	0.416	30	0.814587	0	0	0.814587	0.000472		
	GREENBERG INTERNATIONAL INC		0-10090 MARCY LANE	270302001823800	124434.155	8.369	20	10.920393	0	0	10.920393	0.006321		
	GREENBERG INTERNATIONAL INC		0-10091 MARCY LANE	270302001823900	32472.473	0.167	20	0.218293	0	0	0.218293	0.000126		
	1992293 ONTARIO INC		478 MARCY LANE	270302001824100	9756.679	0.117	20	0.152792	0	0	0.152792	0.000088		
	D B M E INC		0-10094 MARCEY LANE	270302001824200	4513.357	0.047	20	0.061195	0	0	0.061195	0.000035		
	D B M E INC		0-10095 HOLLOWAY BAY ROAD SOUTH	270302001824300	17940.172	0.140	20	0.183063	0	0	0.183063	0.000106		
	GREENBERG INTERNATIONAL INC		476 MARCY LANE	270302001824400	25994.928	2.390	20	3.118472	0	0	3.118472	0.001805		
	D B M E INC		0-10097 MARCY LANE	270302001824500	5430.498	0.543	20	0.708767	0	0	0.708767	0.000410		
		0	0-19827 MARCY LANE	270302001824600	4615.948	0.462	20	0.602426	0	0	0.602426	0.000349		
	D B M E INC		466 MARCY LANE	270302001824700	22912.423	2.224	20	2.901614	0	0	2.901614	0.001680		



Farm As 'F'	Owner	Legal_Txt	Municipal Address	Roll No	Area Ha	Area in Drain Ha	Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC QRFQRF Ratio	
	D B M E INC		400 HOLLOWAY BAY ROAD SOUTH	270302001824700	75539.656	7.556	25	12.323184	0	0	12.323184	0.007133		
	PATTERSON WAYNE		0-10100 ABINO HILLS ROAD	270302001824800	54220.672	5.423	20	7.076191	0	0	7.076191	0.004096		
	FRETZ KIRK		411 MATHEWS ROAD NORTH	270302001824900	137200.450	13.723	25	22.382050	0	0	22.382050	0.012956		
	MACNEIL LORNE CHRISTOPHER		339 MATHEWS ROAD SOUTH	270302001824905	60841.400	6.085	30	11.910345	0	0	11.910345	0.006894		
F	GREENBERG INTERNATIONAL INC.		0-10103 MATHEWS ROAD SOUTH	270302001825000	244114.376	24.220	25	39.502494	0	0	39.502494	0.022865		
	GREENBERG INTERNATIONAL INC.		0-10104 MATHEWS ROAD SOUTH	270302001825100	37708.339	3.772	30	7.381776	0	0	7.381776	0.004273		
F	GIGONE JUSTIN GIANCARLO		291 MATHEWS ROAD SOUTH	270302001825200	34092.209	3.410	30	6.673856	0	0	6.673856	0.003863		
	GREENBERG INTERNATIONAL INC		0-10106 MATHEWS ROAD SOUTH	270302001825300	159816.481	15.985	25	26.071698	0	0	26.071698	0.015091		
	CARVER ANDREW		5145 MICHENER ROAD	270302001825400	104223.920	10.425	35	23.803532	0	0	23.803532	0.013778		
	ORCUTT WAYNE DARREN		5183 MICHENER ROAD	270302001825500	3348.806	0.335	30	0.655662	0	0	0.655662	0.000380		
	CHEN MEI FENG		5197 MICHENER ROAD	270302001825600	10115.703	1.012	30	1.980295	0	0	1.980295	0.001146		
	SIDER BROS BUILDERS LTD		5199 MICHENER ROAD	270302001825650	14311.943	1.432	30	2.801732	0	0	2.801732	0.001622		
	GREENBERG INTERNATIONAL INC		0-10111 MICHENER ROAD	270302001825700	165503.667	16.554	35	37.799175	0	0	37.799175	0.021880		
	PIRSON WANDA		5263 MICHENER ROAD	270302001825800	1014.282	0.101	30	0.198460	0	0	0.198460	0.000115		
F	GREENBERG INTERNATIONAL INC		5353 MICHENER ROAD	270302001825900	403681.138	40.377	35	92.196385	0	0	92.196385	0.053367		
	VANDERENDE MICHAEL PETER		5381 MICHENER ROAD	270302001826000	8175.264	0.818	30	1.600402	0	0	1.600402	0.000926		
	525230 ONTARIO LTD TRUSTEE		0-10115 HOLLOWAY BAY ROAD SOUTH	270302001826100	61339.078	6.135	30	12.007813	0	0	12.007813	0.006951		
	GREENBERG INTERNATIONAL INC		0-10116 HOLLOWAY BAY ROAD SOUTH	270302001826200	11402.642	1.141	20	1.488124	0	0	1.488124	0.000861		
	BENNETT KLARA LEE		30 HOLLOWAY BAY ROAD SOUTH	270302001826300	10022.741	1.029	30	2.014155	0	0	2.014155	0.001166		
	SEELEY COREY JAMES		4831 SHERKSTON ROAD	270302001827400	4801.887	0.045	30	0.087487	0	0	0.087487	0.000051		
F	DAY JOHN MARTIN HARLOW		4924 SHERKSTON ROAD	270302001828100	287161.800	1.308	35	2.987144	0	0	2.987144	0.001729		
	ASHBY BRIAN CHRISTOPHER		4869 SHERKSTON ROAD	270302001828300	10381.865	1.038	30	2.032356	0	0	2.032356	0.001176		
	EBERLY ALFRED GERALD		4894 SHERKSTON ROAD	270302001828400	5620.038	0.201	30	0.392419	0	0	0.392419	0.000227		
F	WINGER CLINTON ROSS		0-10146 SHERKSTON ROAD	270302001828500	44701.946	1.583	35	3.613481	0	0	3.613481	0.002092		
	DE MEL JULIAN FREDRIK		4911 SHERKSTON ROAD	270302001828600	15789.233	1.579	30	3.090810	0	0	3.090810	0.001789		
F	HOUSE ARNOLD GARY		4963 SHERKSTON ROAD	270302001828700	43430.208	4.344	35	9.918861	0	0	9.918861	0.005741		
	CLARKE PAIGE CORA		5069 SHERKSTON ROAD	270302001828710	143267.152	14.330	35	32.720437	0	0	32.720437	0.018940		
	SIMMONS BETTY DOROTHY		4998 SHERKSTON ROAD	270302001829000	20448.544	0.796	30	1.557344	0	0	1.557344	0.000901		
F	SAHS-MEYER EVA-LYN		5187 SHERKSTON ROAD	270302001829200	246096.978	24.615	35	56.205663	0	0	56.205663	0.032534		
F	O'HEARN PATRICK JAMES		5286 SHERKSTON ROAD	270302001829300	41994.548	0.781	30	1.528377	0	0	1.528377	0.000885		
	DRURY STEVEN / DRURY DAYNA		5277 SHERKSTON ROAD	270302001829400	4013.993	0.402	30	0.785816	0	0	0.785816	0.000455		
	ROWLAND SHAWN		5297 SHERKSTON ROAD	270302001829500	118847.206	11.887	35	27.143461	0	0	27.143461	0.015712		
	GRANT STEVEN CRAIG		5321 SHERKSTON ROAD	270302001829700	33771.670	3.378	35	7.713097	0	0	7.713097	0.004465		
	BRETHREN IN CHRIST CHURCH		5348 SHERKSTON ROAD	270302001829800	19915.019	0.919	30	1.798471	0	0	1.798471	0.001041		
	WALL JACOB		5384 SHERKSTON ROAD	270302001829900	5644.101	0.173	30	0.339183	0	0	0.339183	0.000196		
	SCHINKEL BRUCE VICTOR C		5398 SHERKSTON ROAD	270302001830000	3686.275	0.088	30	0.173016	0	0	0.173016	0.000100		
	OSINGA MARK		5409 SHERKSTON ROAD	270302001830100	22469.621	2.247	35	5.131713	0	0	5.131713	0.002970		
	SERADA MARK		5365 SHERKSTON ROAD	270302001830200	75866.616	7.588	35	17.327124	0	0	17.327124	0.010030		
	VAN HOECKEL MAARTEN JOOST		184 HOLLOWAY BAY ROAD NORTH	270302001830300	9343.548	0.935	30	1.829199	0	0	1.829199	0.001059		
	ZUCCHET MICHAEL FRANK		170 HOLLOWAY BAY ROAD NORTH	270302001830400	1578.220	0.158	30	0.309042	0	0	0.309042	0.000179		
	BENNETT LAWRENCE WILLIAM		148 HOLLOWAY BAY ROAD NORTH	270302001830500	6436.810	0.644	30	1.260045	0	0	1.260045	0.000729		
	CULP JENNIFER ELIZABETH		124 HOLLOWAY BAY ROAD NORTH	270302001830600	2950.755	0.295	30	0.577570	0	0	0.577570	0.000334		
	MARACLE ELIZABETH GRACE		104 HOLLOWAY BAY ROAD NORTH	270302001830700	1381.115	0.138	30	0.270289	0	0	0.270289	0.000156		
	1784413 ONTARIO LTD		78 HOLLOWAY BAY ROAD NORTH	270302001830800	6721.481	0.672	30	1.315826	0	0	1.315826	0.000762		
	WARWICK DARBY ROYCE		5414 MICHENER ROAD	270302001830900	5096.233	0.510	30	0.997585	0	0	0.997585	0.000577		
	HARDY DEREK DENIS		5404 MICHENER ROAD	270302001831000	5221.867	0.522	30	1.022246	0	0	1.022246	0.000592		
	KUCY RODNEY ALLEN		5392 MICHENER ROAD	270302001831100	3714.873	0.372	30	0.727296	0	0	0.727296	0.000421		
F	BERNARD JAMES DOUGLAS		5378 MICHENER ROAD	270302001831200	98290.699	9.831	35	22.448562	0	0	22.448562	0.012994		
	HAGGERTY TIMOTHY ROGER		5354 MICHENER ROAD	270302001831201	4310.473	0.431	30	0.843749	0	0	0.843749	0.000488		
	GUENTHER PETER		5274 MICHENER ROAD	270302001831300	4792.385	0.479	30	0.938086	0	0	0.938086	0.000543		
											1537	89.0%		
											1536.87	0.889594		
Roads														
City of Port Colborne		Municipal		OBJECTID		PA_Area	C_Factor	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio		
	Beach Rd From Watershed To Pleasant Beach Rd	City of Port Colborne		150498		1.1757	90	6.903240	0	0	6.903240	0.003996	6.90324	0.0132
	Firelane (No Name) From Firelane 22 To End	City of Port Colborne		149593		0.2387	40	0.622912	0	0	0.622912	0.000361	0.62291	0.0012
	Firelane 22 From Pleasant Beach Rd. To No Name	City of Port Colborne		149574		0.2786	70	1.272310	0	0	1.272310	0.000736	1.27231	0.0024
	Firelane 23 From Firelane 22 To End	City of Port Colborne		149573		0.1949	70	0.890069	0	0	0.890069	0.000515	0.89007	0.0017
	Firelane 28 27 From Pleasant Beach Rd. To Hollow	City of Port Colborne		149692		0.6895	70	3.148809	0	0	3.148809	0.001823	3.14881	0.0060
	Michener Rd From Pleasant Beach Rd To Holloway	City of Port Colborne		150592		0.8798	90	5.165834	0	0	5.165834	0.002990	5.16583	0.0099
	NW Beach and Pleasant Beach Rd From To	City of Port Colborne		150616		0.0112	90	0.065762	0	0	0.065762	0.000038	0.06576	0.0001
	Pleasant Beach Rd From Michener Rd To Sherksto	City of Port Colborne		150545		2.5693	90	15.085902	0	0	15.085902	0.008732	15.08590	0.0289



Farm As 'F'	Owner	Legal_Txt	Municipal Addres	Roll No	Area Ha	Area in		Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC	
						Drain Ha								QRF	QRF Ratio
	Pleasant Beach Rd From Watershed Bndy. To Mich	City of Port Colborne		149550		2.1516		90	12.633335	0	0	12.633335	0.007313	12.63333	0.0242
	Sherkston Rd From Empire Rd To Pleasant Beach R	City of Port Colborne		150488		0.572		90	3.358555	0	0	3.358555	0.001944	3.35856	0.0064
	Sherkston Rd From Pleasant Beach Rd To Holloway	City of Port Colborne		150563		0.5682		90	3.336243	0	0	3.336243	0.001931	3.33624	0.0064
Town of Fort Erie															
	Abino Hills Rd From Blind Line To Point Abino Rd	Town of Fort Erie		1000002		1.4236		80	7.430053	0	0	7.430053	0.004301		
	Abino Hills Rd From Blind Line To	Town of Fort Erie		152091		3.8542		80	20.115841	0	0	20.115841	0.011644		
	Bay Woods From Point Abino Rd S To Blind Line Rd	Town of Fort Erie		1000000		0.1387		40	0.361952	0	0	0.361952	0.000210		
	Blind Line From Abino Hills Rd To Michener Rd	Town of Fort Erie		1000001		5.7427		40	14.986150	0	0	14.986150	0.008675		
	Marcy Lane From Holloway Bay Rd S To Part 1	Town of Fort Erie		1000006		0.4592		70	2.097075	0	0	2.097075	0.001214		
	Holloway Bay Rd From Watershed Bndy. To Miche	Town of Fort Erie		151906		3.0335		90	17.811499	0	0	17.811499	0.010310		
	Holloway Bay Road North From Michener Rd To Sh	Town of Fort Erie		151585		2.1285		90	12.497701	0	0	12.497701	0.007234		
	Marcy Lane From To Part 2	Town of Fort Erie		152042		0.6317		70	2.884848	0	0	2.884848	0.001670		
	Mathews Rd S From S Part 1 To	Town of Fort Erie		152189		0.6702		80	3.497908	0	0	3.497908	0.002025		
	Mathews Rd S From S Part 2 To	Town of Fort Erie		152260		0.0746		80	0.389352	0	0	0.389352	0.000225		
	Mathews Rd S From S Part 3 To	Town of Fort Erie		152253		0.1158		80	0.604383	0	0	0.604383	0.000350		
	Mathews Rd S From S Part 4 To	Town of Fort Erie		152256		0.4322		80	2.255738	0	0	2.255738	0.001306		
	Mathews Rd S From S Part 5 To	Town of Fort Erie		152190		0.2242		80	1.170145	0	0	1.170145	0.000677		
	Mathews Rd S From S Part 6 To	Town of Fort Erie		151919		0.2369		80	1.236428	0	0	1.236428	0.000716		
	Mathews Rd S From S Part 7 To	Town of Fort Erie		152258		0.4114		80	2.147179	0	0	2.147179	0.001243		
	Mathews Road North From Michener Rd To Sherks	Town of Fort Erie		151651		0.9566		40	2.496343	0	0	2.496343	0.001445		
	Michener Rd From Holloway Bay Rd South To Poin	Town of Fort Erie		151781		3.6017		90	21.147742	0	0	21.147742	0.012241		
	Oriole Lane From To	Town of Fort Erie		1000004		0.1647		70	0.752152	0	0	0.752152	0.000435		
	Point Abino Rd From Michener Rd To Sherkston Rd	Town of Fort Erie		1000005		0.1835		90	1.077439	0	0	1.077439	0.000624		
	Point Abino Rd From To	Town of Fort Erie		1000003		0.5731		90	3.365014	0	0	3.365014	0.001948		
	Sherkston Rd From Mathews Rd. N To Point Abino	Town of Fort Erie		151726		1.1423		90	6.707129	0	0	6.707129	0.003882		
	Sherkston Rd From Mathews Rd. N To Holloway Ba	Town of Fort Erie		151701		1.2335		90	7.242619	0	0	7.242619	0.004192		
	Unopened Road Allowance Between Holloway Bay	Town of Fort Erie		151913		2.2918		40	5.980681	0	0	5.980681	0.003462		
													190.74	0.110406	
													1727.61	1.000000	521.73 1.000000



Farm As 'F'	Owner	Legal_ Txt	Municipal Addres	Roll No	Area Ha	Area in Drain Ha	Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC QRF	QRF Ratio
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Haggerty Branch Drain

Farm As 'F'	Owner	Legal_ Txt		Roll No	Area Ha	Area in Drain Ha	Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
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Port Colborne

	Customer_N	Legal_Desc	Municipal_	Roll_Numbe	Area_ha	Catch_Ha						
	D B M E Inc	CON 1 PT LOT 1 RP 59R8890 PT 2 D B M E INC 75% INT M RICHARDS 25% INT	226 HOLLOWAY BAY RD	271104000102800	14.366	0.4678	25	0.762982	0	0	0.762982	0.002309
	Scarlett John Frederick	CON 1 PT LOT 1 RP 59R5913 PARTS 2 TO 4	370 HOLLOWAY BAY RD	271104000102900	1.508	0.6494	30	1.219336	0	0	1.219336	0.003689
	Boles Diane Lynn	CON 1 PT LOT 1 RP 59R5913 PART 1	386 HOLLOWAY BAY RD	271104000102901	0.470	0.4365	30	0.912055	0	0	0.912055	0.002760
	Phibbs Stephanie Diane	CON 1 PT LOT 1	5930 MICHENER RD	271104000103100	4.141	4.1423	35	9.457843	0	0	9.457843	0.028617
	Lander Blake	CON 1 PT LOT 1	534 HOLLOWAY BAY RD	271104000103200	0.319	0.319	30	0.624347	0	0	0.624347	0.001889
	Nadeau Gerrard	CON 1 PT LOT 1	542 HOLLOWAY BAY RD	271104000103300	0.809	0.8092	30	1.583375	0	0	1.583375	0.004791
	Muilleboom Ashley Arlene	CON 1 PT LOT 1	554 HOLLOWAY BAY RD	271104000103400	0.809	0.8094	30	1.583375	0	0	1.583375	0.004791
	Kennedy Nancy Jane	CON 1 PT LOT 1	566 HOLLOWAY BAY RD	271104000103500	1.507	1.507	30	2.949500	0	0	2.949500	0.008924
	Pruyn Kirk	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PART 3	614 HOLLOWAY BAY RD	271104000103600	5.400	5.4008	35	12.332643	0	0	12.332643	0.037315
	Shaubel Brian	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PARTS 1 AND 2	588 HOLLOWAY BAY RD	271104000103610	2.596	2.5966	30	5.082848	0	0	5.082848	0.015379
	Harrietha Thomas	HUMBERSTONE CON 1 PT LOT 1 RP 59R10180 PART 1	5987 SHERKSTON RD	271104000103700	0.405	0.4047	30	0.792666	0	0	0.792666	0.002398
	2293020 Ontario Ltd	CON 1 PT LOT 1 RP 59R10180 PART 2	5961 SHERKSTON RD	271104000103705	0.669	0.6695	30	1.309367	0	0	1.309367	0.003962
	Annett Matthew	CON 1 PT LOT 1 RP 59R10819 PARTS 1 & 2	5891 SHERKSTON RD	271104000103800	0.398	0.3985	30	0.780923	0	0	0.780923	0.002363
	Cirone David	CON 1 PT LOT 1 RP 59R10180 PT PART 3	5841 SHERKSTON RD	271104000103805	0.475	0.4749	30	0.929670	0	0	0.929670	0.002813
	Lehocki Teresa Mary	CON 1 PT LOT 1 59R-10180 PARTS 4 & 5	HOLLOWAY BAY RD	271104000103810	9.155	9.0234	35	20.240058	0	0	20.240058	0.061241
	Manuel Robert George	CON 1 PT LOT 1	5795 SHERKSTON RD	271104000103900	0.105	0.0918	30	0.180062	0	0	0.180062	0.000545
	Eberly Michael David	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 5	727 PLEASANT BEACH RD	271104000107300	15.497	2.5843	35	5.749601	0	0	5.749601	0.017397
	Khan Dina	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 4	PLEASANT BEACH RD	271104000107305	2.443	1.1164	28	1.958244	0	0	1.958244	0.005925
F	Rickman Erin Heather	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 3	635 PLEASANT BEACH RD	271104000107306	2.446	1.1007	28	2.122649	0	0	2.122649	0.006423
	Benvenuti Shane	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 2	625 PLEASANT BEACH RD	271104000107307	2.448	1.0304	28	2.007565	0	0	2.007565	0.006074
	Eberly William Warren	HUMBERSTONE CON 1 PT LOT 2 AND RP 59R14998 PART 1	603 PLEASANT BEACH RD	271104000107400	2.148	0.9102	28	1.634914	0	0	1.634914	0.004947
F	Berry Gordon Albert	CON 1 PT LOT 2	569 PLEASANT BEACH RD	271104000107600	8.624	5.7849	35	11.736676	0	0	11.736676	0.035512
	Robins Jodee Lee	CON 1 PT LOT 2 RP 59R9210 PART 1	5591 MICHENER RD	271104000107900	0.746	0.2518	30	0.493214	0	0	0.493214	0.001492
	Koren Amir	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 1	5670 MICHENER RD	271104000107901	0.999	0.9997	30	1.935671	0	0	1.935671	0.005857
F	Davies Norman Stewart	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 2	5650 MICHENER RD	271104000107903	1.524	0.8187	30	1.401355	0	0	1.401355	0.004240
F	Vongphakdy Soupahone Chastity	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R5691 PT PART 1	5685 MICHENER RD	271104000107930	22.056	2.4822	35	4.274525	0	0	4.274525	0.012933
	Lodomez-Miller Anne Marie	CON 1 PT LOT 1 RP 59R12984 PART 3	454 HOLLOWAY BAY RD	271104000107932	2.235	2.2357	30	4.376299	0	0	4.376299	0.013241
	Aquilina Daniel D	CON 1 PT LOT 1 PT LOT 2 RP 59R12984 PART 2	MICHENER RD	271104000107934	0.667	0.6671	30	1.305452	0	0	1.305452	0.003950
	Aquilina Daniel D	CON 1 PT LOT 1 RP 59R12984 PART 1	5963 MICHENER RD	271104000107935	0.667	0.6673	30	1.305452	0	0	1.305452	0.003950
	Lee Stephen	HUMBERSTONE CON 1 PT LOT 2 RP 59R15397 PART 1	MICHENER RD	271104000107937	1.000	0.5307	30	1.146919	0	0	1.146919	0.003470
	Engels Bryan	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R15397 PART 2	5831 MICHENER RD	271104000107938	1.000	0.7449	30	1.460071	0	0	1.460071	0.004418
	Emonds Ashley	HUMBERSTONE CON 1 PT LOT 1 RP 59R16961 PART 1	MICHENER RD	271104000107940	1.009	1.0087	30	1.777138	0	0	1.777138	0.005377

Town of Fort Erie

	STREET_ NAM	LOCATION	ARN	Shape_Area	Catch_ Ha						
F	GREENBERG INTERNATIONAL INC	5353 MICHENER ROAD	270302001825900	40.368	19.4046	30	36.885391	0	0	36.885391	0.111605
	VANDERENDE MICHAEL PETER	5381 MICHENER ROAD	270302001826000	0.818	0.8177	35	1.867821	0	0	1.867821	0.005651
	525230 ONTARIO LTD TRUSTEE	0-10115 HOLLOWAY BAY ROAD SOUTH	270302001826100	6.134	3.5077	30	6.865858	0	0	6.865858	0.020774
	BENNETT KLARA LEE	30 HOLLOWAY BAY ROAD SOUTH	270302001826300	0.000	1.0291	35	2.287967	0	0	2.287967	0.006923
F	SAHS-MEYER EVA-LYN	5187 SHERKSTON ROAD	270302001829200	24.610	24.6149	30	48.203879	0	0	48.203879	0.145851
F	O'HEARN PATRICK JAMES	5286 SHERKSTON ROAD	270302001829300	4.199	0.7809	30	1.528573	0	0	1.528573	0.004625
	DRURY STEVEN / DRURY DAYNA	5277 SHERKSTON ROAD	270302001829400	0.401	0.4015	35	0.915643	0	0	0.915643	0.002770
	ROWLAND SHAWN	5297 SHERKSTON ROAD	270302001829500	11.885	11.8873	30	23.265236	0	0	23.265236	0.070394
	GRANT STEVEN CRAIG	5321 SHERKSTON ROAD	270302001829700	3.377	3.3779	35	7.713325	0	0	7.713325	0.023338
	BRETHREN IN CHRIST CHURCH	5348 SHERKSTON ROAD	270302001829800	1.992	0.9189	35	2.098445	0	0	2.098445	0.006349
	WALL JACOB	5384 SHERKSTON ROAD	270302001829900	0.564	0.1733	30	0.338596	0	0	0.338596	0.001024
	SCHINKEL BRUCE VICTOR C	5398 SHERKSTON ROAD	270302001830000	0.369	0.0884	35	0.200939	0	0	0.200939	0.000608
	OSINGA MARK	5409 SHERKSTON ROAD	270302001830100	2.247	2.2474	30	4.397828	0	0	4.397828	0.013307
	SERADA MARK	5365 SHERKSTON ROAD	270302001830200	7.587	7.5883	30	14.851234	0	0	14.851234	0.044936



