



**City of Port Colborne
Regular Meeting of Council 28-20
Monday, October 26, 2020 – 6:30 p.m.
Council Chambers, 3rd Floor, 66 Charlotte Street**

Agenda

Notice: Council will meet through electronic participation in accordance with Bill 137, the Municipal Emergency Act in order to keep the health and safety of our community as a priority. If you wish to provide public comments regarding an item on the agenda please submit to deputyclerk@portcolborne.ca by noon on Monday, October 26, 2020.

Watch the Council Meeting streaming live on our [YouTube Channel](#).

- 1. Call to Order:** Mayor William C. Steele
- 2. Introduction of Addendum Items:**
- 3. Confirmation of Agenda:**
- 4. Disclosures of Interest:**
- 5. Adoption of Minutes:**
 - (a) Regular meeting of Council 27-20, held on October 13, 2020.
- 6. Determination of Items Requiring Separate Discussion:**
- 7. Approval of Items Not Requiring Separate Discussion:**
- 8. Delegations/Presentations:**
 - (a) Carol Nagy, Executive Director, Hospice Niagara Re: Community Funding Grant Request for Expansion of Hospice Residential and Community Services Across the Region (Page No. 8)
 - (b) Scott Luey, Chief Administrative Officer and Gary Long, Manager of Strategic Initiatives Re: Strategic Plan 2020-2025 (Page No. 14)
- 9. Councillors' Items:**
 - (a) Staff Responses to Previous Councillors' Enquiries
 - (b) Councillors' Issues/Enquiries
- 10. Consideration of Items Requiring Separate Discussion:**

11. Proclamations:

None.

12. Minutes of Boards, Commissions & Committees:

None.

13. Consideration of By-laws:

14. Council in Closed Session:

- (i) Motion to go into Closed Session

That Council do now proceed into closed session in order to address the following matter(s):

- (a) Minutes of the Closed Session portions of July 15, 2020, September 2, 2020 and September 17, 2020.
- (b) Department of the Chief Administrative Officer, Project Management Office, Presentation concerning the potential disposition of City owned land, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(c) a proposed or pending acquisition or disposition of land by the municipality or local board.

- (ii) Disclosures of Interest (closed session agenda):

- (iii) Consideration of Closed Session Items:

- (iv) Motion to Rise With Report:

15. Disclosures of Interest Arising From Closed Session:

16. Report/Motions Arising From Closed Session:

17. Adjournment:

Council Items:

Notes	Item	Description / Recommendation	Page
<p>WCS MB EB RB GB FD AD DK HW</p>	<p>1.</p>	<p><u>Engineering and Operations Department, Engineering Division, Report 2020-146, Subject: Michener Municipal Drain Meeting to Consider</u></p> <p>That the Mayor and Clerk be directed to execute a by-law to provisionally adopt the Michener Municipal Drain Engineer's Report, dated May 7, 2020, prepared by Paul Marsh, P. Eng. of EWA Engineering Inc., under Section 78, Chapter D.17 of the <i>Drainage Act R.S.O. 1990</i>;</p> <p>That staff be directed to advance the Michener Municipal Drain Engineer's Report to that of the Court of Revision, as per Section 46(1), Chapter D.17 of the <i>Drainage Act R.S.O. 1990</i>; and</p> <p>That Councillor _____, Councillor _____ and Councillor _____ be appointed as members of the Michener Municipal Drain Court of Revision and Councillor _____ be appointed as an alternate to be tentatively scheduled for December 9, 2020.</p>	<p>23</p>
<p>WCS MB EB RB GB FD AD DK HW</p>	<p>2.</p>	<p><u>Planning and Development Department, By-law Enforcement Division, Report No. 2020-106, Subject: Fence Variance – 128 McCain Street</u></p> <p>That Planning and Development Department, By-law Enforcement Division, Report 2020-106, Subject: Fence Variance – 128 McCain Street, be received for information; and</p> <p>That the fence variance request for 128 McCain Street not be approved, and that the property be brought into compliance with the Fence By-law.</p>	<p>121</p>
<p>WCS MB EB RB GB FD AD DK HW</p>	<p>3.</p>	<p><u>Engineering and Operations Department, Engineering Division, Report 2020-160, Subject: Project No.: 2020-02, Elm Street Bulk Water Station Replacement</u></p> <p>That the Council of the City of Port Colborne award Tender 2020-02 Bulk Water Station Installation to V. Gibbons Contracting LTD., of Stevensville, Ontario, for the total tendered price of \$117,990.00, plus applicable taxes;</p>	<p>127</p>

				<p>That a contingency allowance of 10% of the water station and installation costs, being \$21,000.00, be approved to be used by City staff if the necessity should occur;</p> <p>That staff be directed to prepare the by-law and the City Clerk and Mayor be authorized to execute the Contract Agreement; and</p> <p>That the funding for Tender 2020-02 Bulk Water Station installation, be financed from the Water Reserve.</p>	
WCS RB AD	MB GB DK	EB FD HW	4.	<p><u>Corporate Services Department, Information Technology Division, Report 2020-151, Subject: Microsoft Office 365 Cloud Migration</u></p> <p>That the CAO and Director of Corporate Services/Treasurer be directed to contract and execute the applicable documents with Quest Software Inc. in order to complete the project as outlined in Corporate Services Department, Information Technology Division, Report No. 2020-151, Subject: Microsoft Office 365 Cloud Migration.</p>	130
WCS RB AD	MB GB DK	EB FD HW	5.	<p><u>Corporate Services Department, Financial Services Division, Report 2020-156, Subject: Provincial COVID-19 Safe Restart Funding</u></p> <p>That Council direct staff to apply for Phase 2 funding under the Safe Restart Agreement – Municipal Operating Fund.</p>	132
WCS RB AD	MB GB DK	EB FD HW	6.	<p><u>Memorandum from Councillor Harry Wells Re: Designating the Vulnerable Aquifer Schedule B of Official Plan as a Source Water for Rural Residents of Port Colborne</u></p> <p>That Council recognizes the Aquifer as identified in Schedule B3 of the Official Plan as a source water for the rural residents of the City; and</p> <p>That the Director of Planning and Development be directed to amend the Official Plan to include the Aquifer such that the Aquifer receives the same consideration and protection from susceptible threats of contamination or adverse impact as the intake protection zones (IPZ-1 and IPZ-2); and</p> <p>That the Region of Niagara, Township of Wainfleet, and Town of Fort Erie be notified of the City’s action and be requested to pursue similar updates to their municipal planning documents in order to protect the aquifer.</p>	134

Miscellaneous Correspondence						
WCS	MB	EB	7.	<p><u>Niagara Region Re: Solid Waste Management By-law Update</u></p> <p>That the correspondence received from Niagara Region Re: Solid Waste Management By-law Update, be received for information.</p> <p>Note: The appendices to Report 34-2020 can be found the Region's website at the following link: https://pub-niagararegion.escrimemeetings.com/Meeting.aspx?Id=d2aea795-6988-48f3-ba1d-eed3aa762117&Agenda=Agenda&lang=English</p>	136	
RB	GB	FD				
AD	DK	HW				
WCS	MB	EB	8.	<p><u>Niagara Region Musicians Associations Re: The Establishment of a Sub Class of Property Taxes for Venues that Engage Live Entertainment – Economic Challenges brought on by COVID</u></p> <p>That the correspondence received from Steve Kostyk, President, NRMA, regarding the Establishment of a Sub Class of Property Taxes for Venues that Engage Live Entertainment – Economic Challenges brought on by COVID, be received for information.</p>	203	
RB	GB	FD				
AD	DK	HW				
Outside Resolutions – Requests for Endorsement						
WCS	MB	EB	9.	<p><u>City of St. Catharines Re: Development Approval Requirements for Landfills – (Bill 197)</u></p> <p>That the resolution received from the City of St. Catharines Re: Development Approval Requirements for Landfills, be received for information.</p>	213	
RB	GB	FD				
AD	DK	HW				
WCS	MB	EB	10.	<p><u>City of Thorold Re: Amendments to Bill 197 Being Amendments to the Environmental Assessment Act, relating to Landfill Sites</u></p> <p>That the resolution received from the City of Thorold Re: Amendments to the Environmental Assessment Act, relating to Landfill Sites, be received for information.</p>	215	
RB	GB	FD				
AD	DK	HW				

Responses to City of Port Colborne Resolutions					
WCS	MB	EB	11.	<p><u>Township of Enniskillen Re: Funding and Inspections for Long Term Care Homes due to COVID 19 and Endorsement of Bill 164</u></p> <p>That the resolution received from the Township of Enniskillen in support of the City of Port Colborne’s resolution Re: Funding and Inspections for Long Term Care Homes due to COVID 19 and Endorsement of Bill 164, be received for information.</p>	219
RB	GB	FD			
AD	DK	HW			
WCS	MB	EB	12.	<p><u>City of Vaughan Re: Funding and Inspection for Long Term Care Homes due to COVID 19 Pandemic</u></p> <p>That the correspondence received from the City of Vaughan Re: Funding and Inspection for Long Term Care Homes due to COVID 19 Pandemic, be received for information.</p>	220
RB	GB	FD			
AD	DK	HW			
WCS	MB	EB	13.	<p><u>City of Port Colborne’s Resolution Re: Request for Endorsement of Bill 164 Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019</u></p> <p>That the resolutions received from the Municipality of Brooke-Alvinston, Coleman Township, Municipality of Dutton Dunwich, Municipality of Huron East, Township of O’Connor, Town of Rainy River, City of St. Catharines, City of Vaughan, Township of Warwick and City of Welland regarding City of Port Colborne’s request for endorsement, be received for information.</p>	221
RB	GB	FD			
AD	DK	HW			

**Consideration of By-laws
(Council Agenda Item 11)**

By-law No.	Title
6827/77/20	Being a By-law to Provide for a Section 4 and Section 78 Engineer's Report for a Drainage Works in the City of Port Colborne in the Regional Municipality of Niagara Knows as the Michener Municipal Drain
6828/78/20	Being a By-law to Authorize Entering into a Contract Agreement with V. Gibbons Contracting Ltd. For Project 2020-02, Elm Street Bulk Water Station Replacement
6829/79/20	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 Regular Meeting of October 26, 2020

October 8, 2020

Mayor William C. Steele
Port Colborne City Hall
66 Charlotte Street
Port Colborne, ON
L3K 3C8

Request: Community Funding Grant Request for expansion of Hospice Residential and Community Services Across the Region

Dear Mayor Steele,

Please accept this letter as a formal request submitted by Hospice Niagara, a not-for profit organization that has served Niagara Region including Port Colborne for the past 27 years. The attached brief supplements this letter, requesting \$90,000 to be paid over a 3-year period, beginning in 2021 as Port Colborne's contribution toward two new Hospice Palliative Care facilities in Fort Erie and Welland.

All Municipalities in Niagara are being asked to support this capital project as one strong voice of support to the province, as we advocate for expansion of these critical hospice and in-home services in our region. The Towns of Fort Erie and Wainfleet, along with the cities of Welland, Pelham and Thorold are in the process of working with their respective Council to support the same per capita request, as part of the 2021 budget process.

I would be available to present at the Port Colborne City Council Monday, October 26, 2020, to provide further information and answer any questions, if you determine this request is within the financial ability of Port Colborne's budget.

Port Colborne's commitment will add strength to Niagara's unified voice as we advocate for a provincial grant of \$4 million to support this expansion and for compassionate care for everyone.

In closing, on behalf of Hospice Niagara Board of Directors, Staff and Volunteers, thank you you're your time in championing this request.

Sincerely,

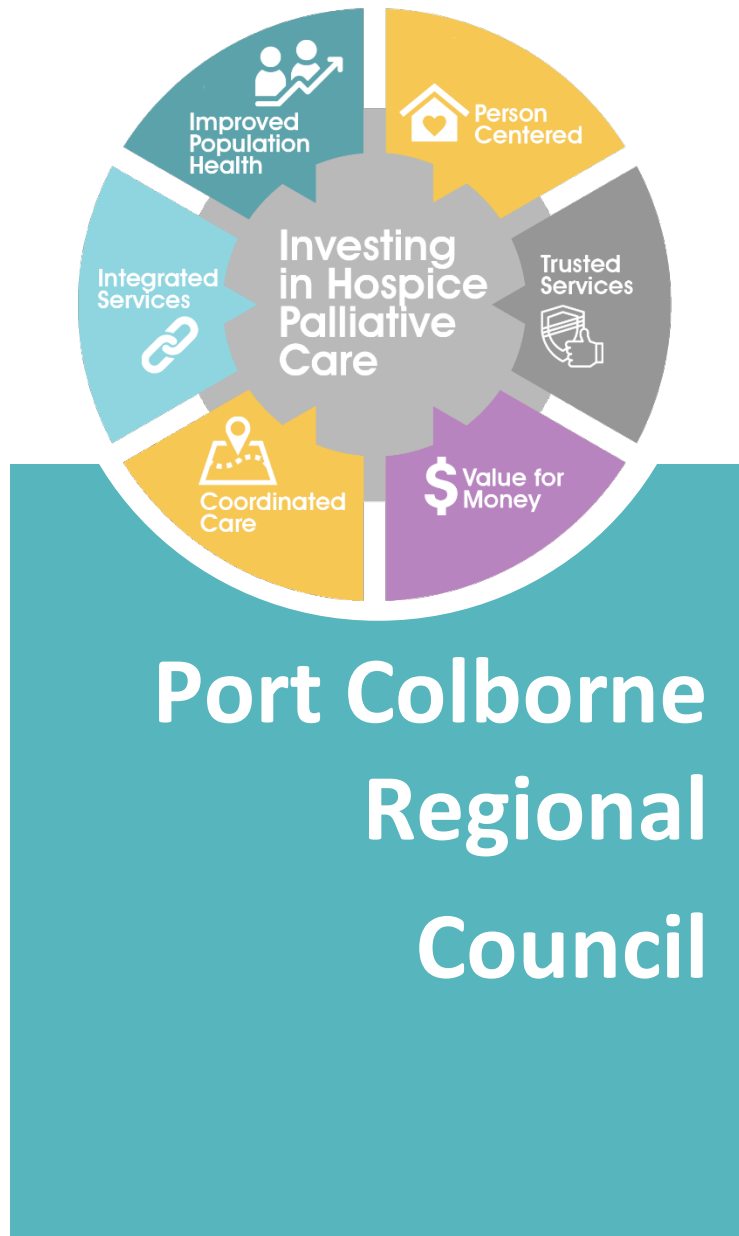


Carol Nagy,
Executive Director
Hospice Niagara
CC Amber LaPointe, City Clerk

The Stabler Centre 403 Ontario Street, Unit 2, St. Catharines, ON L2N 1L5 T: 905-984-8766 F: 905-984-8242	Welland Office 555 Prince Charles Drive, 2 nd Floor, Welland, ON L3C 6B5 T: 905-984-8766 F: 905-735-1703
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info@hospiceniagara.ca | hospiceniagara.ca | Charitable Registration # 899716294RR0001

We rely on your donations to provide our programs and services throughout Niagara.
Official income tax receipts are provided for donations of \$20 or more.



Port Colborne Regional Council

Date: October 26, 2020

Presented by: Carol Nagy

Executive Director, Hospice Niagara

The Problem:

Hospices and Community Palliative Care play an important role in ending hallway medicine.

Right now, too many people are spending their last hours, days, and weeks, in hospital beds or hallways, simply because there is not enough hospice bed capacity and community palliative care to support them at home.

Hospital end-of-life care is limited, with existing local services at risk of closing when hospital services transfer to Niagara Falls.

The need for hospice palliative care services in underserved communities, particularly in South Niagara, are increasing due to an aging population and the high burden of life-limiting progressive disease experienced by people.

Providing equitable, safe access to health services for everyone in Niagara is a compelling social obligation that includes developing accessible hospice palliative care programs across the Region.

Dying is not just a medical event. It is a physical, social, spiritual, psychological life event affecting the patient and their family members.

The number of people dying is about to spike

Hospice Palliative care plays an important role in ending hallway medicine.



In Niagara:

- 4th largest average of hallway bed conditions in Ontario
- 4th largest emergency department provider in Ontario with approximately 200,000 ED and UCC visits annually
- 20% of ALC beds are, at any given time, occupied by patients waiting for transfer out of hospital
- 2nd highest hospital cost in 1997: Acute Palliative Care at \$118M
- The hospice bed count in Niagara is 3 beds per 100,000 people, well below the Auditor General's recommended of 7-10 beds per 100,000
- Niagara Health's only four designated end-of-life beds are closing in 2026
- Niagara has a high percentage of seniors living with chronic illness. Predicted 72% increase in chronic condition prevalence rates by 2036. These projections point to increased pressure on Niagara's healthcare system.

Hospice Palliative Care:

Community-based hospice palliative care happens in people's homes and in hospice residences at a fraction of the cost of hospitals.

Hospital end-of-life care = \$1,100 per day

Hospice at Home is coordinated care by a team of trained staff and volunteers who provide practical help and support the success of home care for people living and dying with chronic illnesses. Bereavement support continues to help adults and children cope with their loss. Expand these services into the Fort Erie community will reach more people living at home and ensure they have choices regarding their end-of-life care.

Hospice at Home = \$100/day

Hospice Residences are for people who need more care than home can provide but do not require the high cost of hospital care, and for those who choose to die at hospice.

Hospice Care = \$465/day hospice care

What people say:

Clients and caregivers give very high ratings to the quality of care provided by Hospice Niagara

- 98%** ranked the care of their loved-one as excellent
- 94%** felt overall, all physical pain was addressed
- 100%** felt they received respect and dignity
- 100%** felt they were included in care planning and decisions
- 100%** feel volunteers and staff met their needs

In Niagara: Hospice at Home

Current State



Up to 1,800 people receive in home palliative care /yr
73% of these people die at home
\$7.2M savings in hospital acute care /yr

1,400 /yr palliative care specialist consultations to primary care

In Niagara: Hospice at Home

Current State



Up to 250 people die in hospice /yr
\$1.3M savings on hospital acute care

30% direct transfer from hospital to hospice \$500,000 savings in hospital acute care /yr

In Niagara, the pressure to fund new hospice beds builds has never been more real – and provided such an opportunity. The redevelopment of two Long-term Care Homes (LTC) in Niagara presents a unique opportunity to co-locate and integrate the full spectrum of hospice-based programs within these Homes making this important care a more affordable option.

- ✓ **By partnering with LTC, we will be able to provide more hospice care, for people living in South Niagara, in both English and French.**
- ✓ **Integration with LTC and with other health partner(s) provides a model for future builds in smaller communities.**
- ✓ **By building in South Niagara, we are maintaining existing end-of-life services at risk of closing.**
- ✓ **By co-designing our programs and services with Indigenous health and social care providers, we will better meet the wellness, cultural, spiritual needs and preferences and achieve better end-of-life outcomes for Indigenous people in Niagara. This will benefit everyone.**
- ✓ **The Ministry of Health has endorsed this plan moving forward with operational funding commitment. They have yet to endorse the \$4M capital grant outlined in Ministry policy.**

Increasing capacity in hospice palliative care throughout our region moves Niagara toward a truly modern, connected health care system that nurtures close partnerships between Long-term Care, community, hospitals, home and hospice, and ensures that every person receives the high quality of care they expect and deserve.

HOSPICE'S
proven record in
PARTNERSHIPS and
exceptional care will
provide vital health care
COST SAVINGS



This innovative solution will:



In Conclusion:

We all experience dying, death and bereavement. It touches each and every person multiple times. Supporting people to live well until last breath is a measure of our humanity and our society.



Together, we are in a unique position to develop a new economical expansion model for Hospice Palliative Care in Ontario that better addresses the needs within our community.

This forward-thinking solution that maintains globally recognized palliative standards of care, while leveraging strategic growth opportunities to create positive social impacts, will significantly reduce hospital costs and contribute to ending hallway medicine.

Hospice Palliative Care is the most cost effective way to ease health care costs in our congested hospitals. Helping families stay well through bereavement is compassionate and keeps our society functioning well.

City of Port Colborne

Strategic Plan 2020-2025

Framework for Discussion

Presentation to Council

October 26, 2020

Scott Luey
Chief Administrative Officer

Gary Long
Manager of Strategic Initiatives

Strategic Plan 2020-2025

Purpose of presentation:

- review the development of the City's Strategic Plan
- seek Council comments to move forward in completing the plan

Strategic Plan 2020-2025

Process to Date:

- Facilitated roundtable discussions with Council and staff were held in spring 2019
- Further discussions were held with staff in 2019 and early 2020
- Project/progress postponed due to COVID-19

Strategic Plan 2020-2025

Goal:

- finalize a strategic plan that will take effect December 2020
- have a guiding document to assist Council and staff in priority setting, resource allocation, and decision-making for the remainder of this Council term and into the next term
- provide strategic focus and ensure organizational alignment to deliver on Council priorities

Strategic Plan 2020-2025

Structure of the Strategic Plan

- mission and vision statement
- guiding principles
- strategic pillars
- action items to support each pillar
- implementation plan

Strategic Plan 2020-2025

6 Strategic Pillars

- Quality and Innovative Delivery of Public Services
- Strong Financial Management to Achieve Financial Sustainability
- City Building Infrastructure Investments
- Attracting Business Investment and Tourists to Port
- Supporting and Investing in Human Capital
- Building Trust and Confidence Through Good Governance

Strategic Plan 2020-2025

Key points/Comments

- strategic planning vs. operational planning
- a living document and an ongoing process
- many projects and initiatives underway
- line of sight
- quarterly progress reports to Council
- leadership/management oversight of plan

Strategic Plan 2020-2025

Next steps/timelines

- October 26th - review framework with Council
- 1st and 2nd week of November - finalize draft plan, review with Directors and broader management team
- Nov. 23rd or Dec. 14 - Council review/approval
- Late November or early December - implementation corporate wide, presentations by CAO and Manager of SI, corporate communications and news release to key contacts

Strategic Plan 2020-2025

Questions/Comments?



SUBJECT: Michener Municipal Drain Meeting to Consider

1. PURPOSE

This report, prepared by Alana Vander Veen, Drainage Superintendent, and authorized by Steve Shypowskyj, Acting Director of Engineering and Operations, is a follow-up to Council's direction to proceed to the "Meeting to Consider", regarding the final delivery of the Michener Municipal Drain Engineer's Report, prepared by EWA Engineering Inc. The purpose of this report is to provide Council with the requisite procedure pertaining to the October 26, 2020 Meeting to Consider and the subsequent Court of Revision.

2) HISTORY, BACKGROUND, COUNCIL POLICY, PRACTICES

Further to Engineering and Operations Department, Engineering Division Report No. 2020-73, which presented Council with a history, background and summary of events leading up to the delivery of the final version of the Engineer's Report, the following update is provided.

Following Council's decision, staff completed a mailing of the Engineer's Report and notification to all properties and/or entities in the watershed that would be affected by this drainage works, stating the date of filing of the Engineer's Report with the City Clerk; the name of the drainage works; and the date and time of the Council meeting at which the Engineer's Report would be considered. This mailing was completed pursuant to the requirements of Sections 41(1) & 41(2) of the *Drainage Act R.S.O. 1990* (the Act).

3) STAFF COMMENTS AND DISCUSSIONS

At this meeting, Council will be provided with a verbal presentation by the Engineer of record, Paul Marsh, P. Eng., of EWA Engineering Inc., outlining the intricacies of the Michener drainage works.

The property owners who were notified under Sections 41(1) & 41(2) of the Act have been provided an opportunity to submit any questions or concerns regarding the design or any gross errors in the Engineer's Report prior to the Council meeting. Should the Meeting to Consider reveal any errors in the Engineer's Report, 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 assessment are a function of the Court of Revision, which is legislated to occur within 60 days of the Meeting to Consider.

As per Section 97 of the Act with respect to the Court of Revision, three members are to be appointed by the Council of the City of Port Colborne. The three members appointed do not have to be standing members of the current Council; however, they must be eligible to run for Council within this municipality. A recommendation to that effect is contained in the recommendation section of this report.

4) OPTIONS AND FINANCIAL CONSIDERATIONS

a) Do nothing.

This is not an option as it is a mandate under the Act to ensure that Municipal Drain Reports are up to date for future maintenance.

b) Other Options

An up-to-date Engineer's Report allows for drain maintenance and roadside ditching programs, which allows staff to provide a reasonable level of service moving forward. All upfront administration and financing is borne by the City of Port Colborne. Once the report is adopted and the construction is completed, the financing or cost of the project will be expensed to the City of Port Colborne property owners, according to the assessment schedule contained in the report. There will be some assessment to the general levy for City-owned roads and properties within the watershed.

5) COMPLIANCE WITH STRATEGIC PLAN INITIATIVES

The Municipal Drain Maintenance Strategic Planning is currently in progress. This project complies with all City legislative requirements.

6) ATTACHMENTS

Appendix A - A copy of the Engineer's Report containing plan and profile of the Michener Municipal Drain

7) RECOMMENDATION

That the Mayor and Clerk be directed to execute a by-law to provisionally adopt the Michener Municipal Drain Engineer's Report, dated May 7, 2020, prepared by Paul Marsh, P. Eng. of EWA Engineering Inc., under Section 78, Chapter D.17 of the *Drainage Act R.S.O. 1990*;

That staff be directed to advance the Michener Municipal Drain Engineer's Report to that of the Court of Revision, as per Section 46(1), Chapter D.17 of the *Drainage Act R.S.O. 1990*; and

That Councillor _____, Councillor _____ and Councillor _____ be appointed as a members of the Michener Municipal Drain Court of Revision and Councillor _____ be appointed as an alternate to be tentatively scheduled for December 9, 2020.

8) SIGNATURES

Prepared on October 6, 2020

Reviewed by:



Alana Vander Veen
Drainage Superintendent



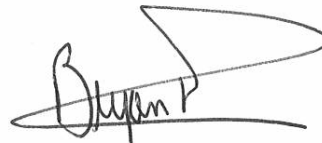
Steve Shypowskyj
Acting Director of Engineering &
Operations

Reviewed and respectfully submitted by:

Reviewed by:



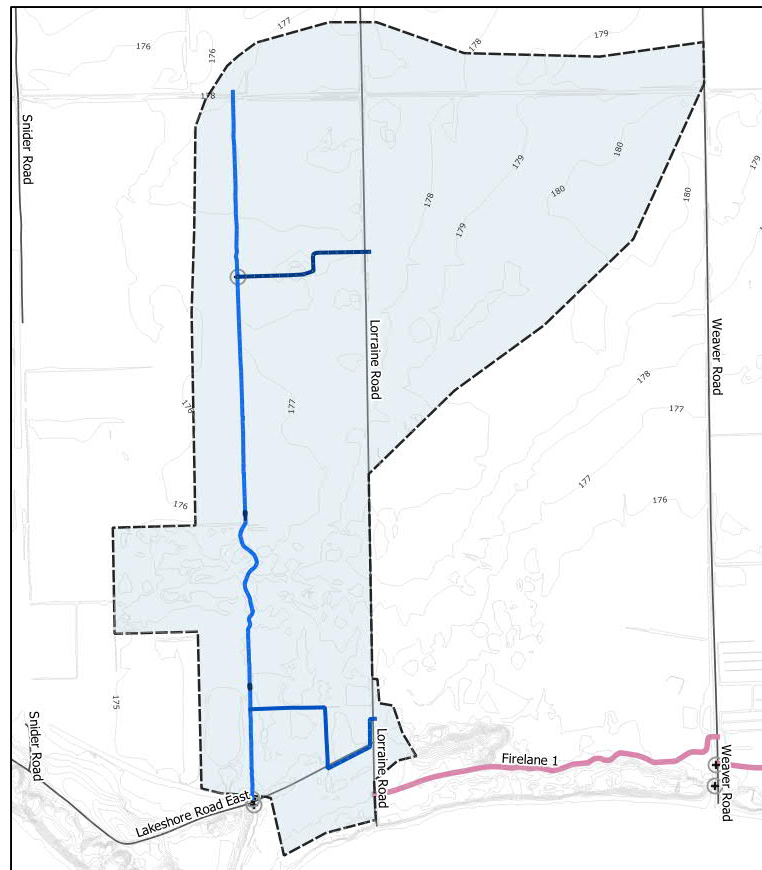
Scott Luey
Chief Administrative Officer



Bryan Boles
Director of Corporate Services / Treasurer



Michener Municipal Drain Report



May 7, 2020

Project No: EWB-189999

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EWA Engineering Inc.

84 Main Street, Unionville, Ontario
L3R 2E7
647.400.2824

www.ewaeng.com

May 7, 2020

Attention: Alana Vander Veen
Drainage Superintendent
City of Port Colborne
1 Killaly Street West
Port Colborne, Ontario
L3K 6H1
alanavanderveen@portcolborne.ca

Dear Ms. Vander Veen:

We are pleased to present our final report for the Michener Drain.

From the first point of opportunity to work with the City of Port Colborne, this assignment has been interesting and challenging. We prepared several options and analysis in consultation with yourself and local residents to identify a preferred solution that we expect will meet the projects's requirements.

This Drain has a significant history behind it and the previous work done by other Engineering companies created a unique challenge to compose a final report based on new analysis of opportunities for maintaining the drain and improving it.

Our report identifies design improvements that will increase the drain's function through maintenance activities, through maintenance of design grade and implementation of flow control structures at key points. The addition of two new Branch Drains from the City's Section 4 petitions have been achieved through design documents, assessment schedules and future maintenance provisions.

Thank you for relying on EWA Engineering for this assignment.

Yours truly,



Paul C. Marsh, P.Eng.

Principal Engineer
EWA Engineering Inc.

Revision and Version Tracking

Title: Michener Drain Report
Submission Date: May 7, 2020

Version #	Issued As:	Prepared by	QA/QC	Editor	Date:
103	Adjusted for Final	P.Marsh	AVA/CL	P.Marsh	May 6, 2020
102	Issued as Final	P.Marsh	AVA	P.Marsh	March 31, 2020
101	Revised as Final	P.Marsh			Jan. 31, 2020
100	Issued as Final	P.Marsh			October 9, 2019
97	97% Issued For Checking	P.Marsh			Oct. 2, 2019
95	95% Issued For Review	P.Marsh		P.Marsh	April 5, 2019
070	70% Issued For Review	P.Marsh		P.Marsh	
025	25% Outline IFR				Sept. 18, 2018

FileName: 189999_Michener_DrainReport_103

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 provided.

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1 Executive Summary

The Michener Municipal Drain is located in the Eastern portion of the City of Port Colborne. It has an outlet into the Wignell Drain, immediately north of Lakeshore Rd. East and the drain currently ends just north of the Friendship Trail.

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 Michener Drain.

The report includes a description of all work, and associated plans, cost estimates, and assessment schedules for the proposed work on the existing Michener Drain as well as for 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 4 and 78.

The proposed improvement work for the Michener Drain is prepared as a Section 78 (1.1) of the Drainage Act. The works are described as maintenance; including the rebuild of a sedimentation basin south of the golf course property.

The identification of the 2 existing channels as Branch Drains are being prepared under Section 4 of the Drainage Act.

This report has identified a series of drain improvements that include drain maintenance to ensure suitable channel design flows are achieved. The drain improvements have been developed through plan and profile drawings.

The following are summary descriptions of the planned improvements:

1. A specific program of work for channel improvement for the Michener Drain involving vegetation removal and re-grading to design grade line from 0+700 to 1+700. The existing grade line is being confirmed by grading work instead of being altered.
2. Spot Vegetation removal and basic maintenance at the outlet. Re-instatement of the identified sediment basin shown in the RVA drawings of Nov. 1996.
3. Inclusion of an original private drain as part of the Municipal Drain identified as Michener Branch Drain #2. This drain ensures the Lorraine Rd. Culvert CS-101 has a suitable outlet. Clearing and confirmation of grades are planned west of the existing pond. Upstream of the pond is minimum except spot clearing of fallen trees impacting the drain.
4. An original private drain previously crossing farmland is to be converted to Michener Branch Drain #1 that provided an outlet to roadway culverts on Lorraine Rd. and Lakeshore Rd. East. The proposed drain is to be open channel with a bottom tile for portions of the drain. The tile has a lower road crossing elevation with Lakeshore Rd. East culvert remaining for storm roadway runoff.

The following is a summary of the project financial values as prepared in the attached Assessment Schedule included in Appendix C.

Table 1 Michener Drain Costs

Items	Costs
Estimated Costs	\$ 93,860.80
Eligible Administration Costs	\$ 87,990.88
Calculated Allowances	\$ 17169.64
Total:	\$ 199,021.32

The Michener Drain is organized into three distinct catchment areas as follows:

- Branch Drain #1 serving 9.0Ha with a total open and closed conduit drain length of 505m.
- Branch Drain #2 serving 30.7Ha with an open channel drain 344m.
- Michener Drain serving 94.8Ha, (134.59Ha total catchment) with an open channel drain with several private crossings over 1728m in length.

Assessment Summary is as follows:

Benefit Assessment (Section 22)

Michener Branch Drain #1	\$3,673.00
Michener Branch Drain #2	\$4,845.00
Michener Drain	\$ 0.00
Total - Benefit Assessment (Section 22)	\$8,518.00

Outlet Liability Assessment (Section 23)

Michener Branch Drain #1	\$29,827.28
Michener Branch Drain #2	\$26,463.48
Michener Drain	\$119,512.13
Total - Outlet Liability Assessment (Section 23)	\$175,802.89

Special Benefit Assessment (Section 24)

Michener Branch Drain #1	\$0.00
Michener Branch Drain #2	\$0.00
Michener Drain	\$6,110.00
Total - Special Benefit Assessment (Section 24)	\$6,110.00

Special Assessments (Section 26)

Michener Branch Drain #1	
City of Port Colborne	\$6,590.43
Enbridge	\$2,000.00
Michener Branch Drain #2	\$ 0.00
Michener Drain	\$ 0.00
Total - Special Assessments (Section 26)	\$8,590.43

Total Assessment of Costs \$199,021.32

This report and the proposed improvements are based on instructions from the City of Port Colborne and in consultation with the local landowners. The cost of these improvements is shared across all areas that use the Drain by way of allowances and assessments consistent with the Drainage Act of Ontario.

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 Michener Drain.

In addition to the Michener Drain Report, there are other Drain Reports being prepared concurrently and they are:

- Wignell Drain, outlets to Lake Erie across Lakeshore East Rd. and proceeds northerly for 7.2km.
- Port Colborne Drain, outlets to the Wignell at 2+062 South of the Friendship Trail and proceeds northerly for 3.3km ending at or near the Second Concession Rd.

This report includes a description of all work, and associated plans, cost estimates, and assessment schedules for the proposed work on the existing Michener Drain as well as for 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 4 and 78.

The proposed improvement work for the Michener Drain is prepared as a Section 78 (1.1) of the Drainage Act. The works are described as maintenance; including the rebuild of a sedimentation basin south of the golf course property.

The identification of the 2 existing channels as Branch Drains is prepared as a Section 4 of the Drainage Act based on a petition for sufficient outlet by the Road Authority, which is the City of Port Colborne. The petition forms for Section 4 are available on request to the City of Port Colborne, Drainage Superintendent A. Vander Veen.

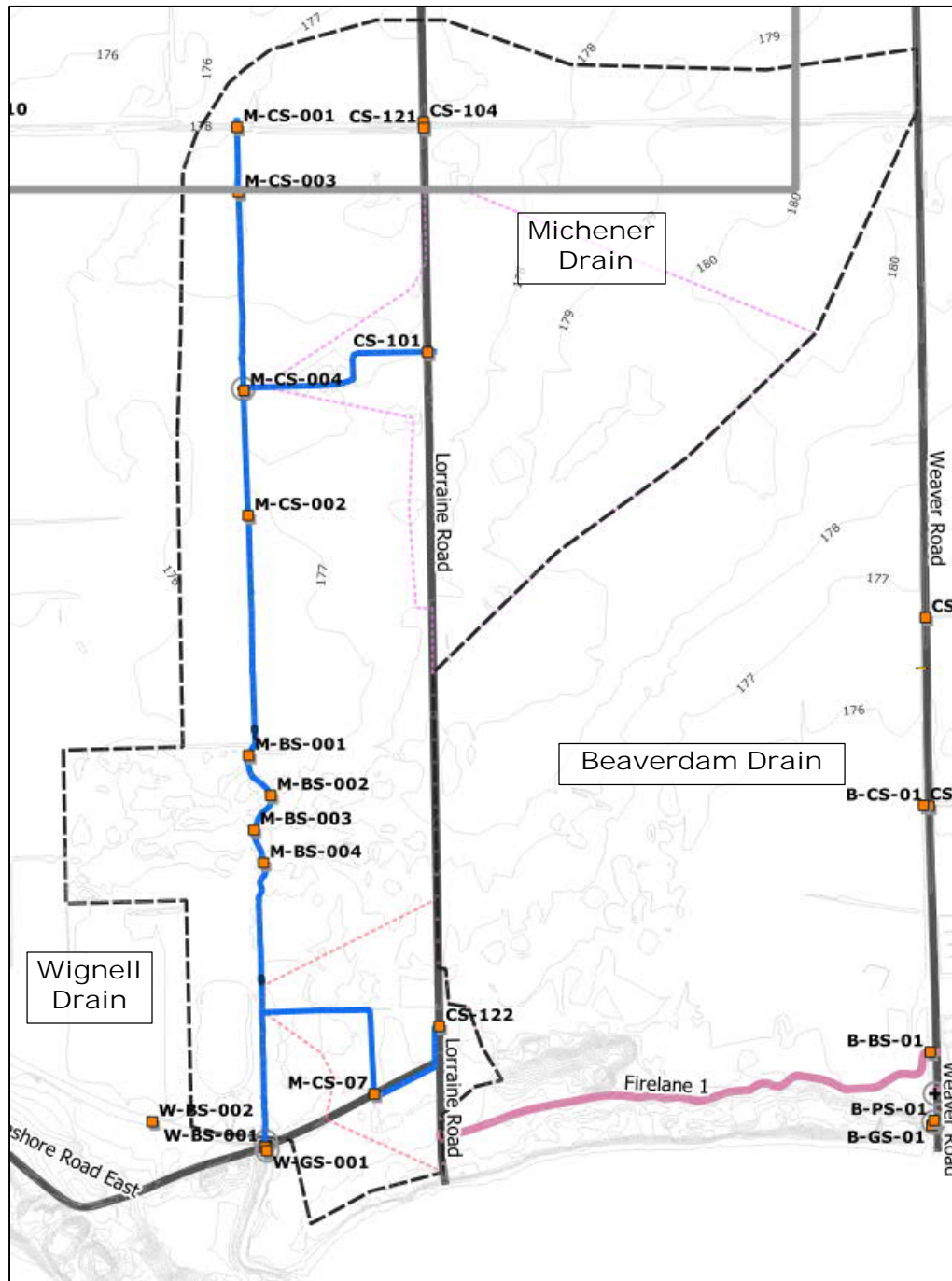


Figure 1 Municipal Drains - Michener Boundary

2.1 Objective

The Michener drain dates back as far as 1855 with the most current report dating back to July 28, 1978 which was adopted through Bylaw #773/89/78. The objective of this new report is to maintain the existing drain in a State of Good

Repair (SOG). The drain has been impacted by changes in land use practices that affect their function. The drain capacity is degraded through growth of vegetation within the banks of the drain.

There are specific new channels proposed to improve drain function.

2.2 Drain History and Past Reports

The Michener Drain Engineer's Report is prepared as follows:

- Baseline Drainage Report; provides an assessment of current drainage problems and identifies the extent of the drainage area to be serviced by the municipal drain. Baseline report includes a history of drainage and presents past design information such as grade lines.
- Wignell Watershed Assessment Report; provides an assessment of existing capacity through the use of hydrologic and hydraulic modelling which identifies the options for resolving problems and recommends a preferred option to improve drainage.

The final Engineer's Report is composed of the two previous reports along with supporting documentation and final drainage cost estimates and assessment schedules.

2.3 Michener Drain Watershed

The Michener Drain Watershed is composed of a single distinct municipal drain that outlets to the Wignell Drain just north of Lakeshore Rd. East. The Michener Drain is 1728m open channel with a predominate top width of 2.5m, with the lower portion dominated by golf course operations and the upper portion agriculture land uses. The Michener drain serves an area of 135 hectares based on the defined drain boundary, refer to Figure 1 Municipal Drains - Michener Boundary.

The watershed boundary is north of the Friendship Trail with a high point of 178m. The upper portion of the drain is a narrow fringe of drainage area north of the Friendship Trail extending eastwards to Weaver Rd. The Michener outlet is just north of Lakeshore Rd East at the Wignell drain and is influenced by the change in Lake Levels. The recorded average lake level is given as 174.15. The lake level fluctuates and for 2018 and 2019 had monthly averages as high as 174.7m, which is higher than average and influences the water surface profile through the Michener Drain.

- Watershed average fall (slope) is given as 0.22% or 2.2m per 1000m
- Drain average fall (slope) is given as 0.13% or 1.30m per 1000m

This slope characterises the Michener drain as low slope or slow watershed. The Michener drain can be segregated into a few distinct geographic areas.

- Outlet; this area starts at station 0+000 chainage marker and is the outlet to the Wignell drain. The outlet is influenced by the water surface elevation in the Wignell drain and is defined by significant vegetation growth for the drain's first 50m.
- From station 0+050 to 0+300 Drain reach to outlet. This portion of the drain lies below the golf course and is a ditch with defined banks that runs to the outlet. Bank full or top width is approximately 4m.
- From station 0+300 to 0+695 Golf course; this reach is heavily managed by the golf course. Includes, pumping to reverse flow to irrigation ponds, changed bridge to culvert, vegetation removal, etc.
- From station 0+695 to 1+728 main drain ends; largely agriculture on either side of the drain but with an identified regulated wetland to the West starting at 1+000 and the drain is vegetated with undergrowth between banks and either side. Above 1+400, the drain has agricultural fields on either side.

Portions of the drain have become overgrown, degrading the performance of the drain throughout the drainage area. Along with physical changes to the Drain needed for continued service have necessitated a new Engineer's report be prepared under Section 78 of the Drainage Act R.S.O. 1990 and that the City petition for new works on this drain under Section 4 of the Drainage Act R.S.O. 1990.

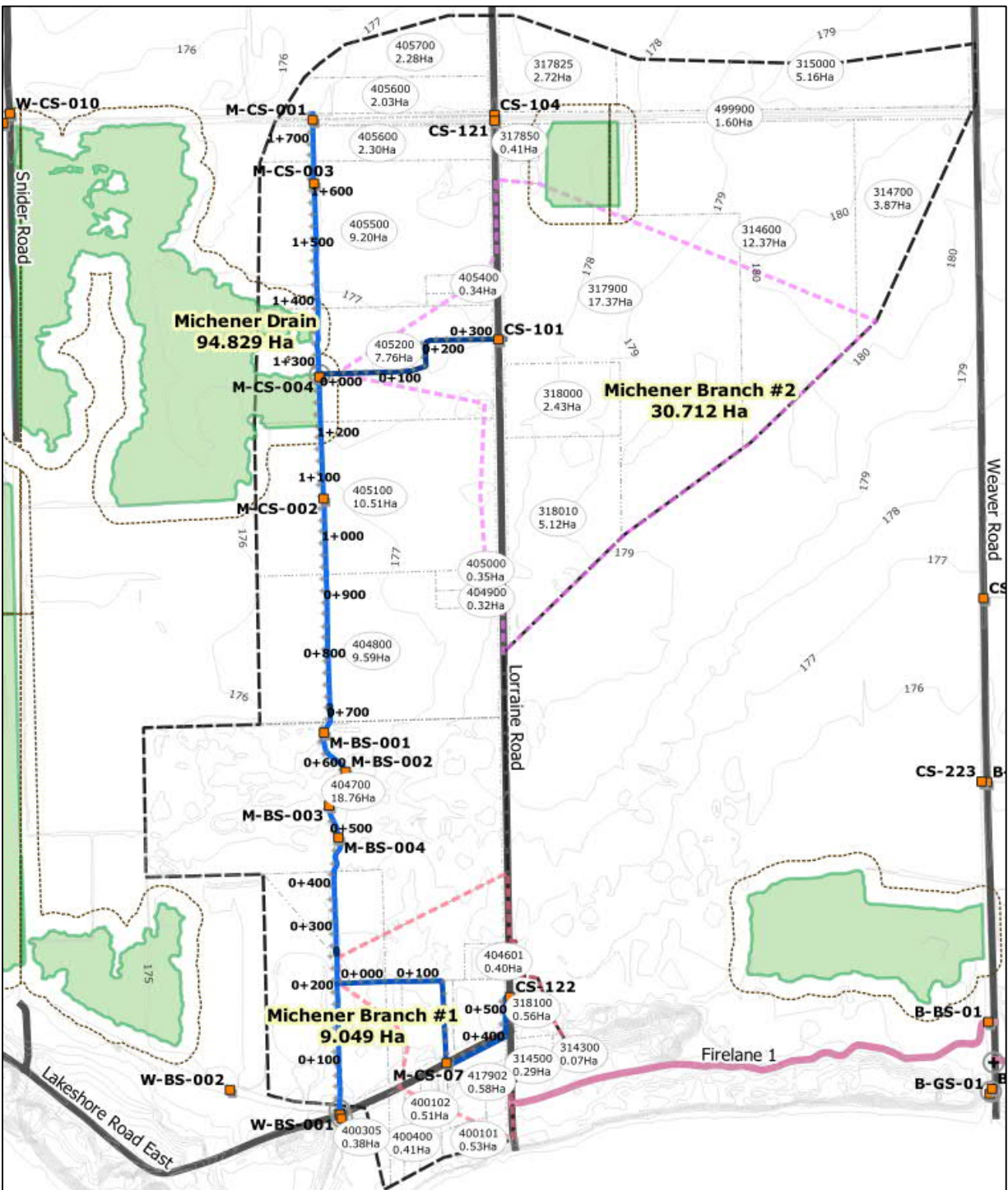


Figure 2 Michener Drain and Proposed Branches

A large format map is included in Appendix A that includes the Wetland boundaries and 30m buffer.

3 Design Considerations

The analysis of the Wignell Watershed is based on Hydrologic and Hydraulic analysis to predict runoff flow requirements and to match channel capacity. Water monitoring and gauge 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.

3.1 Watershed Characterization and Use

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

1. The upper portion of the drain land use is Agriculture with mainly row crops; soya, corn or cereal grains grown. The design service level for agricultural land is flooding with low velocities and drainage of ponding areas of 48 to 72 hours. Drainage is provided to improve working time and to avoid long term submergence leading to crop drowning.
2. Fringe or rural residential is the other major land use with estate lots with houses, buildings, wells and septic beds. Urban expectations of no ponding on residential lots in rural areas can not be met without extensive costs. Acceptable flooding without damage to property contents is the reasonable design service level similar to Agricultural service levels.
3. Whiskey Run Golf Course (WRGC) makes up a significant portion of the drainage area and the golf course operations affect the drain through irrigation and crossings. The WRGC has several permits to take water granted from the MOE that operate on the Wignell Drain but impact the Michener Drain. Past practice indicates the golf course conducted works on the Drain and may have impacted the identified sedimentation pond shown on the plans that were issued to introduce a sinusoidal pattern into the Drain, (Plan dated Nov. 15, 1996)
4. Michener Outlet. The primary design service level for the outlet is merely to have a positive slope to the Wignell Drain with clear and clean flow path to the outlet.

3.2 Former drain changes

The Michener Drain has been in use for a very long time. Over that time, changes have occurred and been abandoned. The description of these changes can be referenced in the Baseline Report.

4 Drain Works Recommendations

4.1 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 cumulative storm with a total rainfall amount of **68.90 mm** using a SCS Type II **24-hr** storm distribution.

The design storm is used to forecast a predicted runoff for identified catchments. Each channel section is designed to convey this runoff.

There are areas that owners have identified as wet and needing drainage. These problem areas are identified for service with underground based piping. Tile Polyethylene Pipe (PE Tile) is below an open channel, which will have conveyance for the design storms. The PE Tile does not meet these design storm criteria but provides post storm drainage in those problem areas. The design storm was based on the IDF curves for Port Colborne.

4.2 Description of the Works

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

4.2.1 Michener Drain Flow Improvement

The primary function of the proposed works for the Michener drain is maintenance of channel section and reduction of flow restrictions. This is for two key restoration efforts as follows:

Restoration works #1 is the removal of vegetation between top of bank to top of bank. This removal is targeted at tree and shrub growth that limits or could obstruct primary flow paths. Every effort to retain trees, not in the channel, and under story growth will be made to reduce environmental impacts of the maintenance work. A work zone is required for the channel improvements and this will be minimized but will remove trees and understory growth.

Restoration works #2 is to remove any deposition humps or deviations that are impeding flow. This does not include any changes to grades that were previously over excavated, past the calculated grade line, but does include channel bank

stabilization where slips or excessive erosion is evidenced during the restoration works #1. Channel restoration is done from one side with effort to reduce existing stable bank cover damage on the opposite side of the work zone.

Most of the proposed work for the Michener Drain is to re-establish the original drain capacity and function through the cutting of trees and vegetation that has grown up through the drain. The following figure illustrates a typical cross-section view of the work and work zone required to do the work.

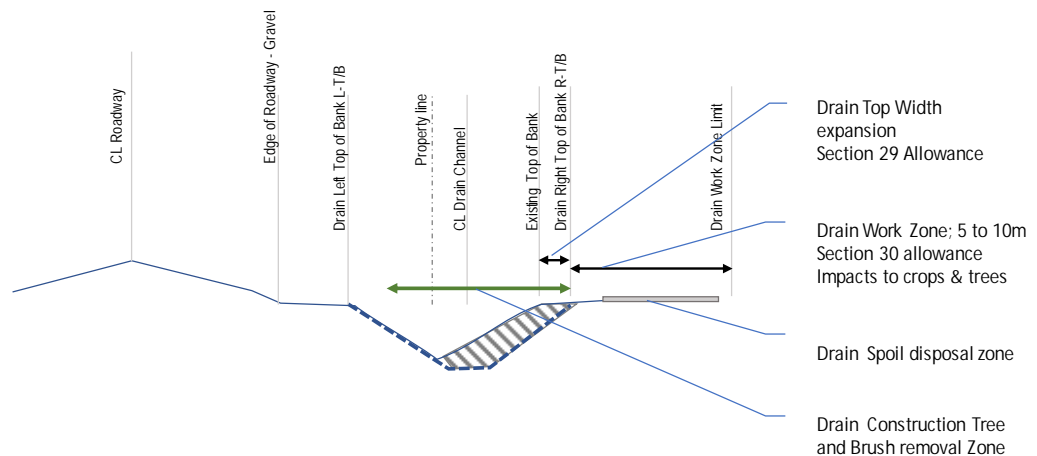


Figure 3 Typical Drain Work and Work Zones

With the main work program the original drain is cleaned down to the proposed grade line and a specific capacity is achieved through removal of soil to the design bottom width and one bank. It is beneficial to only disturb one bank and leave low vegetation in place. Trees through the drain top of bank (T/B) to top of bank (T/B) are removed leaving stump and roots in place if the removal negatively impacts the grade.

Living trees that are removed from the work zone are eligible for the canopy preservation program, replacement of 2 saplings for each removed tree with a DBH of 150mm or greater. Trees within the established banks, top of bank to top of bank, are not eligible unless for a new drain or a re-located drain.

4.2.2 Michener Branch Drains

There are two proposed branch drains identified on the design plans. Branch Drain #1 is an existing channel that flows water from East of Lorraine Rd. and South of Lakeshore Rd East that is clearly visible in the 1934 aerial photography of the area. This originally was an open channel that served an agricultural use, which has now converted to rural residential and golf lands.

Branch Drain #2 is an existing channel that provides outlet to lands East of Lorraine Rd. This channel has existed for a long time and is also visible in the

1934 aerial photo showing the existing pond midway between the outlet and Lorraine Rd. on a bend in the drain. Evergreen Trees outside the top of bank have been planted along the portion East of the pond and West of Lorraine Rd. The large mature trees are outside of the existing top of banks and will remain. One tree has toppled and the roots impact the channel definition, which is to be addressed by cleaning of this section of drain to re-establish the channel.

4.2.3 Municipal Crossings

The drain crossings, Private and Right of Way are shown in Figure 1. Lorraine Rd. presents a barrier to sheet overland flow and the road authority has established several road crossing culverts. These are not part of the drain as their flow is collected within the roadside or Right of Way and there after is conveyed to an outlet. There are three key municipal crossings.

- Lorraine Rd. Culvert CS-101 is an existing culvert currently outlets through a private drain, which the Road Authority has requested be made a Branch Drain (#2) to ensure a SOGR is achieved for the outlet.
- Lorraine Rd. Culvert CS-122 is an existing culvert that outlets flows from the East to Michener through an existing open channel. This is proposed as Michener Branch Drain #1
- Lakeshore Rd. East. Culvert M-CS-007 is an existing roadway culvert that has been the subject of conflict for drainage performance between north and south property owners. This culvert outlets to the open channel drain and is to be converted into a buried pipe to Michener Branch Drain #1.

The Friendship Trail, formerly CNR, is a significant barrier to overland flow and there is a major culvert crossing for flows to pass through the Trail into the Drain. The culvert crossing the Friendship Trail is identified as part of the Drain, while the channels to the North are considered part of the Friendship Trail ROW and not part of the drain.

4.2.4 Private Crossings

There are several private crossings identified on the Main Branch of the Drain as it bisects the agricultural lands. There are also four crossings identified through the golf course lands. The golf course crossings are predominately bridge decks with minimal piers and a replaced new CSP culvert that is undersized and to be replaced by double wall HDPE culvert sized for the design flow.

The farm immediately north of the Golf course has possessed a crossing that is identified as too narrow and fallen into disrepair. The farmer is or has established a fording located to the north property limits. This is to be replaced with a combination sediment basin and crossing located at the South limit of the farm north of the golf course.

4.2.5 Utility Conflicts & Coordination

Utility conflicts may exist with Gas lines and telecommunication lines as identified by the exchange of utility information. In particular, the placement of the proposed Ditch Inlets along Lorraine Rd. and Lakeshore Rd. East are to be field placed to minimize utility conflicts. Re-grading of the Roadside swales are to be positive to the Ditch Inlet.

4.2.6 Plans, Profiles & Specifications

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

Project Specifications are attached in Appendix B.

4.3 Construction and Constructability

The following describes the specific requirements for drain construction.