Farm As 'F'	Owner	Legal_Txt	Municipal Addres	Roll No	Area Ha	Area in		QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC	
						Drain Ha	Runoff Factor 'C'						QRF	QRF Ratio
	VAN HOECKEL MAARTEN JOOST		184 HOLLOWAY BAY ROAD NORTH	270302001830300	0.934	0.9346	35	2.134979	0	0	2.134979	0.006460		
	ZUCCHET MICHAEL FRANK		170 HOLLOWAY BAY ROAD NORTH	270302001830400	0.158	0.1579	35	0.360777	0	0	0.360777	0.001092		
	BENNETT LAWRENCE WILLIAM		148 HOLLOWAY BAY ROAD NORTH	270302001830500	0.644	0.6438	30	1.260437	0	0	1.260437	0.003814		
	CULP JENNIFER ELIZABETH		124 HOLLOWAY BAY ROAD NORTH	270302001830600	0.295	0.2951	30	0.577374	0	0	0.577374	0.001747		
	MARACLE ELIZABETH GRACE		104 HOLLOWAY BAY ROAD NORTH	270302001830700	0.138	0.1381	30	0.270094	0	0	0.270094	0.000817		
	1784413 ONTARIO LTD		78 HOLLOWAY BAY ROAD NORTH	270302001830800	0.672	0.6723	35	1.534445	0	0	1.534445	0.004643		
	WARWICK DARBY ROYCE		5414 MICHENER ROAD	270302001830900	0.510	0.5097	35	1.164534	0	0	1.164534	0.003524		
	HARDY DEREK DENIS		5404 MICHENER ROAD	270302001831000	0.522	0.5223	30	1.021658	0	0	1.021658	0.003091		
	KUCY RODNEY ALLEN		5392 MICHENER ROAD	270302001831100	0.371	0.3716	30	0.728078	0	0	0.728078	0.002203		
F	BERNARD JAMES DOUGLAS		5378 MICHENER ROAD	270302001831200	9.829	9.8312	30	19.241233	0	0	19.241233	0.058218		
	HAGGERTY TIMOTHY ROGER		5354 MICHENER ROAD	270302001831201	0.431	0.4311	30	0.843553	0	0	0.843553	0.002552		
	GUENTHER PETER		5274 MICHENER ROAD	270302001831300	0.479	0.4793	30	0.937499	0	0	0.937499	0.002837		
												286.922193	0.868144	

Roads

City of Port Colborne

						C_Factor	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
Holloway Bay Rd From Watershed To Michener Rd	Town of Fort Erie				1.3732	90	8.062881	0	0	8.062881	0.024396
Holloway Bay Road North From Michener Rd To Highway 10	Town of Fort Erie				2.1285	90	12.497701	0	0	12.497701	0.037814
Michener Rd From Pleasant Beach Rd To Holloway Bay Rd	City of Port Colborne				0.6698	90	3.932798	0	0	3.932798	0.011900
Sherkston Rd From Pleasant Beach Rd To Holloway Bay Rd	City of Port Colborne				0.2392	90	1.404487	0	0	1.404487	0.004250

Town of Fort Erie

Mathews Road North From Michener Rd To Sherkston Rd	Town of Fort Erie				0.4867	40	1.270092	0	0	1.270092	0.003843
Michener Rd From Holloway Bay Rd South To Highway 10	Town of Fort Erie				1.4477	90	8.500315	0	0	8.500315	0.025720
Sherkston Rd From Mathews Rd. N To Holloway Bay Rd	Town of Fort Erie				1.2239	90	7.186251	0	0	7.186251	0.021744
Unopened Road Allowance From Holloway Bay Rd To Highway 10	Town of Fort Erie				0.2774	40	0.723903	0	0	0.723903	0.002190
										43.578428	0.131856
										330.500621	1.0000



Farm As 'F'	Owner	Legal_Txt	Municipal Addres	Roll No	Area Ha	Area in Drain Ha	Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	Watershed QRF Ratio	Interval 1: CofPC QRF	QRF Ratio
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East Branch Drain

Farm As 'F'	Owner	Legal_Txt		Roll No	Area Ha	Area in Drain Ha	Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
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Town of Fort Erie

OWNER1		LOCATION	ARN	Shape_Area	Catch_area							
NIAGARA PENINSULA		0-9990 WILDWOOD AVENUE	270302001814800	2.069	0.6676	30	1.306627	0	0	1.306627	0.039702	
DRULLARD DAVID W		0-9991 POINT ABINO ROAD SOUTH	270302001814900	0.149	0.1476	30	0.288883	0	0	0.288883	0.008778	
WILDWOOD PROPERTIES INC		0-9992 POINT ABINO ROAD SOUTH	270302001815000	0.340	0.3384	30	0.662316	0	0	0.662316	0.020125	
FLYNN GREGORY JAMES		421 POINT ABINO ROAD SOUTH	270302001815100	0.135	0.1133	30	0.221751	0	0	0.221751	0.006738	
WARD DANIEL F		413 POINT ABINO ROAD SOUTH	270302001815200	0.274	0.2382	30	0.466205	0	0	0.466205	0.014166	
ASIP HOLDINGS INC		393 POINT ABINO ROAD SOUTH	270302001815300	1.160	1.1522	30	2.255086	0	0	2.255086	0.068521	
1254345 ONTARIO INC		371 POINT ABINO ROAD SOUTH	270302001815400	1.495	1.491	30	2.918185	0	0	2.918185	0.088669	
357 POINT ABINO ROAD INC		357 POINT ABINO ROAD SOUTH	270302001815500	0.187	0.1838	30	0.359733	0	0	0.359733	0.010931	
STARCK COTTAGE LLC		349 POINT ABINO ROAD SOUTH	270302001815600	0.110	0.1084	30	0.212160	0	0	0.212160	0.006447	
PAGE DONALD STEWART		329 POINT ABINO ROAD SOUTH	270302001815800	1.479	5.9736	30	11.691530	0	0	11.691530	0.355248	
WILDWOOD PROPERTIES INC		4882 WILDWOOD AVENUE	270302001820900	0.123	0.1205	30	0.235843	0	0	0.235843	0.007166	
ROYAL ROBERT JAMES		4894 WILDWOOD AVENUE	270302001821000	0.123	0.1209	30	0.236625	0	0	0.236625	0.007190	
WEINERT DIANNE LOGAN		0-10060 WILDWOOD AVENUE	270302001821100	0.123	0.1206	30	0.236038	0	0	0.236038	0.007172	
CYR RUSSELL NORMAN		0-10061 WILDWOOD AVENUE	270302001821200	0.123	0.1203	30	0.235451	0	0	0.235451	0.007154	
CYR RUSSELL NORMAN		4920 WILDWOOD AVENUE	270302001821300	0.123	0.12	30	0.234864	0	0	0.234864	0.007136	
CYR RUSSELL NORMAN		0-10063 WILDWOOD AVENUE	270302001821400	0.123	0.1198	30	0.234473	0	0	0.234473	0.007124	
FIJAVZ BORIS		0-10075 POINT ABINO ROAD SOUTH	270302001822710	5.287	5.2879	30	10.349478	0	0	10.349478	0.314470	

Roads

City of Port Colborne

No CofPC roads

Town of Fort Erie

Blind Line From To	Town of Fort Erie		1000001	0	0.2934	40	0.765657	0	0	0.765657	0.023265
										32.910905	1.0000



## **Appendix C:**

# **Supplementary Information & Documents**



looking west  
End Of Drain (EOD)

05/15/06



Looking east @ STA  
4+600









451 Pleasant Beach Rd Culvert  
PAM-CS-10 CSP 1000  
Replace with 9m CSPA 1150x820





Michener Rd Culvert  
PB1-CS-03 CONCBOX 1000x600











Point Abino Rd S Culvert  
PAM-CS-20 Twin Conc 1520x1370





### Calculation Record

Project:	Point Abino Drain	Date:	November 18, 2024
Project #:	19-9997	Prepared by:	P.Marsh
Phase:		PM:	
Task:			
WBS item #:			

Calculation:	<b>Water pressure to open the old and new gates at Point Abino Outlet</b>	
Purpose:	<p>The new gate is twice the size of the old gate and was designed to weight less. Changing back to a steel plate makes it heavier and harder for fluid flow to push it open.</p> <p>This compares old to new pressure to open.</p>	
Deliverables:	<p>Description of Deliverables</p> <ol style="list-style-type: none"> <li>1. Fluid pressures to push old gate open</li> <li>2. Fluid pressure to push new gate open (plate steel)</li> <li>3. Fluid pressure to push new gate open (PE)</li> <li>4.</li> </ol>	
Requirements	Depth and velocity are used from the modelling performed.	

## 1 Background



Figure 1 Existing gate after being rehung

The culvert is from 1927. The northern gate, shown in the photo, was rehung on the old concrete face in 2021. Each gate consists of a frame that is bolted to the concrete with a pillow block and rod that acts as a hinge for the hung gate that swings open or closed against the frame.



## Existing gate

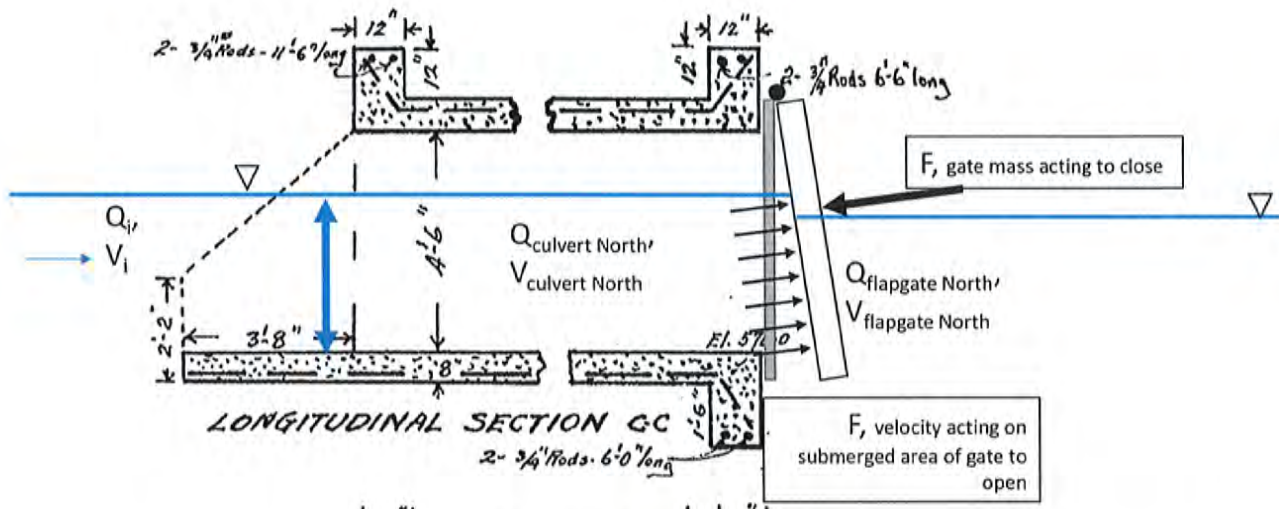


Figure 2 Diagram of forces acting on the gate

There's more than one drawing of the existing dual chamber culvert but the accepted dimension is 4ft 6 inches tall by 5 ft wide. The same dimensions are assumed for the gate as we do not have direct measurements.

## Proposed gate

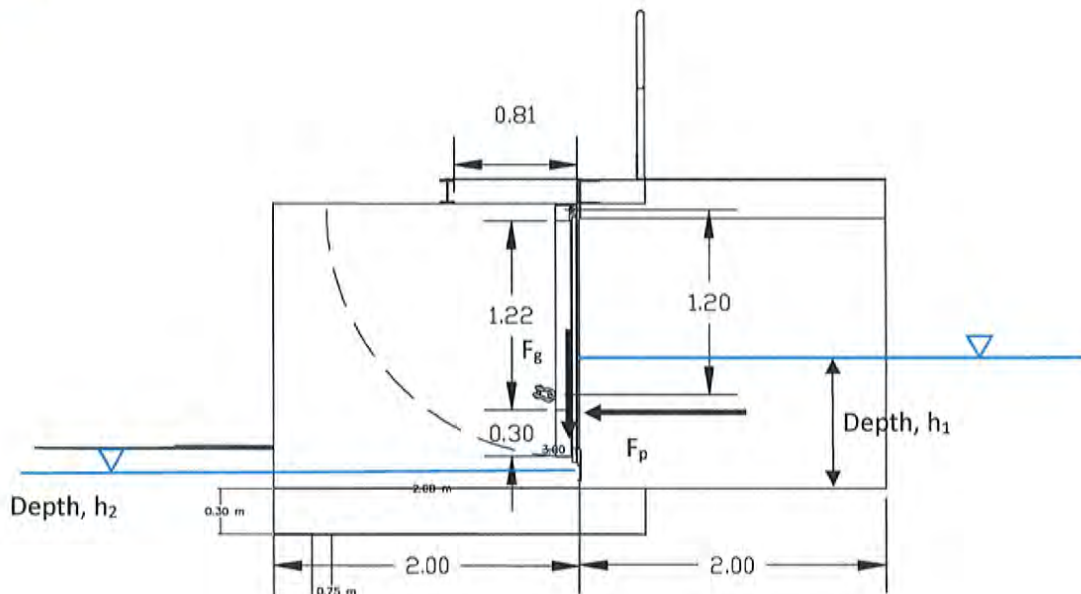


Figure 3 Proposed Gate Geometry

The proposed culvert is a pre-cast culvert with a proposed dimension of 1.5m high and 3.0m wide.



## 2 Methodology

There are two cases to investigate; #1 is the existing 4 ft by 5 ft gate and #2 is the proposed 1.5m x 3m gate.

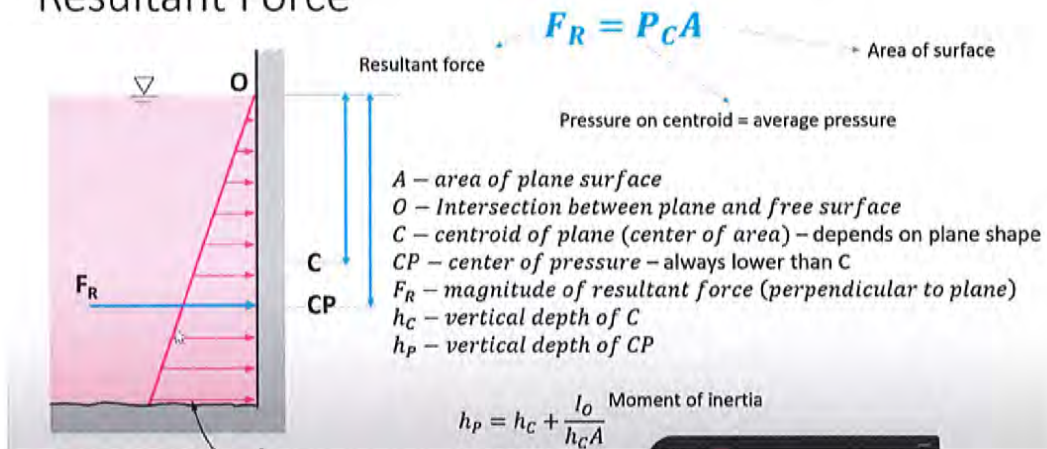
### Step 1: Calculate gate centroid weight

Steel mass based on the volume of gate composed of grid and sheet. This force is acting from the mass on the centroid of the rectangular gate about a hinge point on the top of the gate. Solving for the required momentum to open the gate.

### Step 2: Calculate the height of water to open the gate

With the gate closed, there is no flow moving outwards and hence there is no velocity impact on the gate. The gate is opened by the hydrostatic pressure pushing against the gate. The hydrostatic pressure acts against the gate around the hinge point,  $R_2$  at the centre of pressure, CP.

### Resultant Force



There are many cases or scenarios that could be analyzed. Three are identified as key to the gate operation.

- Case #1: Lakeside water surface level is below the bottom of the gate.
- Case #2: Lakeside water surface level is 1/3 to 1/2 of the gate.
- Case #3: Lakeside water surface level is at or near the top of the gate, as shown in the picture above.

## 3 Validation

There is not a date set of existing performance variables suitable to validate the results. Without some on-site measurements to record flow out and  $h_1$  and  $h_2$ , there isn't a method for validating the calculations.



### Calculation limitations

The determination of CP is based on a vertical gate rotating about a hinge located at the top of the gate. Once the gate does move, then the point at which the same pressure is acting will change as the hydrostatic pressure is acting on has a different shape once the gate is not vertical. There is a dynamic quality to the gate movement that is not sufficiently represented by the calculation of hydrostatic pressure.

The following are forces that are not directly accounted for in the analysis.

- Lakeside wave action on the gate. Waves represent a significant force on the gates, and the wave's oscillation from peak to trough creates a consistent variation in possible gate movements.
- With the gate open, there is a velocity fluid momentum delivered to the inside face of the gate. The fluid momentum on the gate is not calculated. The grades through the culvert are relatively small, and the predicted velocities are also small. This is more true as the water surface in the lake rises relative to the position of the gate.
- The gate hinges are assumed to be without friction.
- Buoyancy of a change to plastic face plate is not considered, only the weight.

The moment to open the gate is calculated with the net result of the two hydrostatic pressure forces on either side of the gate.

## 4. Results

Describe model outputs and production and analysis of results.

### Gate Weights

The existing gate weight was calculated based on all plain steel construction consisting of ribs that are 10cm deep (4 inches) with a frame consisting of a 4 vertical panels and 5 horizontal panels (6 vertical ribs and 5 horizontal ribs. Added to this is the plate steel panel that faces the ribs.

#### Existing Gate

The existing gate dimensions are not measured directly but are based on drawing dimensions showing the existing two chamber culvert to be 4 ft 6 inches high by 5 ft wide.

Table 1 Weight Calculation for Existing Gate

	cm						plain steel density	convert kg to lbs
	Length	Width	Depth	cm3	#	total cm3	8.05 g/m3	2.20462
vertical	138	1.2	10	1656	6	9936	79.98 kg	
horizontal	142	1.2	10	1704	5	8520	68.59 kg	
plate	145	190	1.27	34988.5	1	34988.5	281.66 kg	
						53444.5	<b>438.3 kg</b>	<b>966.2 lbs</b>



## Proposed Gate

The proposed gate is 1.5m tall by 3.0m wide. This is built using the existing two gates, combining them into one gate and adding the necessary 0.3m to the bottom of the gate to reach the 1.5m.

Table 2 Weight Calculation of Proposed Steel Gate

	cm			cm3	#	total cm3	plain steel density		convert kg to lbs
	Length	Width	Depth				8.05	g/m3	
vertical	150	1.2	10	1800	12	21600	173.88	kg	
horizontal	300	1.2	10	3600	6	21600	173.88	kg	
plate	305	155	1.27	60039.25	1	60039.25	483.32	kg	
						103239.3	839.1	kg	1850.0 lbs

Table 3 Weight Calculation of Proposed Hybrid Gate

	cm			cm3	#	total cm3	plain steel density		convert kg to lbs
	Length	Width	Depth				8.05	g/m3	
vertical	150	1.2	10	1800	12	21600	173.88		
horizontal	300	1.2	10	3600	6	21600	173.88		
plate	305	155	1.27	60039.25	1	60039.25	57.94		
Nuts and bolts					100	90.9	9.09		
						grams/each			
						103239.3	422.8	kg	932.2 lbs



## Resultant Force to Open the Gate

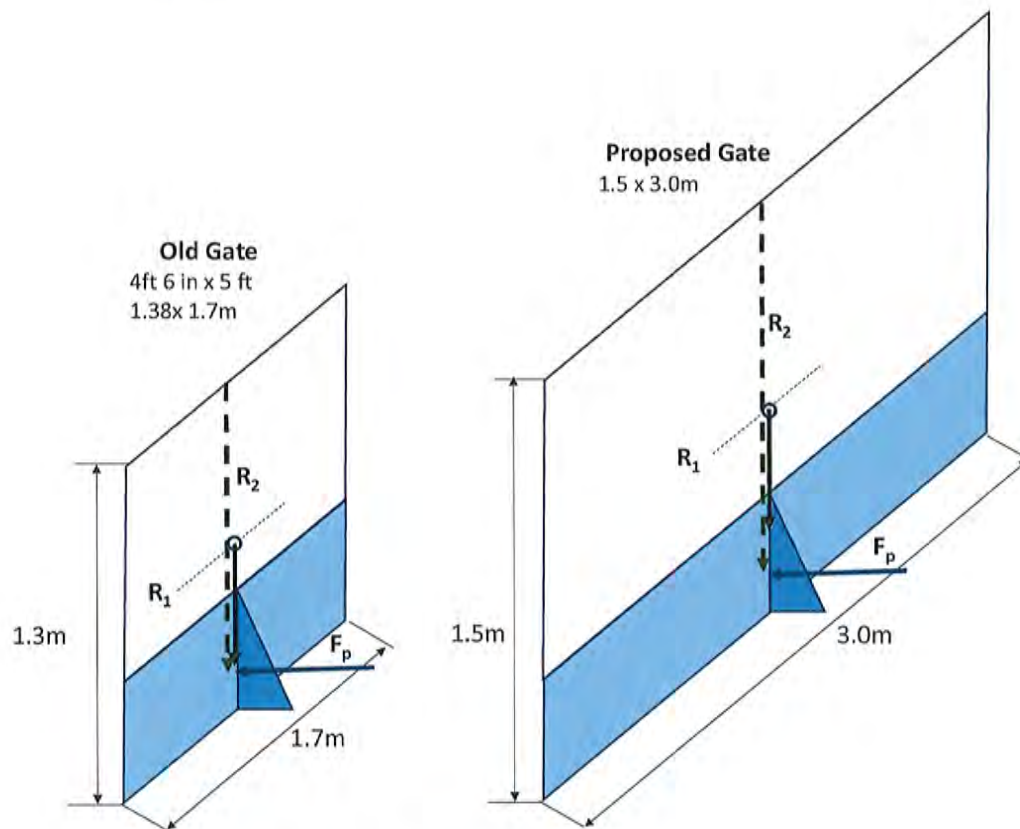


Figure 4 Hydrostatic pressure force

## Existing Gate

The first number shown, top left of the calculation, is the force of gate weight acting at the centroid of the gate. The number following is the momentum about the hinge to move the gate. The bottom left number is the momentum generated by hydrostatic pressure acting about the centre of pressure, CP.

4299.509 N	runoff depth	h1	0.35	
2579.706 N m	Pressure acting on the gate	p	3433.5	kPa
	Force acting on the gate	Fp	2042.9	N
	Moment of Inertia	I <sub>0</sub>	0.004288	
	Pressure acting centre	CP	0.233333	
2580.905 N m	Force acting from the hinge	R <sub>2</sub>	1.26	

$h1$  is the water surface elevation behind the gate, the upstream side of the gate.

$h2$  is the water surface elevation in front of the gate, the downstream side or lakeside of the gate.

$p$  is the hydrostatic pressure

$I_0$  is the moment of Inertia for the gate

$R_2$  is the distance from the hinge for the centre of pressure.



Proposed Gate  
Steel

A calculation to open for an all steel gate 1.5m high by 3m wide consisting of the two old gates joined together with an additional bottom frame added.

8231.826 N	runoff depth	h1	0.42	
6585.461 N m	Pressure acting on the gate	p	4120.2	kPa
	Force acting on the gate	Fp	5191.5	N
	Moment of Inertia	I <sub>0</sub>	0.018522	
	Pressure acting centre	CP	0.2800	
6800.802 N m	Force acting from the hinge	R <sub>2</sub>	1.31	

## Study Cases

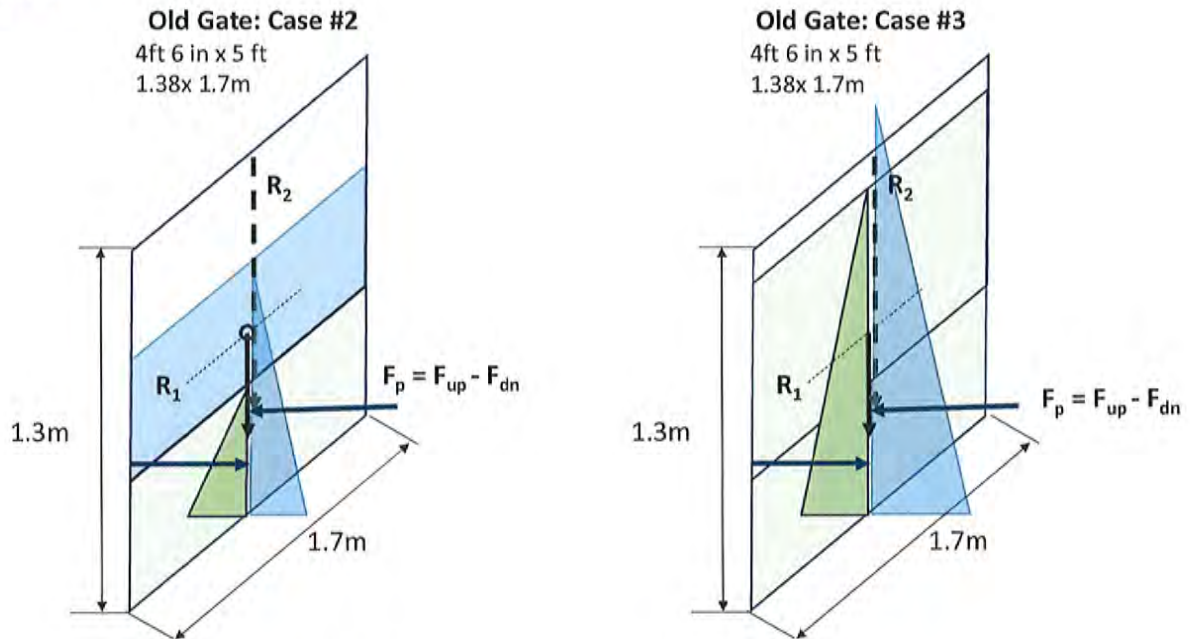


Figure 5 Gate submerged and head to open

## Ex. Gate Case #2: Lake surface @ 173.55

4299.509 N	h1	0.85	
3439.608 N m	h2	0.754	0.096
	p1	8338.5	
	P2	7396.74	
	Fp	4531.7	21263.2 16731.4
	I <sub>0</sub>	0.153531	
	CP	0.5667	
5287.041 N m	R <sub>2</sub>	1.17	



Existing invert is 172.796

**Proposed Gate Case #2: Lake surface @  
173.85**

8231.826	N	h1	0.83		
6585.461	N m	h2	0.7	0.13	
		p1	8142.3		
		P2	6867		
		Fp	5853.6	20274.3	14420.7
		I <sub>0</sub>	0.142947		
		CP	0.5533	0.7	
<b>6868.256</b>	<b>N m</b>	R <sub>2</sub>	1.17		

\* proposed invert is 173.15

**Proposed Gate Case #3: Lake surface @  
174.16**

8231.826	N	h1	1.12		
6585.461	N m	h2	1.01	0.11	
		p1	10987.2		
		P2	9908.1		
		Fp	6895.4		
		I <sub>0</sub>	0.351232		
		CP	0.7467	0.7	
<b>7424.1</b>	<b>N m</b>	R <sub>2</sub>	1.08		

Option for a PE face with steel ribs

4148.048	N	runoff depth	h1	0.29	
3318.439	N m	Pressure acting on the gate	p	2844.9	N
		Force acting on the gate	Fp	2475.1	kPa
		Moment of Inertia	I <sub>0</sub>	0.006097	
		Pressure acting centre	CP	0.1933	
<b>3349.585</b>	<b>N m</b>	Force acting from the hinge	R <sub>2</sub>	1.35	

**Case #2: Lake surface @ 174.16**



4148.048	N	h1	0.77	0.07
3318.439	N m	h2	0.7	
		p1	7553.7	
		P2	6867	
		Fp	3028.3	0.7
		I <sub>0</sub>	0.114133	
		CP	0.5133	
3613.827	N m	R <sub>2</sub>	1.19	

\* proposed invert is 173.15

**Case #3: Lake surface @ 174.16**

4148.048	N	h1	1.06	0.05
3318.439	N m	h2	1.01	
		p1	10398.6	
		P2	9908.1	
		Fp	3046.0	0.7
		I <sub>0</sub>	0.297754	
		CP	0.7067	
3340.452	N m	R <sub>2</sub>	1.10	

\* proposed invert is 173.15



## 5 Summary:

The following table presents the head,  $h_1 - h_2$ , to open the gate. There are three options considered;

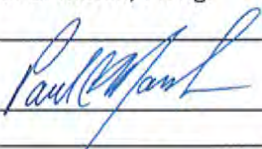
- The existing old gate, 4 ft 6 inches high x 5 ft wide.
- The proposed gate, 1.5m high x 3.0m wide.
- The proposed gate with a plastic face instead of steel.


Table 4 Summary of the head to open the gate

	H x W	Weight, kg	Weight, lbs	Case 1	Case 2	Case 3
<b>Existing Gate</b>	4' 6" x 5'	438.3	966.2	<b>0.35</b>	<b>0.096</b>	<b>0.056</b>
<b>Proposed (all Steel)</b>	1.5 x 3m	839.1	1850.0	<b>0.42</b>	<b>0.13</b>	<b>0.11</b>
<b>Proposed (PE plate)</b>	1.5 x 3m	422.8	932.2	<b>0.29</b>	<b>0.07</b>	<b>0.05</b>

The new larger single gate is twice the weight of the existing single gates and requires more head to open. The lake surface elevation has less of an impact on the hydrostatic pressure to open than expected.

I have reviewed the calculation procedure and verified the results.

Print Name:	Paul C. Marsh, P.Eng.	
Signature:		Date: Thu, January 9, 2025

 <b>Document Review</b>	
Submission Title:	Gate weight calc - DRAFT
Submission Date:	November 28, 2024
Submitted By:	P.Marsh, P.Eng.
Review By:	
Review Date:	
Action:	



## **Appendix D: Specifications**



POINT ABINO MUNICIPAL DRAIN  
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## A1. ROLES

The Contractor is responsible for the construction site including all approvals required for compliance with applicable legislation not already completed by the City of Port Colborne.

The City of Port Colborne, further recognized as The Owner, shall be the responsible party for allocating resources in support of construction where required, such as road occupancy permits during construction.

The Drainage Engineer or the Drainage Superintendent shall supervise construction and the Drainage Engineer, Drainage Superintendent or their representative shall respond to any requests by the Contractor and identify any deficiencies between the Contractor's work and the Design documents.

The Drainage Engineer is the responsible designer and will provide technical direction to the Contractor on an as needed and as requested basis from the Drainage Superintendent or their representative.

## A2 ENVIRONMENTAL CONDITIONS AND COMPLIANCE

The Contractor is wholly responsible for the site environmental conditions, compliance with applicable approvals and existing legislation. The Owner will facilitate environmental approvals, but the Contractor shall control the site and be the responsible party for all construction activities.

General requirements to be fulfilled by Contractor:

- a) Department of Fisheries and Oceans, DFO.  
Requirements to protect Fish and Fish habitat.
- b) Endangered Species Act, 2007 ONTARIO REGULATION 230/08  
<https://www.ontario.ca/page/species-risk>
- c) Ontario Water Resources Act, R.S.O. 1990, c. O.40
- d) On-Site and Excess Soil Management, 2019 ONTARIO REGULATION 406/19 Environmental Protection Act
- e) O. Reg. 675/98: Classification and Exemption of Spills and Reporting of Discharges, Environmental Protection Act, R.S.O. 1990

Any other legislation applicable to the jurisdiction of the works.

## A3 CONSTRUCTION LAYOUT

Conditions stipulated in the Niagara Peninsula Standard Contract Document also apply. Failure to comply with these conditions will result in a reduction in payment for this item.

### a) Stakes

Contractor is responsible for setting any layout, alignment or grade control stakes required for construction. A Stake shall be placed to mark every cross-section grade and a second stake shall be placed to mark the limits of the Working Zone. Work Zone Stake shall be 4' wooden stake painted red at the top of the stake. Grade stake shall be placed at the Work Zone Top of Bank. X-Section stakes shall be placed at a maximum spacing of 25m. A recommended spacing shall coincide with the Profile drawings.



Prior to the start of Construction, the Contractor will stake and identify the difference between the existing grade and the design grade. The Drainage Engineer shall review the stakes and the measurement of the soil to be removed. Post Construction, the Contractor shall remove all stakes.

#### **b) Project Signage**

The Contractor is responsible for the installation and removal of all construction signage and is responsible for daily maintenance of all signage throughout the contract.

### **A4 INSTALL AND MAINTAIN SEDIMENT CONTROL DEVICES**

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document and OPSS 577, the following shall also apply:

#### **a) SILT FENCE**

Silt fence is to be placed prior to disturbing soil adjacent to the drain that could be carried by runoff into the drain. This excludes the area of the drain where The Contractor is working to re-establish Drain grade and cross-section. It includes areas adjacent to the drain impacted by clearing and grubbing for work access.

Silt fence shall be installed in accordance with OPSD 219.190, except that the minimum height above the invert of the drain shall be 500 mm. Silt fence materials shall be in accordance with OPSS 577.05.02.02 for geotextile and OPSS 577.05.03 for stakes. Stakes shall be 1.5 m minimum height.

The silt fence shall remain in place for the duration of the section that the Contractor is working and the Contractor shall make every effort to maintain it throughout the project. The Contractor shall request Approval from the Engineer or the Drainage Superintendent for the removal of the silt fence once each section of the drain is complete. Prior to the removal of the silt fence, the accumulated silt shall be removed and levelled adjacent to the drain in accordance with the disposal of excavated material section.

#### **b) SEDIMENT BASINS**

Sediment basins have been provided along the length of the drain in an effort to minimize the transport of sediment. The Contractor shall construct the sediment basins in accordance with the construction drawings in the locations indicated. Relocation of sediment basins can only be undertaken upon approval of the Engineer.

The Sediment basin is to be constructed prior to the upstream work and shall be monitored during construction for sediment accumulation and sediment removed if the basin has more than 50% of the 0.5m depth occupied with sediment. Once the upstream work is complete, the Sediment basin shall be converted from Construction to Final as per the Design Detail Drawings. Sediment accumulated during construction shall be removed and disposed of in the manner directed by the Contract.

### **A5 ACCESS & NOTICE**

The City of Port Colborne's Drainage Superintendent or designate shall provide affected landowners with notice of the commencement of construction.

It will be the Contractor's responsibility to inform the various businesses and residences of daily construction impacts in order to reduce/eliminate any problems with parked vehicles that may



interfere with their operations. Ingress & egress to the abutting businesses and residences must be maintained at all times.

The Contractor shall advise the Police Department, Fire Department and Niagara Emergency Medical Service on a daily basis, with current status of the construction as it pertains to the passage of traffic within the contract limits.

The Contractor will co-ordinate with local transit to ensure minimum interruption to bus schedules. Transit, school buses and garbage and recycling service vehicles will be given priority to maintain their schedule.

The Contractor shall also maintain/provide existing pedestrian access at all times to the businesses and residents during all phases of construction in an acceptable manner.

## **A6 AS-CONSTRUCTED DOCUMENTATION**

For the 'as-constructed' works, the Contractor must provide the City of Port Colborne with an electronic version of the final drainage works as surveyed post construction, to be imported into AutoCAD or GIS. This copy must confirm that the design grade and cross-section details for all drainage work and the invert elevations and lengths for all culverts complies with the Engineer's Report. Survey spacing shall be to a minimum of 25m.

All work must be in an acceptable electronic format that the City of Port Colborne can use and all work must be completed using the verified geodetic benchmarks. The submission of the As-Constructed works will be in a common delimited format having the form as follows:

- Numeric key, Northing, Easting, Elevation, Coded identifier & optional description

For the coded identifiers, the City of Port Colborne will provide a table for reference. The City will certify the as-constructed files with respect to their completeness.

Failure to provide a certified as-built file will result in the delay of substantial completion and/or contract completion. In the event that the contractor asks the City to perform the AS CONSTRUCTED SURVEY, then payment for the lump sum item is negated.



## B1 EARTH EXCAVATION

Work under this item shall include the supply of all labour, equipment and materials required for ditch excavation or any other type of excavation or earth work as outlined on the Contract Drawings. Ditch work involves clearing, excavation, leveling, and seeding as required. Specifications and information on the Contract Drawings shall take precedence over the standard specifications outlined below. The specifications below shall take precedence over the Niagara Peninsula Standard Contract Document Special Provisions B2.

## B2 CONSTRUCTION

### a) Vegetation Removal

All trees, brush, fallen timber and debris shall be moved from the ditch cross-section and to such a distance on each side to eliminate any interference with the spreading of the spoil. The roots shall be left in the banks if no bank excavation is required as part of the new channel excavation. In wooded or heavily overgrown areas all cleared material may be pushed into piles or rows along the edge of the cleared path and away from leveled spoil. All dead trees along either side of the drain that may impede the performance of the drain if allowed to remain and fall into the ditch, shall be removed prior to excavation and put in piles, unless directed otherwise by the Engineer.

Any tree removed will be offered as wood to the property owner in the form of logs from the trunk where they lay and to be moved from the site by the owner at their expense. Tree tops shall be cut and limbs stacked as piles adjacent to the drain and within the work zone.

### b) Excavation

The bottom width and the side slopes of the ditch shall be as shown on the profile(s) and/or cross-sections on the Contract Drawings. Side slopes are normally one and one-half metre horizontal to one metre vertical (1.5:1) unless otherwise noted on the Contract Drawings. If a bottom width is not specified then any excavation required shall be from the bottom of the ditch without disturbing the bank slopes subject to the clearing of brush required as described in a).

### c) Profile

The profile(s) on the Contract Drawings show the depth and grade for the drain improvements. The description and elevation of benchmarks that were established during the survey are shown on the profile(s) in the location for each benchmark.

### d) Line

The drain shall follow the course of the existing channel and/or shall be constructed in a straight line as outlined on the Contract Drawings. A uniform grade shall be maintained in accordance with the profile(s). A variation of one hundred millimeters (100mm) above the required grade will require the Contractor to remedy the grade to that given on the profile. The Contractor may be required to backfill any portion of the ditch that is excavated more than two hundred millimeters (200mm) below the required grade. All curves shall be made with a minimum radius of fifteen metres (15m).

### e) Excavated Material

Excavated material (spoil) shall be deposited on either or both sides of the drain as directed on the Contract Drawings. Spoil upon excavation shall be placed a minimum one (1) metre back from the top of the bank, either existing or new. No excavated material shall be placed in tributary drains, depressions, or low areas, which direct or channel water into the ditch so that



no water will be trapped behind the spoil bank. The excavated material shall be placed and leveled to a maximum depth of three hundred millimeters (300mm); unless otherwise instructed. The edge of the spoil bank away from the ditch shall be feathered down to existing ground. The edge of the spoil bank nearest the ditch shall have a maximum slope of 2:1. The material shall be leveled such that it may be cultivated with ordinary equipment without causing undue hardship on farm machinery and farm personnel. Wherever clearing is necessary prior to leveling, the Contractor shall remove all stumps unless the Contract Drawings specify that stumps can be covered with the leveled spoil. No excavated material shall cover any logs, brush or rubbish of any kind. Large stones or boulders in the leveled spoil that are heavier than fifteen kilograms (15kg or approximately 300mm in size roughly referred to as man stone or the size of a stone that a single person can carry.) shall be moved to the edge of the leveled spoil nearest to the ditch but in general no closer than one metre (1) to the top of bank.

Where it is necessary to straighten any unnecessary bends or irregularities in the alignment of the ditch or to relocate any portion of an existing ditch, the excavation from the new cut shall be used for backfilling the original ditch. Regardless of the distance between the new ditch and old ditch, no extra compensation will be allowed for this work.

If the Contractor obtains written permission from an affected landowner stating that the owner does not wish the spoil to be leveled and such is approved by the Engineer, the Engineer may release the Contractor from the obligation to level the spoil. If spoil is not leveled that was to be leveled as part of the Contract, the Engineer shall determine the credit to be applied to the Contractor's payment. No additional compensation is provided to the owner if the spoil is not leveled.

If the affected landowner requests that the spoil be removed from the site instead of being spread adjacent to the drain within the work zone or that the grading requirement is to a higher standard than suitable for agricultural cultivation, then the Contractor shall provide trucking of the spoil including disposal at a suitable site or additional grading and shall provide the Drainage Superintendent with the specific costs for each landowner who requests such work. The Engineer shall assess the cost of the trucking of spoil to the landowner making such request.

The Engineer may require the Contractor to obtain written statements from any or all of the landowners affected by the leveling of the spoil. A written statement from the owners indicating their complete satisfaction with the leveling of the spoil is sufficient to comply with this specification. The final decision, with respect to leveling of the spoil, shall be made by the Engineer.

**f) Excavation Through Woodlots**

The Contractor shall minimize disturbance through woodlots by reducing the limit of excavation to the bottom width of the drain and a minimum side slopes. The drain shall be routed around existing trees at the direction of the Drainage Superintendent or where requested by the Engineer.

Prior to performing work through a woodlot, the Contractor in coordination with the Drainage Superintendent shall mark all trees for preservation or removal within the Drain or Workzone. This mark will consist of a physical identification that will be easily understood by the landowner and consist of either colour ribbons or specific paint markings (green to keep, red mark of an 'X' for removal).



**g) Excavation at Bridge and Culvert Sites**

The Contractor shall excavate or clean through all bridges and culverts to match the grade line and the downstream channel cross-section. Bridges that span from bank to bank may be carefully removed to permit excavation below the bridge and then replaced to original condition. Permanent bridges must be left intact. All necessary care and precautions shall be taken to protect the structure. The Contractor shall notify the Engineer before completing excavation in the area of a bridge or culvert if the excavation will expose the footings or otherwise cause bridge instability.

Where the invert of any pipe culvert is above the grade line, the Contractor will be required to remove the culvert, clean and relay it, so that the invert of the culvert is one hundred and fifty millimetres (150mm) below the grade for the ditch bottom at this location.

**h) Obstructions**

In all cases, the Contractor shall ensure that the finished drain is clear of obstructions to flow. The contractor will ensure that trunks are cut flush and that any debris or snags are removed as part of the bid price.

**i) Fences and private furniture or equipment**

The contractor will use the identified work zone for access and shall restore any fences to an equivalent or better condition than before construction. Where possible the Contractor shall preserve existing fences, private equipment and furniture in place but where it must be moved, the Contractor shall in all cases restore to a like or better condition than existed before construction.

**j) Tile Outlets**

The location of all existing tile outlets may not be shown on the profile for the drain. The Contractor shall contact each owner and ensure that all tile outlets are marked prior to commencing excavation on the owner's property. If a marked tile outlet is damaged during, or altered due to construction, the Contractor shall repair or replace the damaged or altered outlet as part of the Contract. If an existing outlet pipe does require replacement the Contractor shall confirm the replacement outlet pipe with the Engineer. All tile outlets identified are considered part of the bid work.

Additional payment will be allowed for the repair or replacement of any unmarked tile outlets encountered during excavation. Where stone or concrete riprap protection exists at any existing tile outlet such protection shall be removed and replaced as necessary to protect the outlet after reconstruction of the channel.

If any outlet becomes plugged as a result of construction, the Contractor shall be obligated to free such outlet of any impediments. Where any damage results to tile leading to and upstream of the outlet, as a consequence of such construction, the Engineer may direct the Contractor to repair such tile and shall determine a fair compensation to be paid to the Contractor for performing the work.



### B3 INSTALLATION OF NEW CULVERT

Work under this item shall include the supply of all labour, equipment and materials required for supply and installation of culverts as outlined on the Contract Drawings. The Niagara Peninsula Standard Contract Document Special Provision B7 shall apply but the specifications and information on the Contract Drawings shall take precedence over Special Provision B7.

The size and material for any new ditch crossings shall be as specified on the Contract Drawings. Any crossings assembled on-site shall be assembled in accordance with the manufacturer's specifications for on-site assembly.

Where a new crossing replaces an existing crossing the following shall apply:

If directed on the drawings that the existing crossing is to be salvaged for the owner the Contractor shall carefully remove the existing crossing and leave along the ditch or haul to a location as specified on the Drawings.

If the existing crossing is not to be saved then the Contractor shall remove and dispose of the existing crossing. Disposal by burying on-site is not permitted.

All new pipe crossings shall be installed a minimum of 100mm below design grade (not as-constructed grade) or at the invert elevations as specified on the Drawings. If the ditch is over excavated greater than 200mm the Contractor shall confirm with the Engineer the elevations for installation of the new pipe crossing.

When an existing crossing is being replaced the contractor shall save all granular and riprap. New crossings can be backfilled with compacted on-site native material that is free of large rocks or stones. Contractor responsible for any damage to a culvert pipe as a result of rocks or stones in the backfill.

All new crossings shall have a minimum 6m laneway width and end slopes shall be at 1:1 slope or flatter. Finished crossing elevation shall provide a minimum of 300mm cover. Finished crossing surface shall be a minimum 150mm depth of Granular A for the minimum 6m width and extending from top of bank to top of bank using salvaged granular or imported granular as required.

Installation of private crossings during construction must be approved by the Engineer before the culvert is installed.

Where riprap protection is called for at either or both ends of a new culvert, such riprap shall be in accordance with Special Provision B4.

Payment will be based on plan quantity.

Riprap to be adequately keyed in along the bottom of the slope. Riprap to extend to top of pipe or as directed on the Drawings. No riprap is required in the ditch bottom on the upstream side of a crossing. If riprap is required in the ditch bottom on the downstream side of a crossing it shall be specified on the Drawings. Any new end face slope not protected by riprap shall be seeded as per specifications for ditch bank seeding.

### B4 HAND LAND RIP RAP WITH FILTER CLOTH

Rip rap complete with filter fabric underlay (geotextile) shall be placed by the Contractor at the locations shown on the drawing or as requested by the Drainage Superintendent. Rip rap shall consist of 200 – 250 mm dia. stones (min.) and shall be placed at 300 mm minimum thickness.



## Point Abino Drain

## Special Provisions

Along upstream edges, where surface water will enter the drain, the underlay shall extend a minimum of 300 mm upstream from the rip rap and be keyed into the soil a minimum of 300 mm. The finished elevation of the rip rap shall be at design elevation or flush with the ground.

Work under this item shall include the supply of all labour, equipment and materials required for placing riprap as outlined on the Contract Drawings. The Niagara Peninsula Standard Contract Document Special Provision B20 shall apply but the specifications and information on the Contract Drawings shall take precedence over Special Provision B20.

## B5 TREE PLANTING

All trees supplied are to be Carolinian Forest or understory native species consistent with Niagara Region.

<https://www.ontario.ca/page/tree-atlas/ontario-southwest>

There will be a 1 year warranty on tree survivability.



## B6 BANK RESTORATION

Bank restoration extent is to the identified location indicated on plans and by the Drain Superintendent. Offset stakes are required prior to the commencement of construction. Inspection of the offset stakes is required prior to any work commencing along with the submittal of required environmental approvals.

### B6.1 'IN WATER WORK'

All in-water and near water works will be conducted in the dry with appropriate erosion and sediment controls.

The erosion and sediment control strategies outlined on the plans are not static and may need to be upgraded/amended as site conditions change to minimize sediment laden runoff from leaving the work areas. If the prescribed measures on the plans are not effective in preventing the release of deleterious substance, including sediment, then alternative measures must be implemented immediately to minimize potential ecological impacts. NPCA enforcement officer should be immediately contacted, additional ESC measures such as a tarp to be kept on site and used as necessary.

An environmental monitor will attend the site to inspect all new controls, as well as on a regular basis, or following rain/snowmelt event, to monitor site conditions.

All activities, including maintenance procedures, will be controlled to prevent the entry of petroleum products, debris, rubble, concrete, or other deleterious substances into the water. Vehicular refueling and maintenance will be conducted a minimum of 30 metres from the water.

All grades within the Regulatory Flood Plain will be maintained, matched or as specified.

The Proponent/Contractor shall monitor the weather several days in advance of the onset of the project to ensure that the works will be conducted during favourable weather conditions. Should an unexpected storm arise, The Contractor will remove all unfixed items from the 100 year storm flood plain that would have the potential to cause a spill or an obstruction to flow; e.g. fuel tanks, porta-potties, machinery, equipment, construction materials, etc.