4.3.1 Vegetation Removal

Vegetation, specifically trees are to be cut down outside of any bird nesting periods. The remaining stumps are to remain in place unless they obstruct flow or they are Ash trees with re-growth from the lower trunk already established. In those cases, the stump will be ground down to match the existing channel section.

Tree removal within the Top of Bank to Top of Bank is to be 100 percent; however, tree removal within the work zone is at the discretion of the 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 as per the tree qualifying criteria.

Where a mature tree is already established and is an individual tree, it can remain on the work zone adjacent to the drain provided there is a working space to provide future maintenance to the drain.

Trees with a DBH greater than 150mm and alive, such trees will be replaced with 2 trees as saplings for future growth in lieu of a damage allowance for the existing tree that is removed. The tree that is removed will be provided to the owner as stacked branches adjacent to the drain and outside of the working zone along with the trunk. The owner shall be wholly responsible for the wood once cut.

New trees can be planted adjacent to a drain following two key criteria:

- The trees are planted back from the top of bank, (the exact distance is determined by tree type and local conditions).
- The trees are planted with adequate space to provide future maintenance access for the drain. Grouping of planted trees is encouraged given that the spacing of the trees and the arrangement permits future maintenance. This is accomplished by providing an angled approach along the tree edge line to the drain and increasing the tree plant density only as the distance from the drain increases.
- Individual hardwood trees may be allowed every 25m. Trees of any type shall not be planted within 6m of an existing drain (solid tile, wrap joints) or 4.5m from existing open drain.
- In certain circumstances where an owner owns property on both sides of the open drain, upon consultation with the Drainage Superintendent, a windbreak may be permitted on one side. On existing drains where windbreaks exist, costs due to trucking material will be the direct responsibility of the owner and not the upstream ratepayers.
- Replacement Trees will be selected from a list of available preferred species at the time of construction for owners eligible for replacements to select their preferred species. Species will be from the identified list of Carolinian species typical for the Region. Owners can select any location for the planting of replacement trees excepting within the work zone.

4.3.2 Spoil Material

Where specified, excavated spoil material shall be disposed of and levelled at a minimum of 2.5 m from the top of 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 shall be placed 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 cost of spoil trucked from the property shall be borne by the benefiting property owner.

Spoil shall be disposed of as noted in the description of the proposed work. Generally, the spoils will be disposed of adjacent to the drain unless otherwise specified. Should any property owner require that all or a portion of the spoil be trucked away from their property, the cost of trucking spoils shall be assessed 100% to the property owner requesting same and will not form part of the total cost of the drainage works. The cost of trucking away spoils from any future maintenance work will be assessed directly to the property owner requesting the same. Debris from vegetation removal will be disposed of in accordance with agreement of the property owner. Debris removal from the site is possible where the owner of the land agrees to pay for the removal.

With respect to the reaches of drain that are within travelled municipal road allowances, the spoil will be trucked away during both 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 existing 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 that is suitable for cultivation of 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 prior to construction.

4.3.3 Sediment Control Basins

The addition of sedimentation basins to the Michener Drain in two locations is done to assist with controlling sediment during maintenance and re-grading to the identified design grade line. Post – Construction these basins remain and continue to provide sedimentation control during precipitation events.

Sediment basins are to be constructed at the locations and to the specifications indicated on the attached drawings. The Contractor will maintain these sediment basins during construction, as directed by the Engineer and/or his designate. The basins are considered to be part of the Municipal Drain and will be maintained in future by the Municipality at the expense of all upstream land and roads owners herein assessed as shown on the attached assessment schedule. Properly maintained sediment basins reduce the incidents of drain maintenance clean out and therefore reduce overall maintenance costs for property owners. It is anticipated that basins will be inspected annually for an assessment of sediment depth and sediment removed where that depth exceeds half the constructed depth.

4.3.4 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 excavation of the existing and proposed channels, and the spoil should be seeded on the day of leveling. Seeding should take place in a manner that optimizes seed germination and establishment of vegetation prior to 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 rye grass	8 kg	20%
Birdsfoot trefoil	12 kg	30%
Total	40 kg/ha	100%

Through the golf course, the owner may choose an alternate re-seeding mix and/or restoration method at their preference and cost.

Where working zone adjacent to the drain is grass and this is affected by construction, this area shall be reseeded with a suitable grass mix to restore to a like or better condition.

4.3.5 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 standards connection designs. 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 sites of potential or evident erosion.
- Tile drain connections – use of PE pipe to connect to a receiving channel.
- Berm and Orifice Flow Control - connections designed to control runoff to specified rates of flow.

Private connections are owned and the landowner is responsible for their construction and maintenance. Where a deficiency is identified by the Drainage Superintendent or Engineer, the landowner is to make good the connection. The landowner can accept to have work done by the City on their behalf to make good the connection based on a 50/50 cost sharing basis. 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.

4.4 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 Michener Drain works prescribed in the Engineer's Report, the City of Port Colborne 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 C, and pro-rating the assessment based on the actual cost using the Outlet Liability Assessment – Section 23. Special Benefit or Special Assessment, Section 24 or Section 26, shall not apply to maintenance work except where maintenance works are related to culvert/bridge replacement or upgrades.

4.5 Summary of Construction

The following table provides a list of construction activities by property starting from the outlet and proceeding upstream.

Michener Drain

Property / Owner / Drain Side	From STA	To STA	Work Description	Access & Disposal
404301 570466 ONTARIO LTD West side	0+004	0+407.5	0+010 to 0+110, 100m of individual tree removal from T/B to T/B 0+260 to 0+268 Construct Sediment Basin - SD-03a) 0+268 to 0+407.5 Re-grade to Design Grade Line 0+000 to 0+215 BW = 1.0m SS=1.5 TW = 4.0m 0+215 to 0+400 BW = 0.8m SS=1.5 TW = 3.8m	Work zone is 10m on the West Side of the Drain. Tree Removal as required for access. Level spoil West Side of Drain
404700 WHISKEY RUN GOLF CLUB LTD Both Sides	0+407.5	0+695.3	0+428 to 0+695.3 sinusoidal channel BW=0.6m SS=1.5 TW=1.5m Preserve existing Bridge Decks through construction Replace existing 500mm CSP with 600mm HDPE	Work Zone is 10m. Side to be determined in cooperation with Golf course. Restore to pre-construction condition.
404800 SPITERI CHARLES Both Sides	0+695.3	0+947	0+705.8 to 0+715.8 Farm Crossing culvert 0+715.8 to 0+723.8 Construct Sediment Basin 0+723.8 to 0+947 Clear vegetation from T/B to T/B and as required in work zone. BW = 1.m SS =1.5m TW = 4m	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Restore to cultivated field condition. Allowance for damage.
405100 VALE CANADA LIMITED Both Sides	0+947	1+206	0+947 to 1+206 Clear vegetation from T/B to T/B and as required in work zone. BW = 1.m SS =1.5m TW = 4m	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Restore to cultivated field condition. Allowance for damage.
405200 VALE CANADA LIMITED Both Sides	1+206	1+399.5	1+206 to 1+280 Clear vegetation from T/B to T/B and as required in work zone. BW = 1.m SS =1.5m TW = 4m 1+280 to 1+286 Culvert to remain as is. 1+290 Branch #2 Confluence 1+290 to 1+399.5 BW=0.6m SS=1.5 TW=3.4m	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Restore to cultivated field condition. Allowance for damage.
405500 ADAMS KEVIN JAMES Both Sides	1+399.5	1+649	Clean and Re-grade to Design Grade Line 1+399.5 to 1+614 BW=0.6m SS=1.5 TW=3.4m 1+614 to 1+624 Replace existing culvert with 600mm HDPE with rip rap headwall.	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Allowance for damage.

Michener Drain

Property / Owner / Drain Side	From STA	To STA	Work Description	Access & Disposal
				Restore to cultivated field condition.
405600 PORT COLBORNE CITY Both Sides	1+649	1+170	Clean and Re-grade to Design Grade Line 1+649 to 1+170 BW=0.4m SS=1.5 TW=3.4m	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Restore to cultivated field condition. Allowance for damage.
ROW Friendship Trail	1+170	1+729	Existing Culvert to remain as is. Drain Ends north Side of Trail Crossing	Access to East work zone from Friendship Trail.

Michener Branch #1 Drain

Property / Owner / Drain Side	From STA	To STA	Work Description	Access & Disposal
404303 MASON MARTHA JEANNE Both Sides	0+000	0+085	Clean and re-grade to design grade line. BW = 0.4m SS = 1.5 TW = 1.5m	10m Work Zone is on the South Side Restore to pre-construction condition.
404700 WHISKEY RUN GOLF CLUB LTD North Side	0+085	0+217	Clean and re-grade to design grade line. BW = 0.4m SS = 1.5 TW = 1.5m	10m Work Zone is on the South Side – no impact
404400 LEON JOHN South Side	0+085	0+110	Clean and re-grade to design grade line. BW = 0.4m SS = 1.5 TW = 1.5m	10m Work Zone is on the South Side Restore to pre-construction condition.
404500 NICHOLLS LARRY JAMES South Side of Branch #1 with Branch #1 crossing from North to South.	0+110	0+302	67m Open Channel to be cleared of vegetation, cleaned to the design grade line. 0+177 Catchbasin (CB-01) with standard top grate; outlet to open channel with grate. Connect existing PE 150mm tile outlet to CB- 01 (from sump pump) 0+178 to 0+302 Branch #1 PE 200mm Tile with filter sock below open channel drain with side slope 3:1 and BTW = 0.6m.	10m Work Zone for Branch #1 for 67m South side. North South Branch #1 Tile and channel is 10m Work Zone on East Side. Restore all to pre- construction condition.

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Property / Owner / Drain Side	From STA	To STA	Work Description	Access & Disposal
Lakeshore Rd. East Right of Way	0+302	0+324.4	1 - CB-02 (OPSD 700.020) 0+128 & 0+145 200mm PE Tile crossing Lakeshore Rd. E and connect to CB-02 and CBDI-03 1 - CBDI-03 with OPSD 403.010 Existing culvert to remain as is.	Road Crossing to be backfilled with unshrinkable fill and restored to pre-construction condition with asphalt to City of Port Colborne Standards. Grade roadside swales to DICB.
400200 DOOLITTLE ROY W III From ROW - North Side	0+325	0+437	Buried 150mm PE Tile Drain on the ROW property line	City to grade roadside swale to CBDI-03 and CB-04. All work from Road allowance and restored to pre-construction condition.
Lakeshore Rd. East and Lorraine Rd. ROW.	0+437	0+437	1-CB-04 (OPSD 700.0.20) Catchbasin at SW corner of intersection. Top of grate set below edge of road.	City to grade roadside swale to CB-04.
Lakeshore Rd. East Right of Way.	0+437	0+458.6	Buried 150mm PE Tile Drain on the ROW property line. Backfill with U-shrink material under Road portion of ROW	City to restore road crossing.
404600 WINGER LLOYD JAMES JUNIOR From ROW - East side	0+458.36	0+505.5	DI-05 Ditch Inlet with precast concrete headwall and grate.	City to grade roadside swale from Culvert CS-122 to Ditch Inlet @ 0.20%
400101 LEON LOU ANN South Side	0+000	0+018	Branch #1 Buried 150mm PE Tile Drain on the ROW property line	Branch #1 Work Zone is from the ROW. City to grade roadside swale. Restore all to pre-construction condition.
400102 WEEBADUARACHCHIGE ASELA South Side	0+018	0+51	Branch #1 Buried 150mm PE Tile Drain on the ROW property line	Branch #1 Work Zone is from the ROW. City to grade roadside swale. Restore all to pre-construction condition.
400400 MATHESON GARY South Side	0+051	0+60	Branch #1 Buried 150mm PE Tile Drain on the ROW property line Drain Ends with PE cleanout.	Branch #1 Work Zone is from the ROW. City to grade roadside swale. Restore all to pre-construction condition.

Michener Branch #2 Drain

Property / Owner	From STA	To STA	Work Description	Access & Disposal
405200 VALE CANADA LIMITED Both Sides	0+000	0+337.2	0+000 to 0+126 Clear Vegetation and re-grade to Design Grade Line. BW = .4m SS = 1.5 TW = 2.95m 0+126 to 0+180 Pond to remain as is. 0+180 to 0+232 Clear Vegetation and re-grade to Design Grade Line 0+232 to 0+337.2 Spot Tree Removal As Directed.	0+000 to 0+180 North Side 10m Work Zone. Spoil spread adjacent to drain. 0+180 to 0+232 West Side 10m Work Zone. Spoil spread adjacent to drain. 0+232 to 0+337.2 South Side Work Zone. Restoration to cultivated field condition.
Lorraine Rd. Right of Way	0+337.2	0+357.2	Existing Culvert to remain as is. City of Port Colborne responsible for maintenance.	

5 Drainage Works Financing

5.1 Cost of Works

As required by the Drainage Act, Chapter D.17, Section 59(1), Council may call a meeting if the contract price exceeds 133 percent of the estimated construction costs.

5.1.1 Admin & Engineering Costs

At present there are no Administration costs identified with the Michener Drain.

There are three primary engineering costs related to these works for the Michener Drain. There are costs from three separate engineering companies working to prepare the report.

Wiebe Engineering was first hired to prepare the report. Wiebe was paid \$92,511.44 for work completed on the Wignell, Michener and Port Colborne Drains. A portion of this fee, allocated by area of the drain, is charged to the Michener Drain. (See Table 2 Drain Area Ratios)

Amec Foster Wheeler (formerly Amec and now Wood Plc) was appointed to conclude the report after Wiebe Engineering. They prepared a draft of the report, invoiced and were paid \$67,147.23 but they did not finalize the report and ceased to work on the project.

These costs have been allocated to the respective drains using a drain area ratio as per the following table.

Table 2 Drain Area Ratios

Drain	Area, Ha	Area Ratio
Michener Drain Area	135	12.02%
Port Colborne Drain Area	345	30.78%
Wignell Drain Area	641	57.20%
Total:	1121	

The result is a cost allocation to Michener for the portion of engineering fees for each of the two previous engineers.

The fees for EWA Engineering Inc. are recorded for the fees in the preparation of each individual report.

5.1.2 Capital Construction Cost

The estimated cost of construction is shown in the following table.

Table 3 Michener Estimated Cost of Construction

	Sub-Total Costs	Total Cost
Michener Branch Drain #1	\$30,271.50	
Michener Branch Drain #2	\$3,325.00	
Michener Drain	\$32,147.50	
Michener General Construction Costs	\$14,968.00	
Michener Contingency	\$13,148.80	
Estimated Cost of Construction		\$93,860.80

5.2 Maintenance & Program Costs

Included in the estimated cost of construction are allocations for costs related to drain maintenance works including vegetation removal and re-grading.

The Michener Main Branch is a section 78 maintenance project to clean and re-grade to the established design grade line shown on the profile drawing, M.P1. The grade line is based on the AMEC survey of what is already in place for the existing culverts. This work is to be assessed according to the construction schedule prepared and shown as Table 8 Michener Drain Assessment Schedule of Costs

The Michener Branch #1 is a Section 4 drain improvement project to provide sufficient outlet for the Lorraine Rd. and Lakeshore Rd. culverts. The Lakeshore Rd. culvert becomes part of the drain, while the Lorraine Rd. culvert remains a roadway culvert. An allowance is made to landowners for the value of the existing drain channels.

The Michener Branch #2 is a Section 4 drainage petition by road authority to provide sufficient outlet for the Lorraine Rd. culvert, which remains a roadway culvert. An allowance is made to the landowner for the value of the existing drain channel. The pond will become part of the drain but is to remain as is.

5.3 Principles of Assessment

The following are general and specific principles used to assess costs for the Michener Drain according to the Regulations formed under the Drainage Act using our understanding of the Act and seeking the most fair methods to share costs to landowners within the Michener 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 a drainage work if any portion of the property contributes a runoff flow directly or indirectly 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 point of collection to a discharge point, an Outlet.
5. The use of a property; farming, residential, or vacant does not define 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.

As an 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 capacity of the drain, this contribution is deemed to be 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 of this 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, 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 Michener Drain and the works being considered, a channel already exists and the proposed assessment is to recognize a service or benefit that already exists and is being confirmed to exist through an allowance under Section 31.

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

While efforts within the drain design and assessment have been made to address water quality as well as quantity, there are limits within the Drainage Act. The following assessment table is proposed for using those regulations within the Drainage Act to address drainage works.

Benefit (Section 22)

This Assessment is based on the creation of land value through the creation of a new or additional drainage system. The Michener Drain works consists primarily of maintenance; cleaning and clearing.

For this reason, there is not a Benefit Assessment proposed on the main branch of the Michener Drain. However, for the two Branch Drains, a Section 22 benefit does exist and is recognized.

Outlet Liability (Section 23)

This is the primary basis for the assessment of the maintenance and drain works. Assessment is based on each individual property's contributing runoff. This is determined from the area flowing to the drain and from the runoff factor C. The runoff factor C is the Rational Method for predicting peak runoff and does not predict volume of runoff (note special benefit used for Site Specific SWM facilities).

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 potential use in the present and in the future. The following Table of property codes will be used for the determination of C Factor values used in the Runoff Outlet Factor assessment.

PropCode	CATEGORY	DESCRIPTION	C-Factor Low	C-Factor High
100	LAND	Vacant residential land not on water	10	25
105	LAND	Vacant commercial land		
110	LAND	Vacant residential/recreational land on water		
200	FARM	Farm property without any buildings/structures	20	55
201	FARM	Farm with residence - with or without secondary structures; no farm outbuildings		
210	FARM	Farm without residence - with secondary structures; with farm outbuildings		
211	FARM	Farm with residence - with or without secondary structures; with farm outbuildings		
221	FARM	Farm with residence - with commercial/industrial operation		
228	FARM	Farm with gravel pit		
230	FARM	Intensive farm operation - without residence	20	50
231	FARM	Intensive farm operation - with residence	20	55
234	FARM	Large scale poultry operation		
244	FARM	Managed forest property, residence not on water	20	30
260	FARM	Vacant residential/commercial/ industrial land owned by a non-farmer with a portion being farmed	20	55
261	FARM	Land owned by a non-farmer improved with a non-farm residence with a portion being farmed		
301	RESIDENTIAL	Single family detached (not on water)	15	40
302	RESIDENTIAL	More than one structure used for residential purposes with at least one of the structures occupied permanently		
303	RESIDENTIAL	Residence with a commercial unit		
313	RESIDENTIAL	Single family detached on water year round residence		
322	RESIDENTIAL	Semi-detached residence with both units under one ownership two residential homes sharing a common center wall.		
332	RESIDENTIAL	Typically a Duplex residential structure with two self-contained units.		
334	RESIDENTIAL	Residential property with four self-contained units		
383	RESIDENTIAL	Bed and breakfast establishment		
391	RESIDENTIAL	Seasonal/recreational dwelling - first tier on water		
392	RESIDENTIAL	Seasonal/recreational dwelling - second tier to water		
405	COMMERCIAL	Office use converted from house	20	65
410	COMMERCIAL	Retail - one storey, generally under 10,000 s.f.		
421	COMMERCIAL	Specialty automotive shop/auto repair/ collision service/car or truck wash		
441	COMMERCIAL	Tavern/public house/small hotel		
490	COMMERCIAL	Golf course	12	35
510	INDUSTRIAL	Heavy manufacturing (non-automotive)	45	85
518	INDUSTRIAL	Smelter/ore processing		
520	INDUSTRIAL	Standard industrial properties not specifically identified by other industrial Property Codes		
590	INDUSTRIAL	Water treatment/filtration/water towers/pumping station	*	*
593	INDUSTRIAL	Gravel pit, quarry, sand pit	*	*
597	INDUSTRIAL	Railway right-of-way	40	65
598	INDUSTRIAL	Railway buildings and lands described as assessable in the Assessment Act		
605	INSTITUTIONAL	School (elementary or secondary, including private)	35	50
702	SPECIAL PURPOSE	Cemetery	35	65

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PropCode	CATEGORY	DESCRIPTION	C-Factor Low	C-Factor High
710	SPECIAL PURPOSE	Recreational sport club - non commercial (excludes golf clubs and ski resorts)	35	85
715	SPECIAL PURPOSE	Racetrack - auto	45	85
735	SPECIAL PURPOSE	Assembly hall, community hall	30	85
	ROW	Single lane Municipal Roadway	75	95
	ROW	unopened road allowance	65	85
	ROW	Regional or MTO	90	98

* C factor values are situationally assigned based on land use.

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

In addition to assessed costs considered for special benefits, there is also recognition for stormwater management facilities within the watershed that reduce the peak flow used to determine the outlet assessment. These facilities that may already exist in the watershed and are recognized as having a benefit in the reduction of peak flow by determining the available volume is greater than the 24 hour peak flow volume predicted for the 1:100 year design storm.

- Site Specific Stormwater Management (SWM) Facilities
 - o Wetlands,
 - o Ponds, (natural and stormwater)
- Natural occurring features
 - o Kettle lakes, and
 - o 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.

Table 4 Section 23 Runoff Factor Determination - QRF Ratio

Area Ha	Soil Type	Gradient	Land Factor	Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
2.176	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	17	2.41	0	0	2.41	0.1760
1.201	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	1.18	0	0	1.18	0.0857
1.084	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	ROW - paved 2 lane	85	6.01	0	0	6.01	0.4382
0.848	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.83	0	0	0.83	0.0605
0.729	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.71	0	0	0.71	0.0521
0.560	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.55	0	0	0.55	0.0400
0.517	NM - Sandy well drained	0.20%	LAND	12	0.41	0	0	0.41	0.0295

QRF is a predicted runoff factor based on the following variables:

- Area, Ha – each property’s connected area
- Runoff Factor ‘C’ – Coefficient of Runoff of generally accepted values
 - Soil Type – from Niagara Soil Report
 - Gradient – General Value from NPCA contours
 - Land Factor – reflects the impact of landuse on Runoff

$QRF = 0.0028 * \text{Runoff Factor 'C'} * \text{Avg Intensity mm/hr} * \text{Area, Ha}$

QRF-SWMF is the adjusted Runoff Factor used to represent the impact of owner implemented stormwater management facilities.

- SWM is the reduction achieved by the stormwater management facility as determined by the Drainage Engineer / Drainage Superintendent.
- SWMF is the reduction in QRF to be applied.
- $QRF-SWMF = QRF - SWMF$

QRF Ratio is QRF-SWMF divided by the Sum of all QRF-SWMF for each cost allocated area. The QRF Ratio is the value for each property contribution to the outlet liability cost as a portion of all other contributors.

QRF-SWMF and QRF Ratio is to be used for all future Maintenance assessments.

Special Benefit (Section 24)

The following are assessed costs considered special benefits:

- Culverts,
- Fording’s,
- Closed Conduit conveyance (piped flow).

The cost of a culvert is assessed against the property owner based on the incremental cost of the drain. So a new culvert is paid for by the owner less the cost of drain construction on a per metre basis. The drain per metre construction cost will be estimated for the report but the actual cost will be used to calculate the final value.

The proposed closed conduit to provide an outlet for the Lorraine Rd. culvert crossing is assessed in the same manner, as an increase in costs above what would be realized for an open channel in the same location.

Culverts construction costs are shared between the land owner and the rest of the watershed on a 50/50 split basis. Construction costs are based on the City’s typical design standard. Additional costs, headwalls, etc. are at the owners cost unless required by the Engineer to meet requirements.

Special Assessment (Section 26)

There are special assessments, as recognized under the 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.

An example is the Ditch Inlets proposed for construction on the Michener Branch Drain #1. Also in Michener Branch #1 is a \$2,000 cost to protect or possibly move the gas line when the 200mm Tile crosses Lakeshore Rd. E. This cost is assigned to the utility owner, Enbridge.

These costs are 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. Actual costs will be assigned to the project as this is merely an estimate of costs during design.

5.3.1 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.
5. Any tree or feature placed within a drainage works right of access for maintenance is not eligible for compensation in any form. Trees within the work zone are eligible for the 2 for 1 tree replacement program.

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 or a Branch Drain 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. In the case of a close conduit the work zone can be reduced to a 5m zone or a 10m zone with 5m on each side. 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 10 year cycle for maintenance a 1/10 factor is to be applied using the land purchase value.

Where a buffer is established that restricts use of the land adjacent to the drain in favour of permanent vegetation, then a full payment for land taken based on the value established is made. For a buffer, a registered easement on title is recommended.

Section 30 Allowance

(Payment for damages during construction)

This allowance is to compensate landowners for economic damages due to construction and recognizes two types of injury. Immediate loss of crop as a result of working corridor for construction and longer term damage to crops as a result of spoil spreading.

For the Michener Drain, we will award an allowance where work on the drain, such as maintenance, damages crops which can not be restored. Compensation in the form of an allowance does not apply to grass or any other ornamental feature that is restored to similar condition as existed pre-construction. Compensation is paid for the work zone width multiplied by the length affected at the rate of \$4,300 per Hectare.

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

A damage allowance for fences can be paid where the fence is not restored. In any of the planned work for the Michener Drain, fences are to be restored to a like or better condition and no allowance for payment is planned.

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.

This can be applied to the following:

- Michener Branch Drain #1 (portions) includes the open channel portion and the inclusion of the PE tile drain in the channel bottom.
- Michener Branch Drain #2.

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 affect 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.

There are no occurrences of this within the Michener Drain.

Section 33 Allowance
(Loss of Access)

Where a re-aligned Drain crosses property and cuts off access, an allowance can be granted. There are no known such occurrences.

5.3.2 General Instructions to Property Owners, Road Authorities and Public Utilities

The principles of the Drainage Act are:

- Drainage is a collective good that benefits all landowners. However, drainage doesn't have to benefit all landowners equally.
- All landowners cooperatively fund the drainage works proposed. There is no direct financial government role in the drainage works other than administrative.
- Landowners are assessed a financial share of the cost for the drainage works based on their respective drainage benefit.
- All drainage costs are born by landowners including allowances.
- Drainage is provided on the basis of an identified service level for a specified size of storm. The standard storm, 1 in 2 year frequency, for basic open channel design is 49.8mm over 24 hours. For a closed conduit design storm, the rational method is used for a peak capacity determined for a 121.1mm storm over 24 hours. A storm of a larger size or intensity

may cause flooding. Tile placed in the bottom of an open channel is provided for drainage and not conveyance.

For more details, refer to the Wignell Watershed Hydrology and Hydraulics Report.

A best effort has been made to compose a fair and reasonable assessment of costs to each portion of the contributing lands.

5.3.3 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 in Appendix C indicates lands 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 or in combination with the Managed Forest Tax Incentive Program or the Conservation Land Tax Incentive Program for the lands to be drained by the Michener Drain.

For additional information on the Agricultural Drainage Infrastructure Program refer to the OMAFRA website at www.omafra.gov.on.ca.

5.4 Michener Drain Maintenance

From the Michener Outlet to the upstream limit of the drain at the Friendship Trail, basic drain maintenance is required. There is spot vegetation removal at the outlet to ensure a clear and free flowing discharge at the outlet but no re-grading is planned.

From 0+100 to 1+716, the existing grade needs to be checked and confirmed for matching the design grade and any high points removed. There are likely to be low points, which will remain. Vegetation removal is planned from 0+700 to 1+700. Work through the golf course is expected to be coordinated with the owner to reduce impact to the course.

Added to the cost of maintenance is the full engineering and administration costs less any costs directly assigned to specific Section 22, Section 24 benefit assessments.

With the Runoff Ratio, there is a Stormwater Management Facility reduction in Section 23 that can be applied for those properties that can demonstrate a runoff amendment structure that reduces peak flow contributions to the drain subject to evaluation and confirmation by the Drainage Superintendent and the Engineer.

For the purposes of the submission of the report, no SWMF assessments are recognized and the individual property owners can make a request for assessment and this will be recognized by the Engineer on project completion.

5.4.1 New Drain Crossings

The original bridge surveyed by AMEC on the golf course property was later changed to a 500mm CSP at some point and is to be replaced with a properly sized culvert at the landowner's expense.

A new farm access crossing is identified at 0+710 and is a combination crossing and sediment basin. The cost of the crossing is 50% owner and 50% outlet benefit. The sediment basin is a cost shared among upstream landowners.

The existing crossing located at 1+615 is to be re-constructed on grade to ensure clear and free flowing inlet and outlet. The re-constructing of a new culvert is to be 50% owner and 50% outlet benefit.

5.4.2 Sediment Basins

The original sediment basin constructed south of the golf course is no longer visible as being an intact drainage structure. It will be reconstructed as part of the Drain Maintenance works in the location shown on the plans and as per the proposed Sediment Basin Standard drawings (M.GD-10).

The sediment basin associated with the crossing structure located at 0+710 is to be a modified version of the M.GD-10.

The cost of constructing sediment basins are shared among upstream landowners through a Section 23 assessment. However, the sediment basin on the golf course property was shown to exist in the Wiebe Drawing from November 15, 1996 and the reconstruction is 100% allocated to the Whiskey Run Golf Course as a Section 24 Special Benefit.

5.5 Allowance and Assessment Schedules

The Assessments calculations in Tables are included in Appendix C. The following sections provide a summary reporting of those calculations.

5.5.1 Drain Allowances

5.5.1.1 Michener Drain

The improvement of the Michener Drain using Section 78 is to perform drain maintenance using an updated schedule and to achieve enhanced stormwater management functions.

The channel will require an allowance under Section 29 for land taken as well as a work zone allowance for future access. The original land required for the drain is recognized by previous report and an assumed work zone of 5m. An additional 5m of work zone to a total of 10m is achieved through a Section 29 allowance based on purchase price of agricultural land as per the Schedule of Costs times the 1/10 ratio.

A section 30 allowance is recognized for the damage to crops during construction and is paid at the rate of \$4,300 per hectare applied to the 10m work zone.

No other allowances are recognized for the maintenance of this existing drain.

Table 5 Michener Allowances

Drain	Section 29	Section 30	Section 31	Section 32	Section 33
Michener	\$2,107.81	\$1,253.69	\$0.00	\$0.00	\$0.00
Sub-Total of Allowances:					\$3,361.50

Additional to these costs will be Administration and Engineering Costs related to the design.

5.5.1.2 Michener Branch Drain #1

As the drainage channel has existed and been providing drainage service since before 1934 when it is clearly visible in the aerial photograph, recognizing the channel with formal status under the drainage act ensures that future maintenance can be performed to ensure adequate outlet is realized for the upstream areas.

This existing channel should have been recognized in previous drain reports but may not have been established under the drainage act if deemed a private drain not crossing multiple properties. Since that time, several small properties have segregated the original property and recognition of the channel as a municipal drain under the Act is requested by the City of Port Colborne to recognize sufficient outlet for road drainage across properties. The branch drain is an addition to the existing drainage recognized through Section 4 of the Act as requested by the road authority for sufficient outlet.

The previous channel will require an allowance under Section 29 for land taken as well as a work zone allowance for future access. Additional allowance for the original cost of construction is also identified by the Act under Section 31, which is being awarded to current property owners when originally incurred by the agricultural property owner.

Table 6 Michener Branch #1 Allowances

Drain	Section 29	Section 30	Section 31	Section 32	Section 33
Michener Branch #1	\$3,510.25	\$0	\$2,393.	\$0	\$0
Sub-Total of Allowances:					\$ 5,903.25

Additional to these costs will be Administration and Engineering Costs related to the design.

5.5.1.3 Michener Branch Drain #2

Existing channel services as an outlet for upstream area East of the Lorraine Rd. with a cross culvert identified as CS-101

Pond to remain as is without additional work or cleaning. Lower reach of the drain to be cleared of vegetation between banks and as required or needed to clear and clean to the design grade.

Allowance calculated for land taken and for the original cost of construction, valued today.

Table 7 Michener Branch #2 Allowances

Drain	Section 29	Section 30	Section 31	Section 32	Section 33
Michener Branch #2	\$2,513.80	\$1,621.10	\$3,770.00	\$0	\$0
Sub-Total of Allowances:					\$7,904.90

Maintenance works for channel restoration are assessed across upstream landowners on a runoff factor basis, see Section 23.

No Section 30 allowance for damages to existing crops is anticipated for the work proposed.

City of Port Colborne
Michener Drain Report

5.5.2 Michener Drain Assessment Tables

The planned construction works for Michener and Branch Drains have been calculated and assessed as shown in the following 3 tables.

Table 8 Michener Drain Assessment Schedule of Costs

Michener Drain Assessment of Costs				Schedule Assessed Costs				Total Allowance	Net
Owner	Legal Text	Roll No	Area	Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Total Assessment		
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.07	\$0.00	\$67.30	\$0.00	\$67.30	\$0.00	\$67.30
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.29	\$0.00	\$273.17	\$0.00	\$273.17	\$0.00	\$273.17
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	12.37	\$0.00	\$11,703.24	\$0.00	\$11,703.24	\$0.00	\$11,703.24
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	3.87	\$0.00	\$3,664.77	\$0.00	\$3,664.77	\$0.00	\$3,664.77
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	5.16	\$0.00	\$5,156.99	\$0.00	\$5,156.99	\$0.00	\$5,156.99
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	2.72	\$0.00	\$2,719.58	\$0.00	\$2,719.58	\$0.00	\$2,719.58
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	0.41	\$0.00	\$405.81	\$0.00	\$405.81	\$0.00	\$405.81
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	17.37	\$0.00	\$16,431.47	\$0.00	\$16,431.47	\$0.00	\$16,431.47
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.43	\$0.00	\$1,971.61	\$0.00	\$1,971.61	\$0.00	\$1,971.61
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.12	\$0.00	\$3,874.95	\$0.00	\$3,874.95	\$0.00	\$3,874.95
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.56	\$0.00	\$423.89	\$0.00	\$423.89	\$0.00	\$423.89
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.36	\$0.00	\$270.29	\$0.00	\$270.29	\$0.00	\$270.29
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.53	\$0.00	\$402.79	\$0.00	\$402.79	\$0.00	\$402.79

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Michener Drain Assessment of Costs				Schedule Assessed Costs				Total Allowance	Net
				Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Total Assessment		
Owner	Legal Text	Roll No	Area						
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.51	\$0.00	\$443.04	\$0.00	\$443.04	\$0.00	\$443.04
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.36	\$0.00	\$270.07	\$0.00	\$270.07	\$0.00	\$270.07
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.38	\$0.00	\$672.86	\$0.00	\$672.86	\$0.00	\$672.86
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRTS 2 & 3	271104000400305	0.38	\$0.00	\$670.47	\$0.00	\$670.47	\$0.00	\$670.47
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.41	\$0.00	\$502.43	\$0.00	\$502.43	\$0.00	\$502.43
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	0.00	\$0.00	\$0.41	\$0.00	\$0.41	\$0.00	\$0.41
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	4.79	\$0.00	\$5,822.18	\$0.00	\$5,822.18	\$0.00	\$5,822.18
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	3.07	\$0.00	\$3,730.03	\$0.00	\$3,730.03	\$0.00	\$3,730.03
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.44	\$0.00	\$477.52	\$0.00	\$477.52	\$0.00	\$477.52
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.22	\$0.00	\$1,154.45	\$0.00	\$1,154.45	\$0.00	\$1,154.45
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.85	\$0.00	\$801.78	\$0.00	\$801.78	\$0.00	\$801.78
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.40	\$0.00	\$492.23	\$0.00	\$492.23	\$0.00	\$492.23
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	18.76	\$0.00	\$18,766.31	\$4,110.00	\$22,876.31	\$0.00	\$22,876.31
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	9.59	\$0.00	\$11,660.28	\$1,250.00	\$12,910.28	\$0.00	\$12,910.28
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	0.32	\$0.00	\$384.13	\$0.00	\$384.13	\$0.00	\$384.13
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.35	\$0.00	\$422.55	\$0.00	\$422.55	\$0.00	\$422.55
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	10.51	\$0.00	\$12,788.68	\$0.00	\$12,788.68	\$0.00	\$12,788.68
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	7.76	\$0.00	\$7,756.27	\$0.00	\$7,756.27	\$0.00	\$7,756.27

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Michener Drain Assessment of Costs				Schedule Assessed Costs				Total Allowance	Net
				Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Total Assessment		
Owner	Legal Text	Roll No	Area						
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.24	\$0.00	\$236.25	\$0.00	\$236.25	\$0.00	\$236.25
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.34	\$0.00	\$340.10	\$0.00	\$340.10	\$0.00	\$340.10
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	9.20	\$0.00	\$9,205.38	\$750.00	\$9,955.38	\$0.00	\$9,955.38
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.30	\$0.00	\$2,299.86	\$0.00	\$2,299.86	\$0.00	\$2,299.86
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.03	\$0.00	\$2,026.41	\$0.00	\$2,026.41	\$0.00	\$2,026.41
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	2.28	\$0.00	\$2,285.09	\$0.00	\$2,285.09	\$0.00	\$2,285.09
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.58	\$0.00	\$580.43	\$0.00	\$580.43	\$0.00	\$580.43
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	1.60	\$0.00	\$1,599.13	\$0.00	\$1,599.13	\$0.00	\$1,599.13
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	0.69	\$0.00	\$688.34	\$0.00	\$688.34	\$0.00	\$688.34
City of Port Colborne	Lorraine Rd. from Lake edge to Killaly St. East	Lorraine ROW	3.25	\$0.00	\$7,290.84	\$0.00	\$7,290.84	\$0.00	\$7,290.84
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW	0.56	\$0.00	\$1,277.26	\$0.00	\$1,277.26	\$0.00	\$1,277.26
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW	0.12	\$0.00	\$310.71	\$0.00	\$310.71	\$0.00	\$310.71
				\$0.00	\$142,321.33	\$6,110.00	\$148,431.33	\$0.00	\$148,431.33

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Table 9 Michener Branch #1 Assessment Schedule of Costs

Michener Branch #1				Assessed Costs				Total Allowance	Net
Owner	Legal Text	Roll No	Area	Benefit Section 22	Outlet Liability Section 23	Special Assessment Section 26	Total Assessment		
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	2.176	\$237.50	\$6,096.20	\$0.00	\$6,333.70	\$1,077.23	\$5,256.47
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.201	\$975.00	\$2,691.00	\$0.00	\$3,666.00	\$2,842.74	\$823.26
CofPC	Lakeshore Rd. East ROW	ROW	0.556	\$535.00	\$5,294.96	\$6,590.43	\$12,420.38	\$0.00	\$12,420.38
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	\$430.50	\$1,424.32	\$0.00	\$1,854.82	\$0.00	\$1,854.82
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	0.729	\$200.00	\$1,634.46	\$0.00	\$1,834.46	\$1,590.74	\$243.73
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	\$0.00	\$1,255.02	\$0.00	\$1,255.02	\$0.00	\$1,255.02
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.517	\$0.00	\$695.64	\$0.00	\$695.64	\$0.00	\$695.64
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	\$45.00	\$680.10	\$0.00	\$725.10	\$0.00	\$725.10
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	\$280.00	\$479.76	\$0.00	\$759.76	\$0.00	\$759.76
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.295	\$0.00	\$660.60	\$0.00	\$660.60	\$0.00	\$660.60
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	\$0.00	\$647.01	\$0.00	\$647.01	\$0.00	\$647.01
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.205	\$70.00	\$459.96	\$0.00	\$529.96	\$392.54	\$137.42
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.134	\$82.50	\$300.46	\$0.00	\$382.96	\$0.00	\$382.96
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.122	\$37.50	\$272.75	\$0.00	\$310.25	\$0.00	\$310.25
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	\$150.00	\$159.39	\$0.00	\$309.39	\$0.00	\$309.39
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.042	\$22.50	\$94.24	\$0.00	\$116.74	\$0.00	\$116.74

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Michener Branch #1				Assessed Costs				Total Allowance	Net
Owner	Legal Text	Roll No	Area	Benefit Section 22	Outlet Liability Section 23	Special Assessment Section 26	Total Assessment		
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	0.012	\$0.00	\$33.13	\$0.00	\$33.13	\$0.00	\$33.13
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.000	\$0.00	\$0.75	\$0.00	\$0.75	\$0.00	\$0.75
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	0.689	\$607.50	\$6,947.53	\$0.00	\$7,555.03	\$0.00	\$7,555.03
Enbridge						\$2,000.00	\$2,000.00		\$2,000.00
				\$3,065.50	\$22,879.76	\$8,590.43	\$42,090.71	\$5,903.25	\$36,187.46

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Table 10 Michener Branch #2 Assessment Schedule of Costs

Owner	Legal Text	Roll No	Area	Benefit Section 22	Outlet Liability Section 23	Total Assessment	Total Allowance	Net
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.108	\$0.00	\$2,278.34	\$2,278.34	\$0.00	\$2,278.34
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	3.545	\$0.00	\$3,255.29	\$3,255.29	\$0.00	\$3,255.29
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	2.799	\$845.00	\$2,570.32	\$3,415.32	\$7,904.90	-\$4,489.58
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	\$0.00	\$2,870.63	\$2,870.63	\$0.00	\$2,870.63
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	14.499	\$0.00	\$11,411.96	\$11,411.96	\$0.00	\$11,411.96
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	1.380	\$4,000.00	\$3,257.92	\$7,257.92	\$0.00	\$7,257.92
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	0.554	\$0.00	\$407.12	\$407.12	\$0.00	\$407.12
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.154	\$0.00	\$181.95	\$181.95	\$0.00	\$181.95
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.096	\$0.00	\$113.61	\$113.61	\$0.00	\$113.61
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	0.075	\$0.00	\$59.15	\$59.15	\$0.00	\$59.15
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.058	\$0.00	\$42.93	\$42.93	\$0.00	\$42.93
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	0.012	\$0.00	\$14.26	\$14.26	\$0.00	\$14.26
				\$4,845.00	\$26,463.48	\$31,308.48	\$7,904.90	\$23,403.58

5.5.3 Michener Drain Maintenance Schedules

The following are maintenance schedules for use with future maintenance work conducted in each of the Drain catchments.

5.5.3.1 Michener Drain Maintenance Schedule

The following is the Maintenance Assessment table for assigning future maintenance costs using Section 23, refer to Appendix C for the calculations.

Table 11 Michener Drain Maintenance Assessment Schedule

Owner	Legal Text	Roll No	Area Ha	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	0.16	0	0	0.16	0.0005
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	0.66	0	0	0.66	0.0019
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	12.371	28.25	0	0	28.25	0.0822
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	3.874	8.85	0	0	8.85	0.0257
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	5.156	12.45	0	0	12.45	0.0362
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	2.719	6.56	0	0	6.56	0.0191
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	0.406	0.98	0	0	0.98	0.0029
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	17.369	39.66	0	0	39.66	0.1155
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	4.76	0	0	4.76	0.0139
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.120	9.35	0	0	9.35	0.0272
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	1.02	0	0	1.02	0.0030
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.357	0.65	0	0	0.65	0.0019
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.532	0.97	0	0	0.97	0.0028
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.512	1.07	0	0	1.07	0.0031
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	0.65	0	0	0.65	0.0019
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.383	1.62	0	0	1.62	0.0047
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRS 2 & 3	271104000400305	0.382	1.62	0	0	1.62	0.0047
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.413	1.21	0	0	1.21	0.0035
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	0.000	0.00	0	0	0.00	0.0000
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	4.787	14.05	0	0	14.05	0.0409
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	3.067	9.00	0	0	9.00	0.0262
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.442	1.15	0	0	1.15	0.0034
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.220	2.79	0	0	2.79	0.0081
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	1.94	0	0	1.94	0.0056
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	1.19	0	0	1.19	0.0035
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	18.764	45.30	0	0	45.30	0.1319
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	9.586	28.14	0	0	28.14	0.0819

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Owner	Legal Text	Roll No	Area Ha	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	0.316	0.93	0	0	0.93	0.0027
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.347	1.02	0	0	1.02	0.0030
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	10.514	30.87	0	0	30.87	0.0899
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	7.756	18.72	0	0	18.72	0.0545
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.236	0.57	0	0	0.57	0.0017
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.340	0.82	0	0	0.82	0.0024
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	9.204	22.22	0	0	22.22	0.0647
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.300	5.55	0	0	5.55	0.0162
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.026	4.89	0	0	4.89	0.0142
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	2.285	5.52	0	0	5.52	0.0161
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.580	1.40	0	0	1.40	0.0041
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	1.599	3.86	0	0	3.86	0.0112
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	0.688	1.66	0	0	1.66	0.0048
City of Port Colborne	Lorraine Rd. from Lake edge to Killaly St. East	Lorraine ROW	3.250	17.60	0	0	17.60	0.0512
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW	0.563	3.08	0	0	3.08	0.0090
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW	0.121	0.75	0	0	0.75	0.0022
			134.55				343.51	1.0000

5.5.3.2 Michener Branch Drain #1 Maintenance Schedule

The following is the Maintenance Assessment table for assigning future maintenance costs using Section 23, refer to Appendix C for the calculations.

Table 12 Michener Branch Drain #1 Maintenance Schedule

Owner	Legal Text	Roll No	Area Ha	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP:59R8112 PAR	271104000404700	2.176	3.55	0	0	3.55	0.2044
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.201	1.57	0	0	1.57	0.0902
City of Port Colborne	Lakeshore Rd. East ROW	ROW	0.556	3.08	0	0	3.08	0.1775
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	0.83	0	0	0.83	0.0478
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	0.729	0.95	0	0	0.95	0.0548
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	0.73	0	0	0.73	0.0421
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.517	0.41	0	0	0.41	0.0233
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	0.40	0	0	0.40	0.0228
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	0.28	0	0	0.28	0.0161
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.295	0.38	0	0	0.38	0.0221
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	0.38	0	0	0.38	0.0217
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.205	0.27	0	0	0.27	0.0154
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.134	0.17	0	0	0.17	0.0101
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.122	0.16	0	0	0.16	0.0091
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	0.09	0	0	0.09	0.0053
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.042	0.05	0	0	0.05	0.0032
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	0.012	0.02	0	0	0.02	0.0011
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.000	0.00	0	0	0.00	0.0000
City of Port Colborne	ROW	Lorraine Rd. ROW	0.689	4.05	0	0	4.05	0.2329
			9.208	17.37	0.00	0.00	17.37	1.00

5.5.3.3 Michener Branch Drain #2 Maintenance Schedule

The following is the Maintenance Assessment table for assigning future maintenance costs using Section 23, refer to Appendix C for the calculations.

Table 13 Michener Branch Drain #2 Maintenance Schedule

Owner	Legal Text	Roll No	Area Ha	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.108	5.67	0	0	5.67	0.0885
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	3.545	8.09	0	0	8.09	0.1264
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	2.799	8.22	0	0	8.22	0.1283
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	3.17	0	0	3.17	0.0495
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	14.499	28.38	0	0	28.38	0.4431
CofPC	ROW	Lorraine ROW	1.380	8.10	0	0	8.10	0.1265
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	0.554	1.01	0	0	1.01	0.0158
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.154	0.25	0	0	0.25	0.0039
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.096	0.16	0	0	0.16	0.0025
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	0.075	0.15	0	0	0.15	0.0023
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.058	0.11	0	0	0.11	0.0017
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	0.012	0.04	0	0	0.04	0.0006
City of Port Colborne	ROW	Weaver Rd. ROW	0.121	0.71	0.00	0.00	0.71	0.01
			30.833	64.05	0.00	0.00	64.05	1.00

6 Michener Drain Report Conclusions

This report has identified a series of drain improvements that include drain maintenance to ensure suitable channel design flows are achieved. The drain improvements have been developed through plan and profile drawings.

The following are summary descriptions of the planned improvements:

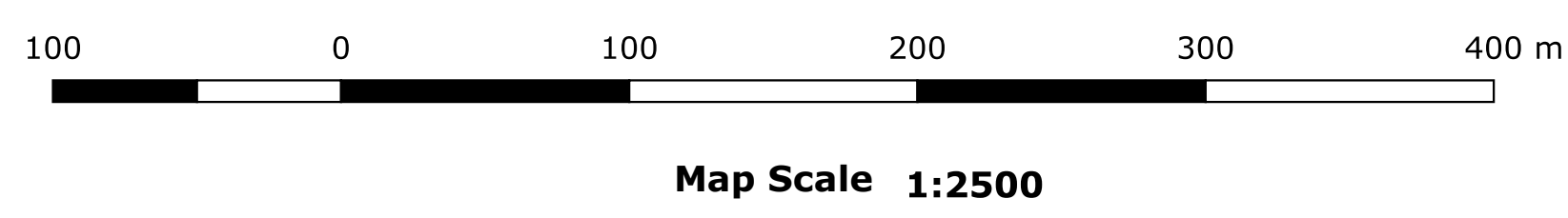
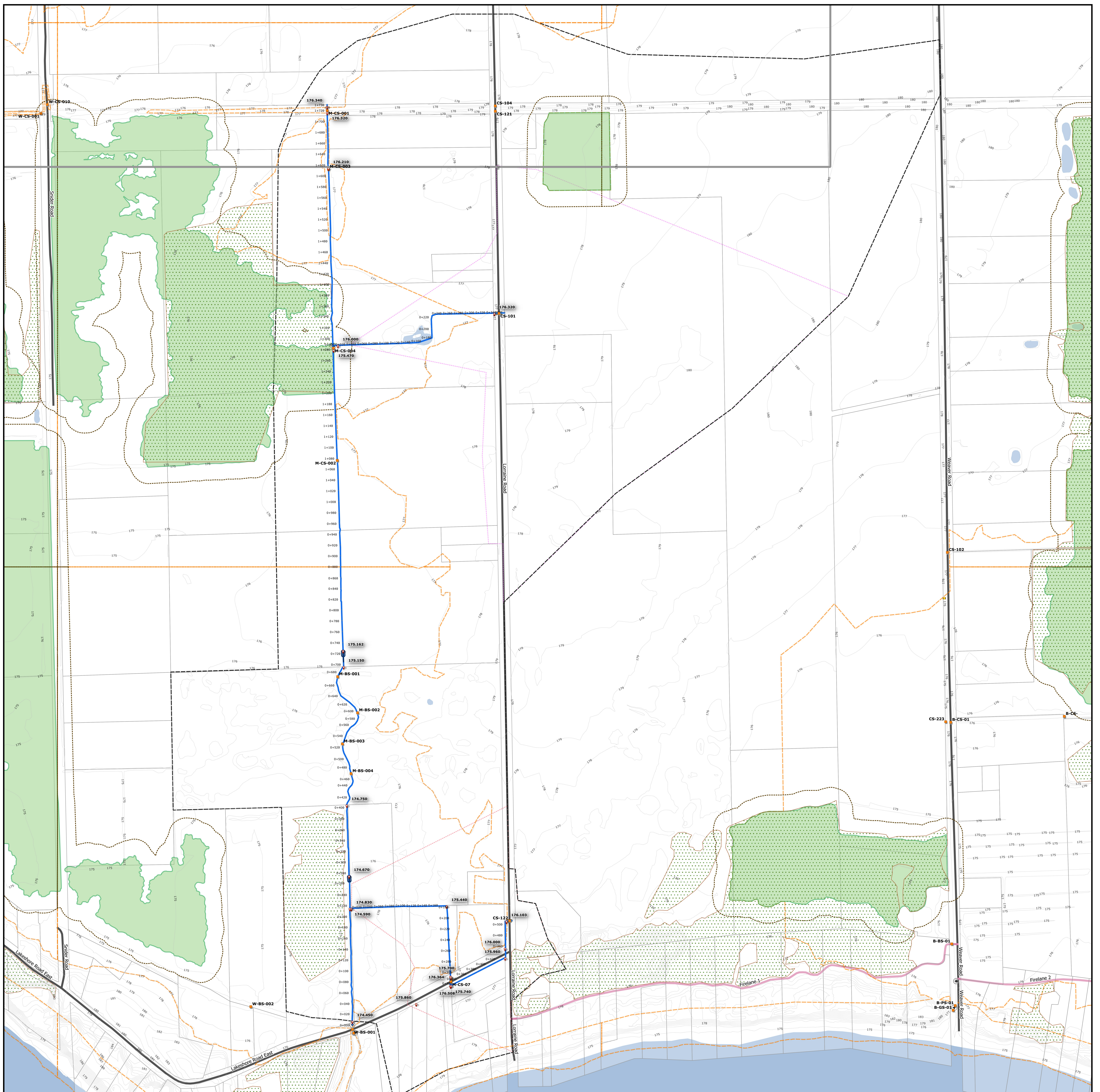
1. Spot Vegetation removal and basic maintenance at the outlet.
2. A specific program of improvement for the Michener Drain involving vegetation removal and re-grading to design grade line from 0+700 to 1+728.
3. An original private drain is to be converted to Michener Branch Drain #1 supplementing the existing roadway culvert on Lakeshore Rd. East and providing a suitable outlet for the culvert crossing Lorraine Rd. for the Section 4 petition by Road Authority. The cost of the bottom tile in channel swale and other improvements are shared with the City of Port Colborne, and the local benefitting landowners. The cost sharing is on a per metre basis for landowners and on the basis of area runoff as calculated. The Ditch Inlets and tile roadway crossing costs are 100% assigned to the City. An allowance is set aside for the possible construction impacts related to the gas line on Lakeshore Rd. E and such costs will be borne by the gas utility owner.
4. Inclusion of an original private drain as part of the Municipal Drain identified as Michener Branch Drain #2. This drain ensures the Lorraine Rd. Culvert CS-101 has a suitable outlet on the basis of a Section 4 Road Authority petition. Clearing and re-grading to design grade is planned west of the existing pond. Upstream of the pond minimal works is proposed except spot clearing of fallen trees impacting the newly identified Branch drain. No change is planned to the existing pond.

Construction of these works is to be recognized as a Section 29 allowance for land access, which has been assumed to already be in place for the main branch of the Michener for top width and a 5m allowance and is introduced for Branch #1 and Branch #2. Damages for construction, Section 30 allowances, are implemented for economic harm for crop damage from construction work impacts for farming properties only. All other construction impacts are to be restored to an equal or better condition.

Assessment is based on a shared benefit for the increased construction costs for the underground pipe works on Michener Branch #1 and allocated as a Section 22 adjacent benefit. Assessment for works related to Michener Branch #2 is Section 23 outlet benefit/liability. Assessment for the Michener Main Drain is based on Section 23 with special benefit assessed for new culvert works. The proposed new sediment basin is a Section 23 outlet liability benefit along with the overall construction costs.

This report and the proposed improvements are based on instructions from the City of Port Colborne and the local landowners. The cost of these improvements are shared across all areas that drain into the Drain by way of allowances and assessments consistent with the Drainage Act of Ontario.