All dewatering/unwatering shall be treated and released to the environment at least 30 metres from a watercourse or wetland and allowed to drain through a well vegetated area. No dewatering effluent shall be sent directly to any watercourse, wetland or forest or allowed to drain onto disturbed soils within the work area. These control measures shall be monitored for effectiveness and maintained or revised to meet the objectives of preventing the release of sediment laden water.

All access to the work site shall be from either side of the watercourse. No equipment or vehicles are permitted to cross through the watercourse unless approved by the NPCA.

Fish and wildlife stranded within the work area shall be captured and released in a live suitable habitat upstream of the work area under the supervision of a qualified aquatic biologist. A permit from the Ministry of Environment (MOECP) may be required. The contractor is responsible for organizing any wildlife removal, if required.

Please notify NPCA enforcement officer and an NPCA project Manager 48 hours prior to commencing construction.

An environmental monitor will be on site, and provide advice, to ensure that activities that could have a negative impact to the natural environment are effectively mitigated as construction proceeds. The



environmental monitor shall notify the NPCA enforcement officer and the project manager if an issue arises.

Additional ESC measures or devices may be deemed necessary as site conditions change and shall be installed as directed by the Site Engineer, Contract Administrator or NPCA.

## B6.2 LIVE STAKES AND NATIVE PLANT MATERIALS

Contractor to make good any and all damages outside of the work area that may occur as a result of construction at no extra cost.

Tree removals are to occur outside of the active period for bats (April 1<sup>st</sup> to August 31<sup>st</sup>) to avoid impacts to species at risk, including bats, birds, and Fowlers Toad. Contractor shall ensure the site complies with The Endangered Species Act.

Construction to occur during the warm water construction timing window of July 15 – March 15. No in water works to occur between March 15 and July 15. Construction timing windows are subject to DFO conditions for approval.

Quantity to be determined based on area of disturbance to be restored.

Live stakes should be from a minimum 2-year-old stock. Live stakes are to be installed at a density of 3 stakes per metre. Live stakes should be pre-soaked (submerged in water) for at least 24 hours after harvesting and immediately before installation.

Live stakes should not be stored for a period longer than 2 days, unless they are being soaked. The contractor shall protect plant materials from drying from the time of harvest until installed.

Live stakes are to be a minimum of 25mm in diameter and cut to a length of 1000mm. Cut angle at the bottom of the stake and flat on top. Trim all side branches while taking care not to damage the bark.

Install live stakes with the buds pointing upwards and thicker stem in the ground.

Live stakes should be installed using a large rubber mallet. 80% of the stake is to be below the surface. Tamp the live stake into the ground at right angle to the surface.

In compact soil a pilot hole should be used to limit damage to the stakes. If using a pilot hole, repack the soil around the live stake. Live stakes should stand firm in the soil following installation.

All stakes not planted to the specifications above will be replaced at the contractor's expense.

## B6.3 EROSION CONTROL BLANKET

A Biodegradable erosion control blanket (ECB) shall be installed on all disturbed natural surface following the placement of topsoil and application of the native seed mix.

The ECB must be constructed of 100% woven coconut fibre (eg coir) or straw mat within a geo jute netting (top and bottom) with biodegradable thread. Non - biodegradable material including polypropylene or plastic with a biodegradable rating are not acceptable. The minimum weight of the ECB must be 400g/m<sup>2</sup> (12 oz/yd<sup>2</sup>).



To install, the ECB must be unrolled downslope or in the direction of the water flow. Adjacent ECBs should overlap a minimum of 150mm along the edges. at the end of each roll, fold back 100mm to 200mm of the ECB. Overlap this 100mm to 200mm over the start of the next roll. Secure the two layers to the ground securely.

Biodegradable or tapered wooden stakes shall be used to secure the blanket. Stakes shall be installed at the spacing recommended by the ECB manufacturer to prevent surface runoff from eroding the underlying soil.

## **B.7 POINT ABINO DRAIN MECHANICAL ADDITIONS**

The following are items of equipment to be added to the POINT ABINO Outlet Structure.

In all cases, the Contractor must confirm all dimensions and fit for all equipment prior to commencing work or ordering parts and equipment to be supplied on the project.

All welds shall be continuous unless shown otherwise.

All welding shall conform to CSA Standard W47.1 and W59.

The Contractor shall submit shop drawings for the fabrication of the beams, railings, inlet grates, outlet flap gate, and all other steel members for the engineer's review prior to ordering the materials.

All steel components (not galvanized) shall have one coat marine primer and two finish coats of selected final paint. Selected paint colour to be as directed by the Drainage Superintendent.

Hot dip galvanized after fabrication to CSA standard G164M.

### **B7.1 POINT ABINO RD CULVERT RECTANGULAR FLEX FACE FLAP GATE**

The contractor is to remove the existing steel flap gates. The two flap gates are to be reconfigured into a single flap gate with a 300mm extension welded to the bottom of the steel frame. The existing steel plate is to be removed from the two gates and a single vulcanized rubber face 12 to 18mm thick sheet is to be fastened to the new 3000x1500 steel frame using stainless steel fasteners.

Stainless steel fasteners to use refuse pull out from the vulcanized rubber face with bolt diameter 9mm (3/8) on a spacing to match the midpoint of each structural steel frame member. Contractor to supply shop drawing detailing the stainless steel bolt plan.

### **B7.2 POINT ABINO RD CULVERT RECTANGULAR TRASH RACK**

The Contractor is to install a vertically mounted steel grate on the face of the entrance to the Pre-Cast Concrete culvert crossing Point Abino Rd. Steel flat bars are to be vertical with structural supports such that no opening in the grate is greater than 100mm.

The installed grate shall be removable for the purposes of maintenance and/or inspections of the culvert. The Contractor is to provide lifting lugs as appropriate for removing the trash rack.

The trash rack shall be 150mm wider on each side and 100mm taller than the concrete culvert opening (obvert), 3000x1500, and match the bottom opening.



**B7.3 TENNIS LANE TRIPLE CULVERT RECTANGULAR TRASH RACK**

Steel flat bars are to be vertical with structural supports such that no opening in the grate is greater than 100mm.

The installed grate shall be removable for the purposes of maintenance and/or inspections of the culvert. The contractor is to provide lifting lugs as appropriate for removing the trash rack.

The trash rack shall be 150mm wider on each side and 100mm taller than the concrete culvert opening (obvert), 3000x1500, and match the bottom opening.

The Contractor to supply shop drawing detailing the trash rack fixed points to the proposed concrete headwall, and how the trash rack can be removed (lifting lugs placement).

**B8 INSTALLATION OF PRE-CAST CULVERTS**

All work on the proposed Pre-Cast Concrete culvert at the Point Abino Drain outlet is to follow Precast Reinforced Concrete Box Culverts and Box Sewers in Open Cut, OPSS.MUNI 422.

**B8.1 Installation of New Precast Culvert, PAM-CS-20 3000x1500**

The Culvert end facing the lake will be a special configuration in order to support mounting hardware for the modified steel flap gate.

Culvert end facing the lake to include wing walls with bottom slab as precast concrete structure or Cast in place (CIP) as per shop drawing submittal.

**B8.2 Installation of New Precast Culvert PAM-CS-05**

The precast culvert is to have the same segments as the Point Abino Rd crossing culvert. The culvert will achieve a top crossing width suitable for a single lane vehicle crossing. The crossing will provide railings, guardrails to prevent a vehicle travelling 20km/hr from driving off of the lane.



## C1 COMPLETION

At the time of final inspection, all work in the contract shall have the full dimensions and cross-sections specified.

Payment is for all work complete on the basis of a measured linear distance inclusion of all items identified above. Where a culvert is removed and reinstalled, compensation shall be in the form of a per each payment. Where a tile is discovered and constructed as an outlet, compensation will be in the form of a per each payment for tile outlets repaired.

## C2 AS-CONSTRUCTED DOCUMENTATION

For the 'as-constructed' works, the Contractor must provide the City of Port Colborne with an electronic version of the final drainage works as surveyed post construction, to be imported into AutoCAD or GIS. This copy must confirm that the design grade and cross-section details for all drainage work and the invert elevations and lengths for all culverts complies with the Engineer's Report. Survey spacing shall be to a minimum of 25m.

All work must be in an acceptable electronic format that the City of Port Colborne can use and all work must be completed using the verified geodetic benchmarks. The submission of the As-Constructed works will be in a common delimited format having the form as follows:

Numeric key, Northing, Easting, Elevation, Coded identifier & optional description

For the coded identifiers, the City of Port Colborne will provide a table for reference along with an example file from a past project for comparison. The City will certify the as-constructed files with respect to their completeness.

Failure to provide a certified as-built file will result in the delay of substantial completion and/or contract completion. In the event that the contractor asks the City to perform the AS CONSTRUCTED SURVEY, then payment for the lump sum item is negated.

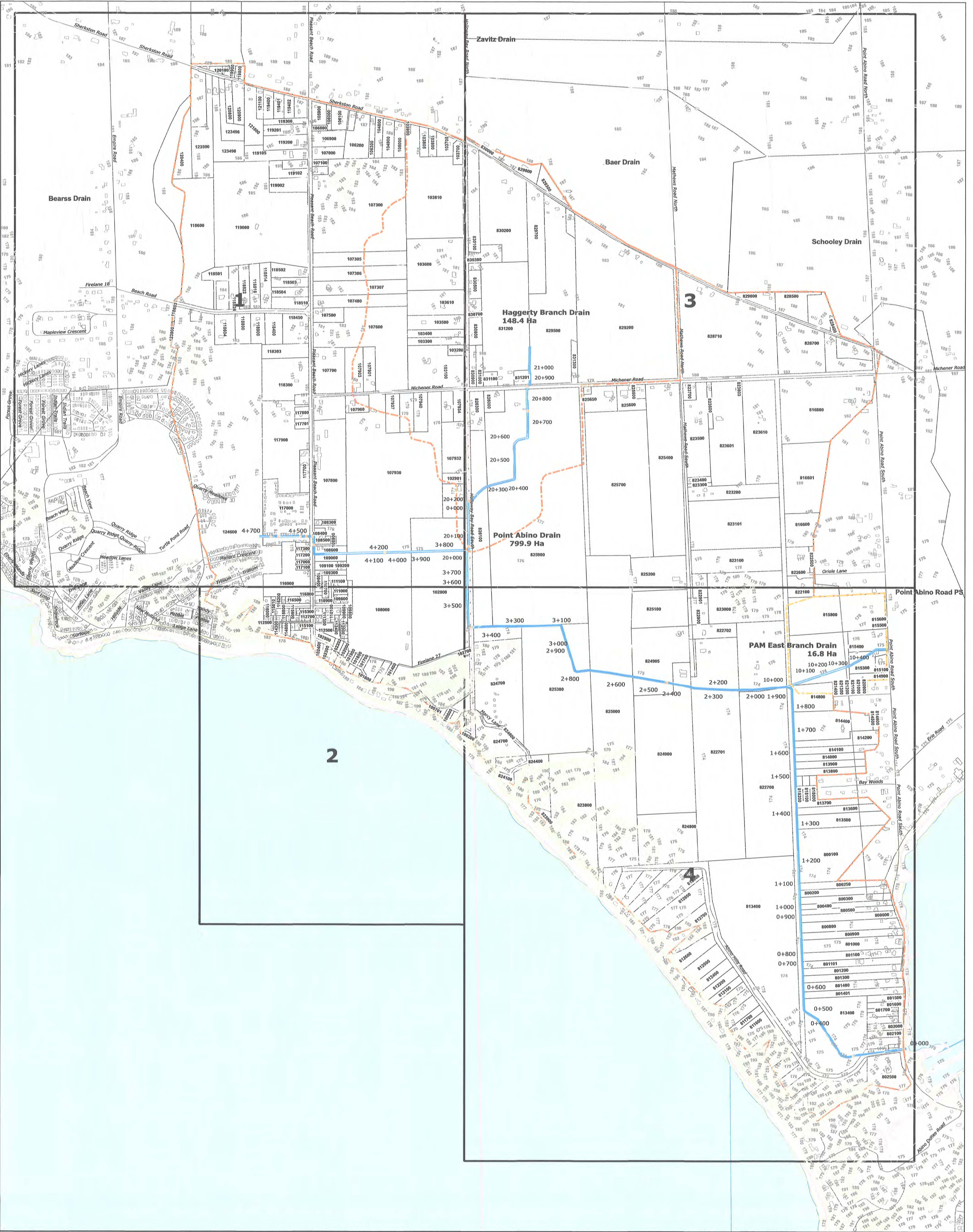
A4 PAYMENT; Payment in full at the lump sum bid price for this item shall be made only upon completion and approval by the Contract Administrator.




## **Appendix E:**

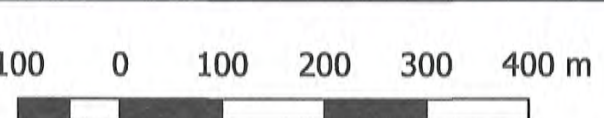
# **Assessment Atlas**







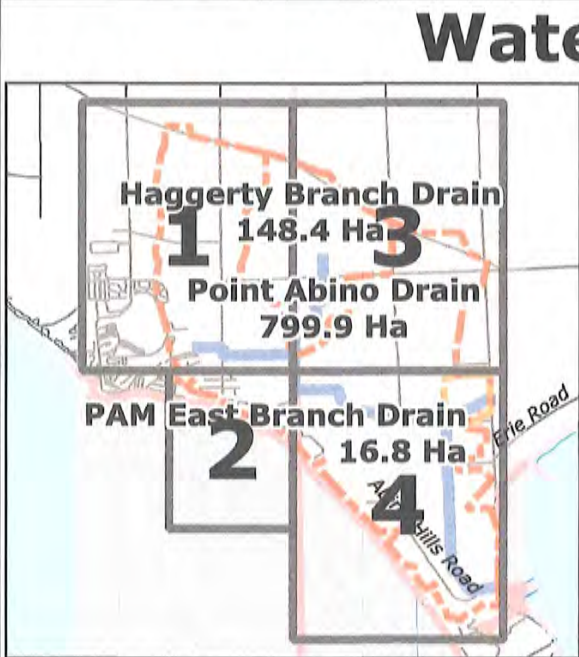
Scale: 1:7,500



**LEGEND**

Contours_2020DTM_NPC	East Branch and Haggerty CL DXF	— Roads	BuildingFootprints
Assess_map_A1_3500_2	entities	2025_updated Parcel	Regulated_Shoreline_Extent
Ptalbino_catch	— C-ROAD-CNTR	CoPC_PAM_watershed	Lake & Canal
Haggerty Branch Drain	DRAIN CL Riparian Chainage DXF	ToFFE_PAM_watershed	adj_catch
PAM East Branch Drain	entities	ROW_PA	
Point Abino Drain	— C-ROAD-CNTR	40	
crossings	Municipal_Boundary_-_Lower_and_Single_Tier	70	
		90	
		80	

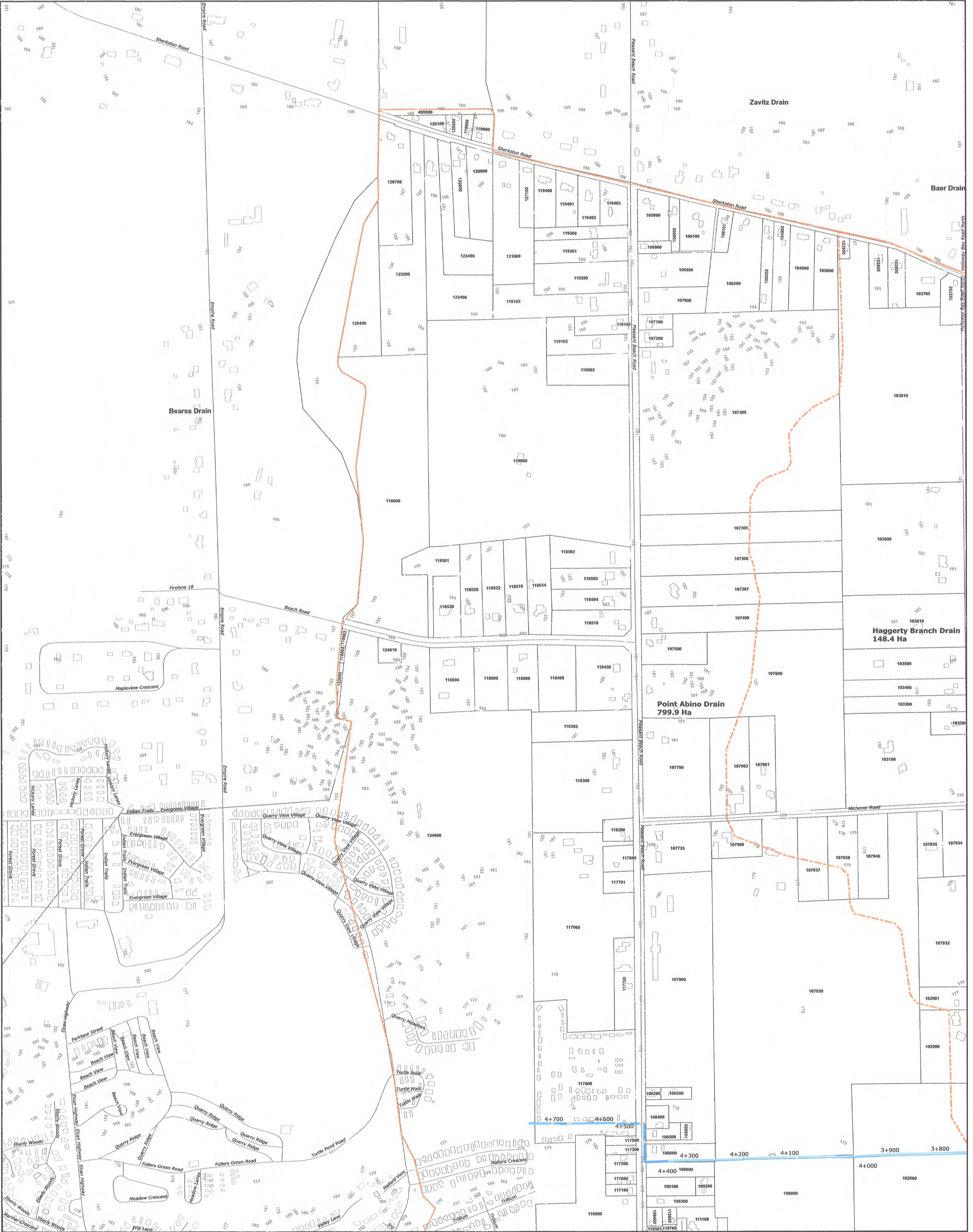
**Watershed Assessment Map**




**Overview Page**

Printed on: 2025-04-08







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100

0

100

200

300

400 m

LEGEND

Contours\_2020DTM\_NPCA

Assess\_map\_A1\_3500\_2

PtAbino\_catch

Haggerty Branch Drain

Point Abino Drain

crossings

DRAIN CL Riparian Chainage DXF

entities

C-ROAD-CNTR

Municipal\_Boundary\_-\_Lower\_and\_Single\_Tier

Roads

2025\_updated Parcel

CofPC\_PAM\_watershed

ROW\_PA

40

70

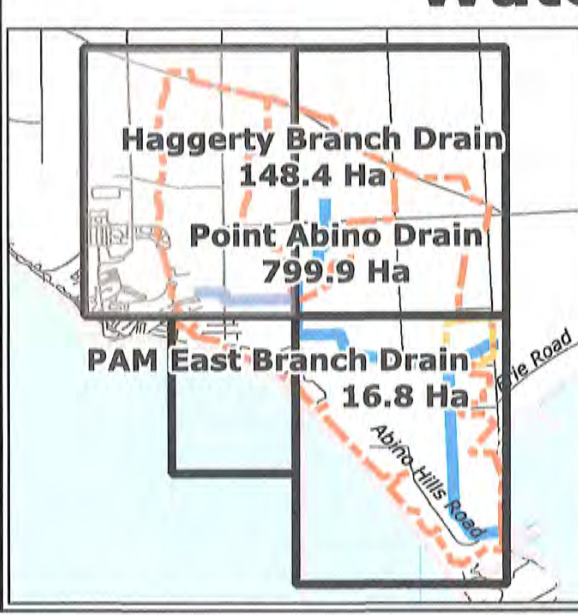
90

BuildingFootprints

Regulated\_Shoreline\_Extent

adj\_catch

Watershed Assessment Map



Haggerty Branch Drain  
148.4 Ha

Point Abino Drain  
799.9 Ha

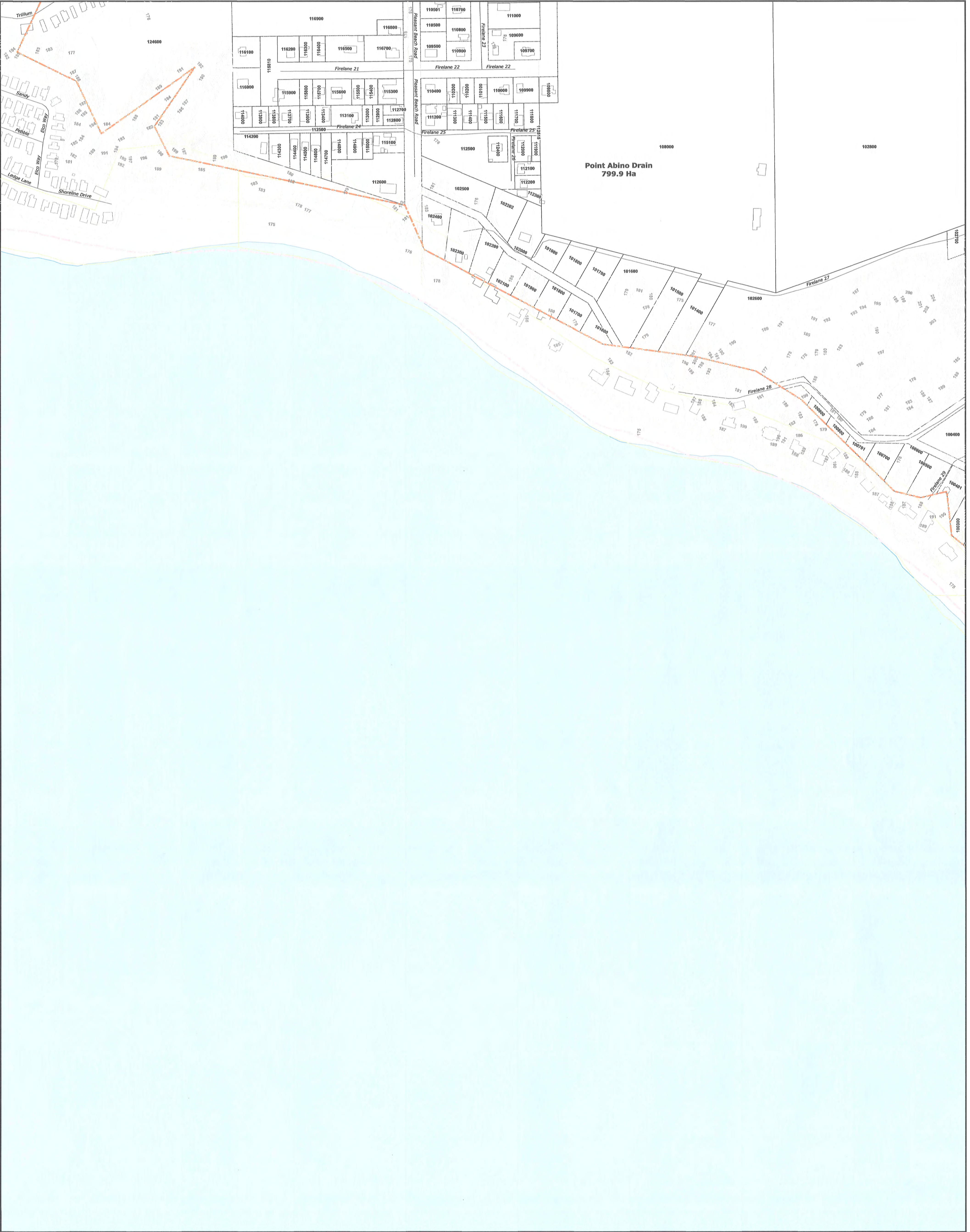
PAM East Branch Drain  
16.8 Ha


Page 1

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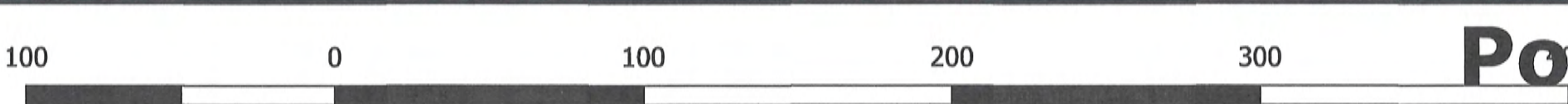
Page 129 of 147







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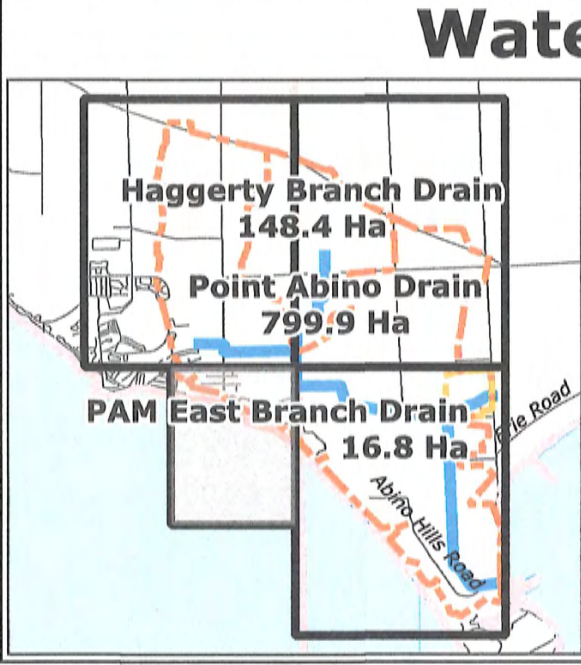


# Point Abino Drain

**LEGEND**

Contours_2020DTM_NPCA	Municipal_Boundary_-_Lower_and_Single_Tier_ROW_PA	BuildingFootprints
Assess_map_A1_3500_2	Roads	Regulated_Shoreline_Extent
PtAbino_catch	2025_updated Parcel	Lake & Canal
Point Abino Drain	CofPC_PAM_watershed	

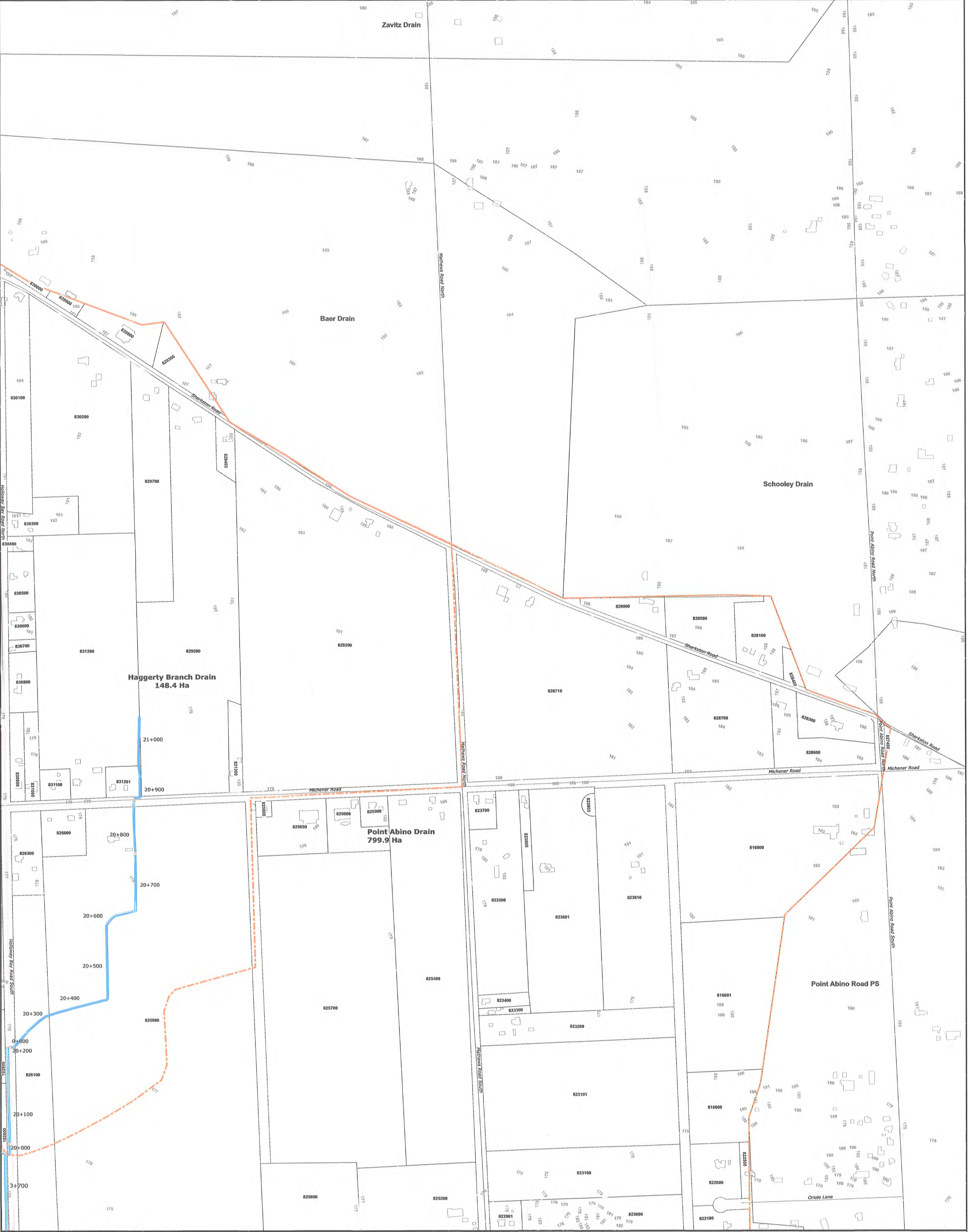
## Watershed Assessment Map




# Page 2

Printed on: 2025-04-08





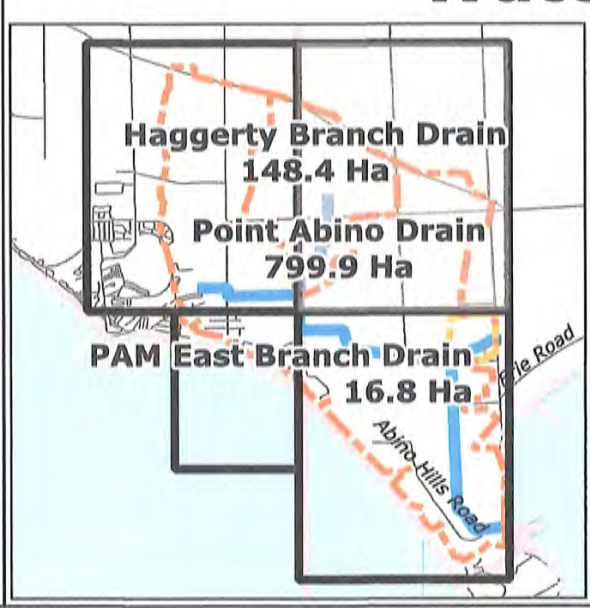


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**LEGEND**

Contours_2020DTM_NPCA	East Branch and Haggerty CL DXF	— Roads	ROW_PA
Assess_map_A1_3500_2	entities	2025_updated Parcel	40
PtAbino_catch	— C-ROAD-CNTR	CoPC_PAM_watershed	70
Haggerty Branch Drain	DRAIN CL Riparian Chainage DXF	ToFFE_PAM_watershed	90
Point Abino Drain	entities	BuildingFootprints	80
crossings	— C-ROAD-CNTR	adj_catch	
	Municipal_Boundary_-_Lower_and_Single_Tier		

**Watershed Assessment Map**



Haggerty Branch Drain  
148.4 Ha  
Point Abino Drain  
799.9 Ha  
PAM East Branch Drain  
16.8 Ha

**Page 3**

Printed on: 2025-04-08







## **The Corporation of the City of Port Colborne**

**By-law No. \_\_\_\_\_**

### **Being a By-law to Provide for a Section 78 Engineer's Report for Drainage works in the City of Port Colborne In the Regional Municipality of Niagara Known as the Point Abino Municipal Drain**

Whereas the Point Abino Drain is a municipal drain within the limits of the Corporation of the City of Port Colborne and the Town of Fort Erie, having status under the *Drainage Act R.S.O. 1990*; and

Whereas the Point Abino Drain is a municipal drain which drains lands from The City of Port Colborne through the Town of Fort Erie to its outlet into Lake Erie; and

Whereas on the 28<sup>th</sup> day of October, 2019, the Council of the City of Port Colborne appointed Paul Marsh P.Eng of EWA Engineering Inc. to complete a new report for the Point Abino Drain watershed; and

Whereas pursuant to Section 78 of the *Drainage Act*, R.S.O. 1990, the Council of the Corporation of the City of Port Colborne, in the Regional Municipality of Niagara, has procured a report titled Point Abino Municipal Drain, dated April 9, 2025, prepared by Paul Marsh, P. Eng., of EWA Engineering Inc., which report was filed with the City Clerk on the 16<sup>th</sup> day of May, 2025, containing plans, profiles and assessment schedules for the construction and future maintenance of the Point Abino Drain, and is attached hereto and forms part of this by-law; and

Whereas the total estimated cost the Point Abino Drain, inclusive of the engineer's report, construction, contract administration and HST (net) is \$2,555,208.06; and

Whereas \$721,993.77 is the total estimated cost assessed for the private lands in the Town of Fort Erie, \$17, 226.00 is the total estimated cost assessed to Enbridge in the Town of Fort Erie and \$1,293,243.78 is the total estimate cost assessed to the roads within the Town of Fort Erie; and

Whereas \$482,168.93 is the total estimated cost assessed to the private lands within the City of Port Colborne; and

Whereas the remaining amount of \$40,635.57 is the estimated cost assessed to the City of Port Colborne for the municipalities share of roads and lands; and

Whereas on the 13<sup>th</sup> day of May 2025 the council of the City of Port Colborne directed staff, by resolution, to proceed to the "Meeting to Consider", under Section 41 of the *Drainage Act*, R.S.O. 1990, in accordance with the recommendations laid out in Public Works Report 2025-91; and

Whereas the Council of the Corporation of the City of Port Colborne, at its meeting on the 7<sup>th</sup> day of July, 2025, approved the Department of Public Works, Report 2025-156 Point Abino Municipal Drain Meeting to Consider, whereby the proposed drainage works was deemed necessary and desirable; and

Now therefore the Municipal Council of the Corporation of the City of Port Colborne under the *Drainage Act R.S.O. 1990*, enacts as follows:

1. The report dated April 9, 2025, may be amended by pronouncement(s) of Courts of Revision and Final Decisions/Orders of the Agriculture, Food and Rural Affairs Appeals Tribunal and/or Referee, and appended hereto as Schedule "A" is hereby adopted and the drainage works as therein indicated and set forth is hereby authorized and shall be maintained in accordance therewith.
2. The Corporation of the City of Port Colborne may borrow on the credit of the Corporation the amount of \$2,555,208.06, excluding HST, being the amount assessed in the City, necessary for payment of the cost of the said drainage works.
3. The Corporation may arrange for the issue of debentures on its behalf for the amount borrowed less the total amount of,



- a) grants received under Section 85 of the Act;
- b) commuted payments made in respect of lands assessed within the municipality; and
- c) money paid under subsection 61(3) of the Act; and,

and such debentures shall be made payable within 5 years from the date of the debenture and shall bear interest at a rate not higher than the rate charged by The Ontario Municipal Improvement Corporation on the date of sale of such debentures.

- 4. A special equal annual rate sufficient to redeem the principal and interest on the debentures shall be levied upon the lands and roads as set forth in the report hereto to be collected in the same manner and at the same time as other taxes are collected.
- 5. For paying the amount of \$2,555,208.06 being the amount assessed upon the lands, a special rate sufficient to pay the amount assessed plus interest thereon shall be levied upon the whole rateable property in the City of Port Colborne in each year for 5 years after the passing of this by-law to be collected in the same manner and at the same time as other taxes are collected.
- 6. If the actual of the drainage works varies from the estimated costs as set out in the report, the actual cost shall be assessed, levied and collected upon and from the said parcel of land in the same proportions and in the same manner as provided in the report in Schedule “A” forming part of this by-law, as revised by the Court of Revision and Final Decisions of the Agriculture, Food and Rural Affairs Appeal Tribunal and/or Referee.
- 7. This By-law may be cited as “The Point Abino Municipal Drain By-law” and shall come into force on the day of its final passing.

Read a first and second time and provisionally adopted this 7<sup>th</sup> day of July 2025.

\_\_\_\_\_  
William Steele  
MAYOR

\_\_\_\_\_  
Jessica Beaupre  
DEPUTY CLERK

Read a third time and enacted this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
Head of Council

\_\_\_\_\_  
Clerk



Table 4 Point Abino Drain Assessment Summary

Point Abino Municipal Drain  
City of Port Colborne  
Town of Fort Erie  
Regional Municipality of Niagara  
Assessment Summary

PA Drain Assessed Costs

Farm As 'F'	Owner	Legal_Txt	Roll No	ARN ABBREV	Area Ha	Area in Drain Ha	Sect. 22	Section 23	Sect. 24	Total Assessed	Allowances	Net
	City of Port Colborne - Lands Assessed											
	Corless Trevor Alexander	PLAN 45 PT LOT 1 NP804	271104000100100	100100	0.193	0.013		\$12		\$12		\$12
	D B M E Inc	PLAN 45 LOT 2 PT LOT 1 NP804 RP 59R8890 PT 1 D B M E INC 75% INT M RICHARDS 25% INT	271104000100200	100200	1.309	0.0757		\$71		\$71		\$71
	Colyocorvid Inc	PLAN 45 LOT 3 NP804	271104000100300	100300	0.785	0.0766		\$72		\$72		\$72
	Colyocorvid Inc	PLAN 45 PCL A B C NP804	271104000100400	100400	0.509	0.5094		\$476		\$476		\$476
	Vance Beverly Diane	PLAN 45 LOT 4 NP804	271104000100401	100401	0.769	0.1152		\$108		\$108		\$108
	Ressel Charles	PLAN 45 LOT 5 NP804	271104000100500	100500	0.781	0.1492		\$139		\$139		\$139
	Vogelsang Christopher	PLAN 45 LOT 6 NP 804	271104000100600	100600	0.774	0.1672		\$156		\$156		\$156
	Ray David Michael	PLAN 45 LOT 7 + ROW NP804	271104000100700	100700	0.742	0.1156		\$108		\$108		\$108
	O'Hern-Lodge Inc	PLAN 804 LOT 8	271104000100701	100701	0.698	0.047		\$44		\$44		\$44
	Jones Wendy Kelly	PLAN 45 LOT 9 NP804	271104000100800	100800	0.711	0.0352		\$33		\$33		\$33
	Leon Leah	PLAN 45 LOT 10 NP804	271104000100900	100900	0.738	0.0367		\$34		\$34		\$34
	Narciso Wayne	PLAN 45 LOT 11 LOT 12 NP804	271104000101000	101000	1.437	0.033		\$31		\$31		\$31
	DWHA Properties Inc	27 NS CON 1 PT BLKS P K & L PLAN 45 LOT 16 NP804 RP 59R5691 PART 3 RP 59R8356 PART 1	271104000101400	101400	0.921	0.2823		\$278		\$278		\$278
	Simunic Joseph E Jr	PLAN 45 LOT 17 PT PCL P NP804	271104000101500	101500	0.393	0.3246		\$320		\$320		\$320
	MCLP Inc	PLAN 45 LOT 18 LOT 19 PT PCL P & L NP804	271104000101600	101600	0.545	0.5418		\$534		\$534		\$534
	MCLP Inc	PLAN 45 LOT 18 LOT 19 PT PCL P & L NP804	271104000101600	101600	1.161	0.0682		\$91		\$91		\$91
	Buscaglia Carol	PLAN 45 LOT 20 PT PCL P NP804	271104000101700	101700	0.647	0.1042		\$103		\$103		\$103
	Buscaglia Carol	PLAN 45 LOT 20 PT PCL P NP804	271104000101700	101700	0.174	0.174		\$168		\$168		\$168
	Campbell Mary Lou	PLAN 45 LOT 21 PT PCL P PT PCL M NP804	271104000101800	101800	0.658	0.111		\$109		\$109		\$109
	Campbell Mary Lou	PLAN 45 LOT 21 PT PCL P PT PCL M NP804	271104000101800	101800	0.145	0.1453		\$142		\$142		\$142
	Leon Leslie	PLAN 804 LOT 22 PT PCL P NP804 RP 59R13659 PART 1 RP 30R13059 PARTS 2 AND 3	271104000101900	101900	0.653	0.1155		\$114		\$114		\$114
	Leon Leslie	PLAN 804 LOT 22 PT PCL P NP804 RP 59R13659 PART 1 RP 30R13059 PARTS 2 AND 3	271104000101900	101900	0.118	0.1183		\$117		\$117		\$117
	N & J Signs	PLAN 45 PT BLK P NP804	271104000102000	102000	0.177	0.1772		\$175		\$175		\$175
	Sahlem Susan	PLAN 45 LOT 23 NP804	271104000102100	102100	0.535	0.1242		\$122		\$122		\$122
	Marshall-Petty Rebecca Anne	PLAN 804 LOT 24	271104000102200	102200	0.366	0.1426		\$141		\$141		\$141
	Craig Glen Francis	PLAN 804 PT PCL P	271104000102202	102202	0.171	0.1713		\$169		\$169		\$169
	Palumbo Joseph Louis Jr	PLAN 45 LOT 25 NP804	271104000102300	102300	0.501	0.2193		\$216		\$216		\$216
	Pizzo Edward Michael	PLAN 45 LOT 26 PT PCL P NP804	271104000102400	102400	0.450	0.1921		\$189		\$189		\$189
	Williamson Michael Patrick	PLAN 45 PT PCL P NP804	271104000102500	102500	0.301	0.3006		\$296		\$296		\$296
	Holloway Bay Property Owners I	PLAN 45 PT PCL P NP804	271104000102600	102600	5.455	5.1122		\$4,797		\$4,797		\$4,797
	Panto Nicholas	PLAN 45 PT PCL P NP804	271104000102700	102700	0.145	0.1452		\$136		\$136		\$136
	D B M E Inc	CON 1 PT LOT 1 RP 59R8890 PT 2 D B M E INC 75% INT M RICHARDS 25% INT	271104000102800	102800	14.366	14.3692		\$17,028		\$17,028		\$17,028
	Scarlett John Frederick	CON 1 PT LOT 1 RP 59R5913 PARTS 2 TO 4	271104000102900	102900	1.508	1.5084		\$2,181		\$2,181		\$2,181
	Boles Diane Lynn	CON 1 PT LOT 1 RP 59R5913 PART 1	271104000102901	102901	0.470	0.4704		\$662		\$662		\$662
	Phibbs Stephanie Diane	CON 1 PT LOT 1	271104000103100	103100	4.141	4.1423		\$6,777		\$6,777		\$6,777
	Lander Blake	CON 1 PT LOT 1	271104000103200	103200	0.319	0.319		\$447		\$447		\$447
	Nadeau Gerrard	CON 1 PT LOT 1	271104000103300	103300	0.809	0.8092		\$1,135		\$1,135		\$1,135
	Muileboom Ashley Arlene	CON 1 PT LOT 1	271104000103400	103400	0.809	0.8094		\$1,135		\$1,135		\$1,135
	Kennedy Nancy Jane	CON 1 PT LOT 1	271104000103500	103500	1.507	1.507		\$2,113		\$2,113		\$2,113
	Pruyn Kirk	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PART 3	271104000103600	103600	5.400	5.4008		\$8,837		\$8,837		\$8,837



Farm	Owner	Legal_Txt	ARN		Area	Area in Drain				Total	Allowances	Net
			Roll No	ABBREV			Sect. 22	Section 23	Sect. 24			
	Shaubel Brian	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PARTS 1 AND 2	271104000103610	103610	2.596	2.5966		\$3,642		\$3,642		\$3,642
	Harriettha Thomas	HUMBERSTONE CON 1 PT LOT 1 RP 59R10180 PART 1	271104000103700	103700	0.405	0.4047		\$568		\$568		\$568
	2293020 Ontario Ltd	CON 1 PT LOT 1 RP 59R10180 PART 2	271104000103705	103705	0.669	0.6695		\$939		\$939		\$939
	Annett Matthew	CON 1 PT LOT 1 RP 59R10819 PARTS 1 & 2	271104000103800	103800	0.398	0.3985		\$559		\$559		\$559
	Cirone David	CON 1 PT LOT 1 RP 59R10180 PT PART 3	271104000103805	103805	0.475	0.4749		\$666		\$666		\$666
	Lehocki Teresa Mary	CON 1 PT LOT 1 59R-10180 PARTS 4 & 5	271104000103810	103810	9.155	9.1566		\$14,992		\$14,992		\$14,992
	Manuel Robert George	CON 1 PT LOT 1	271104000103900	103900	0.105	0.1046		\$148		\$148		\$148
	Belanger Shayna Michlyn	CON 1 PT LOT 2	271104000104800	104800	0.580	0.5799		\$858		\$858		\$858
	Durant Dylan Tanner	CON 1 PT LOT 2 RP 59R4019 PART 1	271104000104900	104900	0.813	0.813		\$1,203		\$1,203		\$1,203
	Waldram Craig Thomas	CON 1 PT LOT 2	271104000105000	105000	0.714	0.7145		\$1,057		\$1,057		\$1,057
	Lampshire Melanie Dawn	CON 1 PT LOT 2 RP 59R12528 PART 1 641700135 UNREG	271104000105900	105900	0.602	0.6017		\$890		\$890		\$890
	Vanderende Lori Ann	CON 1 PT LOT 2	271104000106000	106000	0.216	0.2165		\$320		\$320		\$320
	Langlois Julie Marie	CON 1 PT LOT 2	271104000106100	106100	0.648	0.6483		\$959		\$959		\$959
	Brennan George	CON 1 PT LOT 2	271104000106101	106101	0.242	0.2421		\$358		\$358		\$358
	Phillips Ralph John	CON 1 PT LOT 2 RP 59R4043 PART 1	271104000106200	106200	1.706	1.7067		\$2,356		\$2,356		\$2,356
	Sergnese Brittany Lennie	CON 1 PT LOT 2	271104000106300	106300	0.431	0.4313		\$638		\$638		\$638
	Marois David Rosaire	CON 1 PT LOT 2	271104000106800	106800	0.162	0.1622		\$240		\$240		\$240
	Grenke Kevin Michael	HIMBERSTONE CON 1 PT LOT 2 RP 59R14932 PART 1	271104000106900	106900	0.974	0.9741		\$1,441		\$1,441		\$1,441
	Pooler Steven	CON 1 PT LOT 2	271104000107000	107000	0.721	0.7213		\$1,067		\$1,067		\$1,067
	Bonenfant Wendy	CON 1 PT LOT 2	271104000107100	107100	0.209	0.209		\$309		\$309		\$309
	Vander Veen John	CON 1 PT LOT 2	271104000107200	107200	0.240	0.2403		\$355		\$355		\$355
	Eberly Michael David	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 5	271104000107300	107300	15.497	15.5003		\$26,517		\$26,517		\$26,517
	Khan Dina	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 4	271104000107305	107305	2.443	2.444		\$3,294		\$3,294		\$3,294
F	Rickman Erin Heather	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 3	271104000107306	107306	2.446	2.4461		\$3,298		\$3,298		\$3,298
	Benvenuti Shane	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 2	271104000107307	107307	2.448	2.4482		\$3,306		\$3,306		\$3,306
	Eberly William Warren	HUMBERSTONE CON 1 PT LOT 2 AND RP 59R14998 PART 1	271104000107400	107400	2.148	2.1487		\$2,901		\$2,901		\$2,901
	Hartley-Rybka Kimberly	CON 1 PT LOT 2 RP 59R6260 PART 1	271104000107500	107500	0.817	0.8176		\$1,209		\$1,209		\$1,209
F	Berry Gordon Albert	CON 1 PT LOT 2	271104000107600	107600	8.624	8.6261		\$14,368		\$14,368		\$14,368
	Willwerth Donald R	CON 1 PT LOT 2	271104000107700	107700	2.641	2.6421		\$3,908		\$3,908		\$3,908
	Thomas Leslie Marilyn	CON 1 PT LOT 2 RP 59R10459 PARTS 1 & 2	271104000107735	107735	1.331	1.3315		\$1,969		\$1,969		\$1,969
F	Shaubel Sophia Ann	CON 1 PT LOT 2 ROW & ESMT	271104000107800	107800	6.668	6.6695		\$11,509		\$11,509		\$11,509
	Robins Jodee Lee	CON 1 PT LOT 2 RP 59R9210 PART 1	271104000107900	107900	0.746	0.746		\$1,084		\$1,084		\$1,084
	Koren Amir	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 1	271104000107901	107901	0.999	0.9997		\$1,402		\$1,402		\$1,402
F	Davies Norman Stewart	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 2	271104000107903	107903	1.524	1.5241		\$2,192		\$2,192		\$2,192
F	Vongphakdy Souphhone Chastity	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R5691 PT PART 1	271104000107930	107930	22.056	22.0607		\$37,847		\$37,847		\$37,847
	Lodomez-Miller Anne Marie	CON 1 PT LOT 1 RP 59R12984 PART 3	271104000107932	107932	2.235	2.2357		\$3,135		\$3,135		\$3,135
	Aquilina Daniel D	CON 1 PT LOT 1 PT LOT 2 RP 59R12984 PART 2	271104000107934	107934	0.667	0.6671		\$936		\$936		\$936
	Aquilina Daniel D	CON 1 PT LOT 1 RP 59R12984 PART 1	271104000107935	107935	0.667	0.6673		\$936		\$936		\$936
	Lee Stephen	HUMBERSTONE CON 1 PT LOT 2 RP 59R15397 PART 1	271104000107937	107937	1.000	1		\$1,438		\$1,438		\$1,438
	Engels Bryan	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R15397 PART 2	271104000107938	107938	1.000	1.0004		\$1,423		\$1,423		\$1,423
	Emonds Ashley	HUMBERSTONE CON 1 PT LOT 1 RP 59R16961 PART 1	271104000107940	107940	1.009	1.0087		\$1,415		\$1,415		\$1,415
	Ginther George Eagan	CON 1 PT LOT 2 RP59R5691 PART 2 PART 4 PT PCL PLAN 45 NP 804	271104000108000	108000	12.239	12.2418		\$15,088		\$15,088		\$15,088
	Andreacchi Giuseppe	CON 1 PT LOT 2	271104000108200	108200	0.072	0.0725		\$143		\$143		\$143
	Ross James J	CON 1 PT LOT 2	271104000108300	108300	0.145	0.1449		\$286		\$286		\$286
	Lungu Ana	CON 1 PT LOT 2	271104000108400	108400	0.209	0.209		\$412		\$412		\$412
	Andreacchi Franchina	HUMBERSTONE CON 1 PT LOT 2	271104000108500	108500	0.183	0.1829		\$361	\$5,638	\$5,999		\$5,999
	Parisi Giacomo	CON 1 PT LOT 2	271104000108600	108600	0.504	0.5036		\$869		\$869		\$869
	Andreacchi Salvatore	CON 1 PT LOT 2	271104000108900	108900	0.078	0.0784		\$155		\$155		\$155
	Elliott Jordan	CON 1 PT LOT 2	271104000109000	109000	0.405	0.405		\$699		\$699		\$699
	Elliott Jordan	CON 1 PT LOT 2	271104000109100	109100	0.363	0.3632		\$627		\$627		\$627
	Elliott Jordan	CON 1 PT LOT 2	271104000109200	109200	0.141	0.1415		\$244		\$244		\$244
	Ariganello Rosina	CON 1 PT LOT 2	271104000109300	109300	0.303	0.303		\$523		\$523		\$523