**Appendix A:
Plans, Profiles**



- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> MapBook_index2500 M_designpnt crossings | <ul style="list-style-type: none"> Michener Branch #1 rowculv ALL_ASSESSMENT_PARCELS All_Drain_Parcel_Roads MUN PRIV IntegratedWaterbody | <ul style="list-style-type: none"> Contours ECA_Sig_Woodlands GR_WetlandAllowance_NPCA GR_RegulatedWetlands_NPCA GR_RegulationAreaLimit_NPCA Mich_catch DrainC Michener Drain Michener Branch #2 | <ul style="list-style-type: none"> Michener Branch #1 rowculv ALL_ASSESSMENT_PARCELS All_Drain_Parcel_Roads MUN PRIV IntegratedWaterbody |
|---|---|---|---|

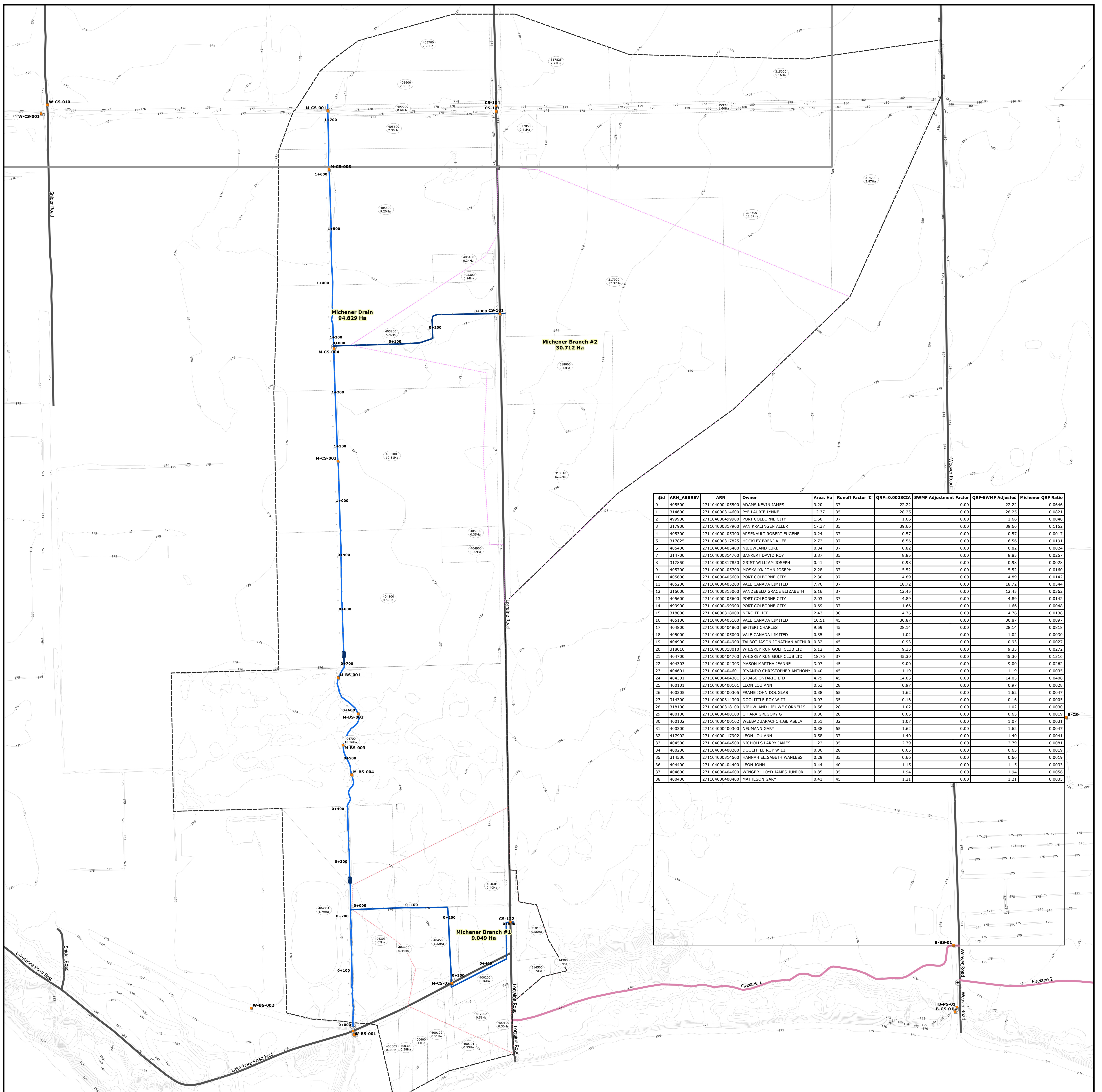
M.EP

Michener Drain

Environmental Plan

EWA Engineering Inc.
84 Fairview Street, Toronto, Ontario
 L4R 3J7
 416-460-2824
 www.ewaeng.com

Printed on: 2020-01-30



Sta	ARN_ABBREV	ARN	Owner	Area, Ha	Runoff Factor %	QRF=0.0028C1A	SWHF Adjustment Factor	QRF-SWHF Adjusted	Michener QRF Ratio
0	405500	271104000405500	ADAMS KEVIN JAMES	9.20	37	22.27	0.00	22.27	0.0546
1	314600	271104000314600	PYE LAURIE LYNE	12.37	35	28.25	0.00	28.25	0.0621
2	499900	271104000499900	PORT COLBORNE CITY	1.60	37	1.66	0.00	1.66	0.0048
3	317900	271104000317900	VAN KRALINGEN ALLERT	17.37	35	39.66	0.00	39.66	0.1152
4	405300	271104000405300	ARSENIAULT ROBERT EUGENE	0.24	37	0.57	0.00	0.57	0.0017
5	317825	271104000317825	HOCKLEY BRENDA LEE	2.72	37	6.56	0.00	6.56	0.0191
6	405400	271104000405400	NEUWLAND LUK	0.24	37	0.62	0.00	0.62	0.0024
7	314700	271104000314700	BANKERT DAVID ROY	3.87	35	8.85	0.00	8.85	0.0257
8	317850	271104000317850	GRIST WILLIAM JOSEPH	0.41	37	0.98	0.00	0.98	0.0028
9	405700	271104000405700	MOSKALYK JOHN JOSEPH	2.28	37	5.52	0.00	5.52	0.0160
10	405600	271104000405600	PORT COLBORNE CITY	2.30	37	4.89	0.00	4.89	0.0142
11	405200	271104000405200	VALE CANADA LIMITED	7.76	37	18.72	0.00	18.72	0.0544
12	315000	271104000315000	WANDERLID GRACE ELIZABETH	5.18	37	12.45	0.00	12.45	0.0362
13	405600	271104000405600	PORT COLBORNE CITY	2.03	37	4.89	0.00	4.89	0.0142
14	499900	271104000499900	PORT COLBORNE CITY	0.69	37	1.66	0.00	1.66	0.0048
15	318000	271104000318000	NERO FELICE	2.43	30	4.76	0.00	4.76	0.0138
16	405100	271104000405100	VALE CANADA LIMITED	10.51	45	30.87	0.00	30.87	0.0897
17	404800	271104000404800	SPTERI CHARLES	9.59	45	28.14	0.00	28.14	0.0818
18	405000	271104000405000	VALE CANADA LIMITED	0.39	45	1.02	0.00	1.02	0.0030
19	404900	271104000404900	TALBOT JASON JONATHAN ARTHUR	0.32	45	0.93	0.00	0.93	0.0027
20	318100	271104000318100	WHESKEY RUN GOLF CLUB LTD	5.12	28	9.35	0.00	9.35	0.0272
21	404700	271104000404700	WHESKEY RUN GOLF CLUB LTD	18.76	37	45.30	0.00	45.30	0.1316
22	404303	271104000404303	MASON MARTHA JEANNE	3.07	45	9.00	0.00	9.00	0.0262
23	404601	271104000404601	RIVANDO CHRISTOPHER ANTHONY	0.40	45	1.19	0.00	1.19	0.0035
24	404301	271104000404301	579466 ONTARIO LTD	4.79	45	14.05	0.00	14.05	0.0408
25	400101	271104000400101	LEON LOU ANN	0.33	28	0.97	0.00	0.97	0.0028
26	400305	271104000400305	FRAME JOHN DOUGLAS	0.38	65	1.62	0.00	1.62	0.0047
27	314300	271104000314300	DOOLITTLE ROY W III	0.07	35	0.16	0.00	0.16	0.0005
28	318100	271104000318100	NEUWLAND LIEUWE CORNELIS	0.56	28	1.02	0.00	1.02	0.0030
29	400100	271104000400100	O'HARA GREGORY G	0.36	28	0.65	0.00	0.65	0.0019
30	400102	271104000400102	WEEBARDUARACHCHIGE ASELA	0.51	32	1.07	0.00	1.07	0.0031
31	400300	271104000400300	NEUHANNI GARY	0.38	65	1.62	0.00	1.62	0.0047
32	417902	271104000417902	LEON LOU ANN	0.58	37	1.40	0.00	1.40	0.0041
33	404500	271104000404500	NICHOLS LARRY JAMES	1.22	35	2.79	0.00	2.79	0.0081
34	400200	271104000400200	DOOLITTLE ROY W III	0.36	28	0.65	0.00	0.65	0.0019
35	314500	271104000314500	HANNAH ELISABETH WANLESS	0.29	35	0.66	0.00	0.66	0.0019
36	404400	271104000404400	LEON JOHN	0.44	40	1.15	0.00	1.15	0.0033
37	404600	271104000404600	WINGER LLOYD JAMES JUNIOR	0.85	35	1.94	0.00	1.94	0.0056
38	400400	271104000400400	MATHESON GARY	0.41	45	1.21	0.00	1.21	0.0035

MapBook_index2500

- crossings
- Michener Branch #1
- Mich_prop
- All_Drain_Parcel_Roads
- MUN
- PRIV

100 0 100 200 300 400 m

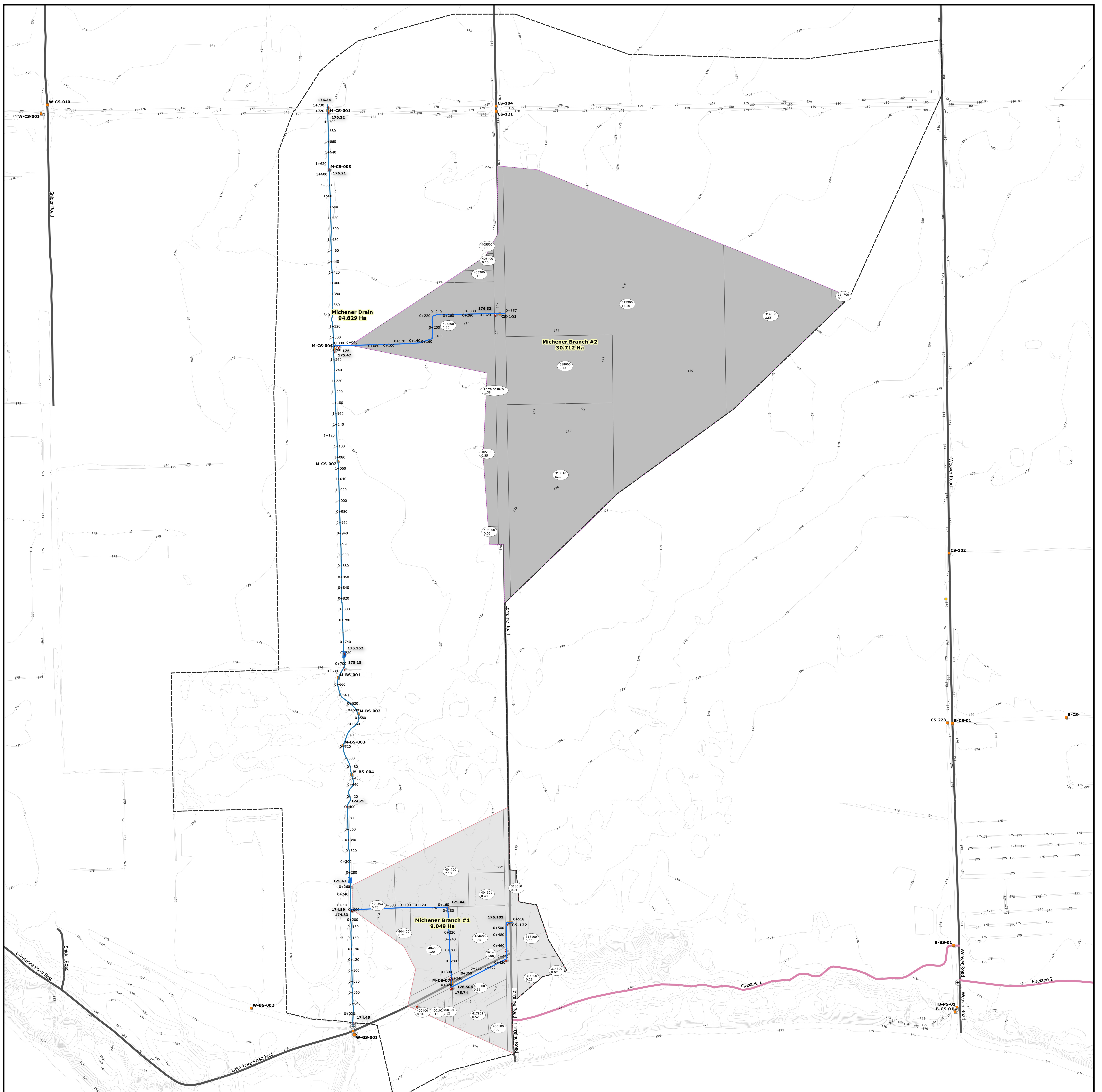
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Michener Drain

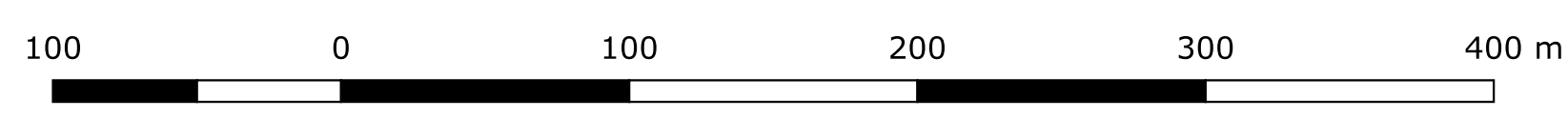
Assessed Properties by Drainage Area and ARN

EWA Engineering Inc.
84 Fairview Drive, Toronto, Ontario
 L4R 3G1
 416-460-2824
 www.ewaeng.com

Printed on: 2020-03-30



<ul style="list-style-type: none"> michener_branches entities 0-michener drain #1 text 0-michener drain #2 text 0-michener drain main text 0-michener drain main text M_designt 0-michener drain #1 0-michener drain #1 text 	<ul style="list-style-type: none"> 0-michener drain #2 0-michener drain #2 text 0-michener drain main 0-michener drain main text M_designt crossings drain_benchmarks 	<ul style="list-style-type: none"> Contours Mich_catch DrainC Michener Drain Michener Branch #2 Michener Branch #1 michener_sediment basin entities 	<ul style="list-style-type: none"> Michener Branch #2 Properties Michener Branch #1 Properties rowculv All_Drain_Parcel_Roads MUN PRIV
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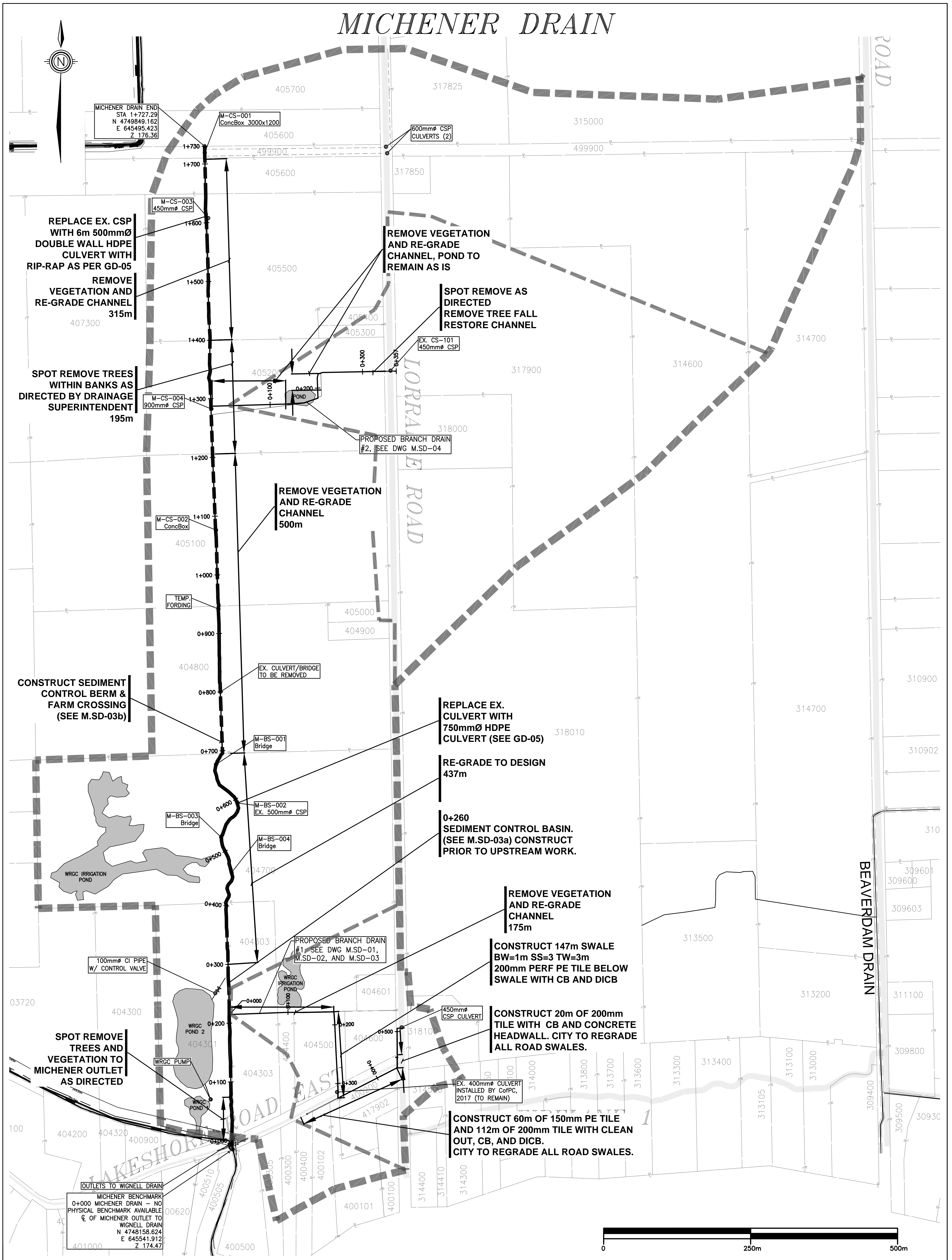
Michener Drain

Assessed Properties by Drainage Area and ARN

EWA Engineering Inc.
84 Fair Street, Williams, Ontario
 L9R 3J7
 416-260-2824 www.ewaeng.com

Printed on: 2020-01-27

MICHENER DRAIN



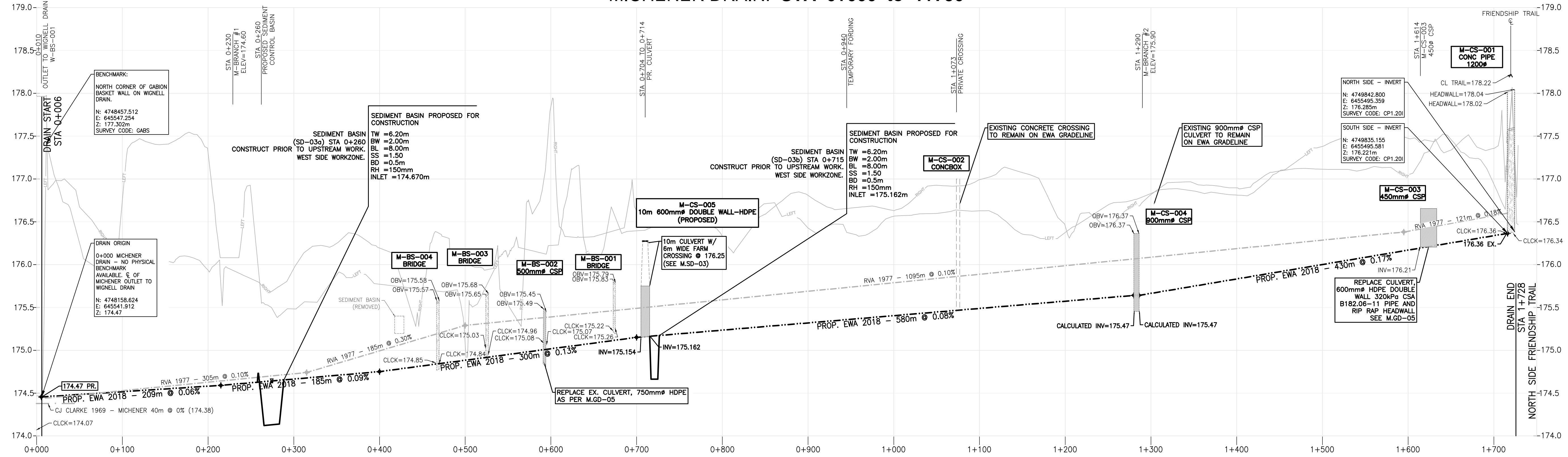
NO.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REPORT	April 15, 2020

Paul C. Marsh, P.Eng. Principal Engineer
EWA Engineering Inc.
 84 Main Street, Unionville, Ontario
 L3R 2E7
 647.400.2824
 www.ewaeng.com

MICHENER DRAIN PLAN

City of Port Colborne Michener Municipal Drain		DRAWN BY : DAC APPROVED BY : PCM PROJECT NO. : 183927 DATE : 14-Apr-20 SCALE : F.T.P.	DRAWING NO. : M.PLAN
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MICHENER DRAIN: STA 0+000 to 1+750



PR	EX	DATA	DESIGN	CONSTRUCTION	PROPERTY
174.07	174.07	AMEC SURVEY, 2013	STA: 0+006 N=4748165.6 E=645541.6 ELEV=174.45	WEST SIDE WORKZONE	0+004
174.52	174.52	AMEC SURVEY, 2013	PROP. CHANNEL: TW=4.0m BW=1.0m SS=1.5	WEST SIDE WORKZONE	ARN-404301 403.5m
174.59	174.59	AMEC SURVEY, 2013	STA: 0+215 N=4748372.8 E=645537.2 ELEV=174.59	RESTORE GRADELINE TO DESIGN GRADELINE: 160m	ARN-404303 403.5m
174.66	174.66	AMEC SURVEY, 2013	PROP. CHANNEL: TW=3.8m BW=0.8m SS=1.5	RESTORE GRADELINE TO DESIGN GRADELINE: 282m	ARN-404700 287.8m
174.75	174.75	AMEC SURVEY, 2013	STA: 0+400 N=4748557.6 E=645532.2 ELEV=174.75	RESTORE GRADELINE TO DESIGN GRADELINE: 282m	ARN-404800 251.7m
174.83	174.83	AMEC SURVEY, 2013	PROP. CHANNEL: TW=3.6m BW=0.6m SS=1.5	CONSTRUCT 6m WIDE FARM CROSSING c/w 10m HDPE CULVERT CLEAR VEG. AND RE-GRADE CHANNEL. 516m	ARN-405100 259m
175.02	175.02	AMEC SURVEY, 2013	STA: 0+700 N=4748821.2 E=645525.7 ELEV=175.15	CONSTRUCT 6m WIDE FARM CROSSING c/w 10m HDPE CULVERT CLEAR VEG. AND RE-GRADE CHANNEL. 516m	ARN-405200 193.5m
175.32	175.32	EWA/CoFPC RTK GPS, MARCH 2019	PROP. CHANNEL: TW=4.0m BW=1.0m SS=1.5	SPOT REMOVE TREES WITHIN BANKS AS DIRECTED BY DRAINAGE SUPERINTENDENT. 193.5m	ARN-405500 249.5m
175.49	175.49	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+280 N=4749399.9 E=645506.3 ELEV=175.64	CLEAR VEG. AND RE-GRADE CHANNEL. 214m	ARN-405600 61m
175.57	175.57	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+286 N=4749399.9 E=645506.3 ELEV=175.64	CLEAR VEG. AND RE-GRADE CHANNEL. 214m	ARN-405600 61m
175.66	175.66	EWA/CoFPC RTK GPS, MARCH 2019	PROP. CHANNEL: TW=3.4m BW=0.4m SS=1.5	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN-405600 61m
175.83	175.83	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+716 N=4749349.9 E=645495.5 ELEV=176.36	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN-405600 61m
176.00	176.00	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+716 N=4749349.9 E=645495.5 ELEV=176.36	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN-405600 61m
176.17	176.17	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+716 N=4749349.9 E=645495.5 ELEV=176.36	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN-405600 61m
176.34	176.34	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+716 N=4749349.9 E=645495.5 ELEV=176.36	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN-405600 61m
176.45	176.45	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+716 N=4749349.9 E=645495.5 ELEV=176.36	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN-405600 61m

- NOTES:**
- DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED
 - CATCHMENT BOUNDARIES ARE BASED ON THE NPCA DIGITAL ELEVATION MODEL (DEM) 2010
 - SPECIFIC POINTS IN THE SURFACE ARE BASED ON THE FOLLOWING SURVEYS:
 - DRAIN CROSSINGS & SPOT CHANNELS: AMEC SURVEY, 2013
 - AS CONSTRUCTED SURVEY BY CoFPC, 2016 STATION 0+000-1+940
 - SUPPLEMENTARY SURVEY BY CoFPC, 2018
 - WEIBE ENGINEERING SURVEY, 2008

THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.

BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE DONE TO THEM.

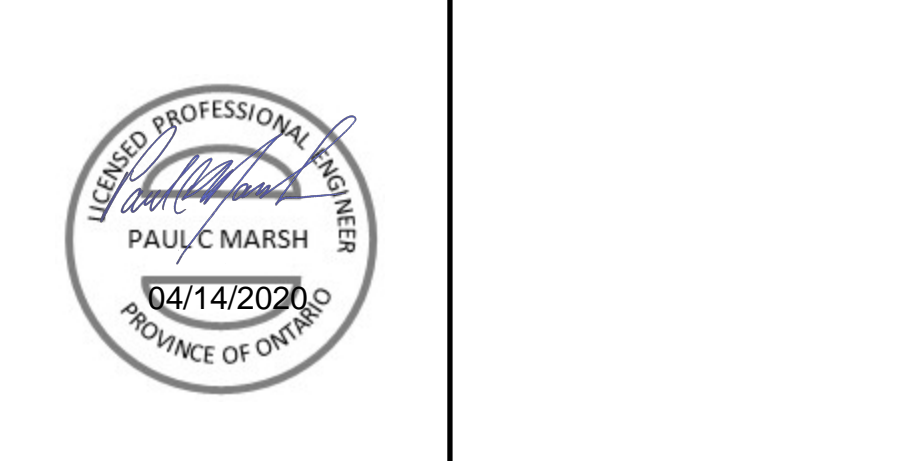
- SPATIAL DATA:**
- DTM DATA FROM NIAGARA PENINSULA CONSERVATION AUTHORITY
 - HORIZONTAL DATUM: UTM NAD83-CSR5 ZONE 17N
 - VERTICAL DATUM: CGVD28-1978
 - ACCURACY: ABSOLUTE HORIZONTAL AND VERTICAL POSITIONAL ACCURACIES OF ±0.5m

LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE - EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE RVA, 1979

1	ISSUED FOR BASELINE REPORT	April 15, 2020
NO.	REVISION DESCRIPTION	DATE

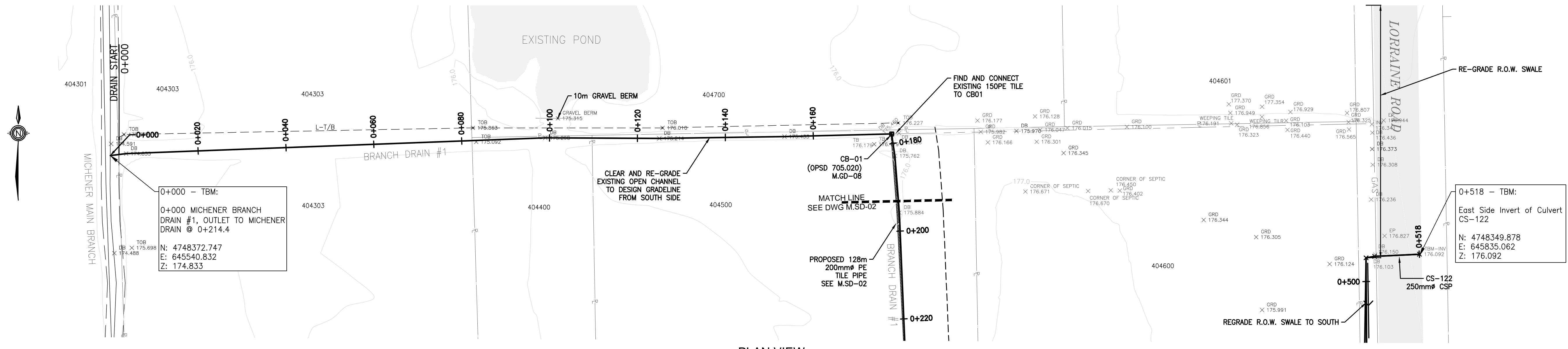
MICHENER MUNICIPAL DRAIN PROFILE



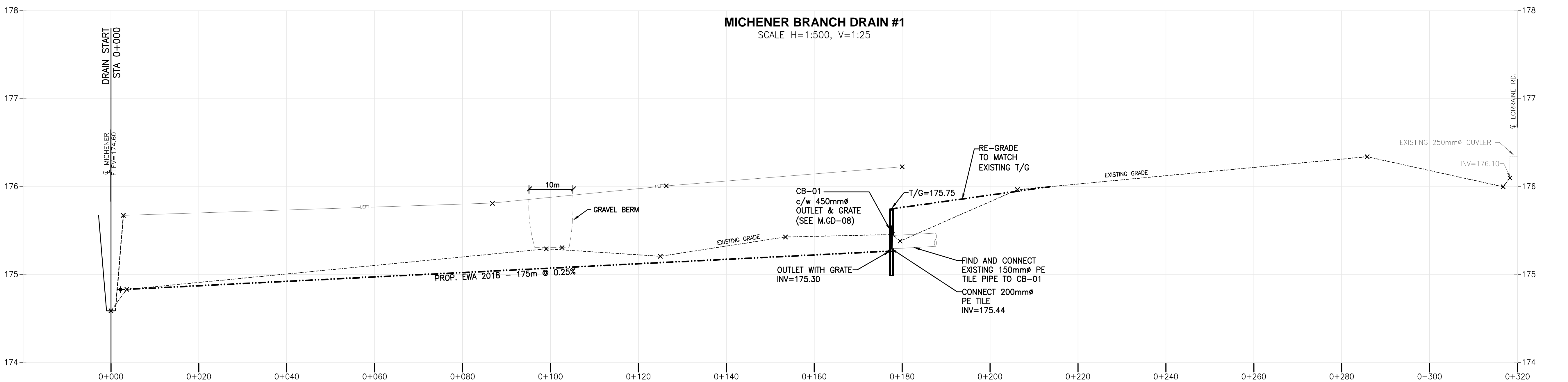
CITY OF PORT COLBORNE

Paul C. Marsh, P.Eng. Principal Engineer
EWA Engineering Inc.
 84 Main Street, Unionville, Ontario
 L3R 2E7
 647.400.2824
 www.ewaeng.com

DRAWN BY: DAC	APPROVED BY: PCM	PROJECT NO.: -	DRAWING NO.:
DESIGNED BY: PCM	DATE: 14-Apr-20	SCALE: H=1:2500 V=1:25	M.P1



PLAN VIEW
SCALE 1:500



MICHERNER BRANCH DRAIN #1
SCALE H=1:500, V=1:25

PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)	PR EX (m)								
174.92	174.97	175.00	175.02	175.07	175.12	175.17	175.22	175.29	175.33	175.37	175.42	175.47	175.52	175.57	175.62	175.67	175.72	175.77	175.82	175.87							
(-0.06m)	(-0.04m)	(-0.03m)	(-0.03m)	(-0.02m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)	(-0.01m)							
EWA/CoFPC RTK GPS SURVEY, SEPT. 2019																											
STA: 0+002 N=4748372.6 E=645539.2 ELEV=174.83										EX. OPEN CHANNEL: BW=0.4m TW=2.5m SS=1.5																	
CLEAR AND RE-GRADE TO DESIGN GRADELINE. SOUTH SIDE WORKZONE																											
175m																											
SOUTH SIDE WORKZONE																											
ARN: 404303				ARN: 404700				ARN: 404601				ARN: 404600				ARN: 404400				ARN: 404500							
0+002		0+082		0+110		0+177		0+197		0+217		0+318		0+002		0+082		0+110		0+177		0+197		0+217		0+318	
80m		28m		67m		20m																					

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 - SUPPLEMENTARY SURVEY BY CoFPC, 2018
 - WEIBE ENGINEERING SURVEY, 2008

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SPATIAL DATA:

DTM DATA FROM NIAGARA PENINSULA CONSERVATION AUTHORITY

- HORIZONTAL DATUM: UTM NAD83-CRS ZONE 17N
- VERTICAL DATUM: CGVD28-1978
- ACCURACY: ABSOLUTE HORIZONTAL AND VERTICAL POSITIONAL ACCURACIES OF ±0.5m

LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE RIA, 1979

1	ISSUED FOR REPORT	April 15, 2020
NO.	REVISION DESCRIPTION	DATE

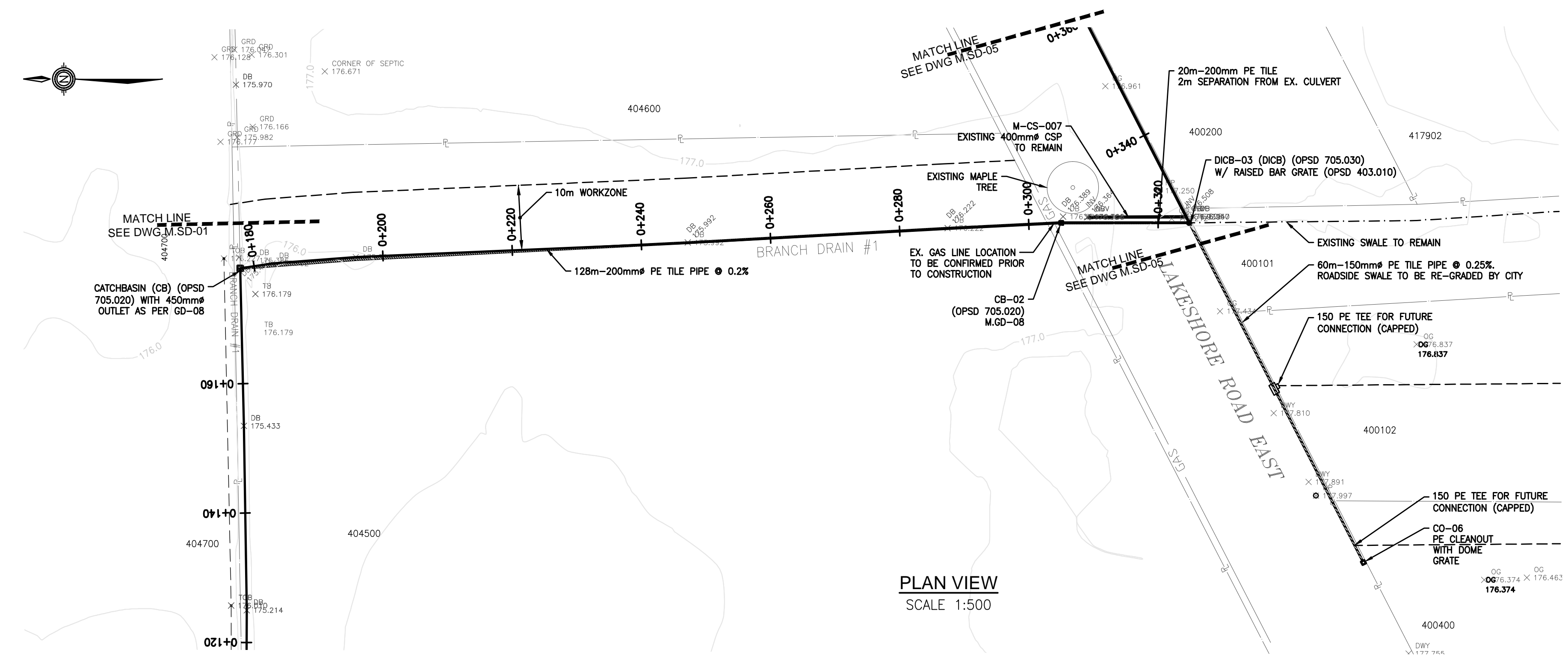


MICHERNER MUNICIPAL DRAIN SPECIFIC DETAIL

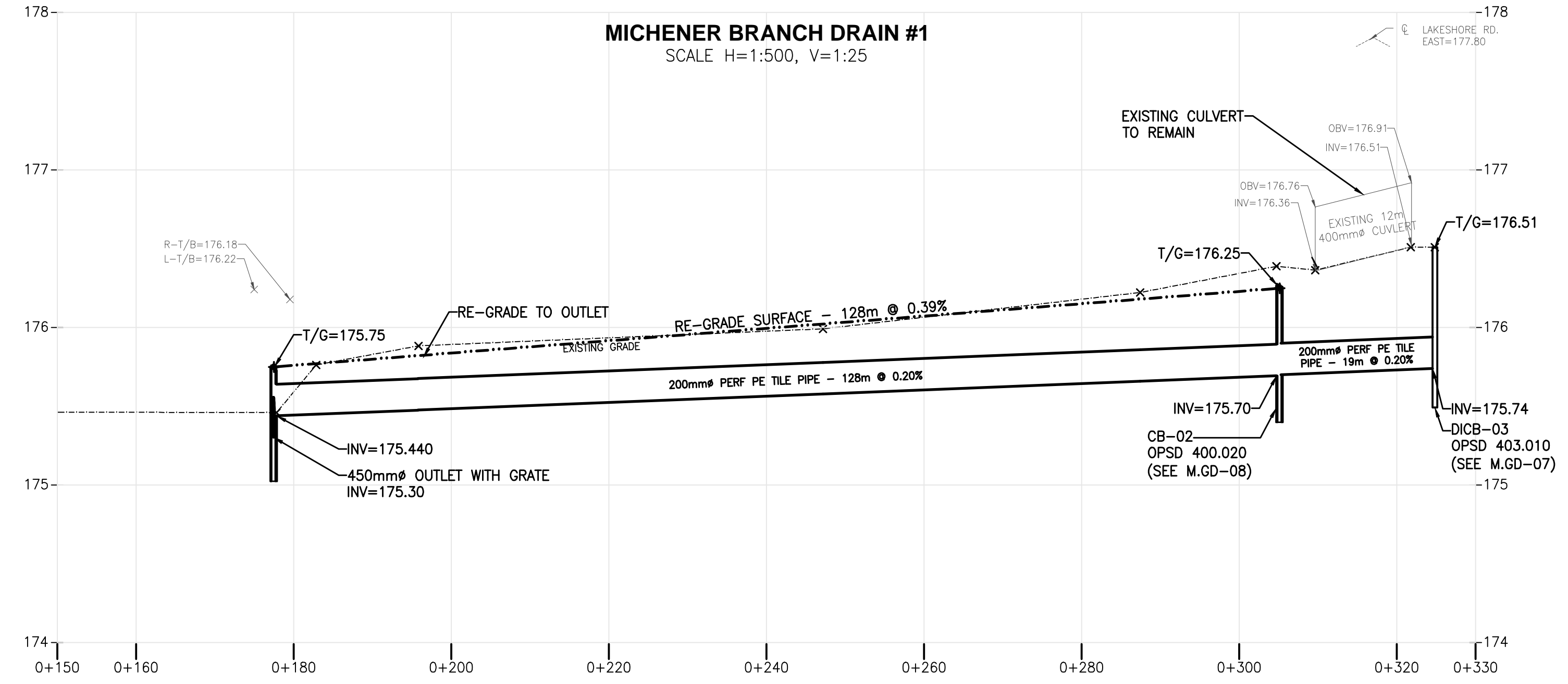


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DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : 189399	DRAWING NO. : M.SD-01
DESIGNED BY : PCM	DATE : 14-Apr-20	SCALE : AS SHOWN	



PLAN VIEW
SCALE 1:500



PROPERTY INFO	CONSTRUCTION NOTES	DESIGN POINT DATA	DATA NOTES	INVERT CENTERLINE ELEVATION
ARN: 404700		INVERT=175.30		PR EX 175.46 (m)
		STA: 0+177 N=4748357.3 E=645716.8 ELEV=175.75		PR EX 175.46 (m)
		V-CHANNEL: BW=0.6m TW=2.1m SS=3		PR EX 175.92 (-0.02m)
	128m - 200mm PERF PE TILE PIPE @ 0.20% AND RE-GRADE TO OUTLET.			PR EX 175.99 (-0.02m)
	10m EAST SIDE WORKZONE			PR EX 176.07 (-0.01m)
				PR EX 176.15 (-0.03m)
				PR EX 176.23 (-0.11m)
				PR EX 176.49 (m)
				PR EX 176.51 (m)
				PR EX 176.54 (m)
				PR EX 176.54 (m)

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LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION
	DATA POINT FROM HISTORICAL DESIGN GRADELINE

1	ISSUED FOR REPORT	April 15, 2020
NO.	REVISION DESCRIPTION	DATE



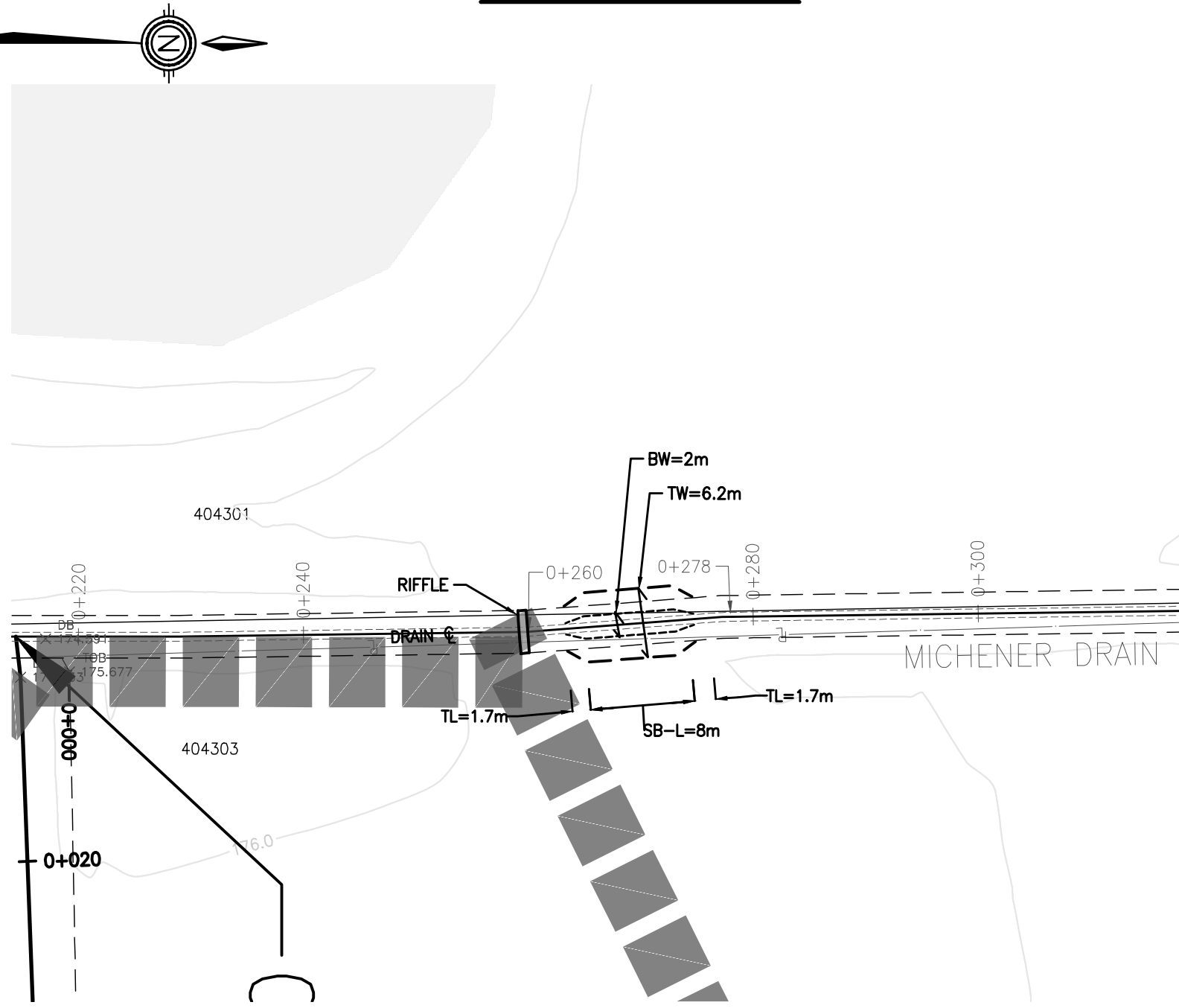
MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

CITY OF PORT COLBORNE

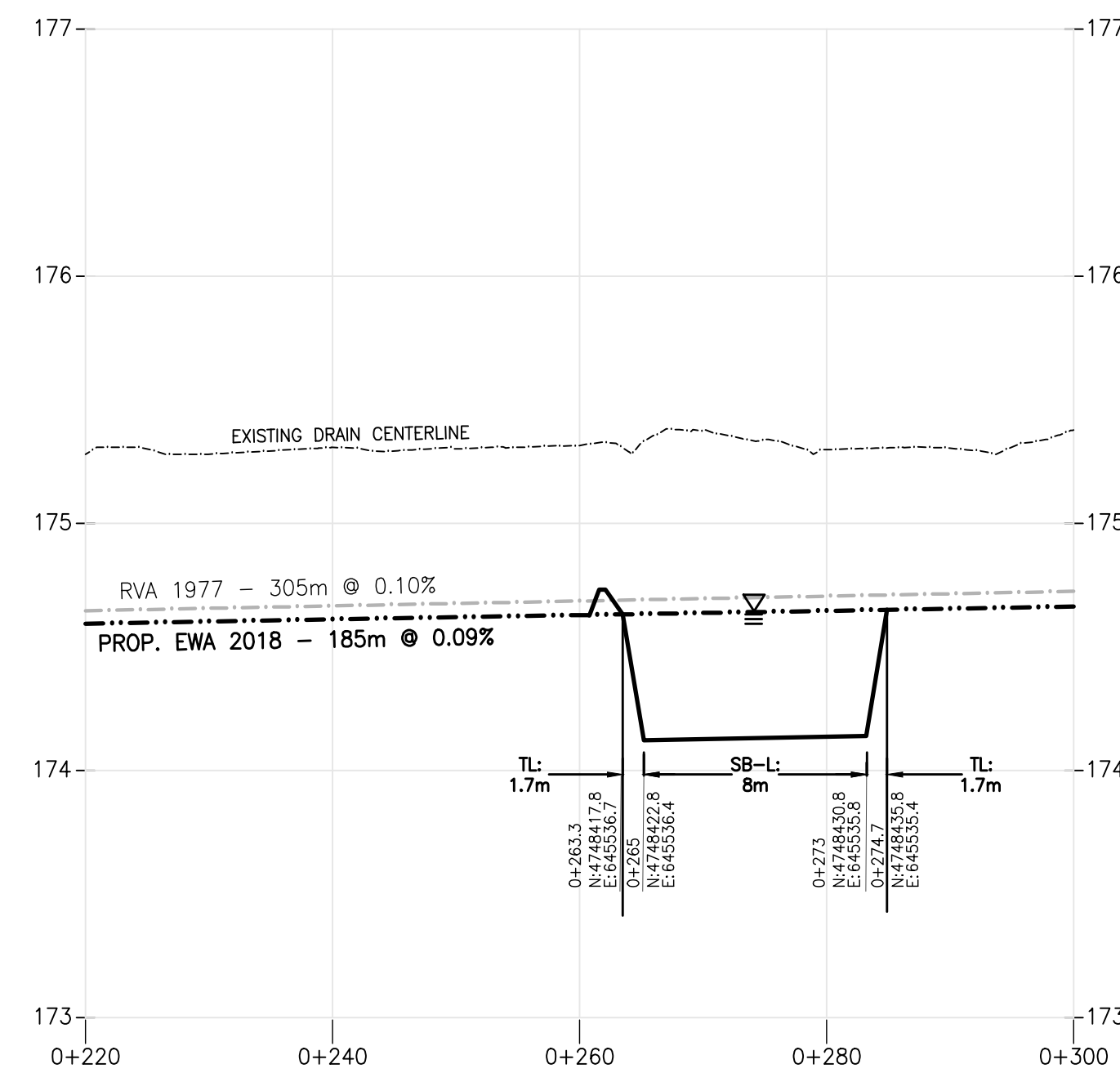
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DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : 189399	DRAWING NO. : M.SD-02
DESIGNED BY : PCM	DATE : 14-Apr-20	SCALE : AS SHOWN	

M.SD-03a



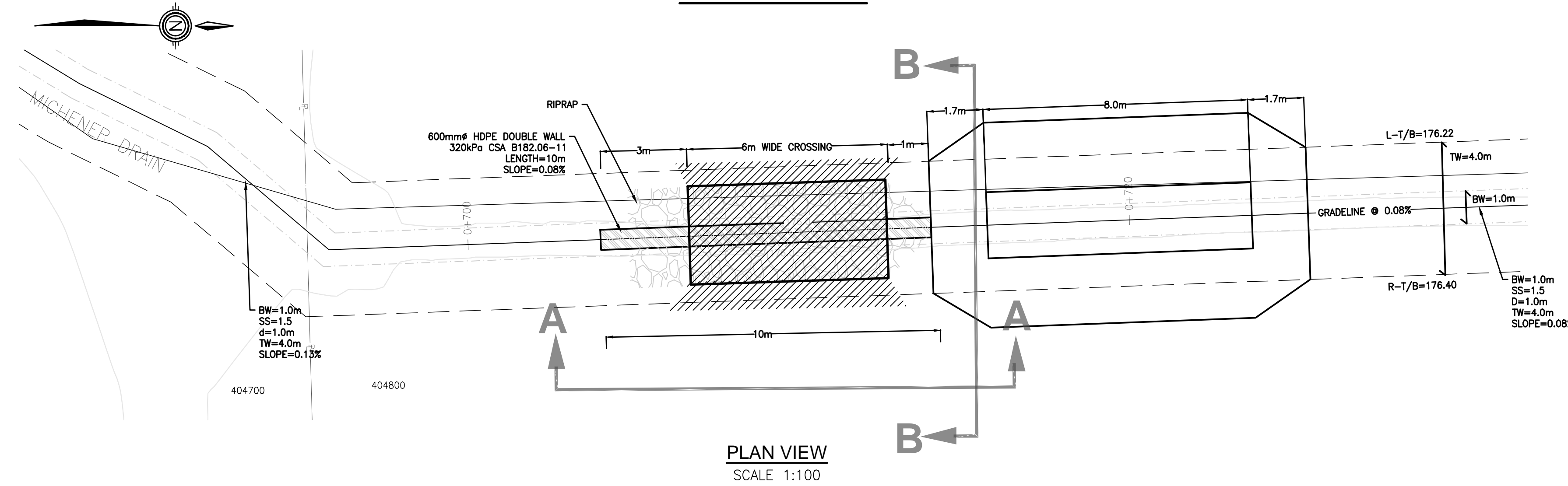
PLAN VIEW
SCALE 1:500



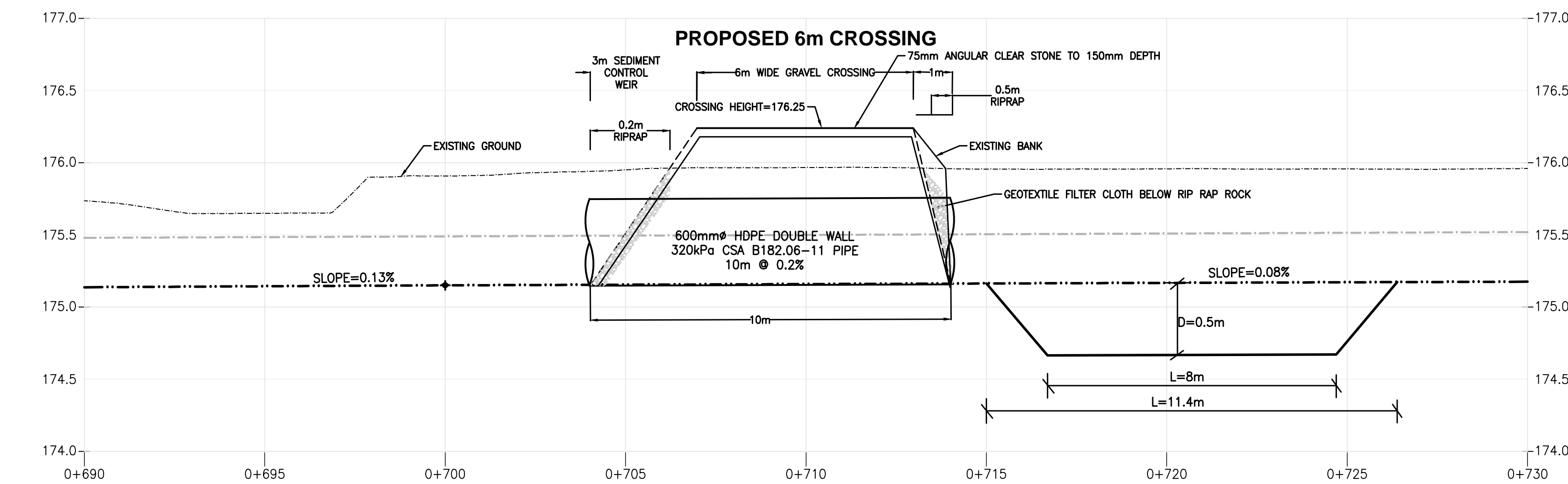
PROFILE VIEW
SCALE H=1:500, V=1:25

PROPERTY	INFO	CONSTRUCTION	DESIGN GRADE	POINT DATA
DRAIN CENTERLINE ELEVATION	PR 174.59	EX 175.25	(-0.66m)	
DRAIN CENTERLINE ELEVATION	PR 174.61	EX 175.31	(-0.70m)	
DRAIN CENTERLINE ELEVATION	PR 174.93	EX 175.59	(-0.66m)	
DRAIN CENTERLINE ELEVATION	PR 174.65	EX 175.30	(-0.65m)	
DRAIN CENTERLINE ELEVATION	PR 174.66	EX 175.38	(-0.71m)	
DATA NOTES	NPCA DEM DATA			
CONSTRUCTION NOTES	STA: 0+274.7 N=4748432.536 E=645535.878 ELE=174.670 CONSTRUCT SEDIMENT BASIN (90-10) STA 0+280 BW=2.0m SPOILS TO BE SPREAD BL=4.0m ADJACENT TO SEDIMENT BASIN ON THE BANK SS=1.5 BD=40.0m BH=150mm ARN:404301 ARN:404303			

M.SD-03b

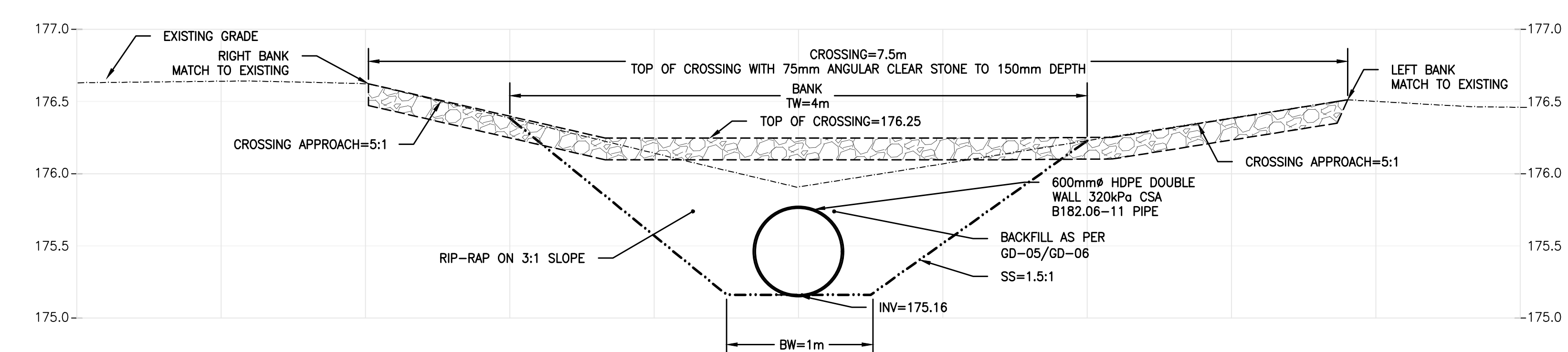


PLAN VIEW
SCALE 1:100



SECTION A-A
SCALE H=1:100, V=1:25

PROPERTY	INFO	CONSTRUCTION	DESIGN GRADE	POINT DATA
DRAIN CENTERLINE ELEVATION	PR 175.14	EX 175.65	(-0.51m)	
DRAIN CENTERLINE ELEVATION	PR 175.15	EX 175.91	(-0.76m)	
DRAIN CENTERLINE ELEVATION	PR 175.15	EX 175.95	(-0.80m)	
DRAIN CENTERLINE ELEVATION	PR 175.16	EX 175.97	(-0.81m)	
DRAIN CENTERLINE ELEVATION	PR 175.16	EX 175.98	(-0.82m)	
DRAIN CENTERLINE ELEVATION	PR 175.17	EX 175.98	(-0.79m)	
DRAIN CENTERLINE ELEVATION	PR 175.17	EX 175.96	(-0.79m)	
DRAIN CENTERLINE ELEVATION	PR 175.18	EX 175.98	(-0.76m)	
DATA NOTES	STA: 0+700 D/S INVERT N=4748821.2 E=645525.7 ELE=175.15 STA: 0+704 D/S INVERT N=4748825.2 E=645525.5 ELE=175.154 EWA 2018 STA: 0+714 U/S INVERT N=4748835.2 E=645525.2 ELE=175.162 EWA 2018 CONSTRUCT 6m WIDE CROSSING WITH 5:1 APPROACH INSTALL 10m OF 600mm HDPE DOUBLE WALL PIPE 11.4m SEDIMENT BASIN ARN: 404700 ARN: 404800			



SECTION B-B
SCALE 1:25

- NOTES:**
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 - WEIBE ENGINEERING SURVEY, 2008

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SPATIAL DATA:

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- HORIZONTAL DATUM: UTM NAD83-CSR3 ZONE 17N
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- ACCURACY: ABSOLUTE HORIZONTAL AND VERTICAL POSITIONAL ACCURACIES OF ±0.5m

LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE (RA, 1979)

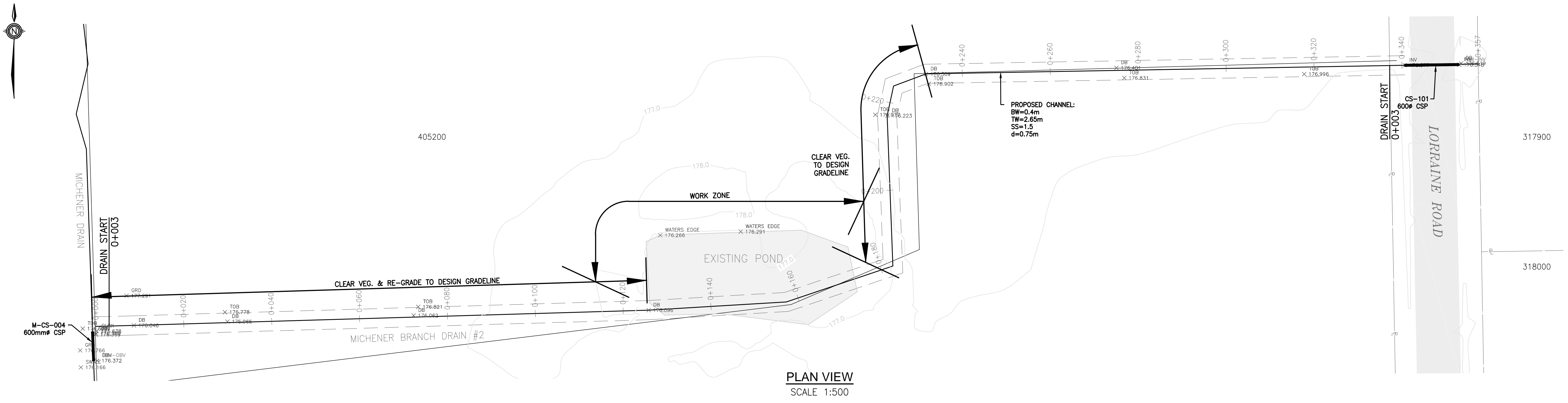
NO.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REPORT	April 15, 2020

PAUL C. MARSH
 LICENSED PROFESSIONAL ENGINEER
 PROVINCE OF ONTARIO

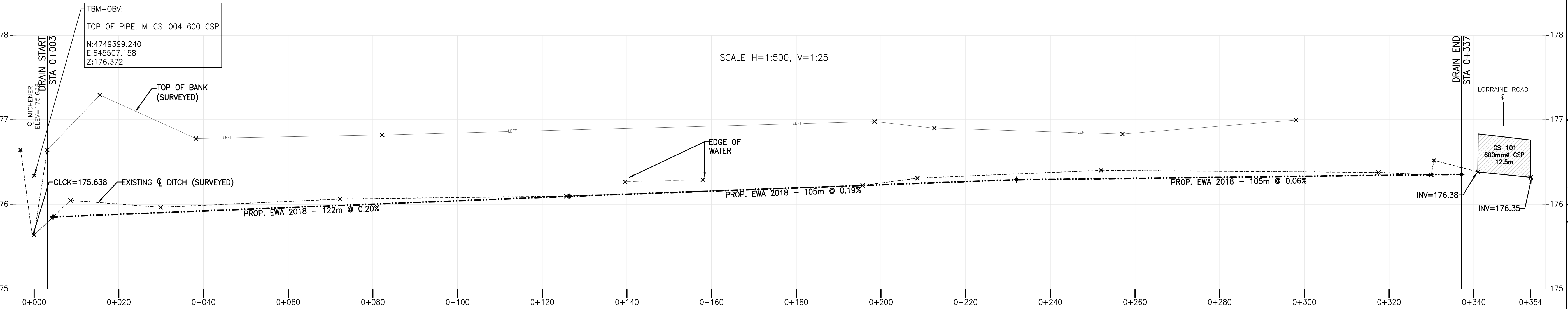
MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

CITY OF PORT COLBORNE
 Paul C. Marsh, P.Eng. Principal Engineer
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DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : 189399	DRAWING NO. : M.SD-03
DESIGNED BY : PCM	DATE : 14-Apr-20	SCALE : N/A	



PLAN VIEW
SCALE 1:500



SCALE H=1:500, V=1:25

DRAIN ELEVATION	DATA NOTES	CONSTRUCTION NOTES	PROPERTY INFO
PR 175.64 EX 175.64 (0.00 m)	EWA/CoPC RTK GPS SURVEY, DEC. 2018	0+000	ARN: 405200 340m
PR 175.86 EX 175.86 (-0.12 m)		CLEAR VEGETATION AND RE-GRADE TO DESIGN GRADELINE. NORTH SIDE WORKZONE	
PR 175.92 EX 175.92 (-0.07 m)			
PR 175.96 EX 175.96 (-0.07 m)			
PR 176.04 EX 176.04 (-0.04 m)			
PR 176.08 EX 176.08 (-0.01 m)			
PR 176.12 EX 176.12 (0.00 m)			
PR 176.16 EX 176.16 (0.00 m)			
PR 176.19 EX 176.19 (0.00 m)			
PR 176.23 EX 176.23 (-0.02 m)			
PR 176.27 EX 176.27 (-0.07 m)			
PR 176.29 EX 176.29 (-0.09 m)			
PR 176.31 EX 176.31 (-0.09 m)			
PR 176.33 EX 176.33 (-0.05 m)			
PR 176.34 EX 176.34 (-0.03 m)			
PR 176.40 EX 176.40 (0.00 m)			

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LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE RIA, 1979

NO.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REPORT	April 15, 2020

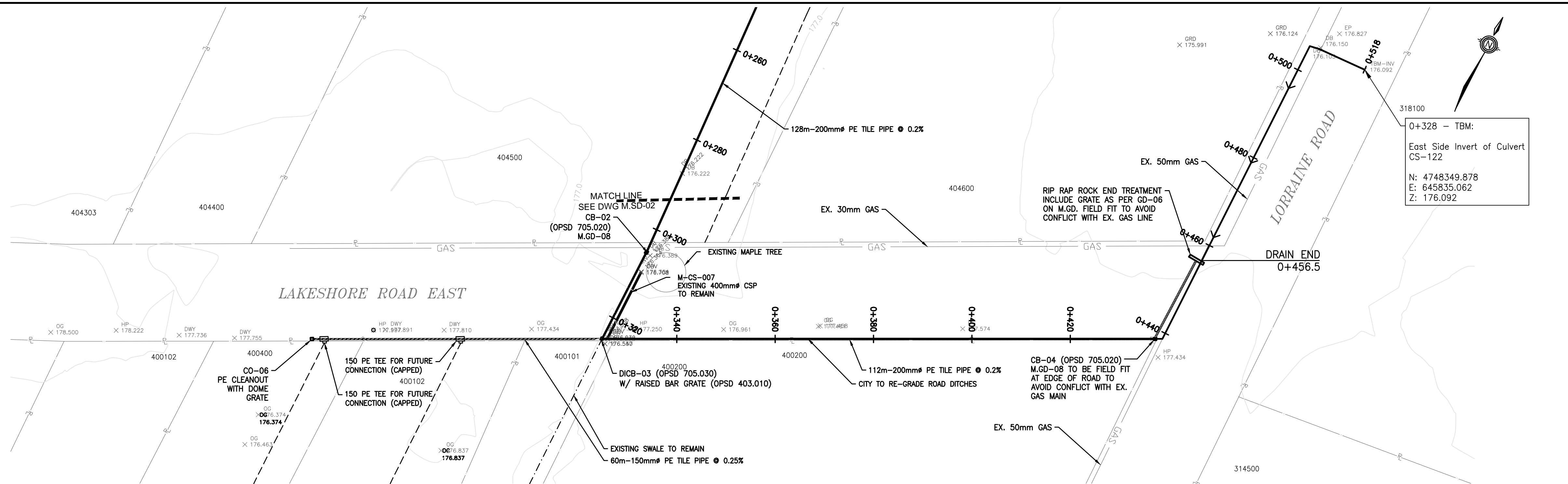


MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

CITY OF PORT COLBORNE

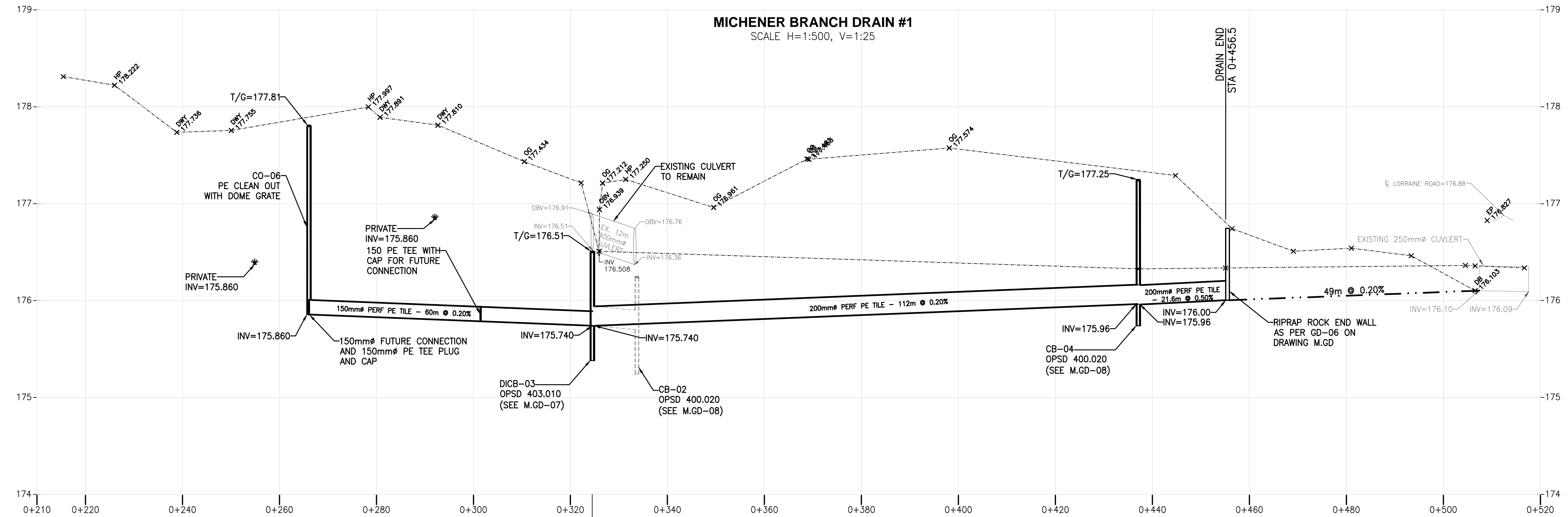
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DRAWN BY: DAC	APPROVED BY: PCM	PROJECT NO.: 189399	DRAWING NO.: M.SD-04
DESIGNED BY: PCM	DATE: 14-Apr-20	SCALE: AS SHOWN	



PLAN VIEW
SCALE 1:500

MICHENER BRANCH DRAIN #1
SCALE H=1:500, V=1:25



DRAIN CENTERLINE ELEVATION	PR	EX	(m)
178.27	PR	EX	()
177.74	PR	EX	()
177.84	PR	EX	()
177.92	PR	EX	()
177.66	PR	EX	()
177.26	PR	EX	()
177.49	PR	EX	()
176.45	PR	EX	()
177.50	PR	EX	()
176.33	PR	EX	()
176.86	PR	EX	()
176.35	PR	EX	()
176.84	PR	EX	()
176.54	PR	EX	()
176.28	PR	EX	()
176.35	PR	EX	()
176.28	PR	EX	()
176.35	PR	EX	()

DATA NOTES
EWA/CoIFC RTK GPS SURVEY, SEPT. 2019

CONSTRUCTION DESIGN GRADE POINT DATA				
STA: -0+060 N=4748203.639 E=645669.745 ELE=175.86	STA: 0+325 N=4748230.424 E=645722.024 ELE=175.74	STA: 0+437.3 N=4748281.877 E=645822.427 ELE=175.96	STA: 0+458.6 N=4748299.625 E=645822.204 ELE=176.00	STA: 0+505.5 N=4748349.396 E=645824.803 ELE=176.10

PROPERTY INFO	CONSTRUCTION NOTES	PROPERTY INFO
LAKESHORE ROAD E R.O.W. 30m ARN: 400102	-0+079.6	LAKESHORE ROAD E R.O.W. 31m ARN: 400400
LAKESHORE ROAD E R.O.W. 33m ARN: 400102	-0+048.6	LAKESHORE ROAD E R.O.W. 18m ARN: 400101
LAKESHORE ROAD E R.O.W. 112m ARN: 400200	0+326.9	LAKESHORE ROAD E R.O.W. 68m ARN: 404600
LORRAINE ROAD R.O.W.	0+437.5	LORRAINE ROAD R.O.W.

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LEGEND

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	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE (RIA, 1979)

NO.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REPORT	MAY/06/2020

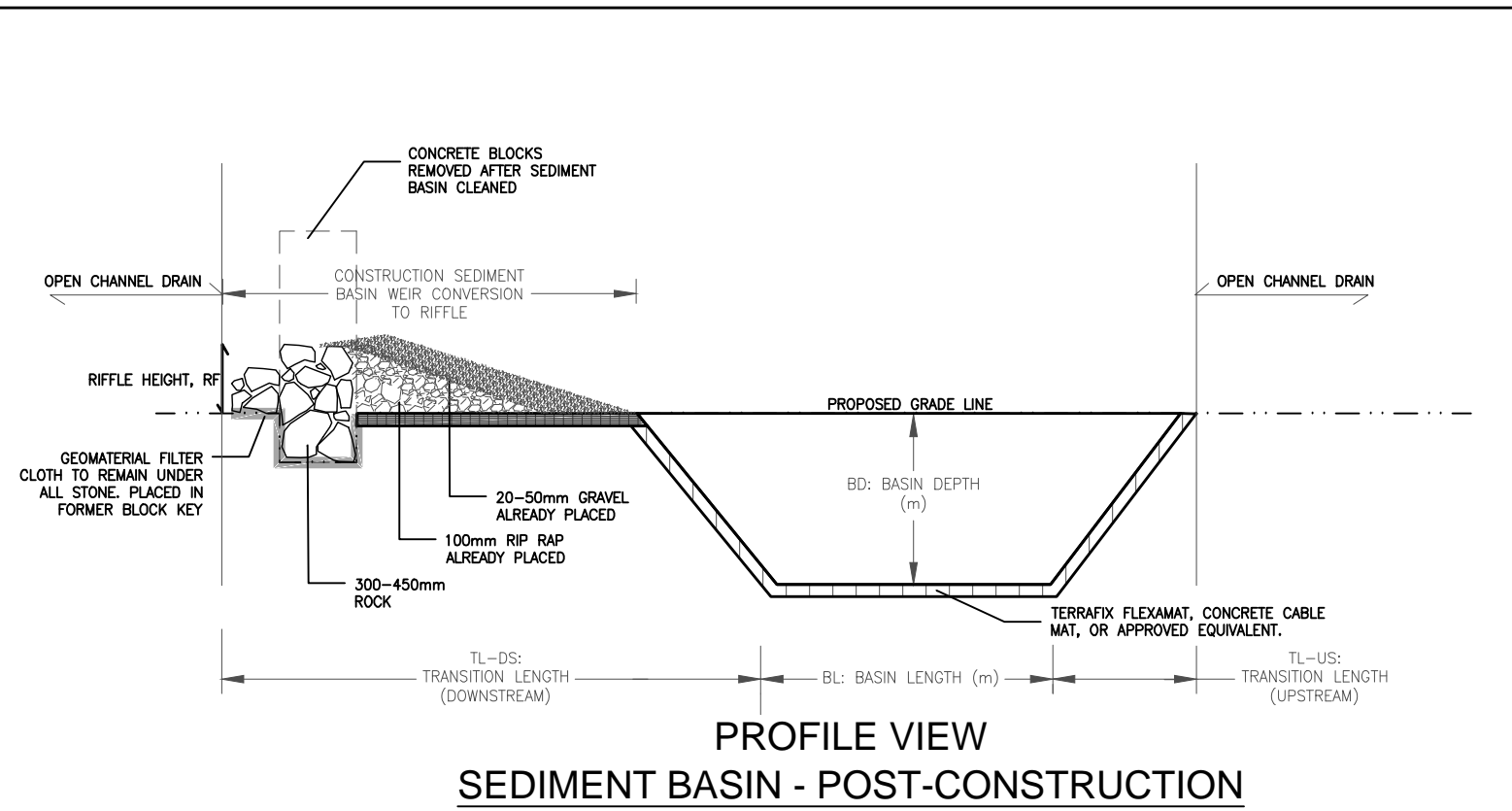
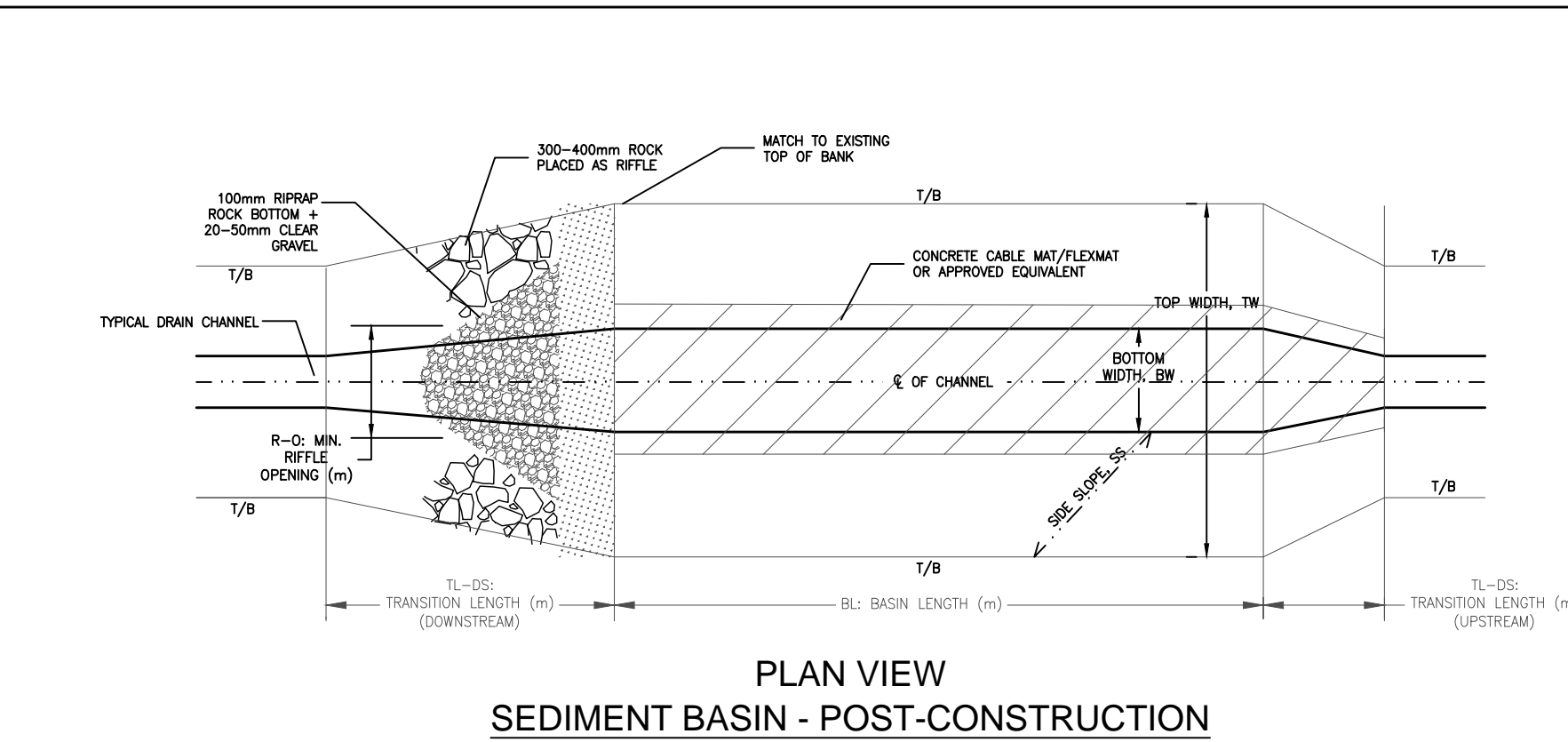
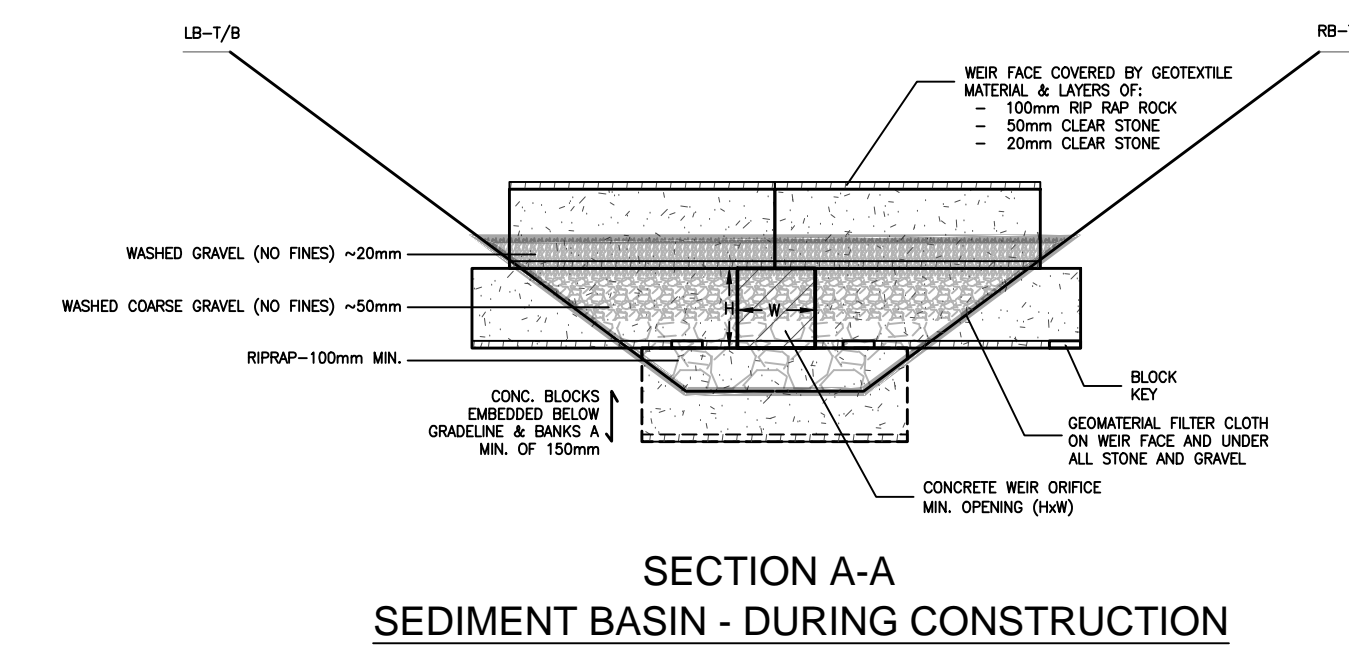
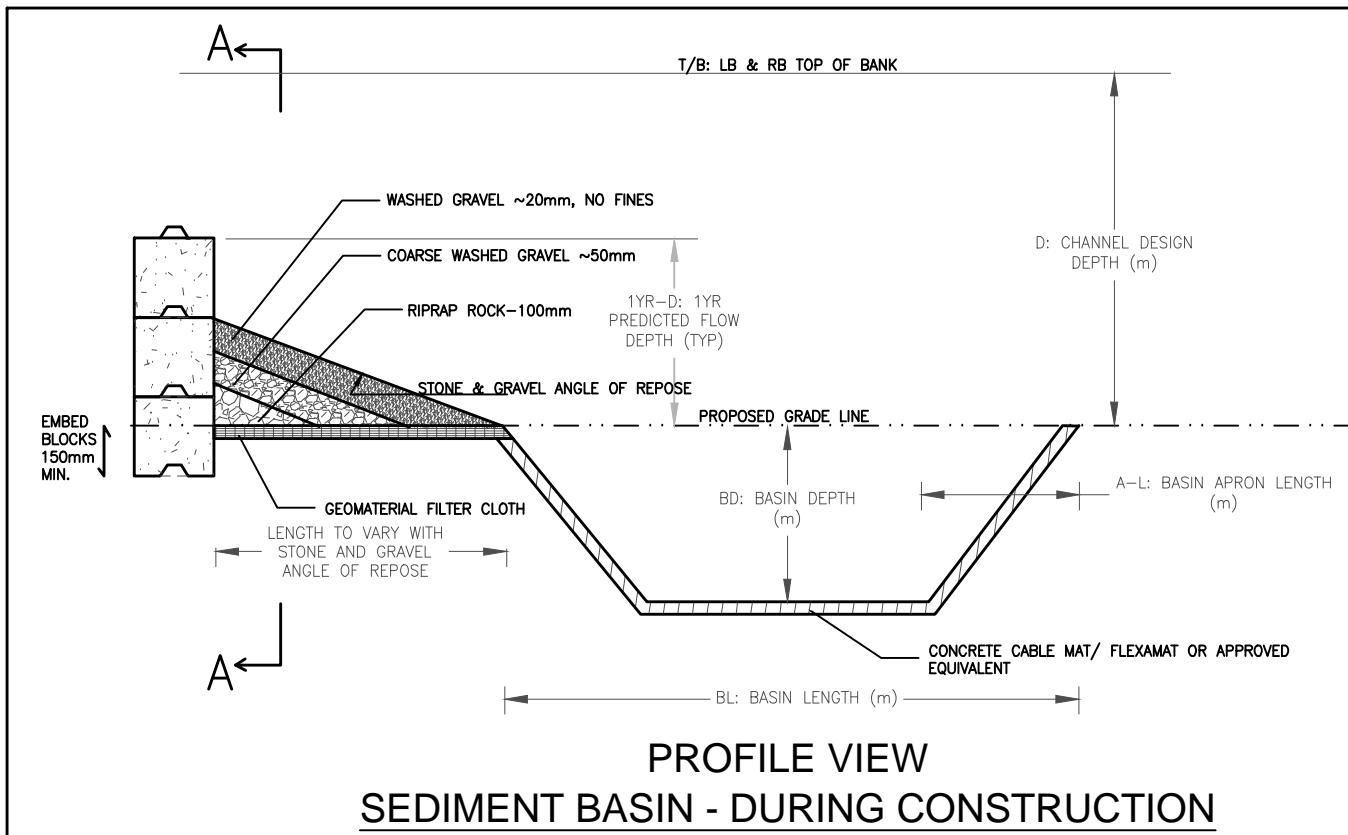
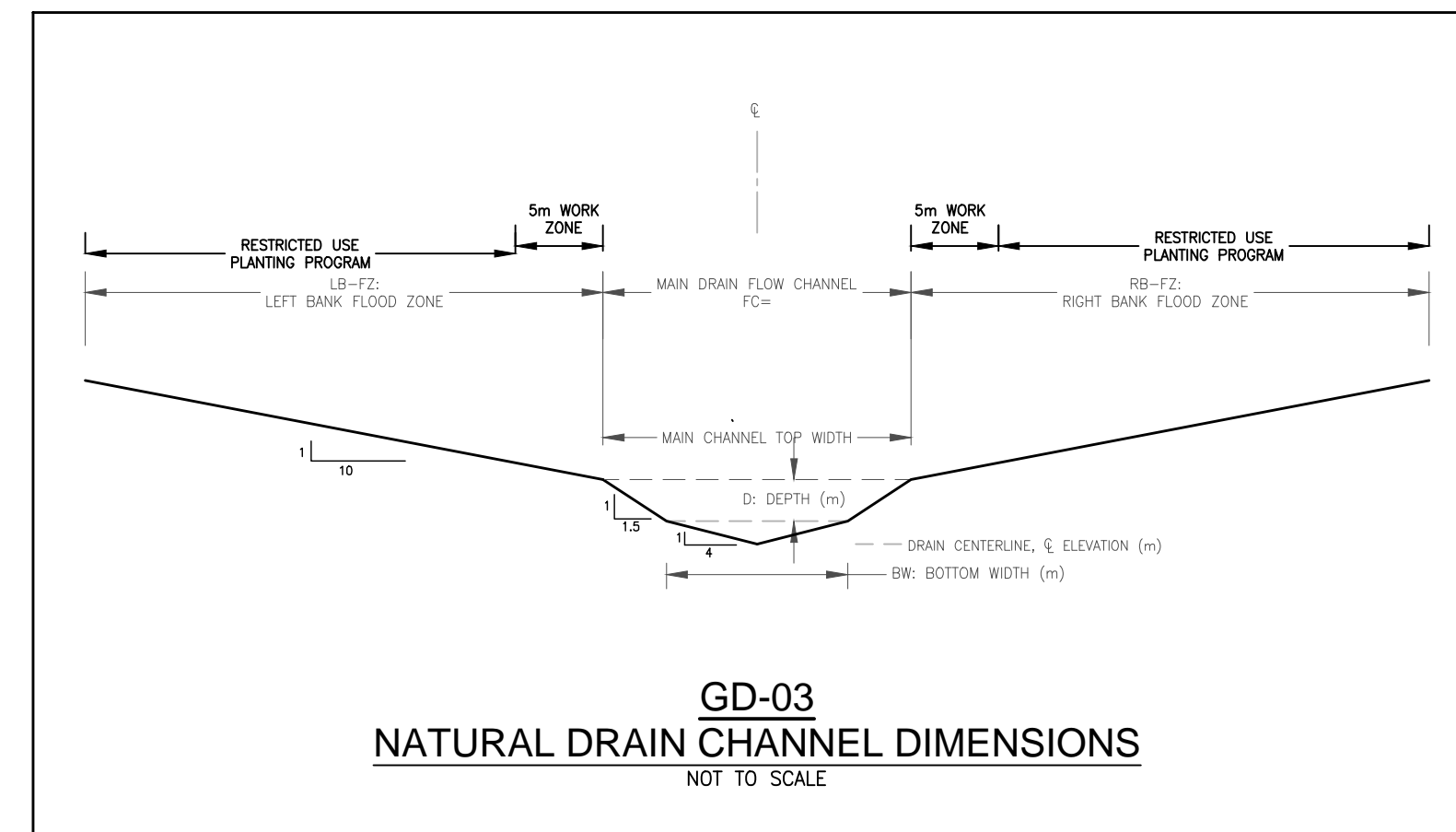
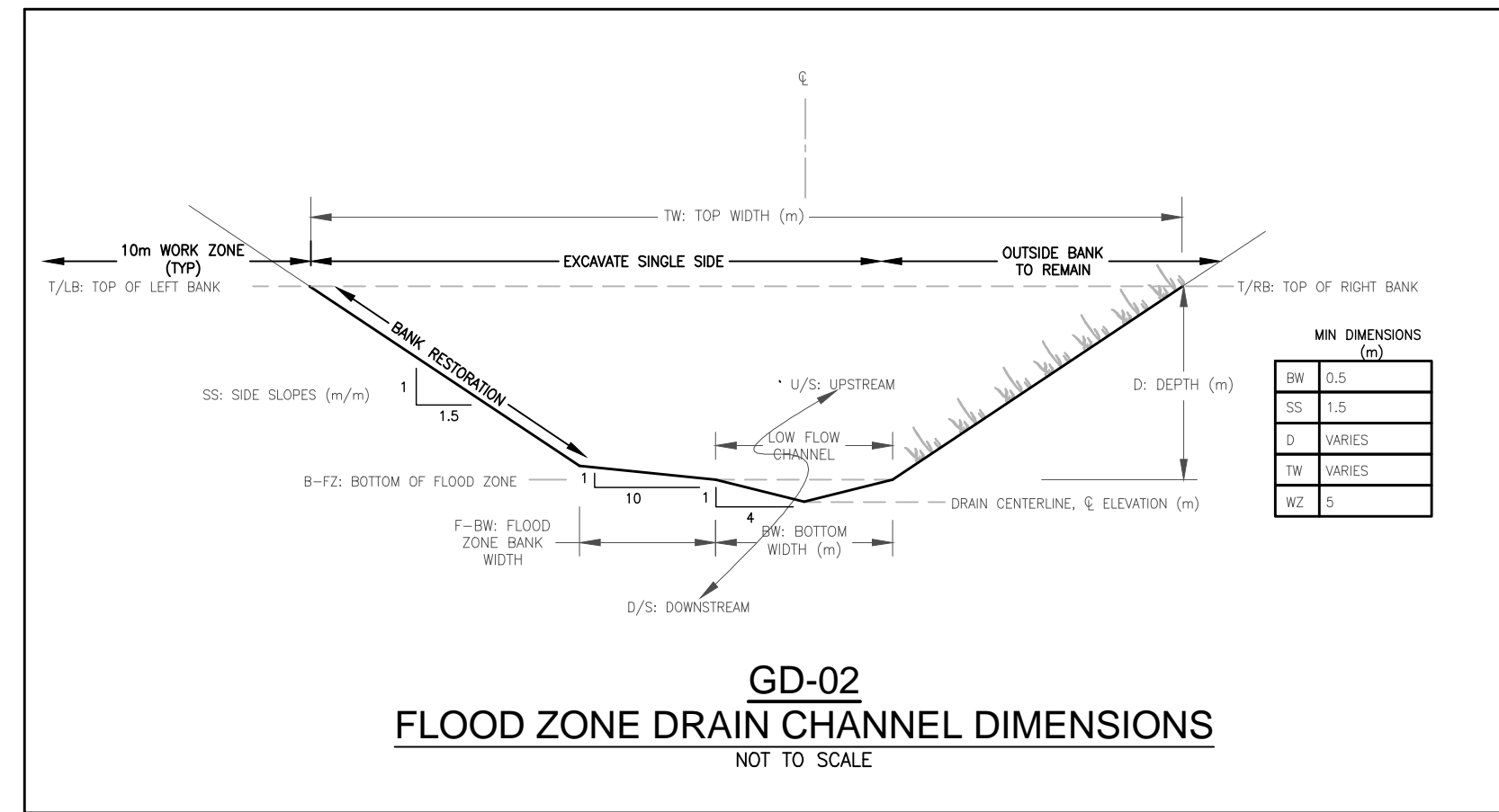
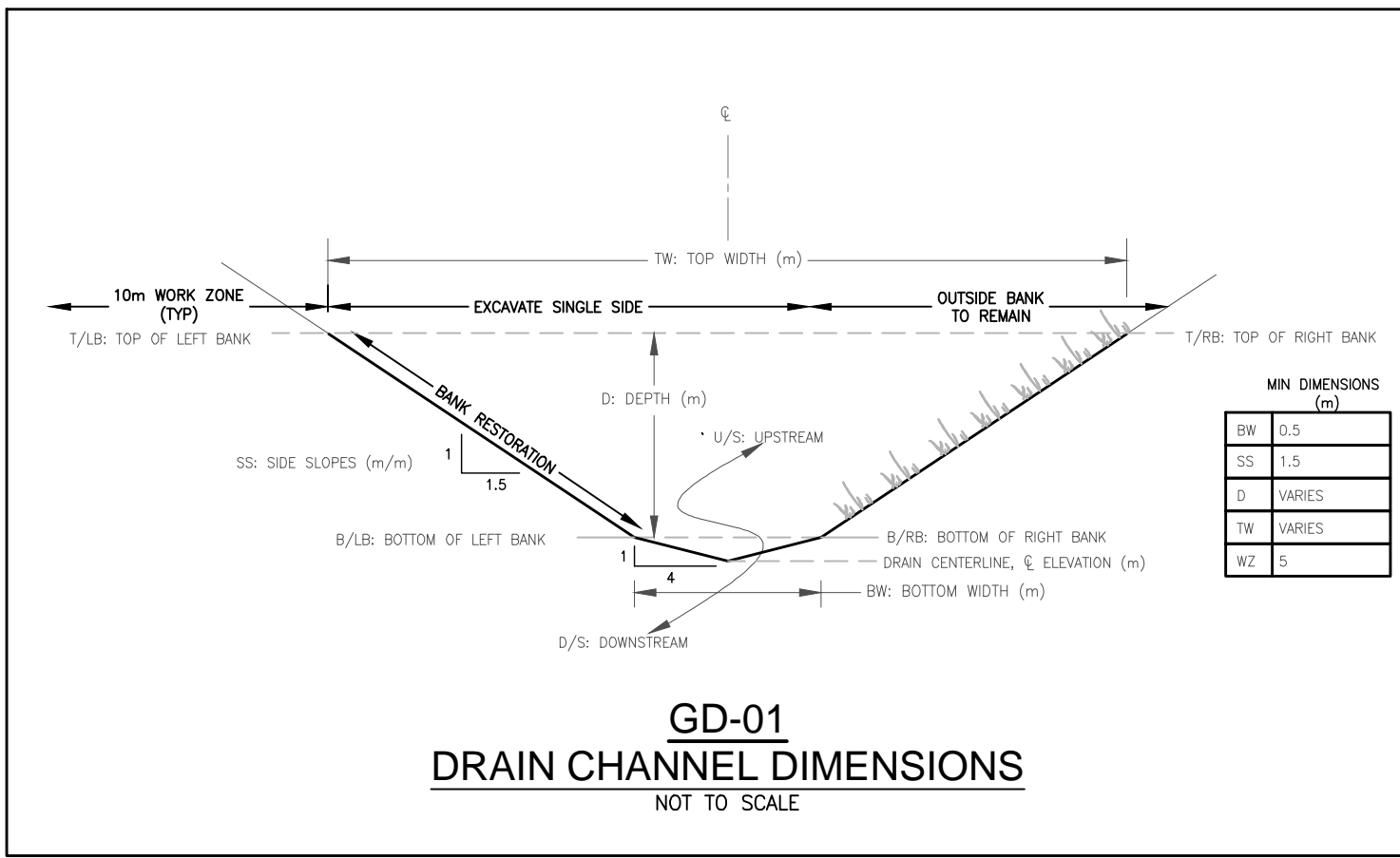


MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

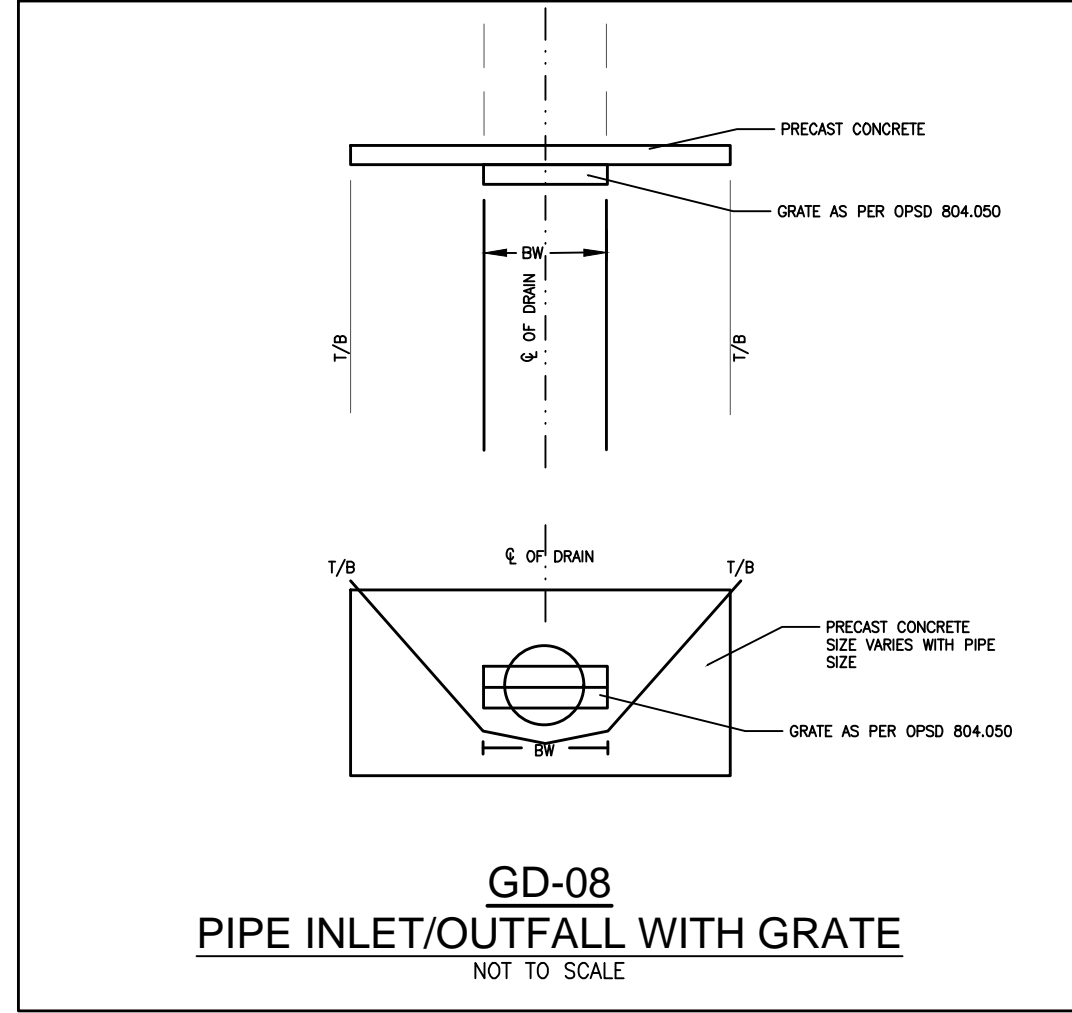
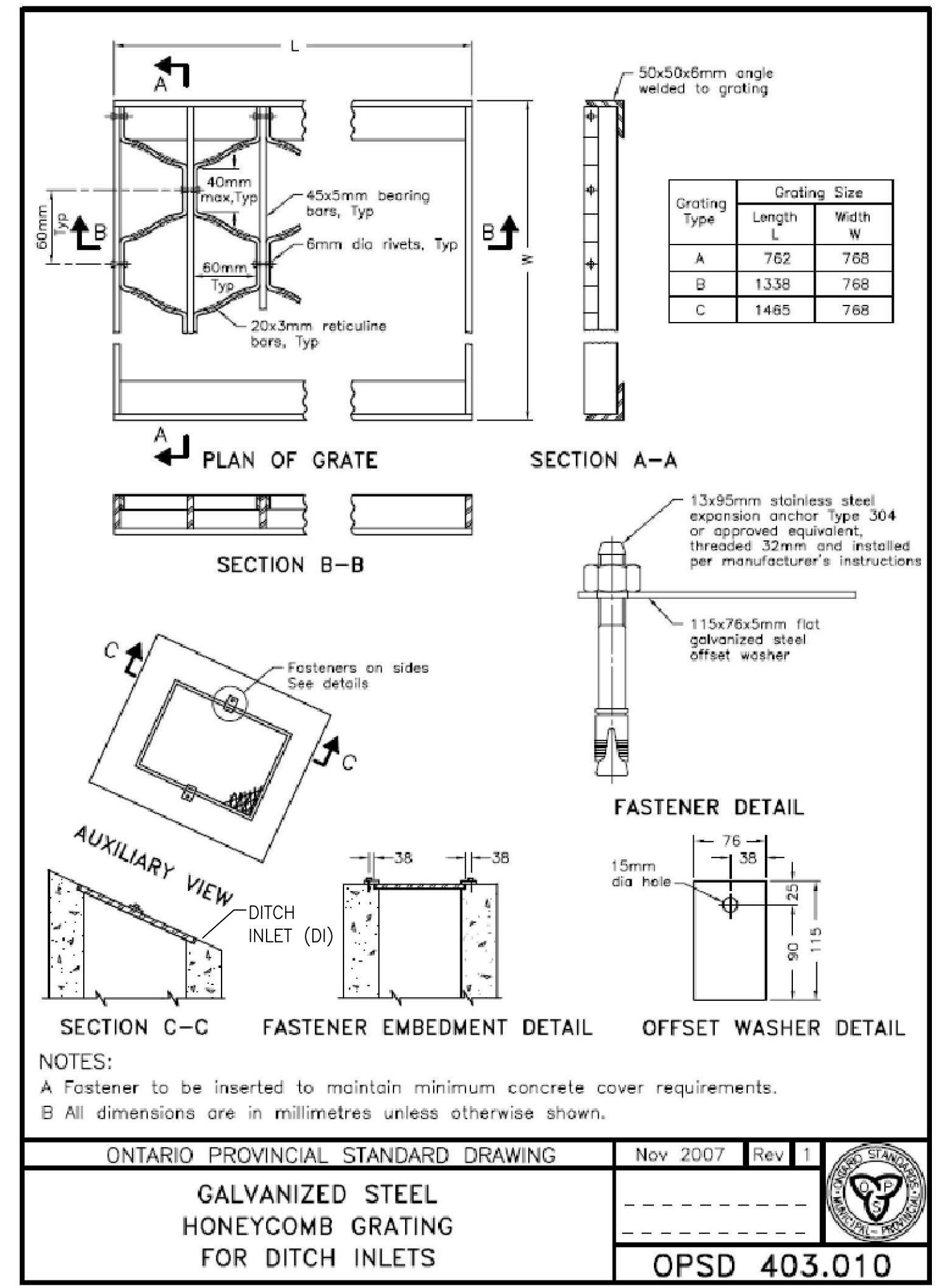
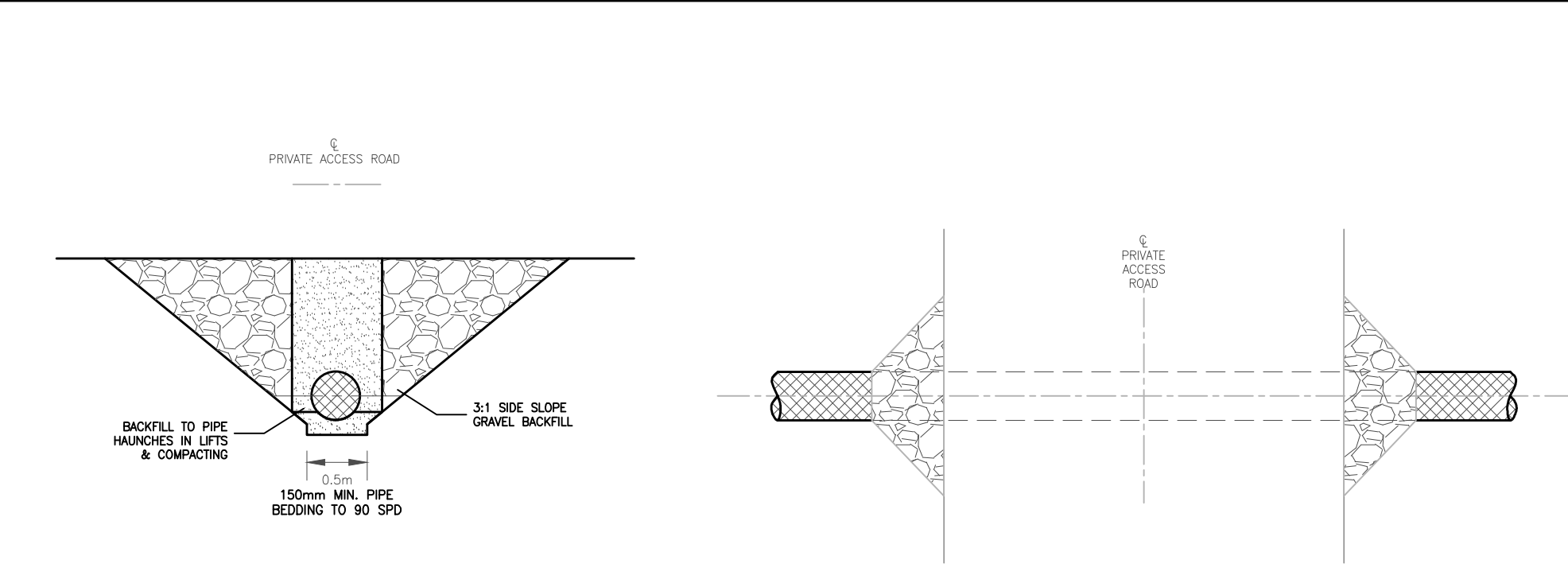
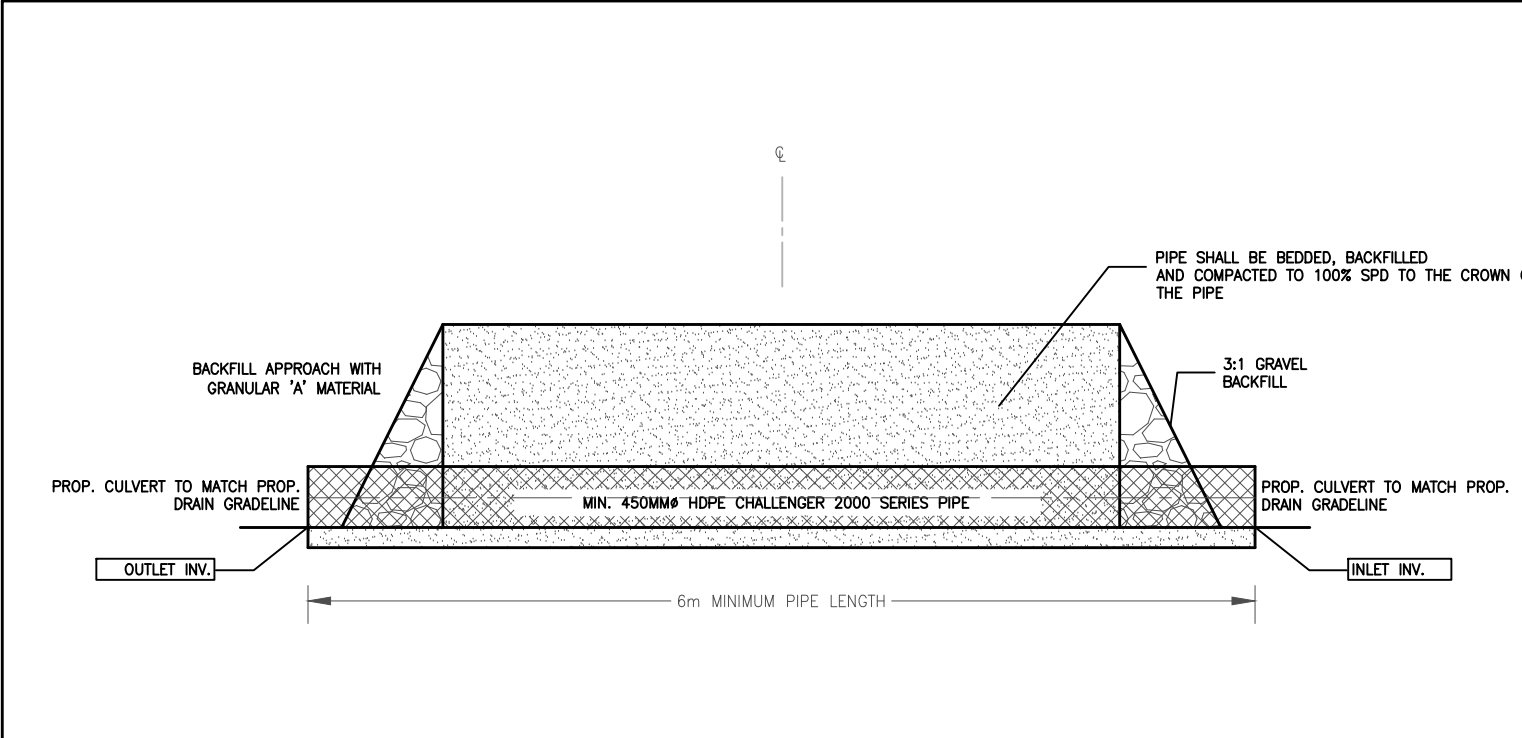


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DRAWN BY: DAC	APPROVED BY: PCM	PROJECT NO.: 189399	DRAWING NO.: M.SD-05
DESIGNED BY: PCM	DATE: 06-May-20	SCALE: AS SHOWN	



GD-10
SEDIMENT BASIN
NOT TO SCALE



MICHENER MUNICIPAL DRAIN GENERAL DETAILS

CITY OF PORT COLBORNE

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PAUL C. MARSH
LICENSED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO
May 07, 2028

DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : -	DRAWING NO. : M.GD
DESIGNED BY : PCM	DATE : 06-May-20	SCALE : N/A	

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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.