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	Andreacchi Vito	CON 1 PT LOT 2	271104000109400	109400	0.115	0.1155		\$142		\$142		\$142
	Tompkins Daniel	CON 1 PT LOT 2	271104000109500	109500	0.104	0.1043		\$129		\$129		\$129
	MacDougald Heather Alanna	CON 1 PT LOT 2 AND PLAN 806 LOTS 19 AND 28	271104000109600	109600	0.158	0.1583		\$273		\$273		\$273
	Obeid Nabhan	CON 1 PT LOT 2	271104000109700	109700	0.065	0.0652		\$113		\$113		\$113
	Bihl Dennis Charles	CON 1 PT LOT 2	271104000109800	109800	0.067	0.0669		\$66		\$66		\$66
	Morgado Joseph	PLAN 47 LOT 1 LOT 2 NP806	271104000109900	109900	0.092	0.0922		\$91		\$91		\$91
	Canal Daniel	PLAN 47 LOT 3 LOT 4 NP806	271104000110000	110000	0.093	0.0926		\$91		\$91		\$91
	Maunder Paul	PLAN 47 LOT 5 NP806	271104000110100	110100	0.046	0.0462		\$46		\$46		\$46
	Leffler Gretchen	PLAN 47 LOT 6 PT LOT 7 NP806	271104000110200	110200	0.051	0.0508		\$50		\$50		\$50
	Pasco Philip Albert	PLAN 47 PT LOT 7 NP806	271104000110300	110300	0.046	0.0461		\$45		\$45		\$45
	Pasco Philip Albert	PLAN 47 LOT 9 PT LOT 8 NP806	271104000110400	110400	0.092	0.0921		\$91		\$91		\$91
	Lim Jaime	PLAN 47 LOT 10 NP806	271104000110500	110500	0.047	0.0475		\$59		\$59		\$59
	Palmisano Mark M	PLAN 47 LOT 11 LOT 12 NP806	271104000110501	110501	0.097	0.0967		\$119		\$119		\$119
	Soto Belisario	CON 1 PT LOT 2, LOT 13 PLAN 47 NP 806	271104000110600	110600	0.101	0.1011		\$125		\$125		\$125
	Sacco Andrew	PLAN 47 LOT 14 LOT 15 NP806	271104000110700	110700	0.099	0.0991		\$122		\$122		\$122
	Arruda Victor	PLAN 47 LOT 16 LOT 17 NP806	271104000110800	110800	0.078	0.0775		\$96		\$96		\$96
	Devans Russell	PLAN 47 LOT 18 NP806	271104000110900	110900	0.065	0.0655		\$81		\$81		\$81
	Muraco Frederick	PLAN 47 806 LOTS 20 21 26 AND 27 NP806	271104000111000	111000	0.186	0.1858		\$321		\$321		\$321
	Ariganello Aldo Peter	PLAN 47 LOT 22 TO LOT 25 NP806 CON 1 PT LOT 2	271104000111100	111100	0.352	0.3516		\$607		\$607		\$607
	Williamson Michael Patrick	PLAN 41 LOT 1 LOT 2 NP800 PLAN 47 PT LOT 8 NP806	271104000111200	111200	0.093	0.0928		\$92		\$92		\$92
	Elia Sandro	PLAN 41 LOT 3 PT LOT 4 NP800	271104000111300	111300	0.055	0.055		\$54		\$54		\$54
	Kennedy Kurt	PLAN 800 LOT 5 PT LOTS 4 AND 6	271104000111400	111400	0.055	0.0549		\$54		\$54		\$54
	Elia Sandro	PLAN 41 LOT 7 PT LOT 6 PT LOT 8 NP800	271104000111500	111500	0.055	0.0548		\$54		\$54		\$54
	Vecchi Vittorio	PLAN 41 PT LOT 8 PT LOT 9 NP800	271104000111600	111600	0.055	0.0548		\$54		\$54		\$54
	Pacheco John	PLAN 800 LOT 10 PT LOTS 9 AND 11	271104000111700	111700	0.055	0.0548		\$54		\$54		\$54
	Puntoriero Antonio	PLAN 800 LOT 12 PT LOT 11	271104000111800	111800	0.055	0.0555		\$55		\$55		\$55
	Hibbard David	PLAN 41 LOT 13 NP 800	271104000111900	111900	0.031	0.0307		\$30		\$30		\$30
	Zaparaniuk Judith Grace	PLAN 41 LOT 14 LOT 15 NP800	271104000112000	112000	0.062	0.0622		\$61		\$61		\$61
	Sanderson Linda	PLAN 41 LOT 16 PT LOT 17 NP800	271104000112100	112100	0.049	0.0488		\$48		\$48		\$48
	Webb Ronald Joseph	PLAN 41 LOT 18 PT LOT 17 NP800	271104000112200	112200	0.049	0.0488		\$48		\$48		\$48
	Cardwell Jason	PLAN 41 LOT 19 NP800	271104000112300	112300	0.048	0.0476		\$47		\$47		\$47
	Thuersam Lester	PLAN 41 LOT 20 LOT 21 NP800 PT BLK B	271104000112400	112400	0.070	0.0697		\$69		\$69		\$69
	Paradise Shores Holdings Inc	PLAN 41 BLK A BLK C PT BLK B NP800	271104000112500	112500	0.526	0.5263		\$1,816		\$1,816		\$1,816
	Paradise Shores Holdings Inc	PLAN 41 BLK A BLK C PT BLK B NP800	271104000112500	112500	0.152	0.1525		\$593		\$593		\$593
	Pacheco John	PLAN 800 PT BLK A	271104000112515	112515	0.002	0.0023		\$0		\$0		\$0
	Pleasant Beach Property Owners Corporation Ltd	CON 1 PT LOT 3 2000 NOV29 TAX CLASS REVIEW CT STANDS SEE DOCU FILE 1869	271104000112600	112600	0.367	0.3668		\$362		\$362		\$362
	Comazzolo Mary	CON 1 PT LOT 3	271104000112700	112700	0.030	0.0299		\$29		\$29		\$29
	De Sousa Mariette	CON 1 PT LOT 3 SIMON SKETCH LOT 2	271104000112800	112800	0.030	0.0298		\$29		\$29		\$29
	Eimiller Thomas Keith	CON 1 PT LOT 3 SIMON SKETCH	271104000112900	112900	0.030	0.0298		\$29		\$29		\$29
	Eimiller Sandra Ann	CON 1 PT LOT 3 (SIMON SKETCH LOT 4 - FOR REFERENCE ONLY)	271104000113000	113000	0.030	0.0298		\$29		\$29		\$29
	McLintock Ann	CON 1 PT LOT 3 SIMON SKETCH LOT 5 TO LOT 7	271104000113100	113100	0.090	0.0895		\$88		\$88		\$88
	Van Patten Shawn	CON 1 PT LOT 3 SIMON SKETCH LOT 8 PT LOT 9	271104000113400	113400	0.045	0.0446		\$44		\$44		\$44
	Sacco Anthony Thomas	HUMBERSTONE CON 1 PT LOT 3	271104000113600	113600	0.045	0.0447		\$44		\$44		\$44
	Paolini Richard John	CON 1 PT LOT 3 SIMON SKETCH LOT 11 LOT 12	271104000113700	113700	0.060	0.0596		\$59		\$59		\$59
	Armao Matilda Kathryn	CON 1 PT LOT 3 SIMON SKETCH LOT 13	271104000113800	113800	0.030	0.0298		\$29		\$29		\$29
	Gigliotti Anthony	CON 1 PT LOT 3 RP 59R2535 PART 1	271104000113900	113900	0.047	0.0469		\$46		\$46		\$46
	Lozovoi Gueorgui	CON 1 PT LOT 3 RP 59R2535 PART 2	271104000114000	114000	0.054	0.0543		\$54		\$54		\$54
	Hudi Martin	CON 1 PT LOT 3	271104000114200	114200	0.107	0.1068		\$105		\$105		\$105
	Allen Troy Edmund	CON 1 PT LOT 3	271104000114300	114300	0.090	0.0896		\$88		\$88		\$88
	Shomers John Peter	CON 1 PT LOT 3	271104000114400	114400	0.052	0.0523		\$52		\$52		\$52
	Labarber Louis P	CON 1 PT LOT 3	271104000114500	114500	0.057	0.0572		\$56		\$56		\$56
	Palumbo Vito	CON 1 PT LOT 3	271104000114600	114600	0.062	0.0622		\$61		\$61		\$61
	Catherine Ruby Josephine	CON 1 PT LOT 3	271104000114700	114700	0.067	0.0672		\$66		\$66		\$66
	Brown Judith Evelyn	CON 1 PT LOT 3	271104000114800	114800	0.058	0.0577		\$57		\$57		\$57



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	Browne Michael Robert	CON 1 PT LOT 3	271104000114900	114900	0.058	0.0577		\$57		\$57		\$57
	Hildreth Ronald James	CON 1 PT LOT 3	271104000115000	115000	0.038	0.0385		\$38		\$38		\$38
	1000609385 Ontario Inc	CON 1 PT LOT 3	271104000115100	115100	0.089	0.0894		\$88		\$88		\$88
	Saulnier Neil	PLAN 46 LOT 1 LOT 2 NP805 ROW OVER BLKS A & B	271104000115300	115300	0.093	0.0931		\$92		\$92		\$92
	Eimiller Thomas Wayne	PLAN 46 LOT 3 NP805	271104000115400	115400	0.047	0.0467		\$46		\$46		\$46
	Bull Joanna	PLAN 46 LOT 4 NP805	271104000115500	115500	0.047	0.0468		\$46		\$46		\$46
	Wojcik Daniel Stanley	PLAN 46 LOT 5 LOT 6 NP805	271104000115600	115600	0.094	0.0938		\$92		\$92		\$92
	Sacco Jo-Ann Mary	PLAN 46 LOT 7 NP805	271104000115700	115700	0.047	0.047		\$46		\$46		\$46
	Vizzari Sara	PLAN 46 LOT 8 NP805	271104000115800	115800	0.047	0.0473		\$47		\$47		\$47
	Clements Alton W	PLAN 805 BLKS A AND B	271104000115810	115810	0.461	0.461		\$1,705		\$1,705		\$1,705
	Vizzari Sara	PLAN 46 LOT 9 LOT 10 NP805	271104000115900	115900	0.079	0.0792		\$78		\$78		\$78
	Yots Jason	PLAN 46 PT LOT 13 LOT 11,12 NP805	271104000116000	116000	0.147	0.1467		\$145		\$145		\$145
	Solanes Fernando	PLAN 46 PT LOT 13 LOT 14,15 NP805	271104000116100	116100	0.119	0.119		\$117		\$117		\$117
	Vizzari Diego	PLAN 46 LOT 16 LOT 17 NP805	271104000116200	116200	0.078	0.078		\$77		\$77		\$77
	Clunie Thomas	PLAN 46 LOT 18 NP805	271104000116300	116300	0.046	0.0464		\$46		\$46		\$46
	Machado Rosa	PLAN 46 LOT 19 NP805	271104000116400	116400	0.046	0.0464		\$46		\$46		\$46
	Bull James Todd	PLAN 46 LOT 20 TO LOT 22 NP805	271104000116500	116500	0.139	0.1393		\$137		\$137		\$137
	Barone Sylvester Cosmo	PLAN 805 LOTS 23 TO 25	271104000116700	116700	0.139	0.1393		\$137		\$137		\$137
	Demunda Richard Anthony	CON 1 PT LOT 3	271104000116800	116800	0.056	0.0557		\$55		\$55		\$55
	Janik Edward Matthew In Trust	CON 1 PT LOT 3	271104000116900	116900	2.809	2.8101		\$2,771		\$2,771		\$2,771
	Potter Danny Mark	CON 1 PT LOT 3	271104000117000	117000	0.139	0.1393		\$275		\$275		\$275
	Janik Edward Matthew In Trust	CON 1 PT LOT 3	271104000117100	117100	0.139	0.1393		\$275		\$275		\$275
	Smith Gordon Franklin	CON 1 PT LOT 3	271104000117200	117200	0.223	0.2229		\$440		\$440		\$440
	Mitro Dominic	CON 1 PT LOT 3	271104000117300	117300	0.111	0.1115		\$220		\$220		\$220
	Senese Thomas Anthony	CON 1 PT LOT 3	271104000117500	117500	0.111	0.1115		\$220		\$220		\$220
	SSI Property GP INC	HUMBERSTONE CON 1 PT LOT 3 RP 59R16901 PART 1	271104000117600	117600	4.694	4.6952		\$10,417		\$10,417		\$10,417
	Sider Roger	CON 1 PT LOT 3	271104000117700	117700	0.747	0.7475		\$1,106		\$1,106		\$1,106
	Malandrino Paola	CON 1 PT LOT 3	271104000117701	117701	0.260	0.2602		\$385		\$385		\$385
	MacDonald Gordon Ross	CON 1 PT LOT 3	271104000117800	117800	0.314	0.3142		\$465		\$465		\$465
F	Pleasant Beach Sherkston Estates Inc	CON 1 PT LOT 3	271104000117900	117900	6.111	6.1121		\$9,041		\$9,041		\$9,041
	O'Shea Noreen	CON 1 PT LOT 3	271104000118200	118200	0.269	0.269		\$398		\$398		\$398
F	Ventresca Mary Yollanda	HUMBERSTONE CON 1 PT LOT 3 RP 59R16488 PART 2	271104000118300	118300	3.486	3.4871		\$5,158		\$5,158		\$5,158
	Lukasavitch Diane	HUMBERSTONE CON 1 PT LOT 3 RP 59R16488 PART 1	271104000118303	118303	1.214	1.2143		\$1,796		\$1,796		\$1,796
	Pavao Dennis	HUMBERSTONE CON 1 PT LOT 3 RP 59R15358 PART 2	271104000118400	118400	0.995	0.9953		\$1,472		\$1,472		\$1,472
	Winney James	HUMBERSTONE CON 1 PT LOT 3 RP 59R13237 PART 1 RP 59R15358 PART 1	271104000118450	118450	1.407	1.4076		\$2,082		\$2,082		\$2,082
	PC City Hall	CON 1 PT LOTS 3,4 PLAN 35 LOTS 1-108,LANES NP794 RP59R4679 PARTS 1,2,4,5	271104000118501	118501	0.738	0.7386		\$1,093		\$1,093		\$1,093
	Marr Gerald Murray	CON 1 PT LOT 3	271104000118502	118502	0.860	0.8604		\$1,273		\$1,273		\$1,273
	Franklin Adam	CON 1 PT LOT 3 RP 59R11998 PART 2	271104000118503	118503	0.661	0.6614		\$978		\$978		\$978
	Nan Kenneth Henry	CON 1 PT LOT 3 RP 59R11998 PART 1	271104000118504	118504	0.658	0.6577		\$973		\$973		\$973
	O'Quinn Christopher Leonard	PLAN 59M365 LOT 1	271104000118510	118510	0.798	0.7984		\$1,181		\$1,181		\$1,181
	Kelley Scott Andrew	PLAN 59M365 LOT 2	271104000118514	118514	0.930	0.9302		\$1,376		\$1,376		\$1,376
	Senra Shawn Cordeiro	PLAN 59M365 LOT 3	271104000118518	118518	0.861	0.8613		\$1,274		\$1,274		\$1,274
	Ward Lisa	PLAN 59M365 LOT 4	271104000118522	118522	0.847	0.8475		\$1,254		\$1,254		\$1,254
	Paladino Alfredo	PLAN 59M365 LOT 5	271104000118526	118526	0.805	0.8056		\$1,192		\$1,192		\$1,192
	Pruyn Joe	PLAN 59M365 LOT 6	271104000118530	118530	0.662	0.6623		\$980		\$980		\$980
F	Belperio Enrico	HUMBERSTONE CON 1 PT LOT 4 RP 59R15508 PART 1	271104000118600	118600	20.534	7.4077		\$12,783		\$12,783		\$12,783
	Shisler Stanley Bruce	CON 1 PT LOT 4	271104000118602	118602	0.414	0.0394		\$58		\$58		\$58
	Shisler Stanley Bruce	CON 1 PT LOT 4	271104000118603	118603	0.074	0.0441		\$65		\$65		\$65
	Hoover David Allan	CON 1 PT LOT 3	271104000118604	118604	1.138	1.1384		\$1,684		\$1,684		\$1,684
	Hoover David Allan	CON 1 PT LOT 3	271104000118800	118800	0.856	0.8564		\$1,267		\$1,267		\$1,267
	Kramer Ryan	CON 1 PT LOT 3	271104000118900	118900	0.794	0.7939		\$1,174		\$1,174		\$1,174
F	Marlatt Brandon	HUMBERSTONE CON 1 PT LOT 3	271104000119000	119000	15.573	15.5763		\$26,880		\$26,880		\$26,880
	Scrada Stephen	HUMBERSTONE CON 1 PT LOT 3 RP 59R17643 PART 1	271104000119002	119002	1.004	1.004		\$1,485		\$1,485		\$1,485
	Topa Anne Shirley	HUMBERSTONE CON 1 PT LOT 3 RP 59R15804 PART 2	271104000119100	119100	0.409	0.4096		\$606		\$606		\$606