ABBREVIATIONS USED:

- BD - SEDIMENT BASIN BOTTOM DEPTH (FROM GRADE LINE)
- BL - SEDIMENT BASIN LENGTH
- 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 - NOTHING
- 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
- T/C - TOP OF CONCRETE
- T/B - TOP OF BANK
- T/G - TOP OF GRATE (BOTTOM ELEV. FOR SLANT TOP)
- TL - TRANSITION LENGTH FROM CHANNEL TO SEDIMENT BASIN BOTTOM WIDTH
- 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

MICHENER MUNICIPAL DRAIN CONSTRUCTION NOTES			
 PORT COLBORNE		CITY OF PORT COLBORNE	
<small>Paul C. Marsh, P.Eng. Principal Engineer EWA Engineering Inc. 84 Main Street, Unionville, Ontario L3R 2E7 416-460-2824 www.ewaeng.com</small>			
DESIGNED BY : PCM	APPROVED BY : PCM	PROJECT NO. : -	DRAWING NO. : M.CN
	DATE : 14-Apr-20	SCALE : N/A	

Appendix B: Specifications

SPECIAL PROVISIONS - MUNICIPAL DRAIN

I N D E X

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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, who is further recognized as The Owner, shall be responsible party for allocation of 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 to this item.

Michener Drain

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.

A5 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.(missing is a description of where a silt fence is to be placed. How frequently across the drain.)

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 leveled 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.

Michener Drain

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 PAYMENT; For progress payment, fifty (50) percent of the lump sum price will be paid upon installation with the balance to be paid with the final payment.

A6 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 PAYMENT; Payment as a lump sum bid for this item shall be full compensation for all labour, equipment and materials necessary to meet the above requirements. Fifty (50) percent of the lump sum price will be paid on the first payment certificate. The balance will be prorated over the remainder of the working period.

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

Michener Drain

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

Michener Drain

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

Michener Drain

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.

Payment shall be as per Plan Quantity.

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.

Michener Drain

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. 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.

Payment shall be as per Plan Quantity.

C1 COMPLETION

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

PAYMENT; 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.

Michener Drain

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 C:
Cost Estimates &
Assessment Tables**

Michener Municipal Drain
City of Port Colborne
Regional Municipality of Niagara

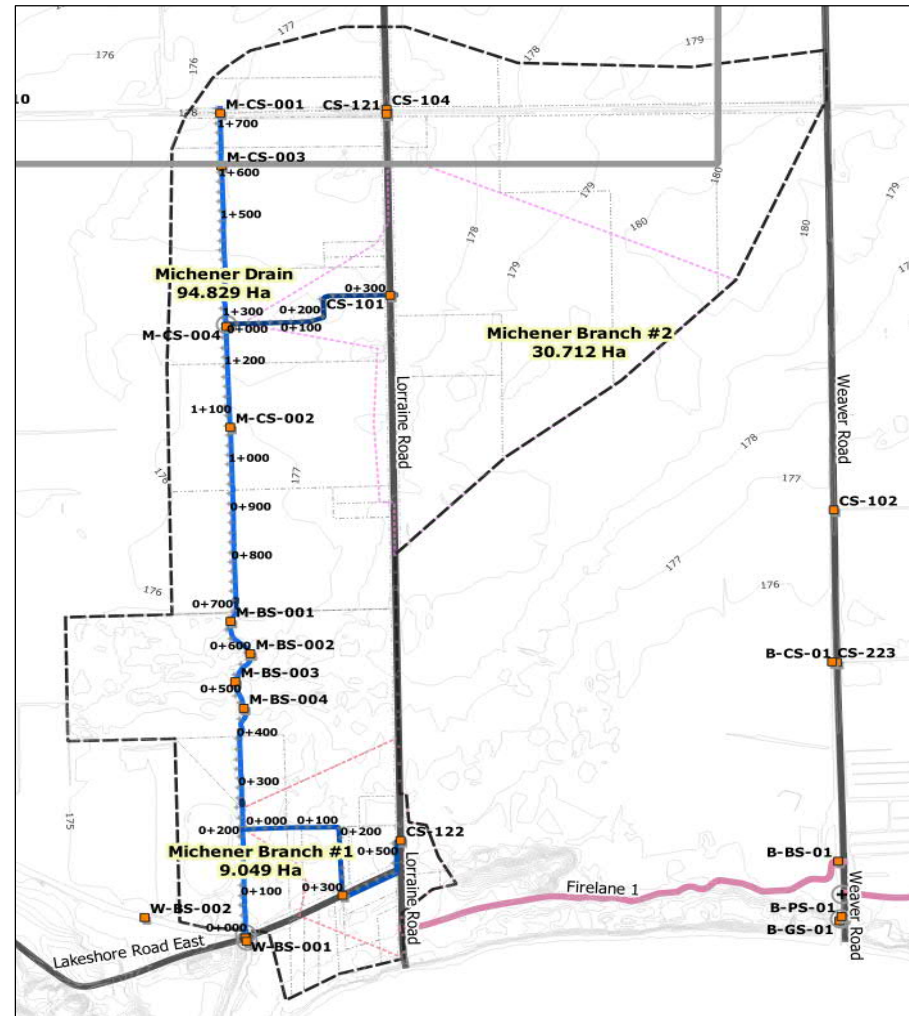
Section 78 and Section 4 Works under the Municipal Drainage Act.

Item	Drainage Assessment	Costs
1	Summary Cover page	
2	Estimated Construction Costs	
	Michener Branch Drain #1	\$ 30,271.50
	Michener Branch Drain #2	\$ 3,325.00
	Michener Drain	\$ 32,147.50
	Michener General Construction Costs	\$ 14,968.00
	Michener Contingency	\$ 13,148.80
	Estimated Cost of Construction	\$ 93,860.80
3	Previous Construction Works Completed but not Assessed	
	None Identified	
	Previous Construction, (Prior to 2018)	\$0.00
4	Eligible Administration Costs	
	Engineering	\$ 87,990.88
	Administration Cost Allocations	\$ -
Ha Ratio	Allocating Admin costs to each catchment for Section 23	
0.067	9.049 Michener Branch Drain #1	\$ 5,915.96
0.228	30.712 Michener Branch Drain #2	\$ 20,078.58
0.705	94.829 Michener Drain	\$ 61,996.34
	Administration Costs	\$ 87,990.88
5	Drain Allowances	
	Michener Branch Drain #1	\$ 5,903.25
	Michener Branch Drain #2	\$ 7,904.90
	Michener Drain	\$ 3,361.49
	Allowances	\$ 17,169.64
	Forecasted Total Drain Costs	\$ 199,021.32
6	Benefit Assessment (Section 22)	
	Michener Branch Drain #1	\$ 3,673.00
	Michener Branch Drain #2	\$ 4,845.00
	Michener Drain	\$ -
	Total - Benefit Assessment (Section 22)	\$ 8,518.00
7	Outlet Liability Assessment (Section 23)	
	Michener Branch Drain #1	\$ 29,827.28
	Michener Branch Drain #2	\$ 26,463.48
	Michener Drain	\$ 119,512.13
	Total - Outlet Liability Assessment (Section 23)	\$ 175,802.89
8	Special Benefit Assessment (Section 24)	
	Michener Branch Drain #1	\$ -
	Michener Branch Drain #2	\$ -
	Michener Drain	\$ 6,110.00
	Total - Special Benefit Assessment (Section 24)	\$ 6,110.00
9	Special Assessments (Section 26)	
	Michener Branch Drain #1	
	City of Port Colborne	\$ 6,590.43
	Enbridge	\$ 2,000.00
		\$ 8,590.43
	Michener Branch Drain #2	
	City of Port Colborne	\$0.00
	Michener Drain	
	City of Port Colborne	\$0.00
	Total - Special Assessments (Section 26)	\$ 8,590.43
	Total Forecasted Drain Costs	\$ 199,021.32

10 Drain Assessment Summary Table

Assessment Schedule Balance:

Prepared by: _____ Paul C. Marsh, P.Eng.
Dated: _____



Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Proposed Construction - Cost Estimate

Michener Branch #1

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M1-11	0+000	0+177	Remove Vegetation, Clear and Grade to Design Grade Line	Perform work from the South Side	Linear	177	\$15		\$ 2,655.00	
M1-12	0+177		Catch Basin, CB-01 Construct to Grade and match outlet with grate to channel		Lump Sum			1	\$ 2,200.00	\$ 2,200.00
M1-13	0+177	0+305	Combined Swale and 150mm Perforated PE Drainage Pipe		Linear	67	\$ 45.00		\$ 3,015.00	
M1-14	0+305	0+305	Catch Basin, CB-02		Lump Sum			1	\$ 1,850.00	\$ 1,850.00
M1-15	0+302		Enbridge Gas Line Protection during construction and lowering if required.		Lump Sum			1	\$ 2,000.00	\$ 2,000.00
M1-16	0+305	0+323.8	400mm Drainage Pipe, CSA 182.2-11 (existing) 200mm PE Tile with Sock	Crossing Lakeshore Rd. E (already installed no cost estimate shown); Tile crossing from CB-02 to CBDI-03	Linear	18.8	\$ 55.00	1	\$ 750.00	\$ 1,784.00
M1-17	0+323.8		CBDI-03, Ditch Inlet with GA bar screen as per OPSD 403.010		Lump Sum			1	\$ 2,050.00	\$ 2,050.00
M1-18	0+049	0+109	150mm Perforated PE Drainage Pipe	excludes ROW re-grading by CofPC		60	\$ 45.00		\$ 2,700.00	\$ 2,700.00
M1-19	0+049		CO-06, PE Clean out access chamber with Dome Drain for cleaning access.		Lump Sum			1	\$ 1,500.00	\$ 1,500.00
M1-20	0+109	0+223	150mm Perforated PE Drainage Pipe	Excludes ROW re-grading by CofPC		114	\$ 45.00		\$ 5,130.00	Road edge backfill with non-shrink material.
M1-21	0+233		Catch Basin, CB-04		Lump Sum			1	\$ 2,000.00	\$ 2,000.00
M1-22	0+233	0+244.5	150mm Perforated PE Drainage Pipe	Crossing Lakeshore Rd. E Tile crossing		11.5	\$ 55.00	1	\$ 750.00	\$ 1,382.50
M1-23	0+244.5		DI-03, Ditch Inlet with grate	Rip Rap end treatment with grate	Lump Sum			1	\$ 1,000.00	\$ 1,000.00
M1-24	0-177	0+244	Remove Vegetation, Clear working zone	As - directed by Drainage superintendent. Re-seeding to original or better.	Linear	67	\$ 15.00		\$ 1,005.00	re-grade excess material from trenching.
M1-25			Road side swales re-grading						\$ -	Cost covered by CofPC.

SubTotal for: Michener Branch #1 \$ 30,271.50

Michener Branch #2

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M2-3	0+000	0+125	Remove Vegetation, Clear and Grade to Design Grade Line	Perform work from the North side	Linear	125	\$ 15.00		\$ 1,875.00	
M2-4	0+125	0+200	existing channel and pond to remain as is.		No cost					
M2-5	0+200	0+345	Selective Vegetation removal and bank stablization.	Spot removals from South side	Linear	145	\$ 10.00		\$ 1,450.00	

SubTotal for: Michener Branch #2 \$ 3,325.00

Michener Drain

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M-1	1+286	1+710	Remove Vegetation, Clean and Grade to Design Grade Line	Perform work from the East side of the Drain.	Linear	424			\$ 6,360.00	
	1+612		Re-place existing culvert	M-CS-003, existing culvert to be improved by replacement.	Lump Sum		1	\$ 1,500.00	\$ 1,500.00	
M-2	0+690	1+286	Remove Vegetation, Clean and Grade to Design Grade Line	Perform work from the East side of the Drain.	Linear	591			\$ 8,865.00	
M-6a	0+700	0+710	Construct Farm Crossing culvert.	This is a combination flow detention berm and farm crossing. The culvert is sized to pass the 1 year design flow while detaining higher flows to then overflow the crossing as a broad crested weir.	Lump Sum		1	\$ 2,500.00	\$ 2,500.00	
M-6a	0+710		Construct Sediment Basin upstream of culvert	Remove material and dispose by spreading adjacent to the drain. Sediment Basin constructed in coordination with culvert crossing and prior to commencing work upstream.	per m + per m2	8	40	\$ 55.00	\$ 2,600.00	
M-7	0+407.5	0+690	Re-store Grade to design Grade Line		Linear	282.5			\$ 4,237.50	
M-8	0+593		Replace ex. Culvert with properly sized 750mm 2W smooth PE culvert - 3m	M-BS-002 replace with new.	Lump Sum		1	\$ 1,500.00	\$ 1,500.00	
M-9	0+260	0+250	Construct Sediment Basin at STA 2+400 as per Design and GD-10.	Remove material and dispose by spreading adjacent to the drain. Sediment Basin constructed prior to commencing work upstream.	per m + per m2	10	52	\$ 55.00	\$ 3,360.00	
M-10	0+000	0+075	Spot tree removal	Remove between top of bank to top of bank that are reducing outlet flow.	each		35	\$ 35.00	\$ 1,225.00	

SubTotal for: Cost ID: \$ 32,147.50

Construction Mgmt Michener Drain

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
			Bonding	Construction Security	% of Constr \$				\$ 1,972.32	
			Environmental Management - Compliance with legislative requirements	Preparation of Environmental Management Plan - Exclusions for SAR incidents that require on site expertise.	Lump Sum				\$ 2,500.00	Program budget - actual cost will vary
			Erosion Control During construction - including conversion of sediment ponds to permanent drain features		Lump Sum				\$ 3,500.00	Program budget - actual cost will vary
			Construction Management	Traffic Control, Layout, and all compliance items for submission on construction startup.	% of Constr \$				\$ 8,218.00	Budget, 12.5% of construction
			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		15	50	\$ 750.00	Program budget - actual cost will vary

SubTotal for: Construction Mgmt Michener Drain \$ 14,968.00

SubTotal for: Michener Drain \$ 80,712.00

Contingency Allowance, (20%) \$ 13,148.80

Cost of Construction: \$ 93,860.80

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Administration Costs

	Area, Ha	Area Ratio
Michener Drain Area	135	12.02%
Port Colborne Drain Area	345	30.78%
Wignell Drain Area	641	57.20%
	1120	

Categories	Costs	Cost Items	Sub-totals, \$	Totals, \$
ADMINISTRATION				
	Interim Financing Allowance			0
	Legal and Permitting Fees			0
	Expenses, where applicable			0
	Applicable Taxes			0
Total - ADMINISTRATION			\$	-
ENGINEERING				
	Preliminary Design and Report			0
	Survey, Design, Plans, Engineer's Report and Assessment Schedule (Wiebe)*1			
		Survey; \$8,342.93	\$ 1,002.81	
		Report Preparation; \$83,533.94	\$ 10,040.66	
	Survey, Design, Plans, Engineer's Report (AMEC)*2			
		3-561-33229; 2012 to 2014; \$67,147.23	\$ 8,071.00	
	Survey, Design, Plans, Engineer's Report and Assessment Schedule (EWA)			
		Design Services	\$ 45,480.00	
		Change Orders	\$ 13,948.00	
		Portion of Expenses	\$ 1,514.04	
		Portion of Project Mgmt	\$ 4,434.38	
	Sub-total: Survey, Design, Plans, Engineer's Report and Assessment Schedule (EWA)		\$ 84,490.88	
	Tribunal Costs (not estimated and assumed to be zero)			0
	Tendering, and contract agreements (estimated)		\$ 3,500.00	
Total - ENGINEERING			\$	87,990.88
TOTAL ADMINISTRATION AND ENGINEERING			\$	87,990.88

*1 Wiebe Engineering was appointed as the Drainage Engineer by Council with an approved budget. The firm declared bankruptcy after having been paid for a portion of the work. This is the amount originally paid and not recovered.

*2 AMEC was appointed as the Drainage Engineer by Council in 2013, assuming work already completed by Wiebe and with an approved budget. After having been paid for 70% of the work, the company refused to complete the project without additional funds being allocated. The contract was cancelled. This is the fee for service paid for partially completed work on the drain.

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Allowances
 Michener Branch #1

Owner	Legal Text	Roll No	ARN ABBREV	Area Ha	Land and Rights of Way		Work Zone			Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances		
					Length m	Top Width	Section 29 Allowance Area, Ha	Section 29 Allowance \$	Work Access \$	Length m	Section 30 Allowance Area, Ha	Section 30 Allowance \$	From STN	To STN	Length, m	Section 31 Allowance		Section 32 Allowance \$	Section 33 Allowance \$
																\$			
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	404700	2.176	97.0	2.50	0.0243	\$ 599.23	\$ -	135.0	0.135	0			95.6	\$ 478.00			\$1,077.23
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.201	126.0	3.00	0.0378	\$ 934.06	\$ 311.35	126.0	0.126	0			126	\$ 630.00			\$1,875.41
					69.0	2.65	0.0183	\$ 451.83	\$ 170.50	69.0	0.069	0			69	\$ 345.00			\$967.33
City of Port Colborne	Lakeshore Rd. East ROW		ROW	ROW	0.556						0.000	0				\$ -			\$0.00
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848	0.0	0.00	0.0000	\$ -		0.0	0.000	\$ -			0	\$ -			\$0.00
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	0.729	80.0	3.00	0.0240	\$ 593.05	\$ 197.68	80.0	0.080	0			80	\$ 800			\$1,590.74
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	318100	0.560			0.0000				0.000	0				\$ -			\$0.00
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	417902	0.517			0.0000					0				\$ -			\$0.00
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	404601	0.405			0.0000					0				\$ -			\$0.00
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357			0.0000					0				\$ -			\$0.00
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.295			0.0000					0				\$ -			\$0.00
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	314500	0.289			0.0000					0				\$ -			\$0.00
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.205	28.0	2.65	0.0074	\$ 183.35	\$ 69.19	28.0	0.028	0			28	\$ 140			\$392.54
WEEBADUARACHHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.134			0.0000					0				\$ -			\$0.00
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	400101	0.122			0.0000					0				\$ -			\$0.00
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071			0.0000					0				\$ -			\$0.00
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.042			0.0000					0				\$ -			\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	0.012			0.0000					0				\$ -			\$0.00
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.000			0.0000					0				\$ -			\$0.00
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW		0.689								0				\$ -			\$0.00
				8.519					\$ 3,510.25			\$ -			\$ 2,393.00	\$ -	\$ -	\$ -	\$5,903.25

Michener Branch #2

Owner	Legal Text	Roll No	ARN ABBREV	Area Ha	Land and Rights of Way		Work Zone			Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances		
					Length m	Top Width	Section 29 Allowance Area, Ha	Section 29 Allowance \$	Work Access \$	Length m	Section 30 Allowance Area, Ha	Section 30 Allowance \$	From STN	To STN	Length, m	Section 31 Allowance		Section 32 Allowance \$	Section 33 Allowance \$
																\$			
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.108								0							\$0.00
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	3.545								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	2.799	337.0	1.900	0.0640	\$ 1,582.21	\$ 931.59	377	0.377	\$ 1,621.10	0	377	377	\$ 3,770			\$7,904.90
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431								0							\$0.00
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	14.499								0							\$0.00
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	ROW	1.380								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	0.554								0							\$0.00
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.154								0							\$0.00
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.096								0							\$0.00
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	314700	0.075								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	405000	0.058								0							\$0.00
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	0.012								0							\$0.00
				30.712					\$ 2,513.80			\$ 1,621.10			\$ 3,770.00	\$ -	\$ -	\$ -	\$7,904.90

Michener Drain

* Section 30 Allowance for damages are based on construction impacts (damages) to cultivated fields only. Actual allowance to be calculated by site impact post construction.

Owner	Legal Text	Roll No	Land and Rights of Way			Work Zone		Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances
			ARN	Area	Length	Top Width	Section 29 Allowance	Work Access	Length	Section 30 Allowance	Section 31 Allowance	Section 32 Allowance	Section 33 Allowance		
			ABBREV	Ha										Area, Ha	
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071											\$0.00
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26:NP778	271104000314500	314500	0.289											\$0.00
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	12.371											\$0.00
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	314700	3.874											\$0.00
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	315000	5.156											\$0.00
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	317825	2.719											\$0.00
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	317850	0.406											\$0.00
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	17.369											\$0.00
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431											\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.120											\$0.00
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	318100	0.560											\$0.00
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.357											\$0.00
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	400101	0.532											\$0.00
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.512											\$0.00
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357											\$0.00
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.383											\$0.00
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRTS 2 & 3	271104000400305	400305	0.382											\$0.00
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.413											\$0.00
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	404300	0.000											\$0.00
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	404301	4.787	403.5	5.0	0.202	\$ 498.53	403.5	0.000	\$0.00				\$498.53
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	3.067											\$0.00
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.442											\$0.00
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.220											\$0.00
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848											\$0.00
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	404601	0.405											\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	404700	18.764	287.8	5.0	0.144	\$ 355.58	287.8	0.000	\$0.00				\$355.58
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	404800	9.586	251.7	5.0	0.126	\$ 310.98	251.7	0.252	\$310.98				\$621.96
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	404900	0.316				\$ -							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	405000	0.347				\$ -							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	10.514	259	5.0	0.130	\$ 320.00	259	0.259	\$320.00				\$640.00
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	7.756	193.5	5.0	0.097	\$ 239.07	193.5	0.194	\$239.07				\$478.15
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.236				\$ -							\$0.00
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.340				\$ -							\$0.00
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	9.204	249.5	5.0	0.125	\$ 308.26	249.5	0.250	\$308.26				\$616.53
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.300	61	5.0	0.031	\$ 75.37	61	0.061	\$75.37				\$150.73
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.026											\$0.00
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	405700	2.285											\$0.00
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	417902	0.580											\$0.00
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	1.599											\$0.00
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	0.688											\$0.00
City of Port Colborne	Lorraine Rd. from Lake to Killaly St. East	Lorraine Rd. ROW		3.250											\$0.00
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW		0.563											\$0.00
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW		0.121											\$0.00
				111.590				\$2,107.81			\$1,253.69				\$3,361.49

Drain Allowance Total \$17,169.64

Michener Municipal Drain
City of Port Colborne
Regional Municipality of Niagara

23.3
2 yr avg. Intensity
for a 1 hour storm

Section 23 Outlet Benefit / Outlet Liability

Owner	Legal Text	Roll No	ARN ABBREV	Area Ha	Soil Type	Gradient	Land Factor	Runoff Factor				ORF Ratio	Michener	ORF Ratio	Michener	ORF Ratio	Michener Drain	Total Section 23 Assessment	
								'C'	ORF	SWM	SWMF		ORF-SWMF		Branch #1		Branch #2		\$
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP:59R8112 PAR	271104000404700	404700	2.176	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	25	3.55	0	0	3.55	0.2044	\$	6,096		\$	6,096	
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.201	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	1.57	0	0	1.57	0.0902	\$	2,691		\$	2,691	
City of Port Colborne	Lakeshore Rd. East ROW	ROW	ROW	0.556	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	ROW - paved 2 lane	85	3.08	0	0	3.08	0.1775	\$	5,295		\$	5,295	
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.83	0	0	0.83	0.0478	\$	1,424		\$	1,424	
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	0.729	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.95	0	0	0.95	0.0548	\$	1,634		\$	1,634	
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493:PART 1	271104000318100	318100	0.560	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.73	0	0	0.73	0.0421	\$	1,255		\$	1,255	
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013:PART 1	271104000417902	417902	0.517	NM - Sandy well drained	0.20%	LAND	12	0.41	0	0	0.41	0.0233	\$	696		\$	696	
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790:PART 1	271104000404601	404601	0.405	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.40	0	0	0.40	0.0228	\$	680		\$	680	
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357	NM - Sandy well drained	0.20%	LAND	12	0.28	0	0	0.28	0.0161	\$	480		\$	480	
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.295	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.38	0	0	0.38	0.0221	\$	661		\$	661	
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26:NP778	271104000314500	314500	0.289	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.38	0	0	0.38	0.0217	\$	647		\$	647	
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.205	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.27	0	0	0.27	0.0154	\$	460		\$	460	
WEEBADUARACHHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.134	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.17	0	0	0.17	0.0101	\$	300		\$	300	
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21:PT WATER LOT	271104000400101	400101	0.122	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.16	0	0	0.16	0.0091	\$	273		\$	273	
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.09	0	0	0.09	0.0053	\$	159		\$	159	
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.042	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.05	0	0	0.05	0.0032	\$	94		\$	94	
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	0.012	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	25	0.02	0	0	0.02	0.0011	\$	33		\$	33	
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.000	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.00	0	0	0.00	0.0000	\$	1		\$	1	
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW		0.689		0.20%		90	4.05	0	0	4.05	0.2329	\$	6,948		\$	6,948	
				9.208					17.37	0.00	0.00	17.37	1.00	\$	29,827				
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.108	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	COMMERCIAL	17	5.67	0	0	5.67			0.0861	\$	2,278	\$	2,278
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	3.545	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	35	8.09	0	0	8.09			0.1230	\$	3,255	\$	3,255
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	2.799	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	35	6.39	0	0	6.39			0.0971	\$	2,570	\$	2,570
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	45	7.14	0	0	7.14			0.1085	\$	2,871	\$	2,871
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	14.499	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	30	28.38	0	0	28.38			0.4312	\$	11,412	\$	11,412
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	ROW	1.380	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	ROW - paved 2 lane	90	8.10	0	0	8.10			0.1231	\$	3,258	\$	3,258
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	0.554	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	28	1.01	0	0	1.01			0.0154	\$	407	\$	407
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.154	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	0.45	0	0	0.45			0.0069	\$	182	\$	182
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.096	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	0.28	0	0	0.28			0.0043	\$	114	\$	114
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136:PARTS 1 AND	271104000314700	314700	0.075	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	30	0.15	0	0	0.15			0.0022	\$	59	\$	59
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448:PART 1	271104000405000	405000	0.058	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	LAND	28	0.11	0	0	0.11			0.0016	\$	43	\$	43
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	0.012	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	45	0.04	0	0	0.04			0.0005	\$	14	\$	14
				30.712					65.80	0.00	0.00	65.80			1.00	\$	26,463	\$	-

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Drain Assessment Summary Table

Benefits realized from drainage improvements 23(1) Outlet Liability for right of drainage.
 23(2) Injuring liability of discharge Additional works or features above the base functioning of the Drain System Roads & Utilities assessed the actual cost of additional works.

Michener Branch #1

Owner	Legal Text	Roll No	Area Ha	Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Special Assessment Section 26	Total Assessment	Total Allowance	Net
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	2.176	\$237.50	\$6,096.20	\$0.00	\$0.00	\$6,333.70	\$1,077.23	\$5,256.47
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.201	\$975.00	\$2,691.00	\$0.00	\$0.00	\$3,666.00	\$2,842.74	\$823.26
City of Port Colborne	Lakeshore Rd. East ROW	ROW	0.556	\$535.00	\$5,294.96	\$0.00	\$6,590.43	\$12,420.38	\$0.00	\$12,420.38
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	\$430.50	\$1,424.32	\$0.00	\$0.00	\$1,854.82	\$0.00	\$1,854.82
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	0.729	\$200.00	\$1,634.46	\$0.00	\$0.00	\$1,834.46	\$1,590.74	\$243.73
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	\$0.00	\$1,255.02	\$0.00	\$0.00	\$1,255.02	\$0.00	\$1,255.02
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.517	\$0.00	\$695.64	\$0.00	\$0.00	\$695.64	\$0.00	\$695.64
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	\$45.00	\$680.10	\$0.00	\$0.00	\$725.10	\$0.00	\$725.10
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	\$280.00	\$479.76	\$0.00	\$0.00	\$759.76	\$0.00	\$759.76
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.295	\$0.00	\$660.60	\$0.00	\$0.00	\$660.60	\$0.00	\$660.60
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	\$0.00	\$647.01	\$0.00	\$0.00	\$647.01	\$0.00	\$647.01
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.205	\$70.00	\$459.96	\$0.00	\$0.00	\$529.96	\$392.54	\$137.42
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.134	\$82.50	\$300.46	\$0.00	\$0.00	\$382.96	\$0.00	\$382.96
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.122	\$37.50	\$272.75	\$0.00	\$0.00	\$310.25	\$0.00	\$310.25
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	\$150.00	\$159.39	\$0.00	\$0.00	\$309.39	\$0.00	\$309.39
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.042	\$22.50	\$94.24	\$0.00	\$0.00	\$116.74	\$0.00	\$116.74
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	0.012	\$0.00	\$33.13	\$0.00	\$0.00	\$33.13	\$0.00	\$33.13
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.000	\$0.00	\$0.75	\$0.00	\$0.00	\$0.75	\$0.00	\$0.75
City of Port Colborne Enbridge	Lorraine Rd. ROW	Lorraine Rd. ROW	0.689	\$607.50	\$6,947.53	\$0.00	\$0.00	\$7,555.03	\$0.00	\$7,555.03
							\$2,000.00	\$2,000.00		\$2,000.00
				\$3,065.50	\$22,879.76	\$0.00	\$8,590.43	\$42,090.71	\$5,903.25	\$36,187.46

Michener Branch #2

WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.108	\$0.00	\$2,278.34	\$0.00	\$0.00	\$2,278.34	\$0.00	\$2,278.34
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	3.545	\$0.00	\$3,255.29	\$0.00	\$0.00	\$3,255.29	\$0.00	\$3,255.29
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	2.799	\$845.00	\$2,570.32	\$0.00	\$0.00	\$3,415.32	\$7,904.90	-\$4,489.58
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	\$0.00	\$2,870.63	\$0.00	\$0.00	\$2,870.63	\$0.00	\$2,870.63
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	14.499	\$0.00	\$11,411.96	\$0.00	\$0.00	\$11,411.96	\$0.00	\$11,411.96
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	1.380	\$4,000.00	\$3,257.92	\$0.00	\$0.00	\$7,257.92	\$0.00	\$7,257.92
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	0.554	\$0.00	\$407.12	\$0.00	\$0.00	\$407.12	\$0.00	\$407.12
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.154	\$0.00	\$181.95	\$0.00	\$0.00	\$181.95	\$0.00	\$181.95
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.096	\$0.00	\$113.61	\$0.00	\$0.00	\$113.61	\$0.00	\$113.61
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	0.075	\$0.00	\$59.15	\$0.00	\$0.00	\$59.15	\$0.00	\$59.15
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.058	\$0.00	\$42.93	\$0.00	\$0.00	\$42.93	\$0.00	\$42.93
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	0.012	\$0.00	\$14.26	\$0.00	\$0.00	\$14.26	\$0.00	\$14.26
				\$4,845.00	\$26,463.48	\$0.00	\$0.00	\$31,308.48	\$7,904.90	\$23,403.58

Owner	Legal Text	Roll No	Area Ha	Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Special Assessment Section 26	Total Assessment	Total Allowance	Net
Michener Drain										
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.07	\$0.00	\$56.51	\$0.00		\$56.51	\$0.00	\$56.51
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.29	\$0.00	\$229.39	\$0.00		\$229.39	\$0.00	\$229.39
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	12.37	\$0.00	\$9,827.62	\$0.00		\$9,827.62	\$0.00	\$9,827.62
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	3.87	\$0.00	\$3,077.43	\$0.00		\$3,077.43	\$0.00	\$3,077.43
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	5.16	\$0.00	\$4,330.51	\$0.00		\$4,330.51	\$0.00	\$4,330.51
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	2.72	\$0.00	\$2,283.72	\$0.00		\$2,283.72	\$0.00	\$2,283.72
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	0.41	\$0.00	\$340.77	\$0.00		\$340.77	\$0.00	\$340.77
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	17.37	\$0.00	\$13,798.07	\$0.00		\$13,798.07	\$0.00	\$13,798.07
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.43	\$0.00	\$1,655.63	\$0.00		\$1,655.63	\$0.00	\$1,655.63
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.12	\$0.00	\$3,253.93	\$0.00		\$3,253.93	\$0.00	\$3,253.93
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.56	\$0.00	\$355.95	\$0.00		\$355.95	\$0.00	\$355.95
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.36	\$0.00	\$226.97	\$0.00		\$226.97	\$0.00	\$226.97
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.53	\$0.00	\$338.24	\$0.00		\$338.24	\$0.00	\$338.24
WEEBADUARACHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.51	\$0.00	\$372.04	\$0.00		\$372.04	\$0.00	\$372.04
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.36	\$0.00	\$226.78	\$0.00		\$226.78	\$0.00	\$226.78
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.38	\$0.00	\$565.02	\$0.00		\$565.02	\$0.00	\$565.02
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRTS 2 & 3	271104000400305	0.38	\$0.00	\$563.01	\$0.00		\$563.01	\$0.00	\$563.01
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.41	\$0.00	\$421.91	\$0.00		\$421.91	\$0.00	\$421.91
								\$0.35		\$0.35
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	0.00	\$0.00	\$0.35	\$0.00		\$0.35	\$0.00	\$0.35
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	4.79	\$0.00	\$4,889.09	\$0.00		\$4,889.09	\$498.53	\$4,390.55
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	3.07	\$0.00	\$3,132.24	\$0.00		\$3,132.24	\$0.00	\$3,132.24
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.44	\$0.00	\$400.99	\$0.00		\$400.99	\$0.00	\$400.99
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.22	\$0.00	\$969.43	\$0.00		\$969.43	\$0.00	\$969.43
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.85	\$0.00	\$673.28	\$0.00		\$673.28	\$0.00	\$673.28
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.40	\$0.00	\$413.34	\$0.00		\$413.34	\$0.00	\$413.34
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	18.76	\$0.00	\$15,758.71	\$4,110.00		\$19,868.71	\$355.58	\$19,513.13
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	9.59	\$0.00	\$9,791.54	\$1,250.00		\$11,041.54	\$621.96	\$10,419.57
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	0.32	\$0.00	\$322.57	\$0.00		\$322.57	\$0.00	\$322.57
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.35	\$0.00	\$354.83	\$0.00		\$354.83	\$0.00	\$354.83
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	10.51	\$0.00	\$10,739.09	\$0.00		\$10,739.09	\$640.00	\$10,099.09
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	7.76	\$0.00	\$6,513.21	\$0.00		\$6,513.21	\$478.15	\$6,035.06
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.24	\$0.00	\$198.39	\$0.00		\$198.39	\$0.00	\$198.39
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.34	\$0.00	\$285.60	\$0.00		\$285.60	\$0.00	\$285.60
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	9.20	\$0.00	\$7,730.08	\$750.00		\$8,480.08	\$616.53	\$7,863.55
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.30	\$0.00	\$1,931.27	\$0.00		\$1,931.27	\$150.73	\$1,780.54
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.03	\$0.00	\$1,701.64	\$0.00		\$1,701.64	\$0.00	\$1,701.64
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	2.28	\$0.00	\$1,918.87	\$0.00		\$1,918.87	\$0.00	\$1,918.87
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.58	\$0.00	\$487.41	\$0.00		\$487.41	\$0.00	\$487.41
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	1.60	\$0.00	\$1,342.85	\$0.00		\$1,342.85	\$0.00	\$1,342.85
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	0.69	\$0.00	\$578.02	\$0.00		\$578.02	\$0.00	\$578.02
City of Port Colborne	Lorraine Rd. from Lake to Killaly St. East	Lorraine Rd. ROW	3.25	\$0.00	\$6,122.37	\$0.00		\$6,122.37	\$0.00	\$6,122.37
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW	0.56	\$0.00	\$1,072.56	\$0.00		\$1,072.56	\$0.00	\$1,072.56
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW	0.12	\$0.00	\$260.91	\$0.00		\$260.91	\$0.00	\$260.91
				\$0.00	\$119,512.13	\$6,110.00	\$0.00	\$125,622.13	\$3,361.49	\$122,260.64

**Appendix D:
Supplementary Information**

**City of Port Colborne
Regular Council Meeting 18-18
Minutes**

Date: July 23, 2018
Time: 7:32 p.m.
Place: Council Chambers, Municipal Offices, 66 Charlotte Street, Port Colborne

Members Present: R. Bodner, Councillor
B. Butters, Councillor
F. Danch, Councillor
A. Desmarais, Councillor
D. Elliott, Councillor
B. Kenny, Councillor
J. Maloney, Mayor (presiding officer)

Absent: Y. Doucet, Councillor (due to vacation)
J. Mayne, Councillor (leave of absence)

Staff Present: D. Aquilina, Director of Planning and Development
T. Cartwright, Fire Chief
A. Grigg, Director of Community and Economic Development
N. Halasz, Manager of Parks and Recreation
A. LaPointe, Manager of Legislative Services/City Clerk (minutes)
C. Lee, Director of Engineering and Operations
S. Luey, Chief Administrative Officer
P. Senese, Director of Corporate Services

Also in attendance were interested citizens, members of the news media and WeeStream.

1. Call to Order:

Mayor Maloney called the meeting to order.

2. Introduction of Addendum Items:

Nil.

3. Confirmation of Agenda:

No. 110 Moved by Councillor R. Bodner
Seconded by Councillor A. Desmarais

That the agenda dated July 23, 2018 be confirmed, as circulated
or as amended.

CARRIED.

4. Disclosures of Interest:

Nil.

5. Adoption of Minutes:

No. 111 Moved by Councillor B. Kenny
Seconded by Councillor A. Desmarais

- (a) That the minutes of the special meeting of Council 16-18, July 9, 2018, be approved as presented.
- (b) That the minutes of the regular meeting of Council 17-18, July 9, 2017, be approved as presented.

CARRIED.

6. Determination of Items Requiring Separate Discussion:

Nil.

7. Approval of Items Not Requiring Separate Discussion:

No. 112 Moved by Councillor F. Danch
 Seconded by Councillor B. Butters

That items 1 to 7 on the agenda be approved, with the exception of items that have been deferred, deleted or listed for separate discussion, and the recommendation contained therein adopted.

Motions Arising from Committee of the Whole Meeting Delegations:

Dianna M. Carle regarding a request for an exemption to By-law 1117/64/81, Section 3.2.2 for 1056 Steele Street to Allow for a Second Curb/Driveway Cut

Council resolved:

That an exemption of By-law 1117/64/81, Section 3.2.2, for 1056 Steele Street be granted to allow for a second curb cut and driveway.

Items:

1. Planning and Development Department, Planning Division, Report 2018-105, Subject: Recommendation Report for Official Plan Amendment D09-01-18 & Zoning By-law Amendment D14-02-18, n/s Killaly Street West

Council resolved:

That the Official Plan Amendment attached to Planning and Development Department, Planning Division Report 2018-105 as Appendix A be approved, adding a special policy to the Highway Commercial designation to support the use of warehousing on the property; and

That the Zoning By-law Amendment attached to Planning and Development Department, Planning Division Report 2018-105 as Appendix B be approved, rezoning the land from "HC – Highway Commercial" to "HC-48"; and

That staff be directed to prepare the Notice of Passing in accordance with the Planning Act and circulate to all applicable parties; and

That the Director of Planning and Development be directed to present for Council's consideration a report and the proposed site plan of the warehousing facility.

2. Engineering and Operations Department, Engineering Division, Report 2018-103, Subject: Wignell, Michener, Port Colborne and Beaverdam Municipal Drains Engineer Appointment

Council resolved:

That the appointment of Paul Smeltzer P. Eng. of AMEC(FW) be rescinded as per Section 39(2) Chapter D.17 of the *Drainage Act R.S.O. 1990*; and

That Paul Marsh P. Eng. of EWA Engineers Inc. be appointed under Section 78(1) Chapter D.17 of the *Drainage Act R.S.O. 1990*, and that this appointment become effective once the conditions of Section 78(2) have been met; and

That staff be authorized to execute a petition under Section 4 Chapter D.17 of the *Drainage Act R.S.O. 1990* to initiate/incorporate any new works related to municipal roads and/or property; and

That Paul Marsh P. Eng. of EWA Engineers Inc., be appointed under Section 8 Chapter D.17 of the *Drainage Act R.S.O. 1990* for the new works contemplated and any additional petitions under Section 4, related to the Wignell, Michener Port Colborne and Beaver Dam Drains, that may come forward during the Drainage Act process; and

That the Mayor and Clerk be authorized to sign the requisite Engineering Services Agreement for the preparation of new engineer(s) reports for the Wignell, Michener, Port Colborne and Beavertown Municipal Drains.

**3. Corporate Services Department, Clerk's Division, Report 2018-109,
Subject: Leave of Absence from Council**

Council resolved:

That a leave of absence be approved for Councillor John Mayne for a period ending November 30, 2018, or until he resumes attendance, whichever occurs first.

**4. Corporate Services Department, Finance Division, Report 2018-108,
Subject: Development Charge Reserve Funds – January 1, 2017 to
December 31, 2017**

Council resolved:

That report Corporate Services Department, Finance Division report 2018-108 with respect to Development Charge Reserve Funds January 1, 2017 to December 31, 2017 be received for information.

**5. Cynthia B. Skinner, Member of The Friends of Port Colborne Lighthouses
Re: Request for Proclamation of Lighthouse Day, August 7, 2018**

Council resolved:

That August 7, 2018 be proclaimed as "Lighthouse Day" in the City of Port Colborne in accordance with the request received from Cynthia B. Skinner, Member, The Friends of Port Colborne Lighthouses.

**6. Region of Niagara Re: Comments of Province's Draft Agricultural Impact
Assessment Guidance Document (PDS Report 29-2018)**

Council resolved:

That the correspondence received from the Region of Niagara Re: Comments on Province's Draft Agricultural Impact Assessment Guidance Document (PDS Report 29-20178), be received for information.

**7. Niagara Central Airport Commission Re: 2nd Quarter Report 2018 for the
Niagara Central Dorothy Rungeling Airport**

Council resolved:

That the correspondence received from Richard Rybiak, Chair, Niagara Central Airport Commission Re: Niagara Central Airport Commission 2nd Quarter Report for the Niagara Central Dorothy Rungeling Airport, be received for information.

CARRIED.

8. Consideration of Items Requiring Separate Discussion:

Nil.

9. Proclamations:

No. 113 Moved by Councillor B. Butters
 Seconded by Councillor D. Elliott

Whereas the 7th of August is International Lighthouse Day, therefore we seek recognition here by having Lighthouse Day declared in Port Colborne; and

Whereas this recognition acknowledges our rich marine based history, culture and industry; and

Whereas Port Colborne is unique, having 2 lighthouses connected by a tunnel; and

Whereas we are able to have tours to same, through co-operative inter-agency agreements, thus meeting the public's ever growing interest in lighthouses; and

Whereas this public interest re-enforces Friends of Port Colborne Lighthouses efforts to increase access and gain stewardship so that they may be properly preserved, restored, maintained and shared with the public for future generations; and

Now therefore, I, Mayor, John Maloney, proclaim August 7th as "Lighthouse Day" in the City of Port Colborne.

CARRIED.

10. Minutes of Boards, Commissions & Committees:

No. 114 Moved by Councillor A. Desmarais
 Seconded by Councillor B. Butters

- a) That the minutes of the Port Colborne Public Library Board meeting of June 5, 2018, be received.

CARRIED.

11. Consideration of By-laws:

No. 115 Moved by Councillor B. Butters
 Seconded by Councillor B. Kenny

That the following by-laws be enacted and passed:

6600/55/18 Being a By-law to Adopt Amendment No. 5 to the Official Plan for the City of Port Colborne

6601/56/18 Being a By-law to Amend Zoning By-law 6575/30/18 Respecting Lands Legally Described as Part Lot 32, Concession 2, Municipally Known as Killaly Street West

6602/57/18 Being a By-law to Appoint Paul Marsh P. Eng. Of EWA Engineers Inc. for the Completion of a New Engineer's Report for the Repair and Improvement of the Wignell, Michener, Port Colborne and Beaverdam Drains situated in the City of Port Colborne and to Rescind By-law No. 5653/84/11 and By-law No. 5666/97/11

6603/58/18 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 Regular Meeting of July 23, 2018

CARRIED.

12. Council in Closed Session:

Motion to go into closed session – 7:38 p.m.

No. 116 Moved by Councillor F. Danch
Seconded by Councillor B. Kenny

That Council do now proceed into closed session in order to address the following matter(s):

- (a) Minutes of the closed session portion of the following Council meetings: July 9, 2018.
- (b) Planning and Development Department, Planning Division Report 2018-102, concerning the potential sale of City-owned land, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(c) a proposed or pending acquisition or disposition of land by the municipality or local board.
- (c) Corporate Services Department, Clerk's Division Report 2018-104, Subject: Appointments to Boards and Committees, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees.
- (d) Planning and Development Department, By-law Enforcement Division Report 2018-106, concerning an update with respect to ongoing property investigations, pursuant to *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees and Subsection 239(2)(e) litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board.
- (e) Verbal report from the Chief Administrative Officer concerning a human resources matter, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees.

CARRIED.

Motion to rise with report – 9:10 p.m.

No. 117 Moved by Councillor A. Desmarais
Seconded by Councillor B. Butters

That Council do now rise from closed session with report at approximately 9:10 p.m.

CARRIED.

13. Disclosures of Interest Arising From Closed Session:

Nil.

14. Report/Motions Arising From Closed Session:

- (b) **Planning and Development Department, Planning Division Report 2018-102, concerning the potential sale of City-owned land, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(c) a proposed or pending acquisition or disposition of land by the municipality or local board.**

The City Clerk reported that direction was provided to the Direct of Planning and Development during closed session in accordance with the *Municipal Act, 2001*.

- (c) **Corporate Services Department, Clerk’s Division Report 2018-104, Subject: Appointments to Boards and Committees, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees.**

That the Deputy Clerk be directed to bring forward a report in open session with respect to appointments to boards and committees recommended by Council, as follows;

That Alison Chambers be appointed to the Accessibility Advisory Committee for a term ending December 31, 2022; and

That Connie Butter be appointed to the Senior Citizen Advisory Council for a term ending December, 31, 2019.

- (d) **Planning and Development Department, By-law Enforcement Division Report 2018-106, concerning an update with respect to ongoing property investigations, pursuant to *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees and Subsection 239(2)(e) litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board.**

The City Clerk reported that direction was provided to the Supervisor, By-law Enforcement during closed session in accordance with the *Municipal Act, 2001*.

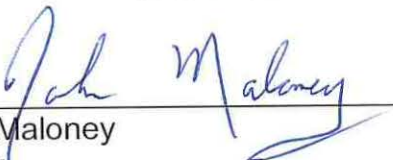
- (e) **Verbal report from the Chief Administrative Officer concerning a human resources matter, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees.**

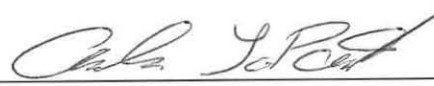
The City Clerk reported that Council received the verbal report from the Chief Administrative Officer during closed session in accordance with the *Municipal Act, 2001*.

15. **Adjournment:**

No. 118 Moved by Councillor F. Danch
 Seconded by Councillor D. Elliott

That the Council meeting be adjourned at approximately 9:11 p.m.
 CARRIED.


 John Maloney
 Mayor


 Amber LaPointe
 City Clerk

AL/cm

**City of Port Colborne
Regular Committee of the Whole Meeting 16-18
Minutes**

Date: July 23, 2018
Time: 6:30 p.m.
Place: Council Chambers, Municipal Offices, 66 Charlotte Street, Port Colborne

Members Present: R. Bodner, Councillor
B. Butters, Councillor
F. Danch, Councillor
A. Desmarais, Councillor
D. Elliott, Councillor
B. Kenny, Councillor
J. Maloney, Mayor (presiding officer)

Absent: Y. Doucet, Councillor (due to vacation)
J. Mayne, Councillor (leave of absence)

Staff Present: D. Aquilina, Director of Planning and Development
T. Cartwright, Fire Chief
A. Grigg, Director of Community and Economic Development
N. Halasz, Manager of Parks and Recreation
A. LaPointe, Manager of Legislative Services/City Clerk (minutes)
C. Lee, Director of Engineering and Operations
S. Luey, Chief Administrative Officer
P. Senese, Director of Corporate Services

Also in attendance were interested citizens, members of the news media and WeeStream.

1. Call to Order:

Mayor Maloney called the meeting to order.

2. Introduction of Addendum Items:

Nil.

3. Confirmation of Agenda:

Moved by Councillor B. Kenny
Seconded by Councillor A. Desmarais

That the agenda dated July 23, 2018 be confirmed, as circulated or as amended.

CARRIED.

2. Engineering and Operations Department, Engineering Division, Report 2018-103, Subject: Wignell, Michener, Port Colborne and Beaverdam Municipal Drains Engineer Appointment

Moved by Councillor R. Bodner
Seconded by Councillor B. Butters

That the appointment of Paul Smeltzer P. Eng. of AMEC(FW) be rescinded as per Section 39(2) Chapter D.17 of the *Drainage Act R.S.O. 1990*; and

That Paul Marsh P. Eng. of EWA Engineers Inc. be appointed under Section 78(1) Chapter D.17 of the *Drainage Act R.S.O. 1990*, and that this appointment become effective once the conditions of Section 78(2) have been met; and

That staff be authorized to execute a petition under Section 4 Chapter D.17 of the *Drainage Act R.S.O. 1990* to initiate/incorporate any new works related to municipal roads and/or property; and

That Paul Marsh P. Eng. of EWA Engineers Inc., be appointed under Section 8 Chapter D.17 of the *Drainage Act R.S.O. 1990* for the new works contemplated and any additional petitions under Section 4, related to the Wignell, Michener Port Colborne and Beaver Dam Drains, that may come forward during the Drainage Act process; and

That the Mayor and Clerk be authorized to sign the requisite Engineering Services Agreement for the preparation of new engineer(s) reports for the Wignell, Michener, Port Colborne and Beaverdam Municipal Drains.

CARRIED.

14. Notice of Motion:

Nil.

15. Adjournment:

Moved by Councillor F. Danch
Seconded by Councillor D. Elliott

That the Committee of the Whole meeting be adjourned at approximately 7:31p.m.

CARRIED.

AL/cm

Report Number: 2020-106

Date: August 24, 2020

Subject: Fence Variance – 128 McCain Street

1) PURPOSE

The purpose of this report is to present Council with a fence variance request from Rachel McPherson of 128 McCain Street.

2) HISTORY, BACKGROUND, COUNCIL POLICY, PRACTICES

It is Council Policy to review any variance requests for fences and decide on each case based on the information presented. The applicant's property is located at the corner of McCain Street and Steele Street. The front entry to the dwelling is on McCain and the fence is located in the exterior side yard and rear yard adjacent to a neighbouring driveway.

3) STAFF COMMENTS AND DISCUSSIONS

The current Fence By-law 5510/107/10, Section 3.3.2, establishes fence heights of 2 m (6.56 ft) above the effective ground level in any rear or side yards, However, if the rear yard of one property abuts the front yard of the adjacent property, then the exception is applied.

“3.3 Fence Heights in Residential Zones

3.3.1 No person shall construct or permit to be constructed or maintained within 4.5 metres of the street line in front yard: or within the required front yard if it is less than 4.5 metres.

- (i) a fence of closed construction of a height greater than 1.0 metre above effective ground level; or
- (ii) a fence of open construction of a height greater than 1.25 metres above effective ground level.

Where a building or a part of a building is closer to the front lot line than 4.5 metres, this distance shall be known as the Required front yard.

3.3.2 Except as otherwise provided in this By-law, no person shall construct or permit to be constructed or maintained any fence of a height greater than 2.0 metres above the effective ground level in any rear and /or side yards from the rear lot line to the front setback line as illustrated in Schedule “A” to this By-law.