Farm	Owner	Legal_Txt	ARN		Area	Area in Drain	Sect. 22	Section 23	Sect. 24	Total	Allowances	Net
			Roll No	ABBREV								
	Topa Travis	HUMBERSTONE CON 1 PT LOT 3 RP 59R15804 PART 1	271104000119102	119102	0.834	0.8345		\$1,234		\$1,234		\$1,234
	Young Samuel Bare	CON 1 PT LOT 3 RP 59R5195 PART 2	271104000119105	119105	1.409	1.4097		\$1,946		\$1,946		\$1,946
	O'Neal Aaron	CON 1 PT LOT 3 RP 59R5195 PART 3	271104000119200	119200	1.168	1.1683		\$1,728		\$1,728		\$1,728
	Rowland Jeffrey Alan	CON 1 PT LOT 3 RP 59R5195 PART 1	271104000119201	119201	0.854	0.8546		\$1,264		\$1,264		\$1,264
	Lostracco Douglas Edward	CON 1 PT LOT 3 RP 59R11965 PART 1	271104000119300	119300	0.473	0.4729		\$699		\$699		\$699
	Serniak Greg	CON 1 PT LOT 3 RP59R5431 PART 1	271104000119400	119400	0.529	0.5289		\$782		\$782		\$782
	Jaskolka Edward Joseph	CON 1 PT LOT 3 RP 59R5431 PART 2	271104000119401	119401	0.476	0.4757		\$704		\$704		\$704
	Johnson Robert Alexander	CON 1 PT LOT 3 RP 59R5431 PART 3	271104000119402	119402	0.422	0.4224		\$625		\$625		\$625
	Frost Paul William	CON 1 PT LOT 3 RP 59R5431 PART 4	271104000119403	119403	0.454	0.4538		\$671		\$671		\$671
	Vorstenbosch Cathy Marie	CON 1 PT LOT 3	271104000119800	119800	0.235	0.2348		\$347		\$347		\$347
	Woelke Helena	HUMBERSTONE CON 1 PT LOT 3 RP 59R14079 PART 1	271104000119900	119900	0.110	0.1096		\$162		\$162		\$162
	Buick Robert	HUMBERSTONE CON 1 PT LOT 3	271104000120000	120000	0.124	0.1242		\$184		\$184		\$184
	Kirkwood Graeme Scott	CON 1 PT LOT 3 PT LOT 4	271104000120100	120100	0.187	0.1868		\$276		\$276		\$276
F	Damude Raymond Harold Jr	CON 1 PT LOT 4	271104000120400	120400	4.206	1.6133		\$2,784		\$2,784		\$2,784
	Priebe James Arthur	CON 1 PT LOT 4 AND RP59R10512 PARTS 1 AND 5	271104000120700	120700	1.635	1.5865		\$2,190		\$2,190		\$2,190
	Dykstra David Gary	CON 1 PT LOT 3	271104000120800	120800	0.573	0.573		\$848		\$848		\$848
	Penny William John	CON 1 PT LOT 3	271104000120900	120900	0.889	0.8896		\$1,316		\$1,316		\$1,316
	Robison Darlene Raye	CON 1 PT LOT 3	271104000121000	121000	1.660	1.6604		\$2,292		\$2,292		\$2,292
	Kostuk William Roger	CON 1 PT LOT 3	271104000121100	121100	0.382	0.3823		\$565		\$565		\$565
	Desrochers Christina Maria	CON 1 PT LOT 3 RP 59R10512 PARTS 3 AND 8	271104000123496	123496	1.196	1.1965		\$1,652		\$1,652		\$1,652
	Gillis Nicole Jennifer	HUMBERSTONE CON 1 PT LOTS 3 AND 4 RP 59R10512 PARTS 4 7 AND 11	271104000123498	123498	2.046	2.0464		\$2,825		\$2,825		\$2,825
	Godla Jiri	CON 1 PT LOT 4 RP 59R10512 PARTS 2 6 AND 10	271104000123500	123500	2.609	2.6101		\$3,603		\$3,603		\$3,603
	Shisler Terry	CON 1 PT LOT 4 RP59R4654 PART 1	271104000123900	123900	2.554	0.0827		\$122		\$122		\$122
	SSI Property GP Inc	HUMBERSTONE CON 1 PT LOTS 3 TO 8 PT RD ALLOW PT BED LAKE ERIE RP 59R5042 PARTS 6 TO 12 PT PART 5 RP 59R4991 PART 1 RP 59R9347 PART 1 RP 59R16102 PART 1 RP 59R16103 PART 1	271104000124600	124600	82.769	39.772		\$88,242		\$88,242		\$88,242
	Canadian Niagara Power Inc	HUMBERSTONE CON 1 PT LOT 4 59R13714 PART 1	271104000124610	124610	0.208	0.2078		\$307		\$307		\$307
	PC City Hall	CON 1 PT LOTS 1-22	271104000499900	499900	0.992	0.248		\$550		\$550		\$550
Town of Fort Erie												
	SHORE OAKS INC	683 POINT ABINO ROAD SOUTH	270302001800100	800100	9.418	6.161		\$8,640		\$8,640	\$0	\$8,640
	VAN BOLDEREN ADOLPHUS L	725 POINT ABINO ROAD SOUTH	270302001800200	800200	1.232	1.1984		\$1,681		\$1,681	\$0	\$1,681
	RLC POINT ABINO INC	715 POINT ABINO ROAD SOUTH	270302001800250	800250	1.189	1.0806		\$1,515		\$1,515	\$0	\$1,515
	JOHNSON KAREN	739 POINT ABINO ROAD SOUTH	270302001800300	800300	1.187	1.1873		\$1,665		\$1,665	\$0	\$1,665
	PICTOR WILLIAM	745 POINT ABINO ROAD SOUTH	270302001800400	800400	0.894	0.8942		\$1,254		\$1,254	\$0	\$1,254
	POSSLER HEIDI CARMEN	753 POINT ABINO ROAD SOUTH	270302001800500	800500	0.920	0.9204		\$1,291		\$1,291	\$0	\$1,291
	DURRANT GRAHAM	761 POINT ABINO ROAD SOUTH	270302001800600	800600	1.297	1.2969		\$1,819		\$1,819	\$0	\$1,819
	WILSON BRIAN	781 POINT ABINO ROAD SOUTH	270302001800800	800800	1.859	1.8592		\$2,607		\$2,607	\$0	\$2,607
	MES REALTY COMPANY LLC	787 POINT ABINO ROAD SOUTH	270302001800900	800900	1.319	1.3196		\$1,851		\$1,851	\$0	\$1,851
	DICIENZO ALYSSA MARIE	801 POINT ABINO ROAD SOUTH	270302001801000	801000	1.981	2.3795		\$3,337		\$3,337	\$0	\$3,337
	DICIENZO ANTHONY	819 POINT ABINO ROAD SOUTH	270302001801100	801100	1.570	1.5702		\$2,202		\$2,202	\$0	\$2,202
	SCHMITT MAUREEN	829 POINT ABINO ROAD SOUTH	270302001801101	801101	1.294	1.2947		\$1,816		\$1,816	\$0	\$1,816
	GIBSON SHIRLEY	839 POINT ABINO ROAD SOUTH	270302001801200	801200	1.282	1.282		\$1,798		\$1,798	\$0	\$1,798
	IAFRATE MICHAEL	849 POINT ABINO ROAD SOUTH	270302001801300	801300	1.375	1.3007		\$1,824		\$1,824	\$0	\$1,824
	SEUBERT SCOTT BEAL	857 POINT ABINO ROAD SOUTH	270302001801400	801400	1.713	1.6088		\$2,256		\$2,256	\$0	\$2,256
	JOHNSON DAVID / MOSIER AMY	873 POINT ABINO ROAD SOUTH	270302001801401	801401	1.346	1.2632		\$1,772		\$1,772	\$0	\$1,772
	GREGORY K M / GREGORY M M	879 POINT ABINO ROAD SOUTH	270302001801500	801500	0.417	0.4169		\$585		\$585	\$0	\$585
	CRABTREE ROBERT	891 POINT ABINO ROAD SOUTH	270302001801600	801600	0.343	0.3433		\$481		\$481	\$0	\$481
	FERRONI RICHARD JOSEPH	897 POINT ABINO ROAD SOUTH	270302001801700	801700	0.211	0.2108		\$296		\$296	\$0	\$296
	LISI ANTHONY	903 POINT ABINO ROAD SOUTH	270302001801800	801800	0.284	0.2836		\$398		\$398	\$0	\$398
	FAIRFIELD BRENNAN DOROTHY D	913 POINT ABINO ROAD SOUTH	270302001801900	801900	0.382	0.3817		\$535		\$535	\$0	\$535
	SANDERS STEPHEN	921 POINT ABINO ROAD SOUTH	270302001802000	802000	0.445	0.4447		\$624		\$624	\$0	\$624
	MCCABE REGINA ANNE	931 POINT ABINO ROAD SOUTH	270302001802100	802100	0.410	0.41		\$575		\$575	\$0	\$575



Farm	Owner	Legal_Txt	ARN			Area in Drain				Total	Allowances	Net
			Roll No	ABBREV	Area		Sect. 22	Section 23	Sect. 24			
	GEPHARDT HELENE H	4874 ABINO HILLS ROAD	270302001802101	802101	0.566	0.566		\$794		\$794	\$0	\$794
	MATHEWSON CHRISTOPHER	949 POINT ABINO ROAD SOUTH	270302001802200	802200	0.067	0.0675		\$95	\$15,725	\$15,820	\$0	\$15,820
	BUFFALO YACHT CLUB	917 POINT ABINO ROAD SOUTH	270302001802500	802500	4.589	2.2632		\$2,116		\$2,116	\$0	\$2,116
	ABINO DUNES CORPORATION	0-9865 POINT ABINO ROAD SOUTH	270302001802950	802950	22.925	1.1273		\$1,054		\$1,054	\$0	\$1,054
		0 4961-1 ABINO HILLS ROAD	270302001811000	811000	0.613	0.2147		\$201		\$201	\$0	\$201
	MUNSCHAUER EDWIN A JR	4961 ABINO HILLS ROAD	270302001811000	811000	1.786	1.7868		\$1,671		\$1,671	\$0	\$1,671
	IAFRATE BRUNO	4971 ABINO HILLS ROAD	270302001811100	811100	0.807	0.4641		\$434		\$434	\$0	\$434
	FWGB CORP	4981 ABINO HILLS ROAD	270302001811200	811200	1.550	0.5618		\$525		\$525	\$0	\$525
	BUTSCH JOHN LORD O'BRIAN	4991 ABINO HILLS ROAD	270302001811400	811400	1.521	0.5207		\$487		\$487	\$0	\$487
	BUTSCH D / BUTSCH J	5003 ABINO HILLS ROAD	270302001811401	811401	2.047	0.6774		\$633		\$633	\$0	\$633
	BECHTEL LURA HESS	5047 ABINO HILLS ROAD	270302001811500	811500	2.901	1.2961		\$1,212		\$1,212	\$0	\$1,212
	BRANTHAM HOLDINGS INC	5077 ABINO HILLS ROAD	270302001811600	811600	2.208	1.4733		\$1,377		\$1,377	\$0	\$1,377
	LEON JULIE ANNE	0-9960 ABINO HILLS ROAD	270302001811700	811700	0.743	0.5017		\$469		\$469	\$0	\$469
	LEON JULIE ANNE	5109 ABINO HILLS ROAD	270302001811800	811800	1.248	0.8388		\$784		\$784	\$0	\$784
	BERGEVIN ANNE	5125 ABINO HILLS ROAD	270302001811900	811900	0.952	0.5344		\$500		\$500	\$0	\$500
	5141 ABINO HILLS RD INC	5141 ABINO HILLS ROAD	270302001812000	812000	0.754	0.438		\$410		\$410	\$0	\$410
	5141 ABINO HILLS RD INC	0-9964 ABINO HILLS ROAD	270302001812100	812100	0.753	0.5132		\$480		\$480	\$0	\$480
	LFPB INC	5161 ABINO HILLS ROAD	270302001812200	812200	1.147	0.8417		\$787		\$787	\$0	\$787
	FITZPATRICK MOLLY	5179 ABINO HILLS ROAD	270302001812400	812400	1.573	0.8706		\$814		\$814	\$0	\$814
	FERGUSON DOROTHYMAE TRUSTEE	5189 ABINO HILLS ROAD	270302001812500	812500	2.653	1.5082		\$1,410		\$1,410	\$0	\$1,410
	CLICK JAMES HARLAN	5223 ABINO HILLS ROAD	270302001812600	812600	2.977	1.4033		\$1,312		\$1,312	\$0	\$1,312
	816176 ONTARIO INC	5243 ABINO HILLS ROAD	270302001812700	812700	3.434	1.7357		\$1,623		\$1,623	\$0	\$1,623
	HUMASON ELIZABETH	5271 ABINO HILLS ROAD	270302001812800	812800	3.260	2.5109		\$2,348		\$2,348	\$0	\$2,348
	JARDINE TANYA	5321 ABINO HILLS ROAD	270302001812900	812900	2.749	2.3702		\$2,216		\$2,216	\$0	\$2,216
	PATTERSON WAYNE	5349 ABINO HILLS ROAD	270302001813000	813000	1.327	1.1401		\$1,066		\$1,066	\$0	\$1,066
	NORRIS BRADLEY WILLIAM	5379 ABINO HILLS ROAD	270302001813100	813100	1.145	0.9456		\$884		\$884	\$0	\$884
	LEON JOSEPH	5395 ABINO HILLS ROAD	270302001813200	813200	0.997	0.7996		\$748		\$748	\$0	\$748
	1000880232 ONTARIO INC	5459 ABINO HILLS ROAD	270302001813300	813300	0.927	0.6782		\$634		\$634	\$0	\$634
	PERE ABINEAU PARK	0-9976 POINT ABINO ROAD SOUTH	270302001813400	813400	19.776	19.78		\$23,117		\$23,117	\$0	\$23,117
		0 0-18321 POINT ABINO ROAD SOUTH	270302001813400	813400	7.998	7.9998		\$9,349	\$14,658	\$24,007	\$0	\$24,007
	EL-SAYED SHERIF FOUAD YACOUT	633 POINT ABINO ROAD SOUTH	270302001813500	813500	2.544	2.3204		\$3,254		\$3,254	\$0	\$3,254
	XU AMY	609 POINT ABINO ROAD SOUTH	270302001813600	813600	1.337	1.1127		\$1,560		\$1,560	\$0	\$1,560
	RITCH MONKELBAAN MARSHA	599 POINT ABINO ROAD SOUTH	270302001813700	813700	1.192	0.9496		\$1,332		\$1,332	\$0	\$1,332
	DIFABIO LEONARDO	557 POINT ABINO ROAD SOUTH	270302001813800	813800	1.248	0.9273		\$1,300		\$1,300	\$0	\$1,300
	TROJNAR RICHARD JOHN	551 POINT ABINO ROAD SOUTH	270302001813900	813900	1.263	0.9212		\$1,292		\$1,292	\$0	\$1,292
	SYKES CLARK MANSFIELD	537 POINT ABINO ROAD SOUTH	270302001814000	814000	1.242	0.9198		\$1,290		\$1,290	\$0	\$1,290
	MISETICH MILDRED	531 POINT ABINO ROAD SOUTH	270302001814100	814100	1.235	1.0331		\$1,449		\$1,449	\$0	\$1,449
	MORRIS LAURIE ANN	511 POINT ABINO ROAD SOUTH	270302001814200	814200	1.759	1.4425		\$2,023		\$2,023	\$0	\$2,023
	THOMSON FLORENCE MARIE	497 POINT ABINO ROAD SOUTH	270302001814300	814300	0.176	0.0652		\$91		\$91	\$0	\$91
	SPIECE COREY JOHN	491 POINT ABINO ROAD SOUTH	270302001814400	814400	3.900	3.6792		\$5,160		\$5,160	\$0	\$5,160
	WEAVER JOSEPH	463 POINT ABINO ROAD SOUTH	270302001814500	814500	0.081	0.0813		\$114		\$114	\$0	\$114
	KNIBLOE WAYNE	487 POINT ABINO ROAD SOUTH	270302001814600	814600	0.180	0.0397		\$56		\$56	\$0	\$56
	NIAGARA PENINSULA	0-9990 WILDWOOD AVENUE	270302001814800	814800	2.069	2.069		\$2,902		\$2,902	\$0	\$2,902
	DRULLARD DAVID W	0-9991 POINT ABINO ROAD SOUTH	270302001814900	814900	0.149	0.1476		\$207		\$207	\$0	\$207
	WILDWOOD PROPERTIES INC	0-9992 POINT ABINO ROAD SOUTH	270302001815000	815000	0.340	0.3384		\$475		\$475	\$0	\$475
	FLYNN GREGORY JAMES	421 POINT ABINO ROAD SOUTH	270302001815100	815100	0.135	0.1133		\$159		\$159	\$0	\$159
	WARD DANIEL F	413 POINT ABINO ROAD SOUTH	270302001815200	815200	0.274	0.2382		\$334		\$334	\$0	\$334
	ASIP HOLDINGS INC	393 POINT ABINO ROAD SOUTH	270302001815300	815300	1.160	1.1522		\$1,616		\$1,616	\$0	\$1,616
	1254345 ONTARIO INC	371 POINT ABINO ROAD SOUTH	270302001815400	815400	1.495	1.491		\$2,091		\$2,091	\$0	\$2,091
	357 POINT ABINO ROAD INC	357 POINT ABINO ROAD SOUTH	270302001815500	815500	0.187	0.1838		\$258		\$258	\$0	\$258
	STARCK COTTAGE LLC	349 POINT ABINO ROAD SOUTH	270302001815600	815600	0.110	0.1084		\$152		\$152	\$0	\$152
	PAGE DONALD STEWART	329 POINT ABINO ROAD SOUTH	270302001815800	815800	1.479	6.1417		\$8,613		\$8,613	\$0	\$8,613
	LAROCQUE WAYNE LAWRENCE	203 POINT ABINO ROAD SOUTH	270302001816600	816600	4.527	1.8697		\$3,059		\$3,059	\$0	\$3,059
	THE NATURE CONSERVANCY OF	155 POINT ABINO ROAD SOUTH	270302001816601	816601	12.157	5.3483		\$8,751		\$8,751	\$0	\$8,751
F	WOODS ELEANOR DEBELTGENS	31 POINT ABINO ROAD SOUTH	270302001816800	816800	10.977	9.3419		\$15,285		\$15,285	\$0	\$15,285
	HUGHES WILLIAM	0-10029 BAY WOODS	270302001818000	818000	0.143	0.1428		\$200		\$200	\$0	\$200



Farm	Owner	Legal_Txt	ARN			Area in Drain				Total	Allowances	Net
			Roll No	ABBREV	Area		Sect. 22	Section 23	Sect. 24			
	FORT ERIE TOWN	0-10030 BAY WOODS	270302001818100	818100	0.144	0.1436		\$201		\$201	\$0	\$201
	CULP RICHARD	0-10031 BAY WOODS	270302001818200	818200	0.145	0.1451		\$203		\$203	\$0	\$203
	LOU AMIN	0-10043 BAY WOODS	270302001819400	819400	0.130	0.1302		\$183		\$183	\$0	\$183
	LOU AMIN	0-10044 BAY WOODS	270302001819500	819500	0.130	0.1298		\$182		\$182	\$0	\$182
	FORT ERIE TOWN	0-10045 BAY WOODS	270302001819600	819600	0.130	0.1299		\$182		\$182	\$0	\$182
	WILDWOOD PROPERTIES INC	4882 WILDWOOD AVENUE	270302001820900	820900	0.123	0.1205		\$169		\$169	\$0	\$169
	ROYAL ROBERT JAMES	4894 WILDWOOD AVENUE	270302001821000	821000	0.123	0.1209		\$170		\$170	\$0	\$170
	WEINERT DIANNE LOGAN	0-10060 WILDWOOD AVENUE	270302001821100	821100	0.123	0.1206		\$169		\$169	\$0	\$169
	CYR RUSSELL NORMAN	0-10061 WILDWOOD AVENUE	270302001821200	821200	0.123	0.1203		\$169		\$169	\$0	\$169
	CYR RUSSELL NORMAN	4920 WILDWOOD AVENUE	270302001821300	821300	0.123	0.12		\$168		\$168	\$0	\$168
	CYR RUSSELL NORMAN	0-10063 WILDWOOD AVENUE	270302001821400	821400	0.123	0.1198		\$168		\$168	\$0	\$168
	WARREN WILLIAM DAVID	4958 ORIOLE LANE	270302001822100	822100	0.814	0.9513		\$1,334		\$1,334	\$0	\$1,334
	MCCORMICK JEAN CAROL	0-10070 ORIOLE LANE	270302001822500	822500	0.342	0.1979		\$278		\$278	\$0	\$278
	WRIGHT ALLAN	4959 ORIOLE LANE	270302001822600	822600	1.141	1.1415		\$1,601		\$1,601	\$0	\$1,601
	HAHN CHARLES J IN TRUST	0-10072 POINT ABINO ROAD SOUTH	270302001822700	822700	14.523	14.5257		\$16,976		\$16,976	\$0	\$16,976
	DIETERS KARIN	366 MATHEWS ROAD SOUTH	270302001822701	822701	18.909	18.9133		\$22,104		\$22,104	\$0	\$22,104
	BRETON TEUNIS ADRIANIS	340 MATHEWS ROAD SOUTH	270302001822702	822702	1.243	1.2432		\$1,744		\$1,744	\$0	\$1,744
	FIJAVZ BORIS	0-10075 POINT ABINO ROAD SOUTH	270302001822710	822710	5.287	5.2881		\$7,416		\$7,416	\$0	\$7,416
	HOWARD SALLY	391 POINT ABINO ROAD SOUTH	270302001822800	822800	5.981	5.9823		\$8,390		\$8,390	\$0	\$8,390
	RIITNER CHARLES	328 MATHEWS ROAD SOUTH	270302001822900	822900	0.994	0.9938		\$1,394		\$1,394	\$0	\$1,394
	5009865 ONTARIO LTD.	300 MATHEWS ROAD SOUTH	270302001822901	822901	0.658	0.6583		\$923		\$923	\$0	\$923
	CROWN LANDSCAPING LTD	0-10079 MATHEWS ROAD SOUTH	270302001823000	823000	6.915	6.9164		\$9,700		\$9,700	\$0	\$9,700
	GGP INVESTMENTS INC	0-10080 MATHEWS ROAD SOUTH	270302001823100	823100	3.876	3.8772		\$5,438		\$5,438	\$0	\$5,438
F	FAZZARI ALEXANDER / SEBASTIANO	200 MATHEWS ROAD SOUTH	270302001823101	823101	8.180	8.1819		\$13,387		\$13,387	\$0	\$13,387
	GARVIN RANDALL CHARLES	158 MATHEWS ROAD SOUTH	270302001823200	823200	2.354	2.3547		\$3,302		\$3,302	\$0	\$3,302
	ADAMS LAWRENCE KENNETH	150 MATHEWS ROAD SOUTH	270302001823300	823300	0.152	0.1525		\$214		\$214	\$0	\$214
	WAINMAN MARK WILLIAM	142 MATHEWS ROAD SOUTH	270302001823400	823400	0.271	0.2712		\$380		\$380	\$0	\$380
	BORKOVSKY BARBARA	32 MATHEWS ROAD SOUTH	270302001823500	823500	3.699	3.7		\$5,189		\$5,189	\$0	\$5,189
	FOX GORDON ALLEN STANLEY	5085 MICHENER ROAD	270302001823600	823600	0.405	0.4047		\$568		\$568	\$0	\$568
	DARBYSON DOUGLAS ALLEN	5045 MICHENER ROAD	270302001823601	823601	6.134	6.1355		\$10,039		\$10,039	\$0	\$10,039
	DARBYSON DOUGLAS ALLEN	5045 MICHENER ROAD	270302001823603	823603	0.099	0.0987		\$138		\$138	\$0	\$138
	LEWIS PAUL KENNEDY	5005 MICHENER ROAD	270302001823610	823610	6.190	6.1915		\$10,130		\$10,130	\$0	\$10,130
	PINO JAVIER	5115 MICHENER ROAD	270302001823700	823700	0.416	0.4162		\$584		\$584	\$0	\$584
	GREENBERG INTERNATIONAL INC	0-10090 MARCY LANE	270302001823800	823800	12.443	8.3694		\$7,825		\$7,825	\$0	\$7,825
	GREENBERG INTERNATIONAL INC	0-10091 MARCY LANE	270302001823900	823900	3.247	0.1673		\$156		\$156	\$0	\$156
	1992293 ONTARIO INC	478 MARCY LANE	270302001824100	824100	0.976	0.1171		\$109		\$109	\$0	\$109
	D B M E INC	0-10094 MARCEY LANE	270302001824200	824200	0.451	0.0469		\$44		\$44	\$0	\$44
	D B M E INC	0-10095 HOLLOWAY BAY ROAD SOUTH	270302001824300	824300	1.794	0.1403		\$131		\$131	\$0	\$131
	GREENBERG INTERNATIONAL INC	476 MARCY LANE	270302001824400	824400	2.599	2.39		\$2,235		\$2,235	\$0	\$2,235
	D B M E INC	0-10097 MARCY LANE	270302001824500	824500	0.543	0.5432		\$508		\$508	\$0	\$508
	0	0-19827 MARCY LANE	270302001824600	824600	0.462	0.4617		\$432		\$432	\$0	\$432
	D B M E INC	466 MARCY LANE	270302001824700	824700	2.291	2.2238		\$2,079		\$2,079	\$0	\$2,079
	D B M E INC	400 HOLLOWAY BAY ROAD SOUTH	270302001824700	824700	7.554	7.5556		\$8,830		\$8,830	\$0	\$8,830
	PATTERSON WAYNE	0-10100 ABINO HILLS ROAD	270302001824800	824800	5.422	5.4232		\$5,070		\$5,070	\$0	\$5,070
	FRETZ KIRK	411 MATHEWS ROAD NORTH	270302001824900	824900	13.720	13.7229		\$16,038		\$16,038	\$0	\$16,038
	MACNEIL LORNE CHRISTOPHER	339 MATHEWS ROAD SOUTH	270302001824905	824905	6.084	6.0854		\$8,534		\$8,534	\$0	\$8,534
F	GREENBERG INTERNATIONAL INC.	0-10103 MATHEWS ROAD SOUTH	270302001825000	825000	24.411	24.2198		\$28,305		\$28,305	\$0	\$28,305
	GREENBERG INTERNATIONAL INC.	0-10104 MATHEWS ROAD SOUTH	270302001825100	825100	3.771	3.7716		\$5,289		\$5,289	\$0	\$5,289
F	GIGONE JUSTIN GIANCARLO	291 MATHEWS ROAD SOUTH	270302001825200	825200	3.409	3.4099		\$4,782		\$4,782	\$0	\$4,782
	GREENBERG INTERNATIONAL INC	0-10106 MATHEWS ROAD SOUTH	270302001825300	825300	15.982	15.9851		\$18,682		\$18,682	\$0	\$18,682
	CARVER ANDREW	5145 MICHENER ROAD	270302001825400	825400	10.422	10.4246		\$17,056		\$17,056	\$0	\$17,056
	ORCUTT WAYNE DARREN	5183 MICHENER ROAD	270302001825500	825500	0.335	0.335		\$470		\$470	\$0	\$470
	CHEN MEI FENG	5197 MICHENER ROAD	270302001825600	825600	1.012	1.0118		\$1,419		\$1,419	\$0	\$1,419
	SIDER BROS BUILDERS LTD	5199 MICHENER ROAD	270302001825650	825650	1.431	1.4315		\$2,008		\$2,008	\$0	\$2,008
	GREENBERG INTERNATIONAL INC	0-10111 MICHENER ROAD	270302001825700	825700	16.550	16.5539		\$27,085		\$27,085	\$0	\$27,085
	PIRSON WANDA	5263 MICHENER ROAD	270302001825800	825800	0.101	0.1014		\$142		\$142	\$0	\$142