EXCEPTION – When the rear yard of one property abuts the front yard of an adjoining property and the safety of passing pedestrians from vehicular movement may be affected by obstructed views, no person shall construct or

permit to be constructed or maintained within 4.5 metres from a driveway of an adjoining lot:

(i) a fence of closed construction that exceeds 1 metre in height above affective ground level,

or

(ii) a fence of open construction that exceeds 1.25 metres in height above effective ground level.”

The views of the fence since 2007 have changed from compliance with the by-law to non-compliance.



2018



2020



The existing condition of the fence and hedgerow at this location are as follows:

- Hedgerow 2m from property line.
- Hedgerow and fence back to back greater than 1m of closed construction.
- Required lowered fence/hedge is 1m from property line to a distance of 4.5m.

The existing conditions of this location on Steele Street are as follows:

- This is a 9m wide highway.
- There is prohibited parking on the east side of the highway, between Killaly Street West and Main Street West.
- This is a residential area.
- The speed limit on Steele Street is 50 km/hr.
- This is a primary road.
- This highway is the main access used by ambulance, fire and police to attend the urgent care centre and Lake Erie.

The By-law Enforcement Division reviewed the area and spoke with the homeowner and the adjacent homeowner. After careful review, the By-law Enforcement Division are not in favour of and do not recommend allowing the variance for 128 McCain Street. Staff recommend that the fence and hedge row be brought into compliance.

4) OPTIONS AND FINANCIAL CONSIDERATIONS:

a) Do Nothing

This section is not applicable.

b) Other Options

This section is not applicable.

5) COMPLIANCE WITH STRATEGIC PLAN INITIATIVES

This section is not applicable.

6) ATTACHMENTS

Appendix A – Fence variance application form and attachments


7) RECOMMENDATION

That Planning and Development Department, By-law Enforcement Division, Report 2020-106, Subject: Fence Variance – 128 McCain Street, be received for information; and

That the fence variance request for 128 McCain Street not be approved, and that the property be brought into compliance with the Fence By-law.

8) SIGNATURES

Prepared on August 4, 2020 by:


Sherry Hanson, C.P.S.O.
Manager of By-law Services

Reviewed by:


Sherry Hanson C.P.S.O.
Acting Director of Planning and Development

Reviewed and respectfully submitted by:


C. Scott Luey
Chief Administrative Officer



Application Form

Request for Relief from Fence By-law

Applicant

- 1) Name: Rachel MacPherson
- 2) Address: 128 McCain St.
- 3) Phone #: [REDACTED]
- 4) Email: [REDACTED]

Area in question

Site Plan Attached

Address: 128 McCain St.

Location: (check all that apply)

- Front Yard
- Side Yard
- Exterior Side Yard
- Required Front Yard
- Rear Yard
- Corner Lot

Fence Construction: Open Closed

Existing Fence Height: 1.6 m Proposed Fence Height: 1.6 m

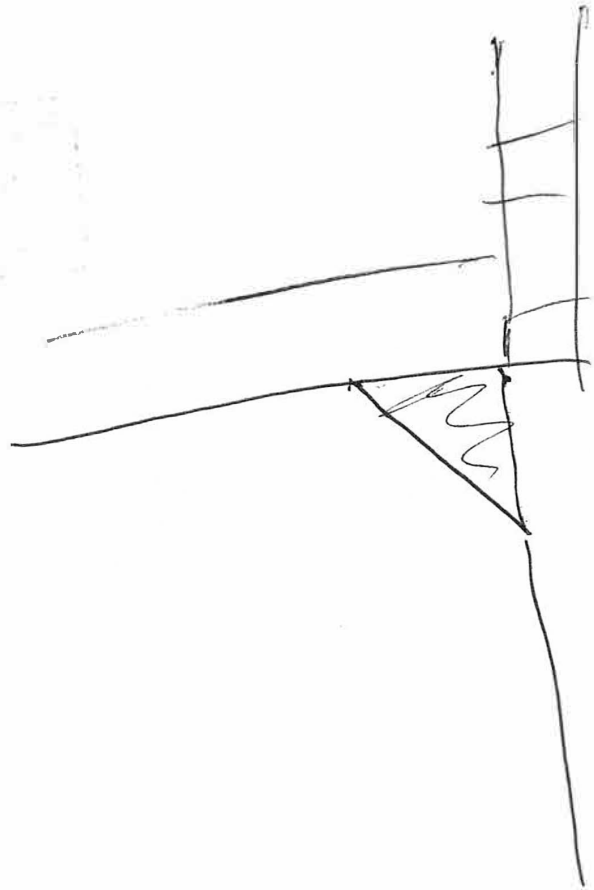
Is the Fence adjacent to a driveway	<input checked="" type="checkbox"/>	Is there an easement/swale on the property	
Is there an existing Site Plan Agreement		Is there a Pool on the property	

Comments: The fence we built is parallel to an existing fence of 20+ years. The fence runs along Steel St. 4.1 m from road side. There has been no safety concerns in the past and no new obstructions of view made. Over a year ago we planted a row of trees, the rear neighbor was aware and ok with addition.

Applicant Signature R. [Signature] Date: 17/06/2020

Office Use Only:

Variance Fee	\$450.00	Zoning	
Paid by:		Date	





Report Number: 2020-160

Date: October 26th, 2020

SUBJECT: Project No.: 2020-02, Elm Street Bulk Water Station Replacement

1) PURPOSE

The purpose of this report is to inform Council of the outcome of the tender proceedings for Project 2020-02, Elm Street Bulk Water Station Replacement, and to obtain approval from Council to award the project to the recommended contractor.

2) HISTORY, BACKGROUND, COUNCIL POLICY, PRACTICES

The Elm Street bulk water station is located at 1080 Elm Street and housed within the Animal Shelter complex. The Elm Street bulk water station is generally utilized by water haulers to service the customers in the rural area of the City and also residents of Wainfleet.

The existing bulk water station was approved for replacement as part of the Proposed 2016 Water & Wastewater Rates at a budget of \$269,692.00. In 2020 an equivalent station to the existing Elizabeth Street station was purchased for \$91,963.06. The use of this station will provide consistency between both stations for future maintenance and allows the use of interchangeable parts already stocked at the Engineering and Operations Centre.

Tender documents have been prepared and a public tender procedure was initiated. During the tender process a total of ten (10) contractors took out documents. At the time of tender closing on October 5th, four (4) contractors had submitted pricing. The results of that tender opening have been identified below. The entire tender process and opening proceedings adhered to the purchasing policy as previously adopted and endorsed by Council.

3) STAFF COMMENTS AND DISCUSSIONS

The intended work consists of the installation of a City supplied bulk water station, installation of two (2) engineered concrete slabs, installation of 150mm watermain, ditch realignment, as well as including abandonment, removal, disposal and restoration of all appurtenances.

The tendering process closed on Monday, October 5th, 2020 with four (4) compliant submissions:

1. V. Gibbons Contracting LTD.	\$117,990.00
2. Stolk Construction LTD.	\$142,605.00
3. C.R.L. Campbell Construction & Drainage LTD.	\$194,555.00

4. Greenspace Construction

\$259,820.21

The tender document and pricing submitted by V. Gibbons Contracting LTD. of Stevensville, Ontario in the amount of \$117,990.00, plus applicable taxes was found to be complete in all aspects with regard to specifications, details and format.

V. Gibbons Contracting LTD. completed the installation of the Elizabeth Street bulk water station in 2011 with success.

Staff recommend that a 10% contingency on the water station and installation costs be approved for use should necessary costs arise.

It is the recommendation of staff at this time that Council accept the tender as submitted by V. Gibbons Contracting LTD. and award the 2020-02, Elm Street Bulk Water Station installation to them. This will allow the City to enter into an agreement with V. Gibbons Contracting LTD. and to initiate construction as soon as scheduling allows while staying below the approved budget from 2016.

4) OPTIONS AND FINANCIAL CONSIDERATIONS:

a) Do nothing.

If no action is taken at this time, the bulk water station will be stored at the Operations Centre and staff will release a new tender for work to be completed at a future date.

b) Other Options

Accept the tender as presented from V. Gibbons contracting to allow the installation of the new station to begin. (Recommended)

5) COMPLIANCE WITH STRATEGIC PLAN INITIATIVES

Not applicable.

6) ATTACHMENTS

None.

7) RECOMMENDATION

That the Council of the City of Port Colborne award Tender 2020-02 Bulk Water Station Installation to V. Gibbons Contracting LTD., of Stevensville, Ontario, for the total tendered price of \$117,990.00, plus applicable taxes;

That a contingency allowance of 10% of the water station and installation costs, being \$21,000.00, be approved to be used by City staff if the necessity should occur;

That staff be directed to prepare the by-law and the City Clerk and Mayor be authorized to execute the Contract Agreement; and

That the funding for Tender 2020-02 Bulk Water Station installation, be financed from the Water Reserve.

8) SIGNATURES

Prepared on October 14th, 2020 by:



Patrick Zub
Design & Construction Supervisor

Reviewed by:



Steve Shypowskyj
Acting Director of Engineering &
Operations

Reviewed by:



Bryan Boles
Director of Corporate Services / Treasurer

Reviewed and Respectfully Submitted by:



C. Scott Luey
Chief Administrative Officer

Report Number: 2020-151

Date: October 26, 2020

SUBJECT: Microsoft Office 365 Cloud Migration

1) PURPOSE

The purpose of this report is to obtain approval to contract with Quest Software Inc. to migrate the City of Port Colborne (the “City”) from HCL Domino Notes Email to Outlook in the Microsoft Office 365 Cloud.

2) HISTORY, BACKGROUND, COUNCIL POLICY, PRACTICES

As the Covid-19 pandemic began in early 2020, the City moved quickly to adopt new information technology to support a mobile work environment in order to keep City services open and running.

One of the key actions was the introduction of Microsoft Office 365 in the Cloud. While the City has used Microsoft products for some time, they have been hosted on servers on premises in City Hall. The move to the Cloud has brought a new level of mobility, introduced new applications and strengthened the City’s data security. An example of one of the new applications is the online video conferencing (Microsoft Teams) which has enabled virtual meetings to support on-going initiatives to promote social distancing.

3) STAFF COMMENTS AND DISCUSSIONS

This report recommends the migration of HCL Domino Notes Email (formerly IBM Domino Notes) to Outlook on the Microsoft Office 365 Cloud.

While staff have the capability of performing the migration, there is no current capacity. If staff were to perform the migration it would happen incrementally over six months. In utilizing the services of Quest Software Inc., the migration will occur over one weekend to be scheduled toward the end of the year. The estimated value of the contract with Quest Software Inc. is \$70,000.

The Province of Ontario has provided grant funding to modernize municipalities across the province. Staff propose that this project will be funded by the modernization grant.

In the near term there are no immediate cost savings as the HCL Domino system is used to maintain other databases at the City. This usage will be reviewed following the proposed project in this report as the City works to reduce the application footprint.

The main beneficiary of this project will be the user experience and ease of access to applications across multiple devices.

4) OPTIONS AND FINANCIAL CONSIDERATIONS:

Do Nothing - The City will continue to utilize HCL Domino Email. With this option the City accept some risk in that it may be necessary to migrate to a different platform regardless, as there is no track record with the company that now has ownership of Notes. There are no guarantees that this company will maintain and improve this platform in the future.

5) COMPLIANCE WITH STRATEGIC PLAN INITIATIVES

Improving the user experience will support Council and staff to “Create an Even Better Community”.

This initiative will also greatly improve communications in terms of City Wide Emergency Management and Disaster planning.

6) ATTACHMENTS

None.

7) RECOMMENDATION

That the CAO and Director Corporate Services/Treasurer be directed to contract and execute applicable documents with Quest Software Inc. in order to complete the project as outlined in Corporate Services Department, Information Technology Division, Report No. 2020-151, Subject: Microsoft Office 365 Cloud Migration.

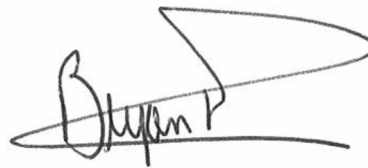
8) SIGNATURES

Prepared on October 16, 2020 by:



Belinda Daniel
Manager, Information Technology

Reviewed by:



Bryan Boles, MBA, CA, CPA
Director of Corporate Services/Treasurer

Reviewed and respectfully submitted by:



C. Scott Luey
Chief Administrative Officer



Report Number: 2020-156

Date: October 26, 2020

SUBJECT: Provincial COVID-19 Safe Restart Funding

1) PURPOSE

The purpose of this report is to seek direction from Council through a resolution to apply for additional funding under Phase 2 of the Province of Ontario (the “Province”) Safe Restart Agreement.

2) HISTORY, BACKGROUND, COUNCIL POLICY, PRACTICES

The Province has developed a two-phase approach to providing all municipalities across the province with operating funding to address COVID-19 related operating pressures.

During the first phase, the Province allocated municipalities’ funding on a per household basis. The City of Port Colborne received \$657,090 (\$622,700 municipal portion and \$34,390 Transit portion).

In the second phase (“Phase 2”), the Province has developed an application process that requires the following:

- Resolution of Council seeking additional funding under Phase 2;
- 2020 Operating budget;
- Actuals at September 30 – Treasurers statement of accuracy;
- Year-End Forecast – Treasurers statement of accuracy; and
- Supporting documentation (if any).

The Province has set aside \$695 million in this funding stage and have indicated they will determine the allocation methodology only after all applications have been received.

3) STAFF COMMENTS AND DISCUSSIONS

As previously communicated, staff have planned and allocated resources to achieve what staff understand to be a Council directive of a balanced budget by year end.

As Council is aware, the pandemic and related impacts continue to evolve.

Staff identify that should the City apply for Phase 2 funding, the application is due on November 6th and the last Council meeting before that date is the Council meeting this report is being brought forward on (October 26th). Staff anticipate the reporting requirements for Phase 2 to be completed before but near the November 6th deadline as staff are simultaneously completing the 2021 operating budget.

For this reason, staff recommend that Council approve a resolution to move forward

with the application for Phase 2 funding. Staff will consult with the Mayor prior to applying, should Phase 2 funding be required.

4) OPTIONS AND FINANCIAL CONSIDERATIONS:

Do Nothing - The City will not apply for Phase 2 funding.

5) COMPLIANCE WITH STRATEGIC PLAN INITIATIVES

A Phase 2 funding application, should one be required, would support a sustainable financial framework for the City of Port Colborne.

6) ATTACHMENTS

None.

7) RECOMMENDATION

That Council direct staff to apply for Phase 2 funding under the Safe Restart Agreement – Municipal Operating Funding.

8) SIGNATURES

Prepared on October 16, 2020 by:

Reviewed and respectfully submitted by:



Bryan Boles, MBA, CA, CPA
Director of Corporate Services /
Treasurer

C. Scott Luey
Chief Administrative Officer



Memorandum

To: Mayor Steele and Members of Council

From: Councillor Harry Wells

Date: October 26, 2020

Re: **Designating the Vulnerable Aquifer Schedule B3 of Official Plan as a source water for rural residents of Port Colborne**

The City has received a significant number of requests from citizens urging and pleading the decision makers for the City to protect the vulnerable aquifer identified in Schedule B3 of the City's Official Plan (OP). The rural community of Port Colborne and other settlements in Ontario and New York state depend on this same aquifer to supply them their everyday need for fresh consumable water.

We are surrounded by high quality fresh water and because of this many of us take it for granted until we turn on the tap and no water comes out or the water that does come out is not suitable for consumption. A mere 0.014% of all water on Earth is both fresh and easily accessible with 97% of the remaining water being saline, and a little less than 3% being difficult to access. We are so fortunate to have this quality and quantity of fresh water and we as decision makers for the City are accountable to make the appropriate decision to protect it. This Council has to take the lead in acknowledging that water is a scarce and precious resource and that protecting the quality of the aquifer is a necessity, not an option.

The Provincial Policy Statement (PPS) calls for the protection of resources, public health and safety, and the quality of the natural environment. The policies of the PPS represent minimum standards and the PPS recognizes and expects Planning authorities and decision-makers to go beyond these minimum standards to address matters of importance to their community, as long as doing so does not conflict with any policy of the PPS. The policies of the PPS are expected to be complemented by City generated policies and plans regarding matters of interest to the City such as protecting the Aquifer.

The Clean Water Act regulates the municipal drinking water system and addresses Intake Protection Zones and *recognizes that the people of Ontario are entitled to expect their drinking water to be safe*. The Niagara Peninsula Source Protection Plan, and the City's OP and Zoning By-law (ZBL) establish levels of protection for identified intake protection zones for the City's urban drinking water system but, presently there are no policies for private water supply for rural residents. The issue being the Aquifer is not

privately owned and is accessible to the public. The current Regional Official Plan calls on the City to develop and adopt Local Official Plans and Secondary Plans containing more detailed environmental policies in conformity with Provincial and Regional policies and Plans.

The City is responsible for its local water distribution network and local sewer collection system so it should also be responsible for protecting the City's rural source of water the Aquifer. The *Niagara Peninsula Conservation Authority's*, Niagara Drinking Water Source Protection Plan States "We all need and deserve safe drinking water and, in this regard, it is in everyone's interest to ensure that our drinking water is safe and secure".

I am requesting that Council approve the following motion;

That Council recognizes the Aquifer as identified in Schedule B3 of the Official Plan as a source water for the rural residents of the City; and

That the Director of Planning and Development be directed to amend the Official Plan to include the Aquifer such that the Aquifer receives the same consideration and protection from susceptible threats of contamination or adverse impact as the intake protection zones (IPZ-1 and IPZ-2); and

That the Region of Niagara, Township of Wainfleet, and Town of Fort Erie be notified of the City's action and be requested to pursue similar updates to their municipal planning documents in order to protect the aquifer.

Thank you for your consideration,

Harry Wells
Ward 4 Councillor

September 30, 2020

CL 15-2020, August 13, 2020 & CL 17-2020, September 17, 2020
PWC 7-2020, August 4, 2020
PW 34-2020, August 4, 2020

Local Area Municipalities

SENT ELECTRONICALLY

RE: Solid Waste Management By-law Update

Regional Council, at its meeting of August 13, 2020, approved the following recommendation of its Public Works Committee:

That Report PW 34-2020, dated August 4, 2020, respecting Solid Waste Management By-law Update, **BE RECEIVED** and the following recommendations **BE APPROVED**:

1. That the Solid Waste Management By-law No. 2017-56 as amended, **BE AMENDED** to reflect the by-law updates outlined in Appendix 1 to Report PW 34-2020;
2. That the proposed Short Form Offences and Set Fines Schedule, attached as Appendix 2 to Report PW 34-2020 as amended, **BE FORWARDED** to the Chief Justice of the Ontario Court (Provincial Division) for approval, as required under the Provincial Offences Act and upon approval including any changes by the Chief Justice, the Short Form Offences and Set Fines Schedule become enforceable under the updated By-law; and
3. That a copy of the amended By-law and Report PW 34-2020 **BE FORWARDED** to the local area municipalities for information.

The amended by-law was approved at the Regional Council meeting held on September 17, 2020.

A copy of Report PW 34-2020 and the amended by-law are enclosed for your information.

Yours truly,



Ann-Marie Norio
Regional Clerk

:kl

CLK-C 2020-191

Distribution List: Susan McPetrie Waste Management Services Advisor
Nick Lidstone Contract Supervisor
Bruce Zvaniga, P.Eng Commissioner of Public Works (Interim)
N. Coffey, Executive Assistant to the Commissioner, Public Works

Subject: Solid Waste Management By-law Update

Report to: Public Works Committee

Report date: Tuesday, August 4, 2020

Recommendations

1. That this Committee recommend to Regional Council that the Solid Waste Management By-law No. 2017-56, as amended **BE AMENDED** to reflect the By-law updates outlined in this report and attached as Appendix 1;
2. That this Committee recommend to Regional Council that the proposed Short Form Offences and Set Fines Schedule, attached as Appendix 2, **BE FORWARDED FOR APPROVAL** to the Chief Justice of the Ontario Court (Provincial Division) as required under the *Provincial Offences Act*. Upon approval including any changes by the Chief Justice, the Short Form Offences and Set Fines Schedule become enforceable under the updated By-law; and
3. That a copy of the amended By-law and the subject report **BE FORWARDED** to the local area municipalities, for information.

Key Facts

- The purpose of this report is to seek Committee's approval for the amendment of the Solid Waste Management By-law No.2017-56 (By-law), which was last updated in 2017.
- Several updates to the By-law are required due to service level changes which have previously been approved by Council, to be effective October 19, 2020.
- Additional updates to the By-law to include provisions on exemptions, container limits and set-out specifications, Acceptable Materials, inappropriate behaviour towards staff, Illegal Dumping and issuing Orders for clean-up of Non-Compliant Material.
- An update to the Short Form Offences and Set Fines Schedule is proposed to facilitate the enforcement of property owners' responsibility to remove Material deemed uncollectable (i.e. contaminated or does not otherwise meet By-law restrictions) by the collection contractors.
- Minor clarifications and clerical corrections to the existing By-law wording have been made to improve public understanding and administration.

Financial Considerations

There are no anticipated financial implications with the proposed update of the By-law.

Analysis

The purpose of the By-law is to regulate and control the use of Niagara Region's waste management system. Since coming into effect in October 1999, the By-law has regularly been revised to reflect changes to waste collection services and requirements. Amendments were adopted in 2001, 2002, 2003, 2008, 2010, 2011, 2012, 2015 and 2017.

The current update to the By-law is required to incorporate the waste collection service level changes approved by Council on October 17, 2019 (PW 61-2019), which take effect October 19, 2020. The update also includes improvements in wording to encourage increased waste diversion and provide clarification on existing conditions for enhanced enforcement and public understanding.

A coordinated update to the Requirements for Waste Collection policy and procedures is needed to ensure consistency with the By-law change. An update to the Requirements of Waste Collection policy and procedures will be provided to Public Works Committee in September, 2020.

Outlined below are the proposed By-law revisions which are contained in Appendix 1:

Service Level Changes

The By-law has been updated to reflect the waste, recyclables and organics service levels changes taking place on October 19, 2020.

Every-other-week Garbage collection

All properties outside of the Designated Business Areas (DBAs) and those residential properties inside specified DBAs, which receive Niagara Region's curbside Garbage collection, will receive every-other-week Garbage collection as a base service. Weekly collection of Blue/Grey Box/Cart and Green Bin/Cart Material will continue. Schedule A of the By-law has been revised to show the collection frequencies for each service.

Changes to Garbage Container limits

Garbage Container limits will also be changing on October 19, 2020. Schedule A has been updated with the following container limit changes:

- Garbage Container limits will double for all properties receiving every-other-week Garbage collection. (i.e. if current limit is one (1) Garbage Container per unit, per week, it will double to two (2) Garbage Containers every-other-week).
- Mixed-Use (MU) and Industrial, Commercial and Institutional (IC&I) properties outside DBAs will be permitted to set out eight (8) Garbage Containers, per property, every-other-week.
- MU and IC&I properties inside DBAs will change from a container limit of seven (7) containers per property, per week to four (4) containers, per property, per week as a base service.

Limit on Bulky Goods Collection – Low Density Residential Properties

Starting October 19, 2020, there will be a limit of four (4) Bulky Goods, per unit, per Garbage collection. Section 6.2 of the By-law has been updated to include this limit. There is no limit on the number of times a resident can schedule a pick up.

Discontinuation of Curbside Collection of White Goods

As curbside collection of White Goods will be discontinued effective October 19, these items have been removed from Section 3, Classes of Collectable Items and Section 12 under Collection Services in the By-law. Section 1.39, Non-Collectable Material, of the By-law has been updated to include White Goods.

Diaper Exemptions

As per the Public Works Committee recommendation on May 12, 2020, a garbage exemption program was approved to have diapers collected weekly with the start of the new collection contracts, for households with a child under the age of four in diapers. In addition, a weekly collection service was approved for residents who generate additional garbage due to a medical condition. Section 14.1 of the By-law has been changed to provide the appropriate criteria and guidelines for the updated exemptions.

Blue/Grey Cart and Green Cart Limits for IC&I Outside DBAs

Similar to other comparator municipalities, Niagara Region has placed a limit on the number of recycling and organics carts that can be collected weekly at IC&I properties outside the DBAs. This ensures that resources and capacity are sufficient to efficiently and effectively collect and process residential recycling and organics. The container limits in Schedule A of the By-law have been updated with a maximum limit of eight (8) Blue/Grey Carts and eight (8) Green Carts for IC&I properties outside of DBAs. Section 14 of the By-law has been updated to place a limit on the number of recycling and organics carts that can be collected weekly at IC&I properties outside the DBAs.

Container and Set-out Specifications

The size restrictions for Blue and Grey Boxes have been further defined to provide a maximum depth, in addition to the maximum height and width, and clarify how dimension should be measured. The By-law has also been updated to specify that containers must have handles or indentations to facilitate lifting.

In section 11.1, the acceptable methods for bundling flattened cardboard have been updated.

Section 14.1 has been updated to provide instructions on how to properly affix Garbage Tags to Garbage bags and on Garbage Material.

Clarifications have been made to improve public understanding and administration of the use of lids on collection containers. All lids must be readily separable from all collection containers with the exception of Blue, Grey, and Green Carts from As Designated properties, and Green Bins, available from the Region, or approved alternatives.

Acceptable Household Hazardous Waste Containers

Although guidelines for acceptable containers for Household Hazardous Waste are provided on the Region website, they have not previously been included in the By-law. Section 27 has been updated to outline the parameters for acceptable containers for disposing of Household Hazardous Waste at Region landfills and drop-off sites.

Farm Exemption

Section 14.9 of the By-law has been updated to reflect the Region's existing farm exemption parameters.

On a request basis, if a residential farm requests commercial services, the property will be categorized as an IC&I premise and will receive services as such and specifically will no longer be eligible for Bulky Good, Leaf and Yard Material and Brush collection, and cannot purchase Garbage Tags for additional Garbage.

If a commercial farm requests single family residential services, the property will be categorized as a low-density residential premise and receive services as such and specifically will not be eligible for the eight (8) bag/can per every-other-week Garbage limit.

Private Garbage Collection

Previously, IC&I and MU properties that used private garbage collection were not permitted to receive Regional Garbage collection. Section 14.5 of the By-law has been updated to allow properties using private garbage collection to receive Regional Garbage collection, provided they are also using Regional Blue/Grey Box/Cart and Green Bin/Cart collection and are able to stay within the applicable Garbage Container limits. The rationale for the elimination of the restriction was to improve service delivery to those IC&I and MU properties that would otherwise have been ineligible to receive curbside Regional Garbage collection.

Multi-Purpose Properties

Section 14.8 was modified to align with Niagara Region's "Requirements for Waste Collection" policy.

Inappropriate Behaviour

To enforce the safety of Niagara Region or contractors' staff, if the Owner of a Premises or a tenant indulges in any inappropriate behaviour, violent, threatening or illegal conduct, or uses profane or abusive language, as determined by Niagara Region, towards Region staff or contractors' staff, the Region may, at the discretion of the Commissioner of Public Works or his/her designate, and upon written notice to the Owner, cease collection from the Premises until such time as the inappropriate

behaviour is corrected to the satisfaction of the Region. These changes are reflected in Section 15.3b of the By-law.

Material in Enclosures

A new section (16.6) has been added to the By-law to provide service users using enclosures to store Materials, with criteria for these enclosures. The purpose of establishing criteria is to ensure enclosures are constructed in a manner that does not pose a health and safety risk to the collector.

Communal Collection Points

Section 16.2 has been updated so that Premises that place their Material at a Communal Collection Point must ensure all collection containers are labelled with the Dwelling Unit address to clearly distinguish separation from neighbouring Premises.

Uncontained Material

In addition to the existing wording in Section 19, which requires that Owners of Premises ensure that Material set out for collection does not become uncontained and are responsible for immediate clean-up of all uncontained Material, the By-law has been updated to state that if the uncontained Material is not cleaned up, the Region may clean up the Material and charge the Owner for this work. Wording has also been added to outline a notification process for Premises with persistent issues of uncontained Material.

Notices and Orders for Clean-up

Where a Person or Owner is in Non-compliance with this By-law and if the Non-compliance continues despite the Region's attempts to obtain compliance, as outlined in Section 41.1, the Region may forthwith perform the work required to obtain compliance with this By-law, by way of an Order, as determined by Region staff as outlined in Section 49.

Section 49 has been expanded to facilitate the enforcement of Orders, which was previously not specified in By-law No.2017-56.

Authorize collection of Non-Compliant or Non-Collectable Material

Section 20.3 has been added to the By-law to authorize the collection of Non-Compliant or Non-Collectable Material by the Region or its Contractors for the purpose of investigation or health, safety and welfare of the general public.

The following changes have been made to the list of Acceptable Materials:

- Section 26.1 Acceptable Materials for Compositing: added (g) organic material which has decomposed under anaerobic conditions;
- Section 28.1 Acceptable Materials for Landfilling: Clarified (e) soil or dirt in acceptable quality and quantity, as determined by the Region.

Regional Drop-off Location Restrictions

Regional Drop-off Location restrictions have been updated to include an anti-idling provision. Section 33 specifies that no Person shall cause or permit a vehicle to idle for more than three (3) minutes.

Illegal Dumping

In addition to the current guidelines prohibiting a Person from dumping or depositing Material into public litter bins or on any public road or property, Section 38 now includes restrictions on dumping Material within a one (1) metre radius of a public litter bin.

Enforcement: Friendly Reminders

To encourage compliance, with this By-law, the Region may use Friendly Reminders and Final Friendly Reminders to inform Persons or Owners of Non-Compliance. Where a Person or Owner is in Non-Compliance with this By-law and if the Non-Compliance continues, despite the Region's attempts to obtain compliance, the Region may proceed with an Order requiring the Person or Owner to correct the contravention, as outlined in Sections 49.

Additions and Modifications to Definitions Section

The following definitions have been revised:

“Amnesty Week” has been updated from what was previously “Garbage Exemption Week”. It has also been updated to reflect the changes in garbage container limits related to every-other-week garbage collection.

“Bulky Goods” has been revised to reflect more examples of acceptable items, including large toys and water softening units.

“Friendly Reminder” has been updated to include “Final Friendly Reminders” in the definition of written notices used by the Region.

“Garbage Exemptions” has been simplified for clarity.

“Garbage Tag” has been updated to specify that tags must be untampered and affixed to the neck of a waterproof bag or on top of Materials placed in a Garbage container.

“Green Bin Container” has been updated to include that the container may be a container from the Region or other rigid reusable closed or open-top container clearly labelled with handles.

“Leaf and Yard Material” has been updated to add logs to the list of materials that are not considered “Leaf and Yard Material”.

“Pet Waste” has been broadened to include pet bedding to animal excrement generated by small household pets.

“Regional Drop-Off Location” has been simplified for clarity.

“Set Out Service” has been updated to specify that it does not include “Leaf and Yard Material”, “Bulky Good”, “Brush” or any other excluded items As Designated by the Region.

“Sharps” has been updated to include safety engineered needs, laboratory class or other Materials capable of causing punctures or cuts.

The following new definitions have been added to the By-law:

“Care and Control”: Material shall be deemed to have been within the care and control of a Person at a point in time if the Material included any Material typically associated

with or used by that Person and shall include but is not restricted to the following Materials:

- a) mail and other paper products bearing the name, address or other identifying characteristics typically associated with that Person;
- b) Material that can on a balance of probabilities be shown to have been purchased by that Person;
- c) Material that can on a balance of probabilities be shown to have originated from Premises with respect of which a Person is considered an Owner and during the time the Person was considered an Owner;
- d) Materials that can on a balance of probabilities be shown to have been transported in a motor vehicle owned or under the care and control of the Person.

“Communal Collection Point” means a Collection Point approved or as determined by the Region, that is authorized for the use of more than one Premises.

“Construction, Renovation and Demolition”: Material includes but is not limited to windows, drywall, wood, metal, PVC pipe and other building Materials.

"Dwelling Unit" means a place of residence designed or intended for habitation by one (1) or more persons with its own culinary and sanitary facilities which are provided for the exclusive use of the person or persons who reside therein. If an Owner disagrees with the number of units contained within the Premises as assessed, it is up to the Owner to provide proof of the actual number of legally existing individual units within the Premises. In the absence of provision of proof to the satisfaction of the Region, the limit for the Premises in question shall be as determined by the Region.

“Illegal Dumping” means the disposing of Material in non-designated areas, such as public roads or ditches, public property and public litter bins, as set out in Section 38 of this By-law. Illegal Dumping does not include Litter.

"Litter" means debris, refuse, or Material discarded outside the regular Collection Point or lying scattered about the area.

"Liquid Material" means Material which is not solid and which exhibits evidence of free water, or other liquids, whether or not contained.

“Multi-Purpose Property” means a single property as defined by MPAC and/or contained in applicable Site Plan Conditions, housing multiple Premises types.

General revision and language updates

The new By-law is a result of a collaborative team approach involving several meetings between the Region’s Legal and Court Services Division, front line staff and managers from the Waste Management Services Division. Terminology usage has been standardized in the By-law to use commonly understood words and clearly phrased responsibilities and prohibitions so that residents can easily understand how to deal with Recyclables and Garbage, both in their curbside collection and at the Regional Drop-Off Locations. It should be noted that By-law enforcement staff’s first priority has been and will continue to be the education of residents rather than simply levying fines. However, staff will continue to actively pursue illegal dumping and will levy fines when appropriate. The proposed By-law enhancements will provide staff with the necessary tools to enforce the By-law and levy fines if verbal or written communication with residents is not sufficient to achieve compliance.

The amended By-law will be posted on the Region’s website for review by residents and businesses.

Alternatives Reviewed

Alternatives were not considered as the By-law required updates to align with previously approved program changes.

Relationship to Council Strategic Priorities

The amendment of the By-law will support Council’s Strategic Priority of Sustainable and Engaging Government, specifically the promotion of high quality, efficient and co-ordinated core services.

Other Pertinent Reports

WMPSC C-54-2017 Requirements for Waste Collection (C3.007)

WMPSC C-12-2017 Waste By-law Update

PW 61-2019 Base Level Service for Waste Management Collection Contract

Prepared by:

Susan McPetrie
Waste Management Services Advisor
Waste Management Services

Prepared by:

Nick Lidstone
Contract Supervisor
Waste Management Services

Recommended by:

Bruce Zvaniga, P.Eng
Commissioner of Public Works (Interim)
Public Works

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared in consultation with Patricia D'Souza, Legal Counsel and reviewed by Catherine Habermebl, Director Waste Management Services, Sherri Tait Manager Waste Collection & Diversion, Lydia Torbicki Manager Waste Policy & Planning and Emil Prpic, Associate Director Waste Disposal Operations and Engineering.

Appendices

Appendix 1 – Proposed Amendments to Solid Waste Management By-law.

Appendix 2 – Proposed Short Form Offences and Set Fines

THE REGIONAL MUNICIPALITY OF NIAGARA

BY-LAW NO. 2020-62

A BY-LAW TO AMEND BY-LAW 2017-56 BEING A BY-LAW
TO REGULATE THE USE OF THE WASTE MANAGEMENT SYSTEM FOR
THE REGIONAL MUNICIPALITY OF NIAGARA

WHEREAS on April 11, 1996, Regional Council adopted By-laws 8280-96, 8281-96 and 8282-96 to assume from the twelve area municipalities all waste management powers conferred by any Act upon the area municipalities;

WHEREAS Section 11(3) of the Municipal Act, 2001, ("the Act") provides that an upper tier municipality may pass By-laws respecting waste management subject to the requirements set out in the Act;

WHEREAS on May 15, 2017, Regional Council passed By-law No. 2017-56 being a by-law to regulate the use of the waste management system for The Regional Municipality of Niagara; and

WHEREAS Regional Council wishes to amend the said By-Law to reflect changes in service levels and improvements in wording to encourage increased waste diversion and provide clarification on existing conditions for enhanced enforcement and public understanding.

NOW THEREFORE THE COUNCIL OF THE REGIONAL MUNICIPALITY OF NIAGARA ENACTS AS FOLLOWS:

1. That the following sections be repealed and replaced with the following:

PART I – DEFINITIONS

1. The following terms are defined for purposes of this By-law:

- 1.1 "Amnesty Week" means the five (5) Garbage Collection Days immediately following December 25 where, in addition to the regular Garbage limit, selected Premises can place additional Garbage to the curb for collection without a Garbage Tag;

- 1.2 "Area Municipality" means any one of the municipality or corporation of the Town of Fort Erie, Town of Grimsby, Town of Lincoln, City of Niagara Falls, Town of Niagara-on-the-Lake, Town of Pelham, City of Port Colborne, City of St. Catharines, City of Thorold, Township of Wainfleet, City of Welland, or Township of West Lincoln;

- 1.3 “As Designated” means as designated by the Region from time to time by the Commissioner of Public Works or his/her designate. It is anticipated that the Region’s recycling and other programs and related requirements will continue to evolve as new methods and Materials emerge. These changes will be implemented on an “As Designated” basis;
- 1.4 “Blue Box” means a container available from the Region or approved alternative as set out in Section 8 of this By-law or As Designated, used to set out Blue Box Material for collection;
- 1.5 “Blue Box Material” means recyclable Material that is collected under the Blue Box Program. The Material includes:
- (a) empty glass bottles, jars and lids/caps (lids/caps must be removed), including all glass containers which previously contained a food or beverage product;
 - (b) empty metal food and beverage cans, including all hard shell steel or aluminum containers which previously contained a food or beverage product;
 - (c) empty metal paint cans and lids (lids must be removed and a thin layer of dry residue are acceptable);
 - (d) clean aluminum foil meaning food wrap, food packaging and kitchenware such as pie plates made from a thin sheet of aluminum;
 - (e) empty plastic containers and packaging which previously contained a food or consumer product, including Polyethylene Terephthalate (PETE #1) bottles and containers; High Density Polyethylene (HDPE #2) tubs and lids, or bottles; Polyvinyl Chloride (PVC #3); Low Density Polyethylene (LDPE #4) plastic tubs and lids; Polypropylene (PP #5) plastic bottles, tubs and lids; Polystyrene (PS #6) containers and rigid foam packaging; and Polycarbonate mixed plastic (PC #7);
 - (f) empty gable-top cartons (e.g. milk and juice cartons) and aseptic packaging (e.g. juice boxes);
 - (g) empty spiral wound containers (e.g. frozen juice or potato chip containers) with metal lids bottoms and paper sides;
 - (h) empty metal aerosol cans (lids and caps must be removed); and
 - (i) other Material As Designated;
- 1.6 “Brush” means woody Material including twigs, tree limbs or branches;

- 1.7 “Bulky Goods” means large household items which are Collectable Material that cannot fit into a normal Garbage Container and may be overweight (excluding construction/demolition Material). Some examples include, but are not limited to, the following:
- (a) Artificial Christmas Trees;
 - (b) Box spring, mattress, and bed frame;
 - (c) Carpet or rugs in compact rolls/bundles not exceeding 1.5 metres (4.5 ft) in length and 0.76 metres (2.5 ft) in diameter and tied;
 - (d) Couches, sofa, chair;
 - (e) Floor lamps;
 - (f) Furniture (for example, tables, cabinets, dressers);
 - (g) Glass Shards packaged in cardboard box labelled “glass”;
 - (h) Large Toys;
 - (i) Pool cover and solar blankets in compact rolls/bundles not exceeding 1.5 metres (4.5 ft) in length and 0.76 metres (2.5 ft) in diameter and tied;
 - (j) Toilets or sinks that are individual and not part of construction and demolition;
 - (k) Other Collectable Material that cannot fit in a Garbage Container;
 - (l) Water softening units; and
 - (m) Other household items, As Designated the Region;
- 1.8 “Cart” means a container available from the Region or approved alternative as set out in Section 8, 10 and 11 of this By-law or As Designated, used to set out Blue Box, Grey Box or Green Bin Material for Types B-F Premises as set out in Schedule A to this By-law
- 1.9 “Care and Control” means Material shall be deemed to have been within the care and control of a Person at a point in time if the Material included any Material typically associated with or used by that Person and shall include but is not restricted to the following Materials:
- (a) Mail and other paper products bearing the name, address or other identifying characteristics typically associated with that Person;
 - (b) Material that can on a balance of probabilities be shown to have been purchased by that Person;
 - (c) Material that can on a balance of probabilities be shown to have originated from Premises with respect of which a Person

- is considered an Owner and during the time the Person was considered an Owner; or
- (d) Materials that can on a balance of probabilities be shown to have been transported in a motor vehicle owned or under the Care and Control of the Person.
- 1.10 "Christmas Trees" means naturally grown evergreen trees without tinsel, decorations, ornaments or tree lights;
- 1.11 "Christmas Trees, Artificial" means trees manufactured from manmade Material;
- 1.12 "Collectable" means Material which may be collected at Curbside or a collection point approved by the Region pursuant to this By-law;
- 1.13 "Communal Collection Point" means a collection point approved or as determined by the Region, that is authorized for the use of more than one Premises;
- 1.14 "Composter" means a container available from the Region or any enclosure with a lid for the purpose of decomposing Leaf and Yard Material and/or Green Bin Material by aerobic decay or bacterial action;
- 1.15 "Construction, Renovation and Demolition" Material includes but is not limited to windows, drywall, wood, doors, metal, PVC pipe and other building Materials As Designated by the Region;
- 1.16 "Council" means the Council of The Regional Municipality of Niagara;
- 1.17 "Curbside" means the area directly in front of an Owner's Premises as close as possible to the travelled portion of the road without obstructing or interfering with the travelled portion of the road or any sidewalk. It normally extends 1.2 m (four (4) feet) rearward from the travelled portion of the road;
- 1.18 "Designated Business Area" means an area designated by the local municipality to receive alternate collection services compared to residential or other industrial, commercial and institutional services;
- 1.19 "Dwelling Unit" means a place of residence designed or intended for habitation by one (1) or more persons with its own culinary and sanitary facilities which are provided for the exclusive use of the person or persons who reside therein. If an Owner disagrees with the number of units contained within the Premises as assessed, it is up

to the Owner to provide proof of the actual number of legally existing individual units within the Premises. In the absence of provision of proof to the satisfaction of the Region, the limit for the Premises in question shall be as determined by the Region;

- 1.20 “Eligible Property” means a Premises of Types A, B, C, D, E or F as set out in Section 13 and Schedule A to this By-law where:
- (a) container limits set out in Schedule A can be abided by in the normal course of waste generation activity; and
 - (b) the Owner of the Premises are in compliance with this By-law; and
 - (c) the only Material set out for collection is Material generated on that Premises;
- 1.21 “Friendly Reminder” and “Final Friendly Reminder” means a written notice by the Region, in a form similar to that set out in Schedule B to this By-law or As Designated, which is delivered to an Owner, or left in a visible location, which can be readily seen at the Premises, or in a mailbox, to address Non-compliance;
- 1.22 “Garbage” means all non-hazardous, solid, residual waste which, for purposes of collection or drop-off at a Regional Drop-Off Location, does not fall within a recyclable class of Material as set out in Subsection 3.1(a) or elsewhere in this By-law and such other Material As Designated. It does not include grass;
- 1.23 “Garbage Container” means a waterproof opaque bag, receptacle, can, bin, or such other container As Designated, for the storing and setting out of Garbage. It does not include cardboard boxes;
- 1.24 “Garbage Exemptions” mean exemptions as set out in Section 13 to the approved Garbage Container limits as shown in Schedule A;
- 1.25 “Garbage Tag” means a tag that can be purchased from the Region or authorized vendor and affixed and untampered (i.e. torn in half) to the neck of a waterproof bag or on top of the Materials placed in a Garbage Container to allow additional limit of Garbage to be set out for collection. Only Type A Premises as defined in Schedule A of this By-law can use a Garbage Tag;
- 1.26 “Green Bin Container” means a container such as a Green Bin, Carts or the smaller Kitchen Catcher available from the Region, or other rigid reusable closed or open-top container clearly labelled with handles used for storing and setting out Green Bin/Cart Material;

- 1.27 “Green Bin Material” means compostable organic Material collected under the Green Bin program As Designated by the Region, including but not limited to food waste (such as meat, bones, shells, tea bags), pumpkins, tissue paper, paper towels and napkins, paper egg cartons, 100% compostable paper cups and plates, dryer lint, soiled newspaper, cold fireplace ashes, brown paper bags, saw dust, wood shavings, paper take-out trays, kitty litter and Pet Waste. It does not include grass or Liquid Material;
- 1.28 “Grey Box” means a container available from the Region or approved alternative as set out in Section 11 of this By-law or As Designated, used to set out Grey Box Material;
- 1.29 “Grey Box Material” means recyclable Material that is collected as part of the Grey Box Program. The Material includes:
- (a) soft-covered books and hard-covered books with the covers removed;
 - (b) boxboard (non-waxed, such as cereal and cracker boxes);
 - (c) cardboard (non-waxed);
 - (d) fine paper and paper envelopes;
 - (e) newspapers and unaddressed ad mail and flyers;
 - (f) plastic bags and stretchy plastic outer-wrap including but not limited to plastic grocery and retail bags, outer-wrap from such things as clean food wrap, empty bread bags, empty produce bags, toilet paper and paper towel packaging, empty and clean milk bags dry cleaner bags. Plastic bags and stretchy plastic outer-wrap must be stuffed into one bag and securely tied;
 - (g) shredded paper placed in a securely-tied, transparent plastic bag;
 - (h) telephone books and magazines, including catalogues and all glossy publications; and
 - (i) other Material As Designated;
- 1.30 “Illegal Dumping” means the disposing of Material in non-designated areas, such as public roads, ditches, public property, rural areas, and public Litter bins, as set out in Section 37 of this By-Law. Illegal Dumping does not include Litter;
- 1.31 “Large Rigid Plastic” means hard plastic items that do not fit into a Blue Box for Curbside Collection such as but not limited to buckets, pails, pots, crates, trays, baskets, totes, toys, pools, furniture, chairs and car seats with no other parts, metal or Material attached. Large

plastic items does not include plastic coolers, piping, siding or any plastic that also contain or have attached any wood, metal, insulation, rubber and non-plastic components;

- 1.32 "Leaf and Yard Material" means leaves, weeds, trimmings, flowers, small twigs less than 1.5 cm in diameter and other Material As Designated, but does not include grass, Brush, soil, dirt, roots, rocks, logs, stumps or sod;
- 1.33 "Leaf and Yard Container" means reusable, rigid, open-top containers, paper bags or certified plastic compostable plastic bags As Designated by the Region. It does not include cardboard boxes or non-compostable plastic bags;
- 1.34 "Litter" means debris, refuse, or Material discarded outside the regular Collection Point or lying scattered about the area;
- 1.35 "Liquid Material" means Material which is not solid and which exhibits evidence of free water, or other liquids, whether or not contained;
- 1.36 "MPAC" means the Municipal Property Assessment Corporation;
- 1.37 "Material" is the broadest categorization of all that a Person or Owner wishes to dispose or recycle either through public collection or at a Regional Drop-Off Location. Subcategories of Material for collection are Collectable Material, including Recyclables and Non-Recyclables, to be prepared according to the class instructions in this By-law, and excluded Non-Collectable Material. Any Material may also be Non-Compliant because of its content or preparation. Subcategories of Material for drop-off at Regional Drop-Off Locations are Acceptable Material, to be prepared according to the category instructions in this By-law, and excluded Unacceptable Material;
- 1.38 "Multi-Purpose Property" means a single property as defined by MPAC and/or contained in applicable Site Plan Conditions, housing multiple Premises types;
- 1.39 "Non-Collectable Material" means Material forbidden, prohibited and not acceptable for Curbside collection pursuant to this By-law including:
- (a) hazardous waste which is corrosive, flammable, toxic, explosive or biomedical or as defined in Ontario Regulation 347, R.R.O. 1990, under the Environmental Protection Act or any successor legislation;

- (b) prohibited Material as defined under the Transportation of Dangerous Goods Act, 1992, or any successor legislation;
 - (c) pathological waste, as defined and regulated in Ontario Regulation 347, R.R.O. 1990, under the Environmental Protection Act or any successor legislation;
 - (d) solid and liquid waste Material or substances which contain or could contain pathogen bacteria or micro-organisms that may be hazardous or dangerous;
 - (e) motor vehicles or automotive parts;
 - (f) live animals or fowl or carcasses or part of an animal or other creature, save for normal and bona fide Green Bin Material, which has been drained of all liquids;
 - (g) septic or holding tank pumping's or raw sewage;
 - (h) Material of any kind or nature that may be explosive or combustible or may cause fire including hot coals, ashes, oil-soaked or gasoline-soaked rags, papers, cloths or similar Material;
 - (i) gaseous, semi-liquid or liquid waste including liquid industrial waste as defined in Ontario Regulation 347, R.R.O. 1990, under the Environmental Protection Act or any successor legislation;
 - (j) sealed metal drums or barrels;
 - (k) other Material as prohibited in any relevant Certificate of Approval issued by the Ministry of the Environment under the relevant legislation;
 - (l) Sharps;
 - (m) Construction, Renovation or Demolition Material including windows;
 - (n) grass clippings;
 - (o) Waste Electrical and Electronic Equipment (WEEE);
 - (p) batteries (all types);
 - (q) White Goods; and
 - (r) other Material As Designated;
- 1.40 "Non-Compliant" means Material not prepared for collection or Regional Drop-Off Location deposit in accordance with the requirements set out in this By-law. "Non-Compliance" has the related meaning;
- 1.41 "Owner" includes but is not limited to:
- (a) a Person who is the registered owner and or the beneficial owner of Premises which is subject to this By-Law;
 - (b) the Person for the time being managing or receiving the rent of from Premises, which is subject to this By-Law, whether on

- the Person's own account or as agent or trustee of any other Person or who would receive the rent if the Eligible Property was let; and
- (c) a Person who is a lessee or occupant or tenant of the Premises who in their capacity as lessee or occupant manages or is in charge or control Premises, which is subject to this By-Law;

There may be more than one Owner within the forgoing definition with respect to a particular Premises;

- 1.42 "Person" includes a partnership, an unincorporated association, a corporation, a cooperative society or a cooperative organization, the successors of a partnership, of an association, of a corporation, of a society or of an organization and the heirs, executors, liquidators of the succession, administrators or other legal representatives of a Person;
- 1.43 "Pet Waste" means animal excrement generated by small household pets including cats, dogs, small rodents or other similar indoor pets kept for companionship and enjoyment, and including pet bedding, whether separate or intermingled with such excrement, but excluding animal excrement generated by horses, cows, chickens or other similar farm, wild, working, undomesticated or commercial livestock animals;
- 1.44 "Premises" means land and buildings combined in the geographic area of Niagara region or a part of such land and buildings combined in the case of land and buildings which contain multiple self-contained units with respect to which a Person is considered an Owner. Premises shall be categorized by type in accordance with the definitions contained in Schedule A;
- 1.45 "Region" or "the Region" means The Regional Municipality of Niagara or an authorized representative of The Regional Municipality of Niagara, including a Regional Drop-Off Location site attendant, a contractor or its employee, or a by-law enforcement officer, as appropriate in the context;
- 1.46 "Regional Drop-Off Location" means a temporary or permanent location set up by the Region for drop-off of Material including but not limited to waste, recyclables, compost, or household hazardous waste;

- 1.47 “Registered Charities” are charitable organizations, public foundations, or private foundations that are created and resident in Canada and have been issued a charitable registration number by the Canada Revenue Agency (CRA). They must use their resources for charitable activities and have charitable purposes in one or more of the following: the relief of poverty, the advancement of education, the advancement of religion or other purposes that benefit the community. To receive exemption under Section 13.8 the Registered Charities must be the direct generators of Blue Box Material, Grey Box Material, Green Bin Material or Garbage;
- 1.48 “Scavenge” means to search through, pick over or remove objects or Material set out for Curbside collection or deposited at a Regional Drop-Off Location;
- 1.49 “Set Out Service” means the provision of onsite service, as approved by the Region, for Owners living in Type A Premises as listed in Schedule A to this By-law and who are unable to physically carry their Garbage, Blue/Grey Box Materials and Green Bin Material to the curb for collection. Set Out Service only includes Garbage, Blue/Grey Box and Green Bin Material. Set Out Service does not include Leaf and Yard Material, Bulky Goods, Brush, or any other excluded items, As Designated by the Region;
- 1.50 “Sharps” means blades, needles, syringes, including safety engineered needles, laboratory glass, or other Materials capable of causing punctures or cuts;
- 1.51 “Site Plan Conditions” means comments and conditions provided by the Region during the site plan application process pursuant to the Region’s Policy “Requirements for Waste Collection”;
- 1.52 “Waste Disposal Site” means as defined in the Environmental Protection Act, R.S.O. 1990, Ch. E.19, or any successor legislation (“Environmental Protection Act”);
- 1.53 “Waste Electrical and Electronic Equipment (WEEE)” means equipment as defined by O.Reg, 389/16 under the Waste Diversion and Transition Act, 2016, or any successor legislation, including but not limited to the following:
- (a) Desktop computers;
 - (b) Portable computers;
 - (c) Computer peripherals (keyboards, mice, hard drives, optical drives – CD Blu-ray, DVD, HD-DVD);

- (d) Monitors;
- (e) Televisions;
- (f) Desktop printing devices, including copiers and multi-function devices;
- (g) Floor standing devices, including printers, photocopiers and multi-function devices;
- (h) Scanners and typewriters;
- (i) Telephones and answering machines;
- (j) Cellular phones, PDA's and pagers;
- (k) Audio and video players/recorders (MP3, cassette, digital);
- (l) Cameras;
- (m) Radios;
- (n) Receivers;
- (o) Speakers;
- (p) Turntables;
- (q) Video players/projectors, digital frames;
- (r) Video recorders; and
- (s) Personal handheld computers, tablets.

- 1.54 "White Goods" means major household appliances or items such as stoves, washers, dryers, dishwashers, dehumidifiers, water tanks, barbeques, swing sets, bicycles, air-conditioning units, heat-pumps, refrigeration units or freezer units and other Material As Designated.

PART II –COLLECTION SERVICES

2. General Collection Provision

- 2.1 The Region provides collection of all Collectable Material from Eligible Properties in the Region according to the terms of this By-law and subject to other terms As Designated.
- 2.2 The Region also provides enhanced services as requested, approved and funded by local municipalities.
- 2.3 No Owner shall be eligible for collection unless the Owner complies with this By-law and other terms As Designated.
- 2.4 The Region may retain a contractor or contractors to fulfill the Region's responsibilities under this By-Law.
- 2.5 If, due to breakdown of equipment, strike, inclement weather, or any other cause, waste collection is not provided to an Eligible Property, the Region shall not be liable to any Person for any damages, costs,

loss or expenses of any kind due to the failure of such waste collection to take place.

3. Classes of Collectable Material

3.1 The Classes of Collectable Material are:

(a) Recyclable Material:

- i. Blue Box Material;
- ii. Brush;
- iii. Christmas Trees;
- iv. Green Bin Material;
- v. Grey Box Material;
- vi. Leaf and Yard Material; and
- vii. Other recyclable Material As Designated.

(b) Non-Recyclable Material:

- i. Bulky Goods;
- ii. Garbage; and
- iii. Other non-recyclable Material As Designated.

3.2 All other Material is Non-Collectable Material and is not to be placed out for collection.

4. Separate According to Class and Class Provisions

4.1 If collection service is available to an Eligible Property for any of the above Classes, then the Material which an Owner sets out for collection must be separated according to Class.

4.2 Every Owner shall prepare Collectable Material according to the provisions in Sections 5 through 13 of this By-law relevant to each Class of Material.

5. Brush

5.1 Brush shall be set out for collection in accordance with the schedule of collection days As Designated and

- (a) shall be packaged in bundles where each individual piece of Material shall not exceed 7 cm (2.8 inches) in diameter and where each bundle shall not exceed:

- i. a size of 1.5 m (5 feet) in length by 0.5 m (1.6 feet) in diameter; and
 - ii. a weight of 22.7 kg (50 pounds); and
 - (b) if collected on the same day as other Material, shall be clearly separated from any other class of Material set out for collection.
- 5.2 Brush is only collectable from a Type A Premises as defined in Schedule A to this By-law. Further information on the collection of Brush is available from sources noted in Section 53 of this By-law.
6. Bulky Goods
- 6.1 Bulky Goods are only collectable from a Type A Premises as defined in Schedule A to this By-law. Further information on the collection of Bulky Goods is available from the sources noted in Section 53 of this By-law.
- 6.2 Bulky Goods set out for Curbside collection:
- (a) shall be in a contained state neatly placed at the Curbside; and
 - (b) shall not be stacked; and
 - (c) shall not have Material stacked or loose set on top of Bulky Goods; and
 - (d) shall be dismantled if possible; and
 - (e) shall not include Construction, Renovation and Demolition Material; and
 - (f) must be of a weight and dimension to be able to fit into the collection vehicle in a safe and efficient manner, As Designated by the Region; and
 - (g) limit of four (4) items per collection per Eligible Property.
- 6.3 The Owner must arrange in advance with the Region's collection contractor for the scheduled collection of Bulky Goods As Designated. Information on how to schedule collection is available from the sources noted in Section 53 of this By-law.
- 6.4 Contaminated items (e.g. mattresses with bed bugs), as determined by the Region, must be wrapped in plastic to be eligible for pick up.
- 6.5 Artificial Christmas Trees shall be set out for scheduled collection as Bulky Goods.

- 6.6 Collectable Material which can fit within a regular Garbage Container should not be disposed of as Bulky Goods, but as Garbage.
- 6.7 Glass shards resulting from broken mirrors, dishes, picture frames or other household glass, not including windows, are collectable as Bulky Goods if:
- (a) placed in a separate, sturdy, walled container to be collected with its glass shard contents, and secured so as to remain closed and to protect the safety of collection personnel;
 - (b) labelled appropriately (i.e. "Broken Glass"); and
 - (c) Large glass pieces (greater than 1.5ft by 1.5ft) must be removed from any bulky item, packaged or wrapped separately in a cardboard, bubble wrap or another approved packaging Material, and appropriately labelled (i.e. " Glass") to protect the safety of collection personnel.
7. Christmas Trees
- 7.1 Christmas Trees shall be set out for Curbside collection without wrapping, bagging, tinsel, lights or any other decorations, in accordance with the schedule of collection days and times As Designated. Further information on the collection of Christmas Trees is available from the sources noted in Section 53 of this By-law.
- 7.2 Christmas Trees are only collectable from Type A Premises, as defined in Schedule A to this By-law.
- 7.3 No Owner shall set out a Christmas Tree unless it, or segments cut from it, are less than 3 metres (10 feet) in length and free of all accessories, decorations and plastic wrap. No Artificial Christmas Trees, wrapped or bagged trees, will be collected for this purpose. Refer to Section 6, Bulky Goods, for the collection of Artificial Christmas Trees.
8. Blue Box Material
- 8.1 Blue Box Material shall be set out for collection according to the following requirements:
- (a) Blue Box Material must be packaged as follows:
 - i. in designated recyclable containers (Blue Box) available from the Region; or

- ii. in a Cart only for Type B-F Premises as set out in Schedule A to this By-law for; or
- iii. in clearly marked, reusable, solid-walled, rigid containers with handles or indentations on two (2) sides to facilitate the lifting and emptying of the said receptacle; or
- iv. in transparent plastic bags; or
- v. in a sturdy non-waxed cardboard box (box will be recycled); and

(b) Blue Box containers shall meet the following requirements:

- i. height not exceeding a size of up to 91 cm (3 feet) measured internally from the bottom of the receptacle to the top lip of the opening; and no width exceeding a size of up to 61cm (2 feet) measured internally from side to side, not corner to corner, or as determined by the Region; and
- ii. not exceeding a weight (of container and Material together) of 22.7 kg (50 pounds); and
- iii. Carts for Type B-F Premises are exempt from 8.1 (b) (i) and (b) (ii); and
- iv. be of sufficient quality to withstand normal collection activities and use; and
- v. for Blue Box containers with lids, the lid must be readily separable from the container. Any devices used to tie down or secure any lids must be removed by the Owner prior to collection; and

(c) contents shall not exceed the limits of the top of the Blue Box container; and

(d) must be clearly separated from any other class of Material set out for collection on the same Premises.

8.2 Blue Box Material that is loose or not packaged as outlined above may not be collected.

8.3 Further information on the collection of Blue Box Materials is available from the sources noted in Section 53 of this By-law.

9. Leaf and Yard Material

9.1 Leaf and Yard Material shall be set out for Curbside collection:

- (a) packaged in rigid, reusable, open-top containers or compostable paper bags or certified compostable plastic bags As Designated:
 - i. not exceeding 91 cm (3 feet) in height by 61 cm (2 feet) in diameter; and
 - ii. not exceeding a total weight (of container and Leaf and Yard Material together) of 22.7 kg (50 pounds.); and
 - iii. for Leaf and Yard Containers with lids, the lid must be readily separable from the container. Any devices used to tie down or secure any lids must be removed by the Owner prior to collection; and
 - (b) in such a way as to clearly separate it from any other class of Collectable Material set out for collection on the same Premises.
- 9.2 Non-compostable plastic bags (without a 'Biodegradable Products Institute' or '100% Compostable' logo) or cardboard boxes are not permitted.
- 9.3 Leaf and Yard Material is only Collectable from Type A Premises as defined in Schedule A to this By-law.
- 9.4 Further information on the collection of Leaf and Yard Material is available from the sources noted in Section 53 of this By-law.
10. Green Bin Material
- 10.1 Green Bin Material shall be set out for Curbside collection packaged:
- (a) in a Green Bin Container available from the Region or other suitable containers in accordance with 10.1 (c) packaged in:
 - i. Compostable plastic bags with BPI logo;
 - ii. Paper bags;
 - iii. Wrapped in newspaper; and/or
 - iv. Placed directly into the Green Bin container in a loose fashion.
 - (b) in a Cart only for Type B-F Premises as set out in Schedule A to this By-law for; or
 - (c) in other containers labelled "Organics":

- i. not exceeding 91 cm (3 feet) in height by 61 cm (2 feet) in diameter; and
 - ii. not exceeding a total weight (of container and Green Bin Material together) of 22.7 kg (50 pounds); and
 - iii. which are equipped with handles; and
 - iv. Carts are exempt from 10.1 (c) i-iii; and
 - (d) in such a way as to clearly separate it from any other class of Collectable Material set out for collection on the same Premises.
- 10.2 Small amounts of Leaf and Yard Material including weeds, garden Material, trimmings, and twigs smaller than 1.5 cm (0.5 inches) in diameter and no longer than 30.5 cm (12 inches), excluding grass, are permitted as Green Bin Material.
- 10.3 Pet waste and kitty litter shall be either bagged using small certified compostable plastic bags As Designated, paper bags or completely wrapped in newspaper before being placed in the Green Bin/Cart or other labelled container as above.
- 10.4 Green Bin Material that has a tendency to turn into liquid, as determined by the Region, shall be packaged and not be loose so the liquid does not leak or spill during collection. Liquid Material or Material that exhibits evidence of free water, or other liquids, whether or not contained is not permitted in the Green Bin/Cart. The collection service is designed for solid Material.
- 10.5 Further information on the collection of Green Bin Material is available from sources noted in Section 53 of this By-law.
11. Grey Box Material
 - 11.1 Grey Box Material shall be set out for collection according to the following requirements:
 - (a) Grey Box Material must be packaged as follows:
 - i. in designated recycling containers (Grey Box) available from the Region; or
 - ii. in clearly marked, reusable, solid-walled, rigid containers with handles or indentations on two (2) sides to facilitate the lifting and emptying of the said receptacle; or

- iii. in a Cart only for Type B-F Premises as set out in Schedule A to this By-law; or
 - iv. in transparent plastic bags; or
 - v. in a sturdy non-wax cardboard box (box will be recycled); or
 - vi. in case of cardboard, must bundle together in bundles not exceeding a size of 91 cm (3 feet) in width by 91 cm (3 feet) in length by 91 cm (3 feet) in depth and not exceeding a weight of 22.7 kg (50 pounds); or
 - vii. in the case of flattened cardboard placed inside another cardboard box, which cardboard box must not exceed a size of 91 cm (3 feet) in width by 91 cm (3 feet) in length by 91 cm (3 feet) in depth and not exceeding a weight of 22.7 kg (50 pounds); Loose cardboard must be flattened and tied using twine, packing tape or an approved alternative, in bundles no larger than 91 cm (3 feet) x 91 cm (3 feet) x 91 cm (3 feet), and not exceeding a weight of 22.7 kg (50 pounds); or
 - viii. in the case of plastic bags and stretchy plastic outer-wrap, by placing all loose plastic bags or plastic film in one securely tied Plastic Bag (not loose in the Grey Box); and
- (b) Grey Box containers must meet the following requirements:
- i. not exceed a size of up to 91 cm (3 feet) in height by 61 cm (2 feet) in width; and
 - ii. not exceed a weight (of container and Material together) of 22.7 kg (50 pounds); and
 - iii. Carts for Type B-F Premises are exempt from 11.1 (b) i – ii;
 - iv. be of sufficient quality to withstand normal collection activities and use; and
 - v. For Grey Box containers with lids, the lid must be readily separable from the container. Any devices used to tie down or secure any lids must be removed by the resident prior to collection; and
- (c) contents placed within a Grey Box container shall not exceed 91 cm (3 feet) x 91 cm (3 feet) x 91 cm (3 feet); and
- (d) clearly separated from any other class of Collectable Material on the same Premises.

11.2 Grey Box Material that is loose or not packaged as outlined above may not be collected.

11.3 Further information on the collection of Grey Box Material is available from sources noted in Section 53 of this By-law.

12. Garbage

12.1 Material not included in the other Classes of Collectable Material of this By-law shall be set out for collection as Garbage, and

(a) packaged in a Garbage Container:

- i. not exceeding a size of 91 cm (3 feet) in height by 61 cm (2 feet) in diameter; and
- ii. not exceeding a weight (of container and waste) of 22.7 kg (50 pounds); and
- iii. receptacle, can, bin or other container As Designated must be equipped with handles on two (2) sides; and
- iv. be of sufficient quality to withstand normal collection activities and use; and

(b) such that the contents shall not exceed the limits of the top of the Garbage Container; and

(c) in such a way as to clearly separate it from any other classes of Collectable Material on the same Premises; and

(d) if required by this By-law, with the relevant Garbage Tag affixed, refer to Section 13.1 (a); and

(e) containing no other Classes of Collectable Material including but not limited to Leaf and Yard Material, Green Bin Material, Blue Box Material and Grey Box Material and Non-Collectable Material.

12.2 For Garbage Containers with lids, the lid must be readily separable from the container. Any devices used to tie down or secure any lids must be removed by the Owner prior to collection.

12.3 Garbage that is Non-Compliant, or which contains other classes of Collectable Material and/or Non-Collectable Material, may not be collected.

13. Collection Limits and Procedure for Garbage Exemptions

13.1 The maximum number of Garbage Containers set out every-other-week for Type A ,B, E, F Premises and every week for Type C and D Premises shall be as set out in Schedule A to this By-law as follows:

- (a) An Owner of a Type A self-contained unit may set out additional Garbage Containers provided that each extra Garbage Container has the appropriate Garbage Tag affixed, which Garbage Tag has been purchased from the Region or its authorized vendor; and
- (b) the Garbage Tag shall be affixed:
 - i. untampered to a Garbage Container (i.e. torn in half) to the neck of a waterproof bag or on top of the Materials placed in a Garbage Container to allow additional limit of Garbage to be set out for collection. Only Type A Premises as defined in Schedule A of this By-law are eligible to use a Garbage Tag; Any tampered Garbage Tags will not be accepted and Material will not be collected; and
 - ii. in a clearly visible location readily seen upon removal of the container's lid for a non-disposable Garbage Container such as a Garbage can, bin or receptacle. The Garbage Tag shall not be placed directly on the can, bin, handle or receptacle.
 - iii. Information on Garbage Tags is available from the sources noted in Section 53 of this By-law.
- (c) an Owner of Premises may be allowed a Garbage Exemption if they do not also have private Garbage collection services, and subject to application and approval by the Region for the following reasons:
 - i. A medical condition that results in the generation of additional Garbage for Type A Premises and group homes, homes for adults with disabilities and homes for assisted living;
 - ii. Type A Premises with one child under the age of four in diapers can apply for collection of one (1) transparent plastic bag of diapers combined with no other collectable material, to be collected on the week alternate to their regularly scheduled Garbage

- collection day. These properties are restricted to two Garbage Containers and no additional bag of diapers on their regularly scheduled Garbage collection day.
- iii. Type A Premises with two children under the age of four in diapers can apply for weekly collection of one (1) transparent plastic bag of diapers combined with no other Collectable Material;
 - iv. Type A Premises with three or more children under the age of four in diapers can apply for weekly collection of two (2) transparent plastic bag of diapers combined with no other Collectable Material;
 - v. Type A Premises operating as an in-home child care provider can apply for weekly collection of two (2) additional transparent plastic bag of diapers combined with no other Collectable Material;
- (d) an Owner of a Type A Premises may set out two (2) additional Garbage Containers during Amnesty Week;
 - (e) an Owner of Type B Premises may set out for collection a maximum of two (2) containers per unit up to a maximum of twenty-four (24) containers every-other-week per Premises;
 - (f) an Owner of Type B Premises may set out a maximum of two (2) additional Garbage Container per unit up to a maximum of twenty-four (24) additional Garbage Containers per Premises during Amnesty Week;
 - (g) an Owner of Type C-D Premises may set out for collection a maximum of four (4) containers weekly;
 - (h) an Owner of Type D Premises may set out four (4) additional Garbage Containers during Amnesty Week
 - (i) an Owner of Type E and F Premises may set out for collection a maximum of eight (8) containers every-other-week;
 - (j) an Owner of Type F Premises may set out eight (8) additional Garbage Containers during Amnesty Week;
- 13.2 The number of Blue Box, Grey Box or Carts which may be collected from different types of Premises shall be as set out in Schedule A to this By-law, that is:

- (a) for Type A Premises, an Owner may set out for collection unlimited Blue and Grey Boxes;
- (b) for Type B Premises, an Owner may set out for collection unlimited Carts with a guideline of one (1) Cart for every twenty (20) units for Blue Box Material and one (1) Cart for every eleven (11) units for Grey Box Material;
- (c) for Type C, D and F Premises, an Owner may set out for collection unlimited Blue and Grey Boxes or Carts, but will be subject to review by the Region to ensure that efficient and cost effective services are maintained .
- (d) for Type E Premises, an Owner may set out for collection up to a combined total of eight (8) Blue and Grey Carts or the equivalent number of units as determined solely by the Region. Type E Premises that consistently exceed the eight (8) Cart equivalent limit with Boxes, bundles or bags, as solely determined by the Region, will be encouraged to use Carts. If the Owner of a Premises fails to switch to Cart collection, despite the Region's attempts to encourage the switch, the Region may, at their discretion, and upon written notice to the Owner, cease collection from the Premises until such time as the property switches to adequate Cart collection, to the satisfaction of the Region.

13.3 The number of Green Bin Containers or Carts which may be collected from different types of Premises shall be as set out in Schedule A to this By-law, that is:

- (a) for Type A Premises, an Owner may set out for collection unlimited Green Bins;
- (b) for Type B Premises, an Owner may set out for collection Green Bins or Green Carts on a request only basis in the quantity determined by the Region;
- (c) for Type C, D and F Premises, an Owner may set out for collection unlimited Green Bins or Carts, but will be subject to review by the Region to ensure that efficient and cost effective services are maintained .
- (d) for Type E Premises, an Owner may set out for collection up to eight (8) Green Carts or the equivalent number of Green Bins as determined solely by the Region. Type E Premises that consistently exceed the eight (8) Cart equivalent limit with Green Bins, as solely determined by the Region, will be encouraged to use Carts. If the Owner of a Premises fails to

switch to Cart collection, despite the Region's attempts to encourage the switch, the Region may, at their discretion, and upon written notice to the Owner, cease collection from the Premises until such time as the property switches to adequate Cart collection, to the satisfaction of the Region.

- 13.4 In all cases, the Material collected during collection must be Material generated at the self-contained unit for Type A Premises or on the Premises for Type B-F Premises.
- 13.5 Type A Premises that use private Garbage collection services or are not able to stay within the Garbage limit, as determined by the Region, are subject to review by the Region and may not be eligible for Garbage and/or Bulky collection services as Designated. This applies to both base and enhanced service, where applicable.
- 13.6 To be eligible for Garbage collection services, Type C-F Premises must utilize the Region's recycling and organics collection services. This applies to both base and enhanced service, where applicable.
- 13.7 Any Type C or E Premises, as shown in Schedule A with a building greater than three (3) storeys, as determined by the Region, excluding municipal or Region owned buildings are not eligible for any collection services.
- 13.8 Any Type B-F Premises, as shown in Schedule A, that retain private service for Blue or Grey Box Material collection will not be eligible for Regional collection services. An exemption to this clause applies for regional and municipal facilities, Regional Agencies, Boards and Commissions, as well as Registered Charities and schools, subject to application and approval by the Region.
- 13.9 Collection limits for types of Premises are determined by the Region in accordance with Schedule A using the property classifications designated by MPAC and/or contained in applicable Site Plan Conditions. In the event of discrepancy, the Region's designation of the Premises type will prevail. If an Owner disagrees with the number of units contained within the Premises as assessed, it is up to the Owner to provide proof of the actual number of legally existing individual units within the Premises. In the absence of provision of proof to the satisfaction of Niagara Region, the limit for the Premises in question shall be as determined by the Region. In the event of a Multi-Purpose Property, each individual Premises is subject to their respective eligibility requirements and collection limits.

- 13.10 On a request basis, residential farms, as determined by the Region using the property classification identified by MPAC, can receive either Type A or Type E collection limits. If a residential farm does not request a farm exemption, the premises will be serviced, as per their property classification identified by MPAC, as set out in Schedule A to this By-law.

PART III – COLLECTION RESTRICTIONS AND RESPONSIBILITIES

14. Collection Restrictions and Responsibilities

- 14.1 No Person or Owner shall set out or permit to be set out:
- (a) Non-Collectable Material; or
 - (b) Non-Compliant Material.
- 14.2 The Owner of Premises shall set out for collection the Classes of Collectable Material at the locations as shown in Section 15, in the manner, and in accordance with the schedules of collection days As Designated. See Section 53 of this By-law for further sources of schedule and Material preparation information.
- 14.3 If the Owner of a Premises fails to comply with the responsibilities and requirements as set out in this By-law, the Region may, at the discretion of the Commissioner of Public Works or his/her designate, and upon written notice, either by ordinary mail (where receipt is deemed to be three (3) days after mailing), registered mail or hand delivered, to the Owner, cease collection from the Premises until such time as the Non-compliance is corrected to the satisfaction of the Region.
- 14.4 If the Owner of a Premises or a tenant engages in any inappropriate behaviour, riotous, violent, threatening or illegal conduct, or uses profane or abusive language, as determined by the Region, towards Region staff or contractors' staff, the Region may, at the discretion of the Commissioner of Public Works or his/her designate, and upon written notice to the Owner, cease collection from the Premises until such time as the inappropriate behaviour, conduct and/or language is corrected to the satisfaction of the Region.
- 14.5 The Owner of any Premises receiving collection shall be responsible to ensure that all Persons on the Premises who use or expect to use the Region's collection service receive and follow the instructional information relating to the service provided by the Region.

- 14.6 The Owner of any Premises receiving collection shall be responsible to ensure that animals such as dogs are secured or tied to ensure safety of collection workers and uninterrupted collection.
- 14.7 The Owner of a Premises shall not interfere with collection vehicles or personnel.
- 14.8 The Owner of a Premises shall not deposit any Material into a collection vehicle.
- 14.9 In the event a change is made to the schedules of collection day As Designated, the Region shall make reasonable efforts to advise all affected persons by publication or service of notice upon the Owner of the affected Premises as provided for in this section. Publication for purposes of this section means notice placed on the Region's website at least fourteen (14) days prior to any As Designated changes to collection schedule or area being implemented. Service of notice by the Region for purposes of this section means notices given to the Owner of affected Premises either mailed by ordinary mail (where receipt is deemed to be three (3) days after mailing), registered mail, or hand delivered to the address of the Owner according to the last revised assessment roll of the subject property or by posting the notice at the subject property, and such service shall be deemed good and sufficient notice effective upon delivery. Information posters and media releases may be used, in addition to the above publication or service methods. In the event of an emergency situation, as determined by the Region, involving a matter of public health and safety or a legal or regulatory requirement which requires As Designated changes to be implemented faster than on fourteen (14) days' notice, the Region may in its discretion provide less than fourteen (14) days' prior notice but will endeavour to provide as much notice as reasonably practicable.
15. Collection Location
- 15.1 Except as set out in Section 15.2 the Owner of Premises shall set out Material for collection by placing it at Curbside in front of the Premises in a location to clearly distinguish separation from a neighbouring Premises and as close as possible to the travelled portion of the road without obstructing or interfering with the travelled portion of the road or any sidewalk.
- 15.2 The Owner of Premises shall set out Material at a collection point or Communal Collection point approved or as determined by the Region. Dwelling Units that place their Material at a Communal

Collection point must ensure all collection containers are labelled with the Dwelling Unit address to clearly distinguish separation from neighbouring Dwelling Units.

- 15.3 No Owner shall place Material out for collection at any Premises except at their own Premises.
 - 15.4 No Owner shall permit Material at any time in the Care and Control of that Owner to be located otherwise than on their Premises or in a Collection location permitted by Section 15 of this By-law.
 - 15.5 No Owner shall place Material out for collection on top or behind snow banks. This will ensure the Material can safely be collected and prevent containers from falling behind the snow bank or onto the roadway before or after collection. During winter weather, when snow or snow banks may alter the normal set out location, the Owner shall place the Material:
 - (a) at the end of the driveway next to the snow bank; or
 - (b) in a spot cleared out in the side of the snow bank near the travelled portion of the road.
 - 15.6 Material shall not be collected from inside an enclosure, shed or other structures As Designated, unless otherwise approved by the Region. Enclosures must be placed as close as possible to the travelled portion of the road without obstructing or interfering with the travelled portion of the road or any sidewalk, unless otherwise approved by the Region. Collection personnel must be able to access Materials from enclosures by opening the enclosure from the front not the top and must be able to remove Materials from the enclosure without any obstruction.
16. Collection Times
- 16.1 Collectable Material shall be set out not earlier than 5:00 p.m. on the day before the designated collection day and not later than 7:00 a.m. on the designated collection day.
 - 16.2 The Owner shall remove all containers, together with any Material that was not collected for any reason, from the Curbside as soon as possible after collection, but not later than 7:00 p.m. on the designated collection day.
 - 16.3 Material left Curbside before and after collection times will be the responsibility of the Owner of the Premises.

16.4 From time to time, the Region may define specific collection times other than those referenced in in Section 16.1 and 16.2 for As Designated areas. The Owner of a Premises in an As Designated area shall set out Collectable Material for collection at the prescribed times and schedule As Designated which will be published or communicated by the Region for the As Designated areas. Publication for purposes of this Section means notice placed on the Region's website at least fourteen (14) days prior to any As Designated changes to collection schedule or area being implemented. Communication by the Region for purposes of this Section means notices given to Owner of affected Premises either mailed by ordinary mail (where receipt is deemed to be three (3) days after mailing), registered mail or hand delivered to the address of the Owner according to the last revised assessment roll of the subject property or the notice may be posted at the subject property, and such service shall be deemed good and sufficient service, effective upon delivery. Information posters and media releases may be used, in addition to the above publication or communication methods. In the event of an emergency situation, as determined by the Region, involving a matter of public health and safety or a legal or regulatory requirement which requires As Designated changes to be implemented faster than on fourteen (14) days' notice, the Region may in its discretion provide less than fourteen (14) days' prior notice but will endeavour to provide as much notice as reasonably practicable.

17. Acceptable Containers

17.1 The Owner of Premises shall set out for collection only containers which are:

- (a) each container shall be maintained in a safe and efficient condition for collection and have handles or indentations to facilitate the lifting and emptying of the said receptacle; and
- (b) intact, as required, to prevent spillage or breakage during collection; and
- (c) contained, as required, to prevent the attraction of animals (including insects) and the release of odours; and
- (d) free of excess water, ice and snow or other substances which may interfere with collection. Any Material which has become frozen or stuck to the collection container and cannot be easily discharged will not be collected; or
- (e) Approved alternative, as determined by the Region

18. Uncontained Material

- 18.1 The Owner of a Premises shall not permit any Material set out for collection to become uncontained or otherwise escape in for any reason, including weather or animals.
- 18.2 The Owner of a Premises shall be responsible for the immediate clean up or re-securing of uncontained Material.
- 18.3 Where Material that has been set out for collection has blown away or otherwise escaped in any manner, the Owner of a Premises from which the Material originated shall clean up the Material.

19. Ownership

- 19.1 All properly prepared and separated Collectable Material set out within the designated times becomes the property of the Region upon pick-up or other receipt by authorized employees or contractors of the Region.
- 19.2 Material set out which is Non-Collectable or Non-Compliant remains the property and responsibility of the Owner.
- 19.3 At the Region's discretion, the Region may authorize the collection by the Region or Contractors, of Non-Compliant or Non-Collectable Material for the purpose of investigation or health, safety and welfare of the general public.

20. Requirements for Waste Collection

- 20.1 The Region may enter a private property for collection purposes provided that:
- (a) the Region has determined from time to time that the roadways to be used by collection vehicles on behalf of the Region:
- i. have been approved for on-site collection during the site plan approval process; and
 - ii. have widths, turning radii, means of access, and means of egress meeting or exceeding the requirements of the Region's Policy on Requirements for Waste Collection, as amended from time to time; and

- iii. have overhead clearance meeting or exceeding the standards prescribed in the Highway Traffic Act, R.S.O 1990, Ch. H.8, or any successor legislation; and
 - iv. are clear of snow and ice; and
 - v. provide unobstructed access to the Material to be collected; and
- (b) the Owner of the private property and/or development has entered into a written agreement with the Region in the form As Designated and in accordance with policies set by the Region.

20.2 Wherever practical, in accordance with the approved site plan and Region’s Requirements for Waste Collection Policy as determined by the Region, Material from each unit shall be sufficiently separated to allow identification of the unit generating the Material for purposes of the enforcement of this By-Law.

PART IV – REGIONAL DROP-OFF LOCATIONS

21. Drop-off of Acceptable Material

21.1 The Region may establish Regional Drop-Off Locations for the drop-off of Acceptable Material as set out in Sections 24 to 27 of this By-law.

22. Unacceptable Materials

22.1 No Person shall drop off, or permit to be dropped off, unacceptable Material at a Regional Drop-Off Location.

22.2 Unacceptable Material includes the following:

- (a) any dangerous and hazardous Material such as poisons, hot live ashes, caustics, acids, pesticides, herbicides, radioactive Material, industrial process sludge, biomedical waste, or substances which may cause personal or environmental problems with the exception of the Household Hazardous Waste categories as set out in Section 26;
- (b) ammunition;
- (c) reactive chemical waste;
- (d) liquid waste with the exception of certain Household Hazardous Waste categories as set out in Section 26;
- (e) pathological waste with the exception of Sharps;

- (f) sludge from septic tanks or seepage;
- (g) highly flammable, volatile, explosive, reactive or radioactive Materials with the exception of certain Household Hazardous Waste categories as set out in Section 26;
- (h) leachate toxic waste;
- (i) PCB waste;
- (j) carcasses of dogs, cats, fowl and other such creatures, or parts thereof;
- (k) live animals or birds;
- (l) human excrement;
- (m) steel and plastic barrels, unless the lid is removed and the barrel is empty and dry;
- (n) automotive parts, not including automobile tires or small automotive parts;
- (o) waste with excess liquid accumulated in the load or Material that fails a slump test;
- (p) asbestos not prepared as set out in Section 28;
- (q) Organic material which has decomposed under anaerobic conditions; and
- (r) other Material As Designated.

23. Acceptable Material

23.1 Not all Regional Drop-Off Locations will receive all types of Acceptable Material and receipt will depend on whether any of the following activities occur at any given Regional Drop-Off Location:

- (a) Drop-off/Recycling;
- (b) Composting;
- (c) Household Hazardous Waste Collection;
- (d) Landfilling

24. Acceptable Drop-off/Recycling Material

24.1 Acceptable Material for Drop-off includes the following:

- (a) automobile tires separated from the rims and free of foreign Material and excessive moisture;
- (b) asphalt and concrete
- (c) batteries, either single use alkaline or rechargeable;
- (d) Blue Box Material;
- (e) Bulky Goods;
- (f) clothing for re-use;
- (g) Collectable Material;

- (h) Construction, Renovation and Demolition Material, including drywall, wood, metal, PVC pipe and other building Materials;
- (i) Garbage;
- (j) Grey Box Material;
- (k) Household items for re-use including small appliances and toys and other such goods;
- (l) Large Rigid Plastic
- (m) Mattresses up to a maximum of four (4) per load, with the exception of loads delivered by the Region's Collection Contractor
- (n) shingles
- (o) Waste Electrical and Electronic Equipment with personal information removed:
- (p) White Goods, and
- (q) other Material As Designated.

24.2 There may be locations where less than this full list may be Acceptable. Consult the sources listed in Section 53 for further information.

25. Acceptable Composting Material

25.1 Acceptable Material for composting includes the following:

- (a) Brush;
- (b) Christmas Trees;
- (c) Green Bin Material;
- (d) Leaf and Yard Material;
- (e) Grass clippings; and
- (f) other Material As Designated.

25.2 There may be locations where less than this full list may be Acceptable. Consult the sources listed in Section 53 for further information.

26. Acceptable Household Hazardous Waste Material

26.1 Acceptable Material for Household Hazardous Waste is:

- (a) aerosol cans with contents remaining;
- (b) antifreeze;
- (c) batteries (all types);
- (d) barbeque propane tanks;
- (e) corrosive cleaners including inorganic acids, bases and oxidizers;

- (f) fertilizers and other inorganic oxidizers;
- (g) fire extinguishers
- (h) flammable liquids such as solvents and thinners;
- (i) fluorescent light tubes;
- (j) gasoline and fuels;
- (k) medications;
- (l) mercury switches and thermometers
- (m) motor oil;
- (n) oil filters;
- (o) pesticides and herbicides;
- (p) paint;
- (q) paint sludge;
- (r) pharmaceuticals;
- (s) pool chemicals;
- (t) small gas cylinders such as propane, oxygen, carbon dioxide, helium, expanding foam;
- (u) Sharps in puncture-proof containers; and
- (v) other Material As Designated.

26.2 All Household Hazardous Waste Material must be in acceptable containers, which conform to the following requirements:

- (a) Must be in the original or clearly labelled container, indicating contents;
- (b) All containers must be capped and sealed;
- (c) Liquid wastes must not be larger than 20 litres each. Barrels and/or drums of liquid waste will not be accepted;
- (d) Gasoline will not be decanted at depots. The container and the contents will be taken for safe disposal;
- (e) No industrial, commercial or institutional hazardous waste will be accepted; and
- (f) Other acceptable containers As Designated.

27. Acceptable Landfilling Material

27.1 Acceptable Material for Landfilling is:

- (a) asbestos if prepared as set out in Section 28;
- (b) Bulky Goods, with the exception of those items which can be re-used or recycled;
- (c) Construction, Renovation and Demolition Material with wood, drywall, metal and other recyclable Material separated;
- (d) Garbage;
- (e) soil or dirt in acceptable quality and quantity, as determined by the Region; and

(f) other Material As Designated.

28. Acceptable Asbestos Preparation and Acceptance Procedures

- 28.1 No Person shall unload or dispose of asbestos at a Regional Drop-Off Location unless such unloading or disposal is in accordance with the conditions set out in this Section.
- 28.2 Any Person dropping off asbestos shall contact the Region at least twenty-four (24) hours prior to delivery of the asbestos to allow for preparation of the Regional Drop-Off Location designated area.
- 28.3 All asbestos must be contained in a rigid, impermeable, sealed container of sufficient strength to accommodate the weight and nature of the asbestos, or the asbestos Material must be double bagged in two (2) six millimetre polyethylene bags. The container must be free from punctures, tears or leaks and shall be clearly labelled to indicate the nature of the contents. The external surface of the container and the vehicle used for the transport of the asbestos must be free of asbestos.
- 28.4 During unloading, the packaged asbestos shall be handled individually and care taken to place the packages in the designated area to avoid spillage. This unloading shall be the responsibility of the Person dropping off the asbestos.
- 28.5 The unloading shall only be done in the presence of the Region to ensure that no loose asbestos or broken containers are unloaded and that no airborne particulate is generated.
- 28.6 In the event that loose asbestos or broken containers are found, the Person dropping off the asbestos shall repackage the Material with additional containers or bags provided in his/her vehicle.
- 28.7 The asbestos containers shall be placed directly in the designated area which has been prepared by the Region.

29. Material Requiring Special Handling

- 29.1 Any Person dropping off Material requiring special handling (such as dusty material) shall contact the Region at least 24 hours prior to delivery to a Regional Drop-Off Location to receive handling instructions from the Region and to allow for preparation of the Regional Drop-Off Location designated area.

- 29.2 The unloading of the Material requiring special handling shall be the responsibility of the Person dropping it off.
- 29.3 The Material requiring special handling shall be placed directly in the designated area by the Person dropping it off.
- 29.4 Material requiring special handling is only accepted Mondays to Fridays, between the hours of 8:30 a.m. and 3:00 p.m.
30. Fees
- 30.1 The Region shall set fees to be paid by Persons for the drop-off of Material at Regional Drop-Off Locations.
- 30.2 The fees are set out in the Region's Fees and Charges By-Law as amended from time to time.
31. Access
- 31.1 Access to a Regional Drop-Off Location shall be limited to the days and times As Designated by the Region. Days and hours of operation are posted at each permanent location.
- 31.2 Access to a Regional Drop-Off Location shall be limited to Persons who are:
- (a) commercial haulers who have provided a copy of their Ministry of the Environment, Conservation and Parks Waste Management System Certificate and, when requested by the Region, proof satisfactory to the Region that the Material they bring for drop-off has been generated from within the Region; or
 - (b) non-commercial haulers who, upon request, have provided proof of their residency in the Region satisfactory to the Region.
- 31.3 The Region may further limit access to certain Regional Drop-Off Locations As Designated.
- 31.4 The Region may specify time schedules and pre-deposit conditions for Persons seeking access to a Regional Drop-Off Location.

- 31.5 The Region may refuse access to a Person at the Region's discretion if:
- (a) the Person has violated this By-law;
 - (b) the Person is likely to violate this By-law;
 - (c) the Person owes money to the Region pursuant to this By-law;
 - (d) the Person is transporting Material which is unacceptable for deposit at the Regional Drop-Off Location;
 - (e) the Person's vehicle load is not fully covered and/or secured;
 - (f) the Person's vehicle appears to be unsafe; or
 - (g) the Person uses abusive or offensive language or behaviour toward workers or other Persons at the Regional Drop-Off Location.

PART V – REGIONAL DROP-OFF LOCATION RESTRICTIONS AND RESPONSIBILITIES

32. Drop-off Restrictions

32.1 The following restrictions apply at Regional Drop-Off Locations:

- (a) all drivers shall ensure the vehicle load is fully covered and/or secured and the vehicle is not over loaded;
- (b) all drivers shall bring vehicles to a complete stop and await the direction of the Region's site attendant before entering or leaving the weigh scale;
- (c) all drivers shall identify the Material type and source to the Region's site attendant;
- (d) all vehicles shall weigh inbound and outbound unless instructed otherwise by the Region's site attendant;
- (e) no Material originating from outside the Region shall be dropped off;
- (f) all Material deposited shall become the property of the Region and may be salvaged, recycled, reclaimed, disposed of and otherwise dealt with as the Region may deem fit;
- (g) no Person, while at a Regional Drop-Off Location, shall operate a vehicle or do any other thing without exercising due care and attention or in a manner that causes or is likely to cause injury or harm to any Person or damage to any property;
- (h) no Person, while at a Regional Drop-Off Location, shall:
 - i) indulge in any riotous, violent, threatening or illegal conduct, or use profane or abusive language as determined by the Region; or

- ii) create a nuisance or in any way interfere with the use of a Regional Drop-Off Location by any other Person;
 - iii) Any person deemed by staff to be engaging in these behaviours may be refused service and/or requested to leave the premises.
- (i) no Person shall deposit or allow or cause to be deposited Materials except in bins or disposal areas for such purposes;
 - (j) all Persons shall at all times obey all signs and directions of the Region, its site attendants or staff or contractors' staff;
 - (k) all Persons shall enter or exit a Regional Drop-Off Location by the designated access and exit routes;
 - (l) no Person shall deposit or permit to be deposited Garbage into recycling bins or composting areas;
 - (m) no Person shall deposit Recyclable Material including Leaf and Yard Material, Green Bin Material, Blue Box Material, Grey Box Material and/or other Material As Designated into the Garbage area located at the Drop-off/Recycling Depot or in the area designated for Landfilling;
 - (n) no Person shall cause or permit a vehicle to idle for more than three (3) minutes in a sixty (60) minute period.
- 32.2 (a) On the first occasion of violation of any of the restrictions in Section 32.1 above, a written warning notifying the Person of his/her violation may be issued by the Region; or
- (b) On the first or any subsequent occasion of violation of any of the restrictions in Section 32.1 above, the Person may be charged with an offence of having violated this By-law and may also be subject to being refused access to Regional Drop-Off Locations.

33. No Trespassing

- 33.1 No Person shall unlawfully enter a Regional Drop-Off Location at any time.
- 33.2 No Person shall unlawfully enter the land strip around the perimeter of a Regional Drop-Off Location (buffer lands) or a Regional Drop-Off Location property during the time that the Regional Drop-Off Location is closed.
- 33.3 No Person shall enter with or operate an off-road vehicle or bike of any type on any part of a Regional Drop-Off Location and/or the land strip around the perimeter of a Regional Drop-Off Location (buffer lands).

34. Drop-off Responsibilities

34.1 Every Person dropping off Material at a Regional Drop-Off Location shall:

- (a) drop off only Material acceptable for deposit As Designated;
- (b) comply with all orders or directions given by the Region's site attendants or contractors' staff;
- (c) obey all speed limit signs and other signs posted at a Regional Drop-Off Location;
- (d) separate each type of Material and deposit in areas designated for such Material by the Region;
- (e) unload Material in a safe manner and use extreme caution while unloading;
- (f) remove covers/tarpaulins and/or release turnbuckles on vehicles only in the unloading area and at the direction of the Site Attendants or contractor's staff;
- (g) remove any remaining loose Material from vehicles before leaving the unloading areas;
- (h) close and secure, in a manner acceptable to the Region, all unloading doors with chains or acceptable alternatives before departure from the unloading areas;
- (i) ensure that any child under the age of 12 remain inside the vehicle at all times;
- (j) ensure that children act responsibly at all times when outside the vehicle;
- (k) ensure that animals remain inside the vehicle at all times;
- (l) acknowledge and accept that any Person entering a Regional Drop-Off Location does so at their own risk. The Person and the Owner of any vehicle brought upon a Regional Drop-Off Location agrees to save the Region, its contractors, agents and employees, harmless from any damages or claims whatsoever to themselves or their property, or to any other Person or property whatsoever, arising from such Person's negligence or failure to comply with their responsibilities as set out in this By-law, As Designated or otherwise;
- (m) not depart from the Regional Drop-Off Location until the relevant fees as set by the Region from time to time are paid in full, whether by cash, debit, or charged to an authorized account;
- (n) conform strictly to all legislative requirements including, in particular, the Environmental Protection Act, the Occupational Health and Safety Act, R.S.O. 1990, Ch. 0.1, and any other relevant successor legislation, any relevant regulations there

- under, any relevant Certificates of Approval and any relevant Regional By-laws, Policies, and Procedures; and
- (o) not smoke anywhere on a Regional Drop-Off Location.

35. Refusal

- 35.1 The Region reserves the right to refuse to accept for drop-off any Material of a questionable nature or origin.

36. Safe Loads

- 36.1 Persons entering a Regional Drop-Off Location shall ensure that all Material transported is secure, covered, tied, or enclosed to prevent any Material from falling onto any roadway or public property.

PART VI – FURTHER RESTRICTIONS

37. Illegal Dumping

- 37.1 No Person shall dump, drop, sweep, throw, cast or otherwise deposit; or permit his/her contractor, agent, employee, child under his/her care or control or animal under his/her care or control to dump, drop, sweep, throw, cast or otherwise deposit; or permit a vehicle owned by an Owner to be used by any Person for the purpose of dumping, dropping, sweeping, throwing, casting or otherwise depositing any Material whatsoever on or in any road or public property, or at the entrance to or around the perimeter of a Regional Drop-Off Location.
- 37.2 No Person shall dump or deposit, or permit his/her contractor, agent, employee, child under his/her care or control or animal under his/her care or control to dump or deposit any Material generated on a Premises owned or occupied by that Person into or within a one (1) metre radius of a Litter bin on any road or public property.
- 37.3 No Person shall permit Material at any time in the Care and Control of that Person to be dumped, dropped, swept, thrown, cast or otherwise deposited by any other Person in contravention of Section 37.1 or 37.2 of this By-law.
- 37.4 For the purpose of Subsections 15.4 and 37.3 Material shall be deemed to have been within the Care and Control of a Person at a point in time if the Material included any Material typically associated with or used by that Person and shall include but is not restricted to the following Materials:

- (a) mail and other paper products bearing the name, address or other identifying characteristics typically associated with that Person;
- (b) Material that can on a balance of probabilities be shown to have been purchased by that Person;
- (c) Material that can on a balance of probabilities be shown to have originated from Premises with respect of which a Person is considered an Owner and during the time the Person was considered an Owner;
- (d) Materials that can on a balance of probabilities be shown to have been transported in a motor vehicle owned or under the Care and Control of the Person.

38. Scavenging

- 38.1 No Person shall, without the written approval of the Region, Scavenge, interfere with, pick over, disturb, remove or scatter any Material set out for collection.
- 38.2 No Person shall Scavenge, interfere with, pick over, disturb, remove or scatter any Material at a Regional Drop-Off Location unless the Material has been designated for re-use by the Region and the Person has received permission from the Region.

39. Saving Provisions

- 39.1 A Person shall be liable under Section 37.3 if they can establish on the basis of a balance of probabilities that such Material, deemed by Section 37.4 to have been within the Care and Control of that Person was in fact never in that Person's care or control.
- 39.2 A Person or Owner shall not be liable for breach of either Section 15.4 or 37.3 of this By-law if they establish on a balance of probabilities that they took all reasonable precautions to prevent occurrence of the offence.

PART VII – ENFORCEMENT

40. Friendly Reminders

- 40.1 To encourage compliance with this By-law, the Region may use Friendly Reminders and Final Friendly Reminders to identify or inform Persons or Owners of Non-compliance. Where a Person or Owner is in Non-compliance with this By-law and if the Non-

compliance continues, despite the Region's attempts to obtain voluntary compliance, the Region may issue an Order as outlined in Section 48.

41. Notifications

41.1 Notwithstanding any other provision of this By-law, no Person or Owner shall be charged with an offense for setting out, or permitting to be set out contrary to this By-law (included specific As Designated areas or collection times or schedules), any Collectable Material for collection where the As Designated provisions have not been published or communicated as set out in Section 16.4 of this By-law.

41.2 In addition to the publication and communication of As Designated changes set out in Section 16.4, the Region will issue a minimum of one (1) written notification to inform the Owner of the As Designated alternate schedule for the As Designated area before any such Owner is charged with an offense as set out above.

42. Enhanced Services

42.1 Offences under this By-law apply to all enhanced services as may be applicable.

43. Maximum Fines

43.1 Every Person, including a corporation, who contravenes a provision of this By-law, is guilty of an offence and upon conviction thereof is liable to pay a maximum fine of not more than \$100,000 for each and every offence, subject to the exception in Section 44 below.

43.2 A director or officer of a corporation who knowingly concurs in the contravention of a provision of this By-law is also guilty of an offence under this By-law.

44. Special Fines

44.1 In addition to a fine under Section 43, a special fine is also chargeable and may exceed \$100,000, where an offence of this By-law has been committed and there is evidence that the Person who has committed the offence has achieved an economic advantage or gain from contravening this By-law. The intent of this section is to eliminate or reduce such economic advantage or gain or to deter the Person from further Non-compliance with this By-law.

45. Continuing Offences
- 45.1 In the case of a continuing offence, for each day or part of a day that the offence occurs or continues, the maximum fine shall be \$10,000.
46. Alternative Set Fine Procedure
- 46.1 In the discretion of the Region, charges may be laid for offences committed in contravention of this By-law using the certificate of offence set fine procedure set out under Part I of the Provincial Offences Act, R.S.O. 1990, Ch. P.33, or any successor legislation.
47. Order Prohibiting Continuation
- 47.1 When a Person or Owner has been convicted of an offence under this By-law, and in addition to any other remedy and to any penalty imposed by the By-law including a fine and a remedial action fee as set out in Section 49, the court in which the conviction has been entered and any court of competent jurisdiction thereafter may make an order prohibiting the continuation or repetition of the offence by the Person or Owner convicted.
48. Work Order
- 48.1 Where the Region is satisfied that a Person or Owner has failed to comply with any provision of this By-law, the Region may, by written notice, issue an Order requiring the Person or Owner to correct the contravention.
- 48.2 The Order shall set out:
- (a) The municipal address and/ or the legal description of the property;
 - (b) Reasonable particulars of the contravention adequate to identify the contravention;
 - (c) The work to be done and the date by which there must be compliance with the Order.
- 48.3 Every a Person or Owner who contravenes an Order is guilty of an offence.
- 48.4 Any Order issued under this by-law may be given by ordinary mail, registered mail or hand delivered to the address of the Person or Owner according to the last revised assessment roll of the subject

property or the notice may be posted at the subject property, and such service shall be deemed good and sufficient service.

- 48.5 Where an Order has been served on an Owner/ Occupant by personal service or posting a copy on the property, it is deemed to be delivered immediately.
- 48.6 Where an Order is given by: ordinary mail it is deemed to have been received three (3) days after mailing; and by registered mail, it is deemed to have been received on date of delivery.
- 48.7 Every Person or Owner shall comply with any Order issued under the authority of this by-law.

49. Remedial Actions

- 49.1 Where a Person or Owner is in default of an Order, the Region may, without notice and in addition to any other action, cause the work to be done at the Person or Owner's expense. Without limitation, the Region, its employees, agents or contractors may access and remove such Material or carry out the work required to make the property comply with this By-law.
- 49.2 Any Material removed may be immediately disposed of.
- 49.3 The Region may invoice the Person or Owner for all costs associated with the work done pursuant to Section 48 including, but not limited to, court costs, Regional and/or local government administrative and legal fees, contractors' invoices, disposal fees and interest at a rate of fifteen (15%) per cent per annum from the day the Region incurs such costs. The Region may include a minimum disposal charge of one hundred and fifteen (\$115.00) dollars in the event the Material cleaned up is not separately weighed.
- 49.4 Such costs may be charged and enforced separately or in addition to any other enforcement action undertaken pursuant to this By-law, not as an alternative to same.
- 49.5 In the event that a Person or Owner was provided an invoice for costs in accordance with Section 49, and the invoice is not paid by the Person or Owner within sixty (60) days of issuance, the costs may be recovered by action or by adding the costs to the tax roll and collecting them in the same manner as taxes in accordance with section 446 of the Municipal Act S.O 2001, c.25, as may be amended from time to time.

49.6 The amount of the costs constitutes a lien on the land or Premises involved upon the registration in the proper land registry office of a notice of lien.

50. Entry for Enforcement

50.1 By-law enforcement officers may enter on private properties or new and redeveloped roadways on private or public properties for the purpose of enforcing this By-law but may not enter a residential dwelling without the occupant's permission or unless so authorized by order of a court of competent jurisdiction.

PART VIII – GENERAL

51. Conflicts of Laws

51.1 Where a provision of this By-law conflicts with a provision of another By-law in force in the Region, the provisions that establish the higher standards to protect the health, safety and welfare of the general public shall prevail.

52. Schedules

52.1 The Schedules to this By-law form an integral part of this By-law.

53. Further Information on Material Preparation

53.1 More detailed instructions on preparation of Material for collection or drop-off at Regional Drop-Off Location are available on the Region's website at www.niagararegion.ca or in publications updated and distributed by the Region from time to time or by contacting the Waste Info-line at 905-356-4141 or 1-800-594-5542.

54. Delegation of Powers to Commissioner of Public Works

54.1 The Commissioner of Public Works or his/her designate is delegated the administrative power by Council to implement minor program changes which have no negative financial impact and/or minimal service level implications to the Waste Management system of the Region under this By-law, including but not limited to:

- (a) alteration to the classes and lists of Material in this By-law requiring specific treatment or preparation for collection or drop-off at Regional Drop-Off Locations;

- (b) appoint By-law Enforcement Officers for the purpose of the enforcement of this By-law;
- (c) changes to the forms in use for notification to the public, such as Friendly Reminders;
- (d) changes to the requirements for Material preparation for collection or drop-off at a Regional Drop-Off Location;
- (e) changes to the procedure for scheduling collection of specialty items such as Bulky Goods;
- (f) changes to the new and redevelopment agreements as set out in Section 20;
- (g) temporary changes to access, time schedules or opening hours at Regional Drop-Off Locations; and
- (h) establishment of such other matters as are necessary for the proper administration of this By-law.

55. Severability

- 55.1 If any provision of this By-law is declared invalid for any reason by a court of competent jurisdiction, only that invalid portion of the By-law shall be severed and the remainder of the By-law shall still continue in force.

56. Environmental Compliance Approvals

- 56.1 The provisions of this By-law shall be subject to the terms of the Environmental Compliance Approvals for any Regional Drop-Off Location or any other waste management facilities or systems operated by or on behalf of the Region, and any relevant statutes and regulations.

57. References

Any reference to a statute is to such statute and to the regulations made pursuant to it, as such statute and regulations may at any time be amended or modified and in effect, and to any statute or regulations that may be passed that have the effect of supplementing or superseding such statute or regulations

58. Short Title of By-Law

- 58.1 The short title of this By-law is the "Waste Management By-law".

59. Force and Effect Date

- 59.1 Except as otherwise specified in this By-law, this By-law shall come into force and effect on the date passed by Regional Council.

60. Interpretation

60.1 The necessary grammatical changes required to make the provisions of this By-law applicable to corporations, partnerships, trusts and persons, and to include the singular or plural meaning where the context so requires, shall in all cases be assumed as though fully expressed.

60.2 The words “include” and “including” are not to be read as limiting the meaning of a word or term to the phrases or descriptions that follow.

60.3 The insertion of headings and the division of this By-law into sections and subsections are for convenience of reference only and shall not affect the interpretation thereof.