Farm	Owner	Legal_Txt	ARN			Area in Drain				Total	Allowances	Net
			Roll No	ABBREV	Area		Sect. 22	Section 23	Sect. 24			
F	GREENBERG INTERNATIONAL INC	5353 MICHENER ROAD	270302001825900	825900	40.368	40.3768		\$66,063		\$66,063	\$0	\$66,063
	VANDERENDE MICHAEL PETER	5381 MICHENER ROAD	270302001826000	826000	0.818	0.8177		\$1,147		\$1,147	\$0	\$1,147
	525230 ONTARIO LTD TRUSTEE	0-10115 HOLLOWAY BAY ROAD SOUTH	270302001826100	826100	6.134	6.1352		\$8,604		\$8,604	\$0	\$8,604
	GREENBERG INTERNATIONAL INC	0-10116 HOLLOWAY BAY ROAD SOUTH	270302001826200	826200	1.140	1.1405		\$1,066		\$1,066	\$0	\$1,066
	BENNETT KLARA LEE	30 HOLLOWAY BAY ROAD SOUTH	270302001826300	826300	1.002	1.0291		\$1,443		\$1,443	\$0	\$1,443
	SEELEY COREY JAMES	4831 SHERKSTON ROAD	270302001827400	827400	0.480	0.0447		\$63		\$63	\$0	\$63
F	DAY JOHN MARTIN HARLOW	4924 SHERKSTON ROAD	270302001828100	828100	28.716	1.3082		\$2,140		\$2,140	\$0	\$2,140
	ASHBY BRIAN CHRISTOPHER	4869 SHERKSTON ROAD	270302001828300	828300	1.038	1.0384		\$1,456		\$1,456	\$0	\$1,456
	EBERLY ALFRED GERALD	4894 SHERKSTON ROAD	270302001828400	828400	0.562	0.2005		\$281		\$281	\$0	\$281
F	WINGER CLINTON ROSS	0-10146 SHERKSTON ROAD	270302001828500	828500	4.470	1.5825		\$2,589		\$2,589	\$0	\$2,589
	DE MEL JULIAN FREDRIK	4911 SHERKSTON ROAD	270302001828600	828600	1.579	1.5792		\$2,215		\$2,215	\$0	\$2,215
F	HOUSE ARNOLD GARY	4963 SHERKSTON ROAD	270302001828700	828700	4.343	4.3439		\$7,107		\$7,107	\$0	\$7,107
	CLARKE PAIGE CORA	5069 SHERKSTON ROAD	270302001828710	828710	14.327	14.3297		\$23,446		\$23,446	\$0	\$23,446
	SIMMONS BETTY DOROTHY	4998 SHERKSTON ROAD	270302001829000	829000	2.045	0.7957		\$1,116		\$1,116	\$0	\$1,116
F	SAHS-MEYER EVA-LYN	5187 SHERKSTON ROAD	270302001829200	829200	24.610	24.6149		\$40,274		\$40,274	\$0	\$40,274
F	O'HEARN PATRICK JAMES	5286 SHERKSTON ROAD	270302001829300	829300	4.199	0.7809		\$1,095		\$1,095	\$0	\$1,095
	DRURY STEVEN / DRURY DAYNA	5277 SHERKSTON ROAD	270302001829400	829400	0.401	0.4015		\$563		\$563	\$0	\$563
	ROWLAND SHAWN	5297 SHERKSTON ROAD	270302001829500	829500	11.885	11.8873		\$19,450		\$19,450	\$0	\$19,450
	GRANT STEVEN CRAIG	5321 SHERKSTON ROAD	270302001829700	829700	3.377	3.3779		\$5,527		\$5,527	\$0	\$5,527
	BRETHREN IN CHRIST CHURCH	5348 SHERKSTON ROAD	270302001829800	829800	1.992	0.9189		\$1,289		\$1,289	\$0	\$1,289
	WALL JACOB	5384 SHERKSTON ROAD	270302001829900	829900	0.564	0.1733		\$243		\$243	\$0	\$243
	SCHINKEL BRUCE VICTOR C	5398 SHERKSTON ROAD	270302001830000	830000	0.369	0.0884		\$124		\$124	\$0	\$124
	OSINGA MARK	5409 SHERKSTON ROAD	270302001830100	830100	2.247	2.2474		\$3,677		\$3,677	\$0	\$3,677
	SERADA MARK	5365 SHERKSTON ROAD	270302001830200	830200	7.587	7.5883		\$12,416		\$12,416	\$0	\$12,416
	VAN HOECKEL MAARTEN JOOST	184 HOLLOWAY BAY ROAD NORTH	270302001830300	830300	0.934	0.9346		\$1,311		\$1,311	\$0	\$1,311
	ZUCCHET MICHAEL FRANK	170 HOLLOWAY BAY ROAD NORTH	270302001830400	830400	0.158	0.1579		\$221		\$221	\$0	\$221
	BENNETT LAWRENCE WILLIAM	148 HOLLOWAY BAY ROAD NORTH	270302001830500	830500	0.644	0.6438		\$903		\$903	\$0	\$903
	CULP JENNIFER ELIZABETH	124 HOLLOWAY BAY ROAD NORTH	270302001830600	830600	0.295	0.2951		\$414		\$414	\$0	\$414
	MARACLE ELIZABETH GRACE	104 HOLLOWAY BAY ROAD NORTH	270302001830700	830700	0.138	0.1381		\$194		\$194	\$0	\$194
	1784413 ONTARIO LTD	78 HOLLOWAY BAY ROAD NORTH	270302001830800	830800	0.672	0.6723		\$943		\$943	\$0	\$943
	WARWICK DARBY ROYCE	5414 MICHENER ROAD	270302001830900	830900	0.510	0.5097		\$715		\$715	\$0	\$715
	HARDY DEREK DENIS	5404 MICHENER ROAD	270302001831000	831000	0.522	0.5223		\$732		\$732	\$0	\$732
	KUCY RODNEY ALLEN	5392 MICHENER ROAD	270302001831100	831100	0.371	0.3716		\$521		\$521	\$0	\$521
F	BERNARD JAMES DOUGLAS	5378 MICHENER ROAD	270302001831200	831200	9.829	9.8312		\$16,085		\$16,085	\$0	\$16,085
	HAGGERTY TIMOTHY ROGER	5354 MICHENER ROAD	270302001831201	831201	0.431	0.4311		\$605		\$605	\$0	\$605
	GUENTHER PETER	5274 MICHENER ROAD	270302001831300	831300	0.479	0.4793		\$672		\$672	\$0	\$672

\$1,135,383\$0\$1,135,383

Roads

City of Port Colborne	Municipal	OBJECTID	PA_Area	
Beach Rd From Watershed To Pleasant Beach Rd	City of Port Colborne	150498	1.1757	\$4,946.51
Firelane (No Name) From Firelane 22 To End	City of Port Colborne	149593	0.2387	\$446.35
Firelane 22 From Pleasant Beach Rd. To No Name	City of Port Colborne	149574	0.2786	\$911.67
Firelane 23 From Firelane 22 To End	City of Port Colborne	149573	0.1949	\$637.78
Firelane 28 27 From Pleasant Beach Rd. To Holloway Bay Rd South	City of Port Colborne	149692	0.6895	\$2,256.28
Michener Rd From Pleasant Beach Rd To Holloway Bay Rd South	City of Port Colborne	150592	0.8798	\$3,701.57
NW Beach and Pleasant Beach Rd From To	City of Port Colborne	150616	0.0112	\$47.12
Pleasant Beach Rd From Michener Rd To Sherkston Rd	City of Port Colborne	150545	2.5693	\$10,809.79
Pleasant Beach Rd From Watershed Bndy. To Michener Rd	City of Port Colborne	149550	2.1516	\$9,052.40
Sherkston Rd From Empire Rd To Pleasant Beach Rd	City of Port Colborne	150488	0.572	\$2,406.57
Sherkston Rd From Pleasant Beach Rd To Holloway Bay Rd N	City of Port Colborne	150563	0.5682	\$2,390.58
				\$37,607
Town of Fort Erie				
Abino Hills Rd From Blind Line To Point Abino Rd	Town of Fort Erie	1000002	1.4236	\$5,324.00
Abino Hills Rd From Blind Line To	Town of Fort Erie	152091	3.8542	\$14,413.98



Farm	Owner	Legal_Txt	Roll No	ARN		Area in Drain	Sect. 22	Section 23	Sect. 24	Total	Allowances	Net
				ABBREV	Area							
	Bay Woods From Point Abino Rd S To Blind Line ROW	Town of Fort Erie	1000000			0.1387		\$259.36				
	Blind Line From Abino Hills Rd To Michener Rd	Town of Fort Erie	1000001			5.7427		\$10,738.31				
	Marcy Lane From Holloway Bay Rd S To Part 1	Town of Fort Erie	1000006			0.4592		\$1,502.66				
	Holloway Bay Rd From Watershed Bndy. To Michener Rd	Town of Fort Erie	151906			3.0335		\$12,762.81				
	Holloway Bay Road North From Michener Rd To Sherkston Rd	Town of Fort Erie	151585			2.1285		\$8,955.21				
	Marcy Lane From To Part 2	Town of Fort Erie	152042			0.6317		\$2,067.13				
	Mathews Rd S From S Part 1 To	Town of Fort Erie	152189			0.6702		\$2,506.42				
	Mathews Rd S From S Part 2 To	Town of Fort Erie	152260			0.0746		\$278.99				
	Mathews Rd S From S Part 3 To	Town of Fort Erie	152253			0.1158		\$433.07				
	Mathews Rd S From S Part 4 To	Town of Fort Erie	152256			0.4322		\$1,616.35				
	Mathews Rd S From S Part 5 To	Town of Fort Erie	152190			0.2242		\$838.47				
	Mathews Rd S From S Part 6 To	Town of Fort Erie	151919			0.2369		\$885.96				
	Mathews Rd S From S Part 7 To	Town of Fort Erie	152258			0.4114		\$1,538.56				
	Mathews Road North From Michener Rd To Sherkston Rd	Town of Fort Erie	151651			0.9566		\$1,788.75				
	Michener Rd From Holloway Bay Rd South To Point Abino Rd	Town of Fort Erie	151781			3.6017		\$15,153.39				
	Oriole Lane From To	Town of Fort Erie	1000004			0.1647		\$538.95				
	Point Abino Rd From Michener Rd To Sherkston Rd	Town of Fort Erie	1000005			0.1835		\$772.04				
	Point Abino Rd From To	Town of Fort Erie	1000003			0.5731		\$2,411.20				
	Sherkston Rd From Mathews Rd. N To Point Abino Rd N	Town of Fort Erie	151726			1.1423		\$4,805.99				
	Sherkston Rd From Mathews Rd. N To Holloway Bay Rd North	Town of Fort Erie	151701			1.2335		\$5,189.69				
	Unopened Road Allowance Between Holloway Bay Rd. and Mathews Rd	Town of Fort Erie	151913			2.2918		\$4,285.45				
									\$99,067			
											\$136,673	

Section 26 - Special Assessments			
Utilities - Enbridge	Move existing Gas Line for construction of Point Abino Rd. Crossing.	\$17,226	\$17,226.00
Town of Fort Erie	PA-02 & PA-03 Demolition of existing concrete box culvert with construction of new concrete box culvert crossing Point Abino Rd. Move Watermain move or protect		
		\$1,035,131	\$1,035,131.40
		\$5,940	\$5,940.00
		\$0	\$0.00
		\$1,058,297	\$1,058,297.40
Point Abino Drain			
	Total Assessed:		\$2,330,353.77
Notes:			
1. The above lands marked "F" are currently classified as agricultural according to the OMAFRA and are therefore entitled to a 1/3 grant.			
2. Section 21 of the Drainage Act, RSO 1990 requires that assessments be shown for each parcel of land and road affected. The affected parcels of land are identified using the			
3. The value of the assessments identified in this schedule are estimates only, and should not be considered final.			



Table 5 Haggerty Branch Drain Assessment Summary

Haggerty Branch Drain

Farm As 'F'	Owner	Legal_Txt	Roll No	ARN ABBREV	Area Ha	Area in Drain Ha	Sect. 22	Section 23	Sect. 24	Total Assessed	Allowances	Net
Port Colborne												
	Customer_N	Legal_Desc	Roll_Numbe		Area_ha	Catch_Ha						
	D B M E Inc	CON 1 PT LOT 1 RP 59R8890 PT 2 D B M E INC 75% INT M RICHARDS 25% INT	271104000102800	102800	14.366	0.4678		\$138.89	\$8,228.44	\$8,367		\$8,367.33
	Scarlett John Frederick	CON 1 PT LOT 1 RP 59R5913 PARTS 2 TO 4	271104000102900	102900	1.508	0.6494		\$221.97		\$222		\$221.97
	Boles Diane Lynn	CON 1 PT LOT 1 RP 59R5913 PART 1	271104000102901	102901	0.470	0.4365		\$166.03		\$166		\$166.03
	Phibbs Stephanie Diane	CON 1 PT LOT 1	271104000103100	103100	4.141	4.1423		\$1,721.71		\$1,722		\$1,721.71
	Lander Blake	CON 1 PT LOT 1	271104000103200	103200	0.319	0.3190		\$113.66		\$114		\$113.66
	Nadeau Gerrard	CON 1 PT LOT 1	271104000103300	103300	0.809	0.8092		\$288.24		\$288		\$288.24
	Muileboom Ashley Arlene	CON 1 PT LOT 1	271104000103400	103400	0.809	0.8094		\$288.24		\$288		\$288.24
	Kennedy Nancy Jane	CON 1 PT LOT 1	271104000103500	103500	1.507	1.5070		\$536.93		\$537		\$536.93
	Pruyn Kirk	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PART 3	271104000103600	103600	5.400	5.4008		\$2,245.04		\$2,245		\$2,245.04
	Shaubel Brian	HUMBERSTONE CON 1 PT LOT 1 RP 59R14398 PARTS 1 AND 2	271104000103610	103610	2.596	2.5966		\$925.28		\$925		\$925.28
	Harriettha Thomas	HUMBERSTONE CON 1 PT LOT 1 RP 59R10180 PART 1	271104000103700	103700	0.405	0.4047		\$144.30		\$144		\$144.30
	2293020 Ontario Ltd	CON 1 PT LOT 1 RP 59R10180 PART 2	271104000103705	103705	0.669	0.6695		\$238.36		\$238		\$238.36
	Annett Matthew	CON 1 PT LOT 1 RP 59R10819 PARTS 1 & 2	271104000103800	103800	0.398	0.3985		\$142.16		\$142		\$142.16
	Cirone David	CON 1 PT LOT 1 RP 59R10180 PT PART 3	271104000103805	103805	0.475	0.4749		\$169.24		\$169		\$169.24
	Lehocki Teresa Mary	CON 1 PT LOT 1 59R-10180 PARTS 4 & 5	271104000103810	103810	9.155	9.0234		\$3,684.51		\$3,685		\$3,684.51
	Manuel Robert George	CON 1 PT LOT 1	271104000103900	103900	0.105	0.0918		\$32.78		\$33		\$32.78
	Eberly Michael David	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 5	271104000107300	107300	15.497	2.5843		\$1,046.66		\$1,047		\$1,046.66
	Khan Dina	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 4	271104000107305	107305	2.443	1.1164		\$356.48		\$356		\$356.48
F	Rickman Erin Heather	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 3	271104000107306	107306	2.446	1.1007		\$386.41		\$386		\$386.41
	Benvenuti Shane	HUMBERSTONE CON 1 PT LOT 2 RP 59R14998 PART 2	271104000107307	107307	2.448	1.0304		\$365.46		\$365		\$365.46
	Eberly William Warren	HUMBERSTONE CON 1 PT LOT 2 AND RP 59R14998 PART 1	271104000107400	107400	2.148	0.9102		\$297.62		\$298		\$297.62
F	Berry Gordon Albert	CON 1 PT LOT 2	271104000107600	107600	8.624	5.7849		\$2,136.55		\$2,137		\$2,136.55
	Robins Jodee Lee	CON 1 PT LOT 2 RP 59R9210 PART 1	271104000107900	107900	0.746	0.2518		\$89.79		\$90		\$89.79
	Koren Amir	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 1	271104000107901	107901	0.999	0.9997		\$352.37		\$352		\$352.37
F	Davies Norman Stewart	HUMBERSTONE CON 1 PT LOT 2 RP 59R16264 PART 2	271104000107903	107903	1.524	0.8187		\$255.10		\$255		\$255.10
F	Vongphakdy Soupahone Chastity	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R5691 PT PART 1	271104000107930	107930	22.056	2.4822		\$778.14		\$778		\$778.14
	Lodomez-Miller Anne Marie	CON 1 PT LOT 1 RP 59R12984 PART 3	271104000107932	107932	2.235	2.2357		\$796.66		\$797		\$796.66
	Aquilina Daniel D	CON 1 PT LOT 1 PT LOT 2 RP 59R12984 PART 2	271104000107934	107934	0.667	0.6671		\$237.65		\$238		\$237.65
	Aquilina Daniel D	CON 1 PT LOT 1 RP 59R12984 PART 1	271104000107935	107935	0.667	0.6673		\$237.65		\$238		\$237.65
	Lee Stephen	HUMBERSTONE CON 1 PT LOT 2 RP 59R15397 PART 1	271104000107937	107937	1.000	0.5307		\$208.79		\$209		\$208.79
	Engels Bryan	HUMBERSTONE CON 1 PT LOTS 1 AND 2 RP 59R15397 PART 2	271104000107938	107938	1.000	0.7449		\$265.79		\$266		\$265.79
	Emonds Ashley	HUMBERSTONE CON 1 PT LOT 1 RP 59R16961 PART 1	271104000107940	107940	1.009	1.0087		\$323.51		\$324		\$323.51

Town of Fort Erie

	OWNER1	LOCATION	ARN		Shape_Area	Catch_Ha						
F	GREENBERG INTERNATIONAL INC	5353 MICHENER ROAD	270302001825900	825900	40.368	19.4046		\$6,714.64		\$6,715	\$1,339	\$5,375.33
	VANDERENDE MICHAEL PETER	5381 MICHENER ROAD	270302001826000	826000	0.818	0.8177		\$340.02		\$340		\$340.02
	525230 ONTARIO LTD TRUSTEE	0-10115 HOLLOWAY BAY ROAD SOUTH	270302001826100	826100	6.134	3.5077		\$1,249.86		\$1,250		\$1,249.86
	BENNETT KLARA LEE	30 HOLLOWAY BAY ROAD SOUTH	270302001826300	826300	0.000	1.0291		\$416.50		\$417		\$416.50
F	SAHS-MEYER EVA-LYN	5187 SHERKSTON ROAD	270302001829200	829200	24.610	24.6149		\$8,775.06		\$8,775		\$8,775.06
F	O'HEARN PATRICK JAMES	5286 SHERKSTON ROAD	270302001829300	829300	4.199	0.7809		\$278.26		\$278		\$278.26
	DRURY STEVEN / DRURY DAYNA	5277 SHERKSTON ROAD	270302001829400	829400	0.401	0.4015		\$166.68		\$167		\$166.68
	ROWLAND SHAWN	5297 SHERKSTON ROAD	270302001829500	829500	11.885	11.8873		\$4,235.22		\$4,235		\$4,235.22







Table 6 East Branch Drain Assessment Summary

East Branch Drain

Farm As 'F'	Owner	Legal_Txt	Roll No	ARN ABBREV	Area Ha	Area in Drain Ha	Sect. 22	Section 23	Sect. 24	Total Assessed	Allowances	Net
Town of Fort Erie												
	OWNER1	LOCATION	ARN		PA_area							
	NIAGARA PENINSULA	0-9990 WILDWOOD AVENUE	270302001814800	814800	20.693	0.6676		\$658		\$658		\$658.40
	DRULLARD DAVID W	0-9991 POINT ABINO ROAD SOUTH	270302001814900	814900	1.492	0.1476		\$146		\$146		\$145.57
	WILDWOOD PROPERTIES INC	0-9992 POINT ABINO ROAD SOUTH	270302001815000	815000	3.401	0.3384		\$334		\$334		\$333.74
	FLYNN GREGORY JAMES	421 POINT ABINO ROAD SOUTH	270302001815100	815100	1.353	0.1133		\$112		\$112		\$111.74
	WARD DANIEL F	413 POINT ABINO ROAD SOUTH	270302001815200	815200	2.741	0.2382		\$235		\$235		\$234.92
	ASIP HOLDINGS INC	393 POINT ABINO ROAD SOUTH	270302001815300	815300	11.596	1.1522	\$589	\$1,136		\$1,725		\$1,724.82
	1254345 ONTARIO INC	371 POINT ABINO ROAD SOUTH	270302001815400	815400	14.954	1.491	\$153	\$1,470		\$1,623		\$1,623.45
	357 POINT ABINO ROAD INC	357 POINT ABINO ROAD SOUTH	270302001815500	815500	1.866	0.1838		\$181		\$181		\$181.27
	STARCK COTTAGE LLC	349 POINT ABINO ROAD SOUTH	270302001815600	815600	1.100	0.1084		\$107		\$107		\$106.91
	PAGE DONALD STEWART	329 POINT ABINO ROAD SOUTH	270302001815800	815800	14.795	5.9736		\$5,891		\$5,891		\$5,891.28
	WILDWOOD PROPERTIES INC	4882 WILDWOOD AVENUE	270302001820900	820900	1.226	0.1205		\$119		\$119		\$118.84
	ROYAL ROBERT JAMES	4894 WILDWOOD AVENUE	270302001821000	821000	1.226	0.1209		\$119		\$119		\$119.23
	WEINERT DIANNE LOGAN	0-10060 WILDWOOD AVENUE	270302001821100	821100	1.226	0.1206		\$119		\$119		\$118.94
	CYR RUSSELL NORMAN	0-10061 WILDWOOD AVENUE	270302001821200	821200	1.226	0.1203		\$119		\$119		\$118.64
	CYR RUSSELL NORMAN	4920 WILDWOOD AVENUE	270302001821300	821300	1.226	0.12		\$118		\$118		\$118.35
	CYR RUSSELL NORMAN	0-10063 WILDWOOD AVENUE	270302001821400	821400	1.226	0.1198		\$118		\$118		\$118.15
	FIJAVZ BORIS	0-10075 POINT ABINO ROAD SOUTH	270302001822710	822710	52.870	5.2879	\$1,430	\$5,215		\$6,645		\$6,645.03
												\$18,369

Roads

City of Port Colborne

No CofPC roads

Town of Fort Erie

Blind Line From To	Town of Fort Erie	1000001	0	0	0.2934	\$0	\$385.81		\$386	\$0	\$385.81
											\$386

Section 26 - Special Assessments		
Regional Municipality of Niagara	\$0	\$0.00
MINISTRY OF TRANSPORTATION ONTARIO	\$0	\$0.00
City of Port Colborne	\$0	\$0.00
Town of Fort Erie	\$0	\$0.00
Utilities - Enbridge	\$0	\$0.00
Utilities - other		
	\$0	\$0.00
<b>East Branch Drain</b>		
<b>Total Assessed:</b>		<b>\$18,755.08</b>
<b>Notes:</b>		
1. The above lands marked "F" are currently classified as agricultural according to the OMAFRA and are therefore entitled to a 1/3 grant.		
2. Section 21 of the Drainage Act, RSO 1990 requires that assessments be shown for each parcel of land and road affected. The affected parcels of land are identified using the roll number received from the City. For convenience only, the owners' names are shown by the last revised assessment roll.		
3. The value of the assessments identified in this schedule are estimates only, and should not be considered final.		



**The Corporation of the City of Port Colborne**

**By-law No. \_\_\_\_\_**

**Being a by-law to adopt, ratify and confirm the proceedings of the Council of  
The Corporation of the City of Port Colborne at its Meeting to Consider July 7,  
2025**

Whereas Section 5(1) of the *Municipal Act, 2001*, provides that the powers of a municipality shall be exercised by its council; and

Whereas Section 5(3) of the *Municipal Act, 2001*, provides that a municipal power, including a municipality's capacity rights, powers and privileges under section 9, shall be exercised by by-law unless the municipality is specifically authorized to do otherwise; and

Whereas it is deemed expedient that the proceedings of the Council of The Corporation of the City of Port Colborne be confirmed and adopted by by-law;

Now therefore the Council of The Corporation of the City of Port Colborne enacts as follows:

1. Every action of the Council of The Corporation of the City of Port Colborne taken at its Meeting to Consider of July 7, 2025, upon which a vote was taken and passed whether a resolution, recommendations, adoption by reference, or other means, is hereby enacted as a by-law of the City to take effect upon the passing hereof.
2. That where no individual by-law has been or is passed with respect to the taking of any action authorized in or with respect to the exercise of any powers by the Council, then this by-law is deemed for all purposes to be the by-law required for such authorization or exercise of any powers.
3. That the Mayor and Clerk are authorized to execute any documents required on behalf of the City and affix the corporate seal of the City and the Mayor and Clerk, and such other persons as the action directs, are authorized and directed to take the necessary steps to implement the action.
4. That the Clerk is authorized to affect any minor modifications, corrections, or omissions, solely of an administrative, numerical, grammatical, semantical, or descriptive nature to this by-law or its schedules after the passage of this by-law.

Enacted and passed this 7<sup>th</sup> day of July, 2025.

\_\_\_\_\_  
William C. Steele  
Mayor

\_\_\_\_\_  
Jessica Beaupre  
Deputy Clerk