61. Repeal of Prior By-Laws

61.1 By-law No. 63-2015 of the Region previously providing for waste management are hereby revoked and repealed.

THE REGIONAL MUNICIPALITY OF NIAGARA

WASTE MANAGEMENT BY-LAW

COLLECTABLE VOLUME LIMITS

Garbage Container Limits		
Type of Premises (as Assessed by MPAC)	Container Limit	Collection Frequency
<p>A. Low Density Residential (LDR) Premises including:</p> <ul style="list-style-type: none"> • single-family detached with one self-contained unit, • semi-detached residential with 2 residential homes, both self-contained units; • duplex residential structure with 2 self-contained units; • residential buildings with three (3) to six (6) units; • cottage properties with up to six (6) cottages; • Bed and Breakfast establishments with three (3) bedrooms or less; • structures with six (6) or more units that are considered horizontal, row or townhouses or condo housing; • Vertical structures where all units have a primary exterior door directly accessing ground level that is visible from the collection point (including stacked townhouse structures) • trailer parks (only those classified as LDR in MPAC), • boarding homes; and • residential farms. 	<p>2 per self-contained unit</p>	<p>Every-other-week</p>
<p>B. Multi-Residential Premises are residential buildings containing seven (7) or more self-contained units, including but not limited to, apartments, condominiums and rentals, nursing and retirement homes, cottage properties with seven (7) or more cottages, boarding homes, Group Homes, and vertical structures (stacked townhouses or similar style) where one or more unit does not have a primary external access door directly accessing ground level and cannot be serviced as a Type A Premises, and mobile homes (not assessed by MPAC as Low Density Residential Units).</p>	<p>2 per self-contained unit up to a maximum 24 per building</p>	<p>Every-other-week</p>

THE REGIONAL MUNICIPALITY OF NIAGARA
 WASTE MANAGEMENT BY-LAW
 COLLECTABLE VOLUME LIMITS

Garbage Container Limits		
Type of Premises (as Assessed by MPAC)	Container Limit	Collection Frequency
C. Premises used for one or more institutional, commercial or industrial purposes inside Designated Business Area and Bed and Breakfasts with four (4) or more bedrooms inside Designated Business Areas	Maximum 4 per Premises	Weekly
D. Mixed use Premises used for one or more institutional, commercial or industrial and residential purposes inside Designated Business Area	Maximum 4 per Premises	Weekly
E. Premises used for one or more institutional, commercial or industrial purposes outside Designated Business Area and Bed and Breakfasts with four (4) or more bedrooms outside Designated Business Areas are Type E Premises.	Maximum 8 per Premises	Every-other-week
F. Mixed use Premises used for one or more institutional, commercial or industrial and residential purposes outside Designated Business Area	Maximum 8 per Premises	Every-other-week

THE REGIONAL MUNICIPALITY OF NIAGARA
 WASTE MANAGEMENT BY-LAW
 COLLECTABLE VOLUME LIMITS

Recycling Container Limits		
Type of Premises (as Assessed by MPAC)	Container Limit	Collection Frequency
A. Low Density Residential (LDR) Premises including: <ul style="list-style-type: none"> • single-family detached with one self-contained unit, • semi-detached residential with 2 residential homes, both self-contained units; • duplex residential structure with 2 self-contained units; • residential buildings with three (3) to six (6) units; • cottage properties with up to six (6) cottages; • Bed and Breakfast establishments with three (3) bedrooms or less; • structures with six (6) or more units that are considered horizontal, row or townhouses or condo housing; • Vertical structures where all units have a primary exterior door directly accessing ground level that is visible from the collection point (including stacked townhouse structures) • trailer parks (only those classified as LDR in MPAC), • boarding homes; and • residential farms. 	Unlimited per self-contained unit	Weekly

THE REGIONAL MUNICIPALITY OF NIAGARA

WASTE MANAGEMENT BY-LAW

COLLECTABLE VOLUME LIMITS

Recycling Container Limits		
Type of Premises (as Assessed by MPAC)	Container Limit	Collection Frequency
B. Multi-Residential Premises are residential buildings containing seven (7) or more self-contained units, including but not limited to, apartments, condominiums and rentals, nursing and retirement homes, cottage properties with seven (7) or more cottages, boarding homes, Group Homes, and vertical structures (stacked townhouses or similar style) where one or more unit does not have a primary external access door directly accessing ground level and cannot be serviced as a Type A Premises, and mobile homes (not assessed by MPAC as Low Density Residential Units).	Unlimited with guideline for 1 Cart for every 20 units for Blue Box Material and 1 Cart for every 11 units for Grey Box Material or to be determined by the Region	Weekly
C. Premises used for one or more institutional, commercial or industrial purposes inside Designated Business Area and Bed and Breakfasts with four (4) or more bedrooms inside Designated Business Areas	Unlimited	Weekly
D. Mixed use Premises used for one or more institutional, commercial or industrial and residential purposes inside Designated Business Area	Unlimited	Weekly
E. Premises used for one or more institutional, commercial or industrial purposes outside Designated Business Area and Bed and Breakfasts with four (4) or more bedrooms outside Designated Business Areas are Type E Premises.	Combined limit of the eight (8) Blue and Grey Carts or the equivalent in Blue and Grey Boxes as determined solely by the Region.	Weekly
F. Mixed use Premises used for one or more institutional, commercial or industrial and residential purposes outside Designated Business Area	Unlimited	Weekly

THE REGIONAL MUNICIPALITY OF NIAGARA

WASTE MANAGEMENT BY-LAW

COLLECTABLE VOLUME LIMITS

Organic Container Limit		
Type of Premises (as Assessed by MPAC)	Container Limit	Collection Frequency
<p>A. Low Density Residential (LDR) Premises including:</p> <ul style="list-style-type: none"> • single-family detached with one self-contained unit, • semi-detached residential with 2 residential homes, both self-contained units; • duplex residential structure with 2 self-contained units; • residential buildings with three (3) to six (6) units; • cottage properties with up to six (6) cottages; • Bed and Breakfast establishments with three (3) bedrooms or less; • structures with six (6) or more units that are considered horizontal, row or townhouses or condo housing; • Vertical structures where all units have a primary exterior door directly accessing ground level that is visible from the collection point (including stacked townhouse structures) • trailer parks (only those classified as LDR in MPAC), • boarding homes; and • residential farms. 	<p>Unlimited per self-contained unit</p>	<p>Weekly</p>
<p>B. Multi-Residential Premises are residential buildings containing seven (7) or more self-contained units, including but not limited to, apartments, condominiums and rentals, nursing and retirement homes, cottage properties with seven (7) or more cottages, boarding homes, Group Homes, and vertical structures (stacked townhouses or similar style) where one or more unit does not have a primary external access door directly accessing ground level and cannot be serviced as a Type A Premises, and</p>	<p>Quantity as determined by the Region on a request only basis for Green Bins or Carts</p>	<p>Weekly</p>

THE REGIONAL MUNICIPALITY OF NIAGARA

WASTE MANAGEMENT BY-LAW

COLLECTABLE VOLUME LIMITS

Organic Container Limit		
Type of Premises (as Assessed by MPAC)	Container Limit	Collection Frequency
mobile homes (not assessed by MPAC as Low Density Residential Units).		
C. Premises used for one or more institutional, commercial or industrial purposes inside Designated Business Area and Bed and Breakfasts with four (4) or more bedrooms inside Designated Business Areas	Unlimited	Weekly
D. Mixed use Premises used for one or more institutional, commercial or industrial and residential purposes inside Designated Business Area	Unlimited	Weekly
E. Premises used for one or more institutional, commercial or industrial purposes outside Designated Business Area and Bed and Breakfasts with four (4) or more bedrooms outside Designated Business Areas are Type E Premises.	Limit of eight (8) Green Carts or the equivalent number of Green Bins as determined solely by Niagara Region.	Weekly
F. Mixed use Premises used for one or more institutional, commercial or industrial and residential purposes outside Designated Business Area	Unlimited	Weekly

THE REGIONAL MUNICIPALITY OF NIAGARA

WASTE MANAGEMENT BY-LAW

FRIENDLY REMINDER NOTICE

**FRIENDLY REMINDER
Curbside Collection Services**

*Dear Property Owner/Tenant:
Failure to comply with the following may result in charges under Waste Management By-law No. 2017-56 or subsequent approved By-laws.*

To ensure compliance with guidelines noted below, Enforcement Staff will return to the property on: _____

NON-COMPLIANT SETOUT

- Materials (garbage, recycling, Green Bin, large household items, etc.) must **NOT** be set out before 5 p.m. on the evening before scheduled collection and must be at the curb by 7 a.m. the day of collection
- Containers and any material not collected **MUST** be removed from the outside no later than 7 p.m. on your collection day
- Garbage or Leaf & Yard Materials must **NOT** be placed out in cardboard boxes for collection
- Materials must **NOT** be placed at the curbside in an uncontained pile
- Containers or bags weighed more than 22.7 kg (50 lbs)
- Containers or bags are more than 90 cm (35 in.) in height by 60 cm (24 in.) in diameter
- Materials must be removed immediately from the curbside

OVER LIMIT

- Your property is over the maximum garbage container/bag limit of _____ per week

BULKY GOODS (LARGE ITEMS/APPLIANCES)

- Residents of single-family, semi-detached or properties with 6 units or less are required to
 - Complete the online booking form at niagararegion.ca/waste or call Eriqma Environmental at 905-227-7771 (Toll Free: 1-855-227-7771) at least **2 BUSINESS DAYS IN ADVANCE** of your regular collection day to arrange a **FREE** pick-up
- All items must be booked for collection
- Bulky Goods service is not available for
 - apartments with 7 or more units
 - commercial, industrial, institutional or
 - multi-use properties
- OPC permits sticker required

PLEASE READ REVERSE SIDE



**FRIENDLY REMINDER
Curbside Collection Services**

UNACCEPTABLE MATERIALS

- Household Hazardous Waste (HHW). Accepted FREE of charge at HHW depots
- Springs and tires
- Automotive parts and tires
- Electronics
- Construction, renovation or demolition materials
- Materials can be taken directly to the landfill. Disposal fees will apply
- Garbage containing recyclables, Green Bin or Leaf & Yard materials

BLUE/GREY BOX

- Mixed Blue and Grey Box materials are **NOT** acceptable
- Material not accepted in recycling program
- All plastic bags and recyclable plastic film and outer wrap must be placed inside one plastic bag (not loose) in the Grey Box
- Cardboard must be banded together and no larger than 91cm (35") x 91cm (35") x 91cm (35")

GREEN BIN/LEAF & YARD BRANCHES

- Sod, soil, stumps, gravel are not collected curbside
- Liquid material is not permitted in the Green Bin
- Material must **NOT** be placed in plastic bags or cardboard boxes for collection
- Loose material including leaves and branches are not accepted
- Grass not collected curbside
- Branches are only collected on designated collection weeks. The next collection week in your area is _____
- Branches **MUST** be tied in bundles no longer than 1.5 m (5 ft) and no wider than 0.5 m (1.5 ft). Individual branches cannot exceed 7 cm (3 in) in diameter

NOTES/COMMENTS


FOR MORE INFORMATION

Visit the Region's website
niagararegion.ca/waste
Refer to your **Collection Guide**
Call the Waste Info Line 905-356-4141
or 1-800-594-5542



2. That this by-law shall come into force and effect on October 19, 2020.

THE REGIONAL MUNICIPALITY OF NIAGARA



James Bradley, Regional Chair



Ann-Marie Norio, Regional Clerk

Passed: September 17, 2020

From: "skostyk@afm298.org" <skostyk@afm298.org>
To: mayor@portcolborne.ca
Date: 2020-08-31 08:14 AM
Subject: Sector Relief

The Niagara Region Musicians Association has prepared a proposal for the consideration City Council in Port Colbourne. The substance of the proposal, is similar in nature to one that recently passed in the City of Toronto, concerning the establishment of a sub class of Property Taxes for venues that engage live entertainment, in specific response to the economic challenges brought on by Covid.

We have very serious concerns particularly for the recovery and present state of the performing Arts sector, as well as the sustainability of entities within the Hospitality Sector.

As you are aware, our current economic environment is such that there are very serious challenges for hospitality operators, and a devastating climate for musical artists, who have experienced the the greatest portion of their income dissolve from the Covid phenomenon.

Our goal in creating our proposal, is to severally assist Hospitality Operators as well as Musical Artists in our community. Hospitality operators will very soon face additional challenges as they face restrictions on indoor patronage that go with the change in seasons.

It may also be prudent to explore a Regional approach on this vital issue. Our intention is to present this idea to all Regional Municipalities, with hopes that they may severally recognize the need for this initiative, and join in unified accord to engage the Region and/or the Provincial Government to invite their support as a pilot project.

Enclosed for your consideration is the full text of our prepared proposal for Port Colbourne. We ask that you review the proposal, and we also request to meet with you on Zoom to discuss the contents. We would be pleased at the opportunity to meet with council members to discuss the contents of this proposal, or perhaps address any questions you may wish to have answered.

If any council members wish to meet with us on Zoom, kindly let us know a convenient time and suitable date. Mornings are characteristically best for me. I would also be asking NRMA V.P. Jerry Salfi to join us for the meeting, if that would be ok with you.

I look forward to receiving your timely reply, with our thanks.

Respectfully,

Steve



City of Port Colborne.pdf

**Steve Kostyk -Guitarist, Pro Guitar Instructor
President - Niagara Region Musicians Associations
American Federation Of Musicians - Local 298
8234 Lamont Ave.
Niagara Falls Ontario, L2G 6V8
Tel: 905-351-6249**



image0.jpeg

"I will never betray my union and I will never betray my class." - Arthur Scargill, British Mineworker leader

Proposal

Prepared for the consideration of The Corporation
Of The City of Welland

Mayor: William Steele

Councillors:

Mark Bagu
Donna Kalailieff
Eric Beauregard
Angie Desmerais
Gary Bruno
Frank Danch
Harry Wells
Ron Bodner

Prepared and submitted by:

Niagara Region Musicians Association, Local 298
8234 Lamont Ave
Niagara Falls Ontario
L2G 6V8

Email: local298nrma@gmail.com
Tel: 289-273-2136



Niagara Region Musicians Association

The Niagara Region Musicians Association is an affiliate of the Canadian Federation of Musicians. We represent the local interests of 300 Performing Musicians. Our National affiliate, the Canadian Federation of Musicians, represents 17,000 working Musicians in Canada. Under Federal Status of the Artist legislation, the NRMA and CFM severally represents the interests of all Canadian Working Musicians. The NRMA also represents the Musicians of the Niagara Symphony and Shaw Festival under two distinct collective bargaining agreements.

Context and Preface

The Covid19 Pandemic has affected and thoroughly disrupted Niagara's Music Industry. Employment opportunities for Musicians at this time are close non existent in our current environment, although sporadically starting to redevelop in a small manner. Moreover, the recovery of our industry will be largely sluggish and with great challenge. There are several reasons for an anticipated sluggish recovery:

- 1) Port Colborne Hospitality operators have been impacted severely over the course of the pandemic. Most of these venues will not be in a fiscal position to hire and engage Musicians due to budget constraints that will predictably arise from social distancing requirements and other restrictions. Reduced seating requirements will inexorably reduce revenue and profit potential. Another key factor is consumer behaviour. Although the economic impact is widespread across much of the City , the Hospitality and Entertainment sector has been most acutely affected. In turn, creating tenuous economic circumstances for the City economically.

According to an Angus Reid Survey, only 18% of Canadians say that they will patronize a sit down restaurant immediately upon reopening.

“The majority of Canadians say that they want to go out to restaurants, which is the good news. The bad news is they don’t want to do it right away,” says Howard Ramos, professor of sociology at Dalhousie University and one of the report’s collaborators. “That’s going to be a heavy burden for smaller independent restaurants.” National Post June 9, 2020

2) Performance engagements for our local musicians are often times procured well into the future. It is not entirely uncommon, under normal prevailing circumstances, for Professional Musicians to be booked as much as one year in advance. We have received reports from our members that indicate cancelations of engagements currently extend into October/November 2020. Upon reopening of the economy, the average Musician can expect a period of 3 to 4 months to partially restore their booking opportunities. Certainly, a full year in the most pristine favourable circumstances as it pertains to the continued abatement of the pandemic.

3) Many of our local professional musicians pursue performance opportunities in the USA on special work permits issued by the United States Customs and Immigration Department, called P2 Visas. The Covid 19 situation has rendered our border closed and all contracts for cross border performances have been outright cancelled. Upon reopening of the border and full reopening of the economy, we anticipate that the engagement of Canadian Musicians in the USA will be sporadic and marginal at best for an extended period. Much of that may be attributed to the pandemic itself, coupled with an unstable political climate. We are looking at a Minimum of 60 days for a musician to apply and receive a P2 Visa.

4) The possible second wave of the pandemic can further magnify challenges to both the hospitality industry as well as the Live Performance Music Industry. It is also entirely possible that an indeterminate percentage of patrons may, out of an abundance of caution, avoid dine in restaurant and lounge services. In summary, Niagara Musicians, Hotels, Restaurants, Lounges, Clubs and Theatres are facing enormous and significant challenges of epic magnitude moving beyond Covid 19, and beyond the reopening of Ontario’s Economy.

Progressive Strategy with Precedent

The City of Toronto has recently recognized the very same challenges to its hospitality and music industries in the Covid Environment, and they have undertaken to enact and create a special subclass of property tax levies, specific to theatres, restaurants, hotels, Lounges, and Clubs.

The temporary tax relief program allows for a significant reduction in commercial property taxes, and is awarded to the property owner.

You may examine an overview of the City of Toronto program by clicking the following link:

<https://www.toronto.ca/business-economy/business-operation-growth/business-incentives/creative-co-location-facilities-property-tax-subclass-designation/>

Definitions

A Live Music Venue or “venue”, is a venue at which Live Music Performances occur. A Live Music Performance is a Performance by individual artists or groups of musical artists, that perform original or non original musical works on instruments, vocally, or on equipment conventionally used to perform Jazz, Rock, Blues, folk, ethnic, classical, R & B, Hip Hop, Country, Global, Experimental, or other genres of music. Music Performances for an audience, but excludes the simple playback of recorded, pre recorded or digital music.

Our Proposal

The Niagara Region Musicians Association hereby proposes that the City of Port Colborne enact a similar property tax relief mechanism, similar to the measure adopted by the City of Toronto, in an effort to assist the hospitality and music industry in it’s recovery.

We propose that features and requirements of the program include the following criteria;

1] Commercial Property owners who qualify and meet full criteria receive a significant reduction in property taxes. The City of Toronto has engaged a benchmark of 50% reduction.

- 2) Venue operators must engage, under contract, a minimum of one live performing Musician, and meet a minimum of 104 contracted performance dates within a 365 day period in order to qualify for the property tax reduction.
- 3) Musicians are free to negotiate their best level of compensation with the venue owner, but must meet minimum standards of compensation, as prescribed in the Niagara Region Musicians Association Tariff of Fees, under the auspices of the mandate of the Canadian Federation of Musicians.
- 4) The venue operator will provide a dedicated area for the musicians to perform within. The dedicated area must allow a minimum of 2 meters of social distancing between the musicians, and 3 meters from the closest audience member. The area must be large enough to accommodate the Performing Artist's P.A. system.
- 5) For the legal protection of the Musicians, participating Musicians will be required to maintain liability insurance of a face value amount of at minimum \$1,000,000. Affordable liability insurance is available through our Canadian Federation of Musicians Insuring partner, at a rate of approximately \$45 which protects the musician on every engagement for one full year. Venues should also be required to maintain adequate liability coverage.
- 6) Musicians are responsible for the disinfection and sanitation of all musical equipment and p.a. systems to include microphones. Venue operators are responsible for the routine (daily) sanitation and disinfection of the performance area, as well as any in-house P.A. System or other back line equipment that is owned by the venue.
- 7) In instances where the performance venue is located within a larger entity, such as a lounge or restaurant located within a hotel, we recommend that the significant property tax reduction be prorated in conjunction with the square footage of the performance venue itself.
- 8) In instances where the venue operator is not the property owner, the operator should be able to proxy the reduction in property tax to the property owner, in exchange for a reduction in commercial rent, the terms of which are mutually agreeable to both parties.

Oversight and Accountability

The Niagara Region Musicians Association can assist the City of Port Colborne to achieve appropriate oversight and accountability of the program, by engaging our existing clerical and administrative protocols, in accordance with our bylaws. Member Musicians are required to file the performance contract with our office prior to the engagement, along with work dues at 2% of scale. (Approximately \$2.00 per musician/ per engagement. This will help to defray the administration costs on our end. The Musician has the option of submitting a pension contribution for the performance.. Upon receipt, our Secretary forwards the Pension payment to the Musicians Pension Fund of Canada. Our secretary can therefore easily maintain record of contracts on a per venue basis. Participating venues can also forward copies of contracts to the NRMA so that venue contracts can be reconciled with Member Contracts.

* Due to privacy issues, we cannot process non member contracts

The Secretary can provide an itemized record of compliance to the City of Port Colborne and the venue owner/operator. The City of Port Colborne may also request copies of supporting documentation on a quarterly or monthly basis. This system of checks and balances can help best achieve integrity in the administration of the program and will help eliminate abuses. If the City of Port Colborne chooses our proposed method of oversight, it will serve to greatly reduce administrative costs that the City might otherwise endure.

City of Toronto Program Protocols and Requirements

The previously mentioned protocols and criteria are foundational to the recommendations of the Niagara Region Musicians Association, as it pertains to adaptation of a similar program in Port Colborne. We have carefully reviewed additional criteria in the current City of Toronto Program, and upon evaluation, we regard them as being either too costly to the venue operator, too cumbersome to implement, not necessary, or contradictory to the ultimate success of the program.

Executive Summary

In conclusion, we appeal to the City of Port Colborne, Mayor, Council and Executive Administration, to recognize the very significant challenges before Venue operators in our hospitality sector, as well as our independent Musicians in our Arts Community, and that proactive remedial action is necessary and prudent to the survival of our respective industries. These measures will lead to sustainability of operations for both hospitality operators and Musicians. We anticipate that, upon implementation, the program will help to sustain our hospitality sector, as well as preserve and create jobs in the Arts sector.

Our Executive team at the Niagara Region Musicians Association is available to discuss the details or overview of this proposal upon request. If any councillors wish to arrange a Zoom meeting we will do our utmost to accommodate your request. We are also available by phone to address your questions and concerns.

On behalf of the Board,

Steve Kostyk
President
Niagara Region Musicians Association Local 298
8234 Lamont Avenue
Niagara Falls Ontario

Tel: 905-351-6249
skostyk@afm298.org

Jerry Salfi, Vice President
jsalfi@afm298.org

Rick Richardson, Secretary
local298nrma@gmail.com

Executive Board

Dan Plunkett

Stew Brennand
Gary Evans
Nick Cooper

October 7, 2020

Honourable Jeff Yurek
Minister of Environment, Conservation and Parks
College Park 5th Flr,
777 Bay St, Toronto, ON M7A 2J3

Sent via email: minister.mecp@ontario.ca

**Re: Development Approval Requirements for Landfills - (Bill 197)
Our File 35.2.2**

Honourable and Dear Sir,

At its meeting held on October 5, 2020, St. Catharines City Council approved the following motion:

WHEREAS Schedule 6 of Bill 197, COVID-19 Economic Recovery Act, 2020 considers amendments to the Environmental Assessment Act relating to municipal autonomy and the principle that municipalities can veto a development outside their municipal boundary in an adjacent municipality; and

WHEREAS Bill 197 empowers multiple municipalities to 'veto' development of a landfilling site within a 3.5 km zone inside the boundary of an adjacent municipality; and

WHEREAS Bill 197 establishes a dangerous precedent that could be expanded to other types of development; and

WHEREAS Bill 197 compromises municipal autonomy and the authority of municipal councils to make informed decisions in the best interest of their communities and municipal taxpayers; and

WHEREAS amendments in Schedule 6 could cause conflict in the effective management of landfill sites, put significant pressure on existing landfill capacity, and threaten the economic activity associated with these sites;

THEREFORE BE IT RESOLVED That the City of St. Catharines calls upon the Government of Ontario (Ministry of the Environment, Conservation and Parks (MOECP) to amend Bill 197, COVID-19 Economic Recovery Act, 2020, to eliminate the development approval requirement provisions from adjacent municipalities and that the 'host' municipality be empowered to render final approval for landfills within their jurisdiction; and

BE IT FURTHER RESOLVED that a copy of this motion be forwarded to Premier Doug Ford, Jeff Yurek the Minister of Environment, Conservation and Parks, Steve Clark the Minister of Municipal Affairs and Housing, local MPP's., the Association of Ontario Municipalities (AMO) and Ontario's Big City Mayors (formerly Large Urban Mayors Caucus of Ontario-LUMCO)

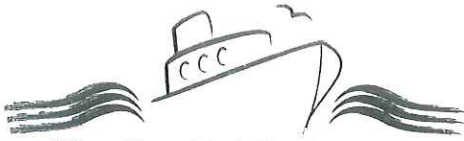
BE IT FURTHER RESOLVED, that a copy of this resolution be forwarded to all Ontario municipalities with a request for supporting motions to be passed by respective Councils and copies of the supporting motion be forwarded to Premier Doug Ford, Jeff Yurek the Minister of Environment, Conservation and Parks, Steve Clark the Minister of Municipal Affairs and Housing, the local MPP's, the Association of Ontario Municipalities (AMO).

If you have any questions, please contact the Office of the City Clerk at extension 1506.



Bonnie Nistico-Dunk, City Clerk
Legal and Clerks Services, Office of the City Clerk
:ra

Cc. Hon. Premier Doug Ford premier@ontario.ca
Hon. Steve Clark, Minister of Municipal Affairs, Housing minister.mah@ontario.ca
Jennifer Stevens, MPP - St. Catharines, JStevens-CO@ndp.on.ca
Jeff Burch, MPP - Niagara Centre, JBurch-QP@ndp.on.ca
Wayne Gates, MPP - Niagara Falls, wgates-co@ndp.on.ca
Sam Oosterhoff, MPP - Niagara West-Glanbrook, sam.oosterhoff@pc.ola.org
Association of Municipalities of Ontario amo@amo.on.ca
Chair of Ontario's Big City Mayors, Cam Guthrie mayor@guelph.ca
All Ontario Municipalities (via email)



Where Ships Climb The Mountain...

October 8, 2020

Town of Fort Erie
Town of Grimsby
Town of Lincoln
City of Niagara Falls
Town of Niagara-on-the-Lake
Town of Pelham
City of Port Colborne
City of St. Catharines
Township of Wainfleet
City of Welland
Township of West Lincoln

Re: Amendments to Bill 197

Please be advised Thorold City Council, at its October 6, 2020 meeting, adopted the following resolution:

Whereas Thorold City Council adopted a motion at its July 21, 2020 meeting pertaining to Bill 197 being amendments to the Environmental Assessment Act, relating to landfill sites; and

Whereas the motion was forwarded to Premier Ford, Minister of Environment and Minister of Municipal Affairs and Housing and the local MPP; and

Whereas a request has been made to circulate this motion to local area municipalities for their support; and

Whereas there were three items in the approved motion, however items two and three were direction to staff and item one contained feedback on the legislation for which support from local area municipalities is desired.

Now Therefore Be it Resolved:

1. That the City Clerk be directed to circulate the motion passed by Thorold City Council on July 21, 2020 regarding its feedback on Bill 197 being amendments to the Environmental Assessment Act, relating to landfill sites to local area municipalities for support of item one.

...2

City of Thorold

P.O. Box 1044, 3540 Schmon Parkway, Thorold, Ontario L2V 4A7

www.thorold.ca

Tel: 905-227-6613

Yours truly,



Donna Delvecchio
City Clerk

DD:cd

cc: M. Dilwaria, Chief Administrative Officer

Resolution Number 11a
Title: City of Thorold
Date: Tuesday, July 21, 2020



MOVED BY: Councillor Neale
SECONDED BY: Mayor Terry Ugolini

Whereas Bill 197, specifically Schedule 6, considers amendments to the Environmental Assessment Act relating to landfill sites; and

Whereas language proposed in the amendment suggests broader engagement on the establishment of landfill sites with the host municipality and any municipality within 3.5 km of the property boundary; and

Whereas this amendment that allows for additional input and oversight from multiple municipalities, could cause conflict in the effective management of landfill sites and also may lead to a devolution of community fees payable to municipalities which host landfill sites.

Now Therefore Be it Resolved:

1. That while the City of Thorold supports reviewing the Environmental Assessment Act to streamline processes for the effective management of landfill sites, it opposes the following:
 - The expansion of broader engagement and oversight to municipalities not hosting the landfill site as it may negatively impact the effective operation of the landfill site within the host municipality; and,
 - A reduction of community fees to payable to municipalities that host land fill sites.
2. That staff be directed to provide comments to this effect during the 45 day review period of the legislation which ends on August 22, 2020.

3. That a copy of this motion be forwarded to Premier Ford, Minister of Environment, Conservation and Parks Jeff Yurek, as well as, the Minister of Municipal Affairs and Housing Steve Clark and the local MPP.

CARRIED

LOST

MAYOR

A handwritten signature in black ink, appearing to read "Tony Vignone", is written over a horizontal line.



TOWNSHIP OF ENNISKILLEN
4465 Rokeby Line
RR# 1, Petrolia, Ontario N0N 1R0
Phone (519) 882-2490 Fax (519) 882-3335

Duncan McTavish,
Administrator-Clerk/Treasurer
Mike Cumming,
Road Superintendent

September 9, 2020

Amber La Pointe
City of Port Colborne
66 Charlotte Street
Port Colborne, ON L3K 3C8

Dear Amber,

Re: Resolutions: Funding and Inspections for Long Term Care Homes due to COVID 19
and Endorsement of Bill 164

Please note that the Council of the Township of Enniskillen at their regular meeting of September 8 2020 passed resolutions supporting the Council of the City of Port Colborne regarding funding and inspections of Long Term Care Homes and the endorsement of Bill 164.

Yours truly,


Duncan McTavish
Clerk

Our File No: CV174-20

August 24, 2020

Delivered by e-mail to:
cityclerk@portcolborne.ca

Ms. Amber LaPointe
City Clerk
Corporate Services Department
City of Port Colborne
66 Charlotte Street
Port Colborne, Ontario L3K 3C8

Dear Ms. LaPointe,

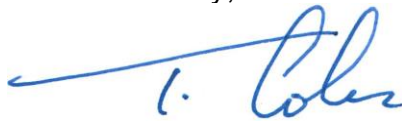
RE: Resolution – Funding and Inspections for Long Term Care Homes due to COVID-19 Pandemic

We acknowledge receipt of your correspondence dated August 18, 2020, with respect to the above noted matter.

In accordance with the City's policy your correspondence has been forwarded to the Mayor and Members of Council. A member of Council may request the matter be listed on a Council/Committee agenda for consideration.

Should this matter be listed on an agenda, we will advise you of any action taken by Vaughan Council.

Yours sincerely,



Todd Coles
City Clerk

TC/lc

City of Port Colborne
RECEIVED
SEP 21 2020

CORPORATE SERVICES
DEPARTMENT

3236 River St. P.O. Box 28
Alvinston, ON N0N 1A0

Phone: 519.898.2173
Fax: 519.898.5653



September 15, 2020

City of Port Colborne
Municipal Offices
66 Charlotte Street
Port Colborne, ON
L3K 3C8
Attention: Amber LaPointe

Dear Ms. LaPointe,

At the September 10, 2020 regular session of Council, the following motion was duly moved and seconded:

RESOLUTION-2020-259 Councillor Jeannette Douglas made a motion that the Municipality of Brooke-Alvinston supports the request from the City of Port Colborne to support Private Member's Bill 164: Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019 as there is a need for regulating private supportive living accommodations to protect individuals requiring special care. Deputy Mayor Frank Nemcek seconded the motion.

Carried

If you require any further information, please contact me directly.

Kind Regards,


Janet Denkers
Clerk-Administrator



937907 Marsh Bay Road,
RR#1 Coleman Township, ON
P0J 1C0
Tel: 705-679-8833
Fax: 705-679-8300
toc@ontera.net

City of Port Colborne
RECEIVED
OCT 14 2020
CORPORATE SERVICES
DEPARTMENT

October 7, 2020

City of Port Colborne,
68 Charlotte Street,
Port Colborne, ON, L3K 3C8.

Dear Members of Council:

The Council of The Corporation of the Township of Coleman passed the following resolution during the September 14, 2020 Council meeting in support of your resolution regarding staffing and inspection of Long Term Care Homes:

Be it resolved that correspondence from the City of Port Colborne and the Township of Gore Bay regarding support for a resolution from the Township of South Glengarry regarding increasing funding for more staffing and regular inspections of Long-Term Care Homes;

And further that the Township of Coleman supports the position of the Township of Glengarry;

And further that a copy of this resolution be circulated to Premier Doug Ford, The Minister of Long-term Care Merrilee Fullerton.

Yours truly,

Patrick Cormier,
Chief Administration Officer/Clerk-Treasurer.

c.c. The Honourable Premier Doug Ford
The Honourable Merrilee Fullerton, Minister of Long-term Care

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222

Moved by: ___Drouillard_____

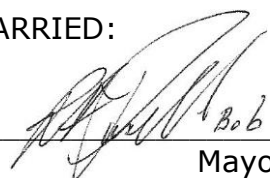
Seconded by: ___Loveland_____

THAT the Council of the Municipality of Dutton Dunwich supports the resolution by the City of Port Colborne endorsing Bill 164: Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019; and

THAT this resolution be forwarded to Karen Vecchio, MP, Jeff Yurek, MPP and the City of Port Colborne.

Recorded Vote	Yeas	Nays
P. Corneil	__x__	_____
A. Drouillard	__x__	_____
K. Loveland	__x__	_____
M. Hentz	__x__	_____
B. Purcell – Mayor	__x__	_____

CARRIED:



 Mayor

DEFEATED:

 Mayor



MUNICIPALITY OF HURON EAST

PO Box 610, 72 Main Street South, Seaforth Ontario N0K 1W0

Tel: 519-527-0160

Fax: 519-527-2561

888-868-7513

www.huroneast.com

Brad Knight, BA, CAO/Clerk
bknight@huroneast.com

Paula Michiels, CPA, CGA, Treasurer-Finance Manager
pmichiels@huroneast.com

September 2nd, 2020.

City of Port Colborne
RECEIVED

SEP 09 2020

CORPORATE SERVICES
DEPARTMENT

City of Port Colborne,
Municipal Offices,
66 Charlotte Street,
Port Colborne, Ontario.
L3K 3C8

Attention: Amber LaPoint, City Clerk

Dear Ms. LaPoint:

RE: Resolution – Endorsement of Bill 164 – Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019

We wish to acknowledge receipt of your resolution endorsing Private Member's Bill 164 – Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019.

This matter was referred to Huron East Council at their regular meeting on September 1st, 2020 and the following motion was passed.

It was duly moved and seconded:

THAT Council of the Municipality of Huron East endorse the City of Port Colborne resolution regarding Private Member's Bill 164 – Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019.

Motion Carried.

Trusting this action of Council will be of assistance.

Yours truly,

Brad Knight,
CAO/Clerk.

BK:ja



TOWNSHIP OF O'CONNOR

330 Highway 595, R.R. #1, Kakabeka Falls, Ontario P0T 1W0

Tel. (807) 476-1451 Fax (807) 473-0891

E-Mail - twpoconn@tbaytel.net

www.oconnortownship.ca

Mayor
Jim Vezina

Clerk-Treasurer
Lorna Buob

Councillors
Alexander Crane
Wendy Handy
Jerry Loan
Bishop Racicot

September 23, 2020

Honourable Doug Ford
Premier of Ontario
Room 281
Legislative Building
Queen's Park
Toronto, ON M7A 1A1
Email: premier@ontario.ca

Dear Premier Ford:

Council, at their meeting held on September 14, 2020, endorsed the resolution from the City of Port Colborne with regard to the Endorsement of Bill 164 – Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019.

For your information I have enclosed a copy of the resolution and I trust that you will give it your consideration and support.

Yours truly,

Lorna Buob
Clerk-Treasurer

Encl.

Cc: Honourable Christine Elliot, Deputy Premier
Honourable Lisa Thompson, Minister of Government and Consumer Services
Honourable Steve Clark, Minister of Municipal Affairs and Housing
Honourable Todd Smith, Minister of Children, Community and Social Services
Honourable Merrilee Fullerton, Minister of Long-Term Care
Judith Monteith-Farrell, MPP, Thunder Bay - Atikokan
Michael Gravelle, MPP, Thunder Bay – Superior North
AMO
City of Port Colborne

PO Box 488
201 Atwood Avenue
Rainy River, ON
P0W 1L0



Office Phone: (807) 852-3244
Clerk Phone: (807) 852-3978
Fax: (807) 852-3553
Email: rainyriver@tbaytel.net
Website: www.rainyriver.ca

Town of Rainy River

RESOLUTION

MOVED BY Marty Krieger

DATE: **September 14, 2020**

SECONDED BY Pat White

RESOLUTION: **20-016**

“That the Town Council of The Corporation of the Town of Rainy River hereby supports the City of Port Colborne in their resolution to endorse Private Member’s Bill 164 – *Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019.*”

ABSTAIN _____
AYES _____
NAYES _____

CARRIED _____
DEFEATED _____

L. ARMSTRONG _____
D. EWALD _____
B. HELGESON _____
A. HARTNELL _____
N. IVALL _____
M. KREGER _____
P. WHITE _____

D. Ewald
MAYOR OR ACTING MAYOR



in the heart of Ontario’s Sunset Country



PORT COLBORNE

CITY OF PORT COLBORNE

Municipal Offices
66 Charlotte Street
Port Colborne, Ontario
L3K 3C8
www.portcolborne.ca

Corporate Services Department, Clerk's Division

August 18, 2020

Honourable Doug Ford, Premier
Legislative Building, Queen's Park
Toronto, ON M7A 1Y7

Dear Premier Ford:

Re: Endorsement of Bill 164 – Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019

Please be advised that, at its meeting of January 27, 2020, the Council of The Corporation of the City of Port Colborne resolved as follows:

WHEREAS Niagara Centre MPP, Jeff Burch, introduced Private Member's Bill 164: Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019 (the "Bill") at the Legislative Assembly of Ontario;

AND WHEREAS the Province of Ontario regulates matters under the following statutes:

- a) Child, Youth and Family Services Act, 2017;
- b) Homes for Special Care Act;
- c) Long-Term Care Homes Act, 2007;
- d) Private Hospitals Act;
- e) Public Hospitals Act;
- f) Retirement Homes Act, 2010;
- g) Residential Tenancies Act, 2006;
- h) Services and Supports to Promote the Social Inclusion of Persons with Developmental Disabilities Act, 2008.

AND WHEREAS there is a need for regulating private supportive living accommodations to protect individuals requiring special care;

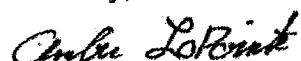
NOW THEREFORE the City of Port Colborne endorses the Bill and will complete the following:

...2

1. Send a letter to the Premier, the Minister of Government and Consumer Services; the Minister of Health; the Minister of Children, Community, and Social Services; the Minister of Long-Term Care, and carbon copy the Association of Municipalities of Ontario stating the endorsement of the Bill and reasons for its support no later than one (1) month's time from the passing of this resolution; and,
2. Circulate the resolution endorsing the Bill to all municipalities in Ontario.

Your favourable consideration of this request is respectfully requested.

Sincerely,



Amber LaPointe
City Clerk

ec: Hon. Christine Elliott, Deputy Premier
Hon. Lisa Thompson, Minister of Government and Consumer Services
Hon. Steve Clark, Minister of Municipal Affairs and Housing
Hon. Todd Smith, Minister of Children, Community and Social Services
Hon. Merrilee Fullerton, Minister of Long-Term Care
Andrea Horwath, Leader of the New Democratic Party
Association of Municipalities of Ontario (AMO)
Local Area Municipalities
Local Area MPPs

September 14, 2020

City of Port Colborne
City Clerks Office
Attn: Amber LaPointe
66 Charlotte Street
Port Colborne, Ontario
L3K 3C8

Sent via email: cityclerk@portcolborne.ca

**Re: Endorsement of Bill 164 – Protecting Vulnerable Persons in Supportive Living
Accommodation Act, 2019
Our File 35.11.2**

Dear Ms. LaPointe,

Please be advised that the Council of the City of St. Catharines, at its meeting held on September 14, 2020, gave consideration to your correspondence respecting the above-noted matter.

The Mayor and Members of Council received and filed the correspondence, directing no further action.

If you have any questions, please contact the Office of the City Clerk at extension 1501.



Bonnie Nistico-Dunk, City Clerk
Legal and Clerks Services, Office of the City Clerk
:ra

Our File No: CV175-20

August 24, 2020

Delivered by e-mail to:
cityclerk@portcolborne.ca

Ms. Amber LaPointe
City Clerk
Corporate Services Department
City of Port Colborne
66 Charlotte Street
Port Colborne, Ontario L3K 3C8

Dear Ms. LaPointe,

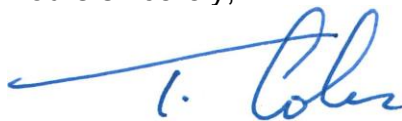
RE: Endorsement of Bill 164 – Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019

We acknowledge receipt of your correspondence dated August 18, 2020, with respect to the above noted matter.

In accordance with the City's policy your correspondence has been forwarded to the Mayor and Members of Council. A member of Council may request the matter be listed on a Council/Committee agenda for consideration.

Should this matter be listed on an agenda, we will advise you of any action taken by Vaughan Council.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "T. Coles".

Todd Coles
City Clerk

TC/lc



TOWNSHIP OF WARWICK

"A Community in Action"

6332 Nauvoo Road, R.R. #8, Watford, ON N0M 2S0

City of Port Colborne
RECEIVED
SEP 14 2020
CORPORATE SERVICES
DEPARTMENT

Township Office: (519) 849-3926 / 1-877-849-3926
Watford Arena: (519) 876-2808
Website: www.warwicktownship.ca

Works Department: (519) 849-3923
Fax: (519) 849-6136
E-mail: info@warwicktownship.ca

September 4, 2020

City of Port Colborne
66 Charlotte Street
Port Colborne, ON L3K 3C8

Dear City of Port Colborne:

RE: Support of Resolution Regarding Support for Bill 164

Please be advised that at their regular meeting of August 24, 2020, Warwick Township Council passed the following motion:

THAT Warwick Township Council supports and endorses the resolution from the City of Port Colborne endorsing Bill 164 - Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019.

- Carried.

If you have any questions or concerns, please do not hesitate to contact me.

Kindest Regards,

Amanda Gubbels
CAO/Clerk
Township of Warwick



City of Welland
Corporate Services
Office of the City Clerk
60 East Main Street, Welland, ON L3B 3X4
Phone: 905-735-1700 Ext. 2159 | Fax: 905-732-1919
Email: clerk@welland.ca | www.welland.ca

September 21, 2020

File No. 20-102

SENT VIA EMAIL

City of Port Colborne
66 Charlotte Street
Port Colborne, ON L2R 7C2

Attention: Amber LaPointe, City Clerk

Dear Ms. LaPointe

Re: September 15, 2020 – WELLAND CITY COUNCIL

At its meeting of September 15, 2020, Welland City Council passed the following motion:

“THAT THE COUNCIL OF THE CITY OF WELLAND receives for information the correspondence from the City of Port Colborne dated August 18, 2020 regarding Endorsement of Bill 164 - Protecting Vulnerable Persons in Supportive Living Accommodation Act, 2019.”

Yours truly,

Tara Stephens
City Clerk

TS:bl

The Corporation of the City of Port Colborne

By-Law No. 6827/77/20

Being a By-law to Provide for a Section 4 and Section 78 Engineer's Report for a Drainage Works in the City of Port Colborne in the Regional Municipality of Niagara Known as the Michener Municipal Drain

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

Whereas the Michener Drain is a municipal drain tributary of the Wignell Municipal Drain, situated in the City of Port Colborne; and

Whereas on the 23rd day of July, 2018, the Council of the City of Port Colborne appointed Paul Marsh, P. Eng of EWA Engineers Inc., to prepare a new report; 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 Michener Municipal Drain Report, dated May 7, 2020, prepared by Paul Marsh, P. Eng., of EWA Engineering Inc., which report was filed with the City Clerk on June 22, 2020, containing plans, profiles and assessment schedules for the construction and future maintenance of the Michener Municipal Drain, and is attached hereto and forms part of this by-law; and

Whereas the total estimated cost the Michener Drain, inclusive of the Engineer's Report, construction, contract administration and HST (net) is \$199,021.32; and

Whereas \$38,311.68 is the total estimated cost assessed to the City of Port Colborne for their roads and parcels; and

Whereas on the 22nd day of June, 2020 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 Engineering & Operations Report 2020-73; and

Whereas the Council of The Corporation of the City of Port Colborne, at its meeting of October 26, 2020 approved the Department of Engineering & Operations, Engineering Division, Report No. 2020-146, Michener Municipal Drain Meeting to Consider, whereby the proposed drainage works was deemed necessary and desirable;

Now therefore the 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 as May 7, 2020, 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 \$199,021.32, excluding HST, being the amount necessary for payment of the cost of the said drainage works.
3. The Corporation may arrange for the issuance 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 and roads assessed within the municipality;
 - c) money paid under subsection 61(3) of the Act;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 Schedule "B" hereto to be collected in the same manner and at the same time as other taxes are collected.
5. For paying the amount of \$38,311.68 being the amount assessed upon the lands and roads belonging to or controlled by the municipality, 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 Schedule "B" forming part of this By-law, the actual cost shall be assessed, levied and collected upon and from the said parcels of lands and roads and parts of parcels in the same proportions and in the same manner as provided in the Schedule "B" 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. That all assessments of \$50.00 or less are payable the first year in which the assessment is imposed upon the land assessed, as provided for under Section 61(3) of the *Drainage Act*, R.S.O. 1990.
8. This By-law may be cited as "The Michener 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 26th day of October, 2020.

William Steele
Mayor

Amber La Pointe
City Clerk

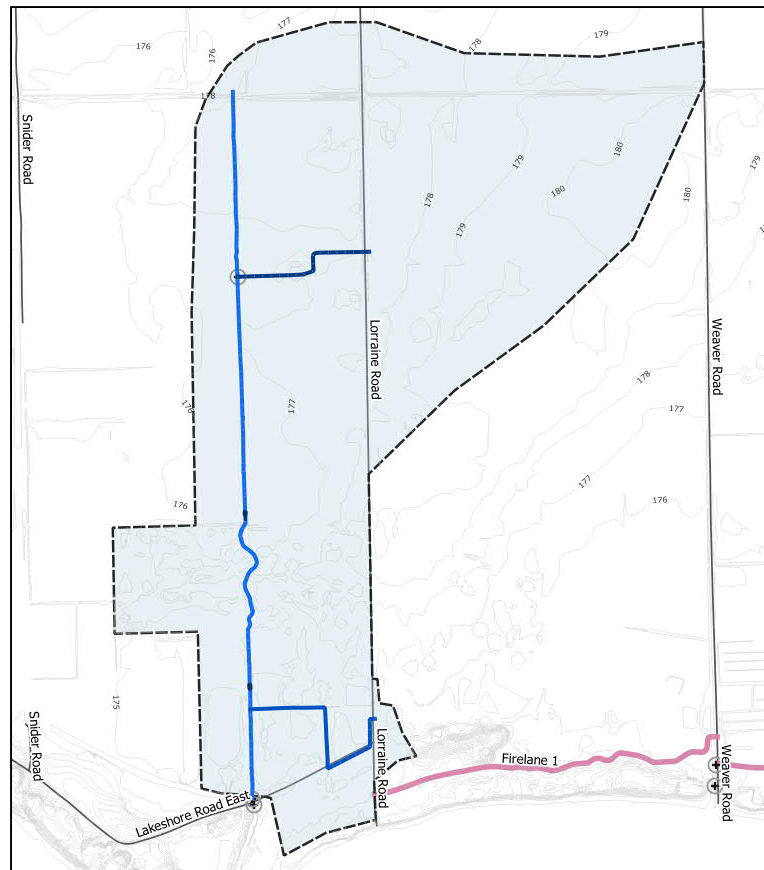
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Head of Council

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Michener Municipal Drain Report



May 7, 2020

Project No: EWB-189999

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May 7, 2020

Attention: Alana Vander Veen
Drainage Superintendent
City of Port Colborne
1 Killaly Street West
Port Colborne, Ontario
L3K 6H1
alanavanderveen@portcolborne.ca

Dear Ms. Vander Veen:

We are pleased to present our final report for the Michener Drain.

From the first point of opportunity to work with the City of Port Colborne, this assignment has been interesting and challenging. We prepared several options and analysis in consultation with yourself and local residents to identify a preferred solution that we expect will meet the projects's requirements.

This Drain has a significant history behind it and the previous work done by other Engineering companies created a unique challenge to compose a final report based on new analysis of opportunities for maintaining the drain and improving it.

Our report identifies design improvements that will increase the drain's function through maintenance activities, through maintenance of design grade and implementation of flow control structures at key points. The addition of two new Branch Drains from the City's Section 4 petitions have been achieved through design documents, assessment schedules and future maintenance provisions.

Thank you for relying on EWA Engineering for this assignment.

Yours truly,



Paul C. Marsh, P.Eng.

Principal Engineer
EWA Engineering Inc.

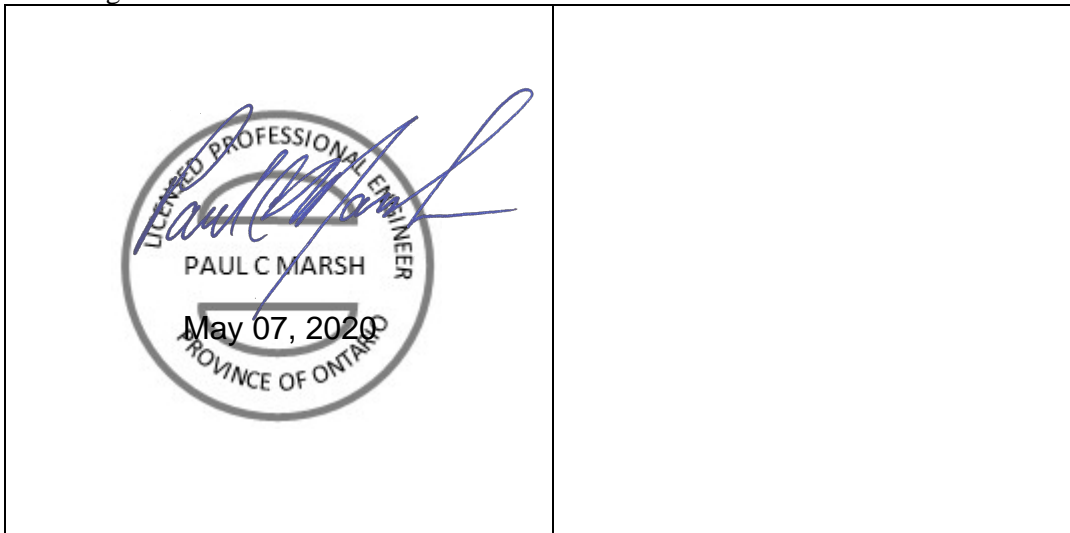
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Submission Date: May 7, 2020

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1 Executive Summary

The Michener Municipal Drain is located in the Eastern portion of the City of Port Colborne. It has an outlet into the Wignell Drain, immediately north of Lakeshore Rd. East and the drain currently ends just north of the Friendship Trail.

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 Michener Drain.

The report includes a description of all work, and associated plans, cost estimates, and assessment schedules for the proposed work on the existing Michener Drain as well as for 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 4 and 78.

The proposed improvement work for the Michener Drain is prepared as a Section 78 (1.1) of the Drainage Act. The works are described as maintenance; including the rebuild of a sedimentation basin south of the golf course property.

The identification of the 2 existing channels as Branch Drains are being prepared under Section 4 of the Drainage Act.

This report has identified a series of drain improvements that include drain maintenance to ensure suitable channel design flows are achieved. The drain improvements have been developed through plan and profile drawings.

The following are summary descriptions of the planned improvements:

1. A specific program of work for channel improvement for the Michener Drain involving vegetation removal and re-grading to design grade line from 0+700 to 1+700. The existing grade line is being confirmed by grading work instead of being altered.
2. Spot Vegetation removal and basic maintenance at the outlet. Re-instatement of the identified sediment basin shown in the RVA drawings of Nov. 1996.
3. Inclusion of an original private drain as part of the Municipal Drain identified as Michener Branch Drain #2. This drain ensures the Lorraine Rd. Culvert CS-101 has a suitable outlet. Clearing and confirmation of grades are planned west of the existing pond. Upstream of the pond is minimum except spot clearing of fallen trees impacting the drain.
4. An original private drain previously crossing farmland is to be converted to Michener Branch Drain #1 that provided an outlet to roadway culverts on Lorraine Rd. and Lakeshore Rd. East. The proposed drain is to be open channel with a bottom tile for portions of the drain. The tile has a lower road crossing elevation with Lakeshore Rd. East culvert remaining for storm roadway runoff.

The following is a summary of the project financial values as prepared in the attached Assessment Schedule included in Appendix C.

Table 1 Michener Drain Costs

Items	Costs
Estimated Costs	\$ 93,860.80
Eligible Administration Costs	\$ 87,990.88
Calculated Allowances	\$ 17169.64
Total:	\$ 199,021.32

The Michener Drain is organized into three distinct catchment areas as follows:

- Branch Drain #1 serving 9.0Ha with a total open and closed conduit drain length of 505m.
- Branch Drain #2 serving 30.7Ha with an open channel drain 344m.
- Michener Drain serving 94.8Ha, (134.59Ha total catchment) with an open channel drain with several private crossings over 1728m in length.

Assessment Summary is as follows:

Benefit Assessment (Section 22)

Michener Branch Drain #1	\$3,673.00
Michener Branch Drain #2	\$4,845.00
Michener Drain	\$ 0.00
Total - Benefit Assessment (Section 22)	\$8,518.00

Outlet Liability Assessment (Section 23)

Michener Branch Drain #1	\$29,827.28
Michener Branch Drain #2	\$26,463.48
Michener Drain	\$119,512.13
Total - Outlet Liability Assessment (Section 23)	\$175,802.89

Special Benefit Assessment (Section 24)

Michener Branch Drain #1	\$0.00
Michener Branch Drain #2	\$0.00
Michener Drain	\$6,110.00
Total - Special Benefit Assessment (Section 24)	\$6,110.00

Special Assessments (Section 26)

Michener Branch Drain #1	
City of Port Colborne	\$6,590.43
Enbridge	\$2,000.00
Michener Branch Drain #2	\$ 0.00
Michener Drain	\$ 0.00
Total - Special Assessments (Section 26)	\$8,590.43

Total Assessment of Costs \$199,021.32

This report and the proposed improvements are based on instructions from the City of Port Colborne and in consultation with the local landowners. The cost of these improvements is shared across all areas that use the Drain by way of allowances and assessments consistent with the Drainage Act of Ontario.

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 Michener Drain.

In addition to the Michener Drain Report, there are other Drain Reports being prepared concurrently and they are:

- Wignell Drain, outlets to Lake Erie across Lakeshore East Rd. and proceeds northerly for 7.2km.
- Port Colborne Drain, outlets to the Wignell at 2+062 South of the Friendship Trail and proceeds northerly for 3.3km ending at or near the Second Concession Rd.

This report includes a description of all work, and associated plans, cost estimates, and assessment schedules for the proposed work on the existing Michener Drain as well as for 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 4 and 78.

The proposed improvement work for the Michener Drain is prepared as a Section 78 (1.1) of the Drainage Act. The works are described as maintenance; including the rebuild of a sedimentation basin south of the golf course property.

The identification of the 2 existing channels as Branch Drains is prepared as a Section 4 of the Drainage Act based on a petition for sufficient outlet by the Road Authority, which is the City of Port Colborne. The petition forms for Section 4 are available on request to the City of Port Colborne, Drainage Superintendent A. Vander Veen.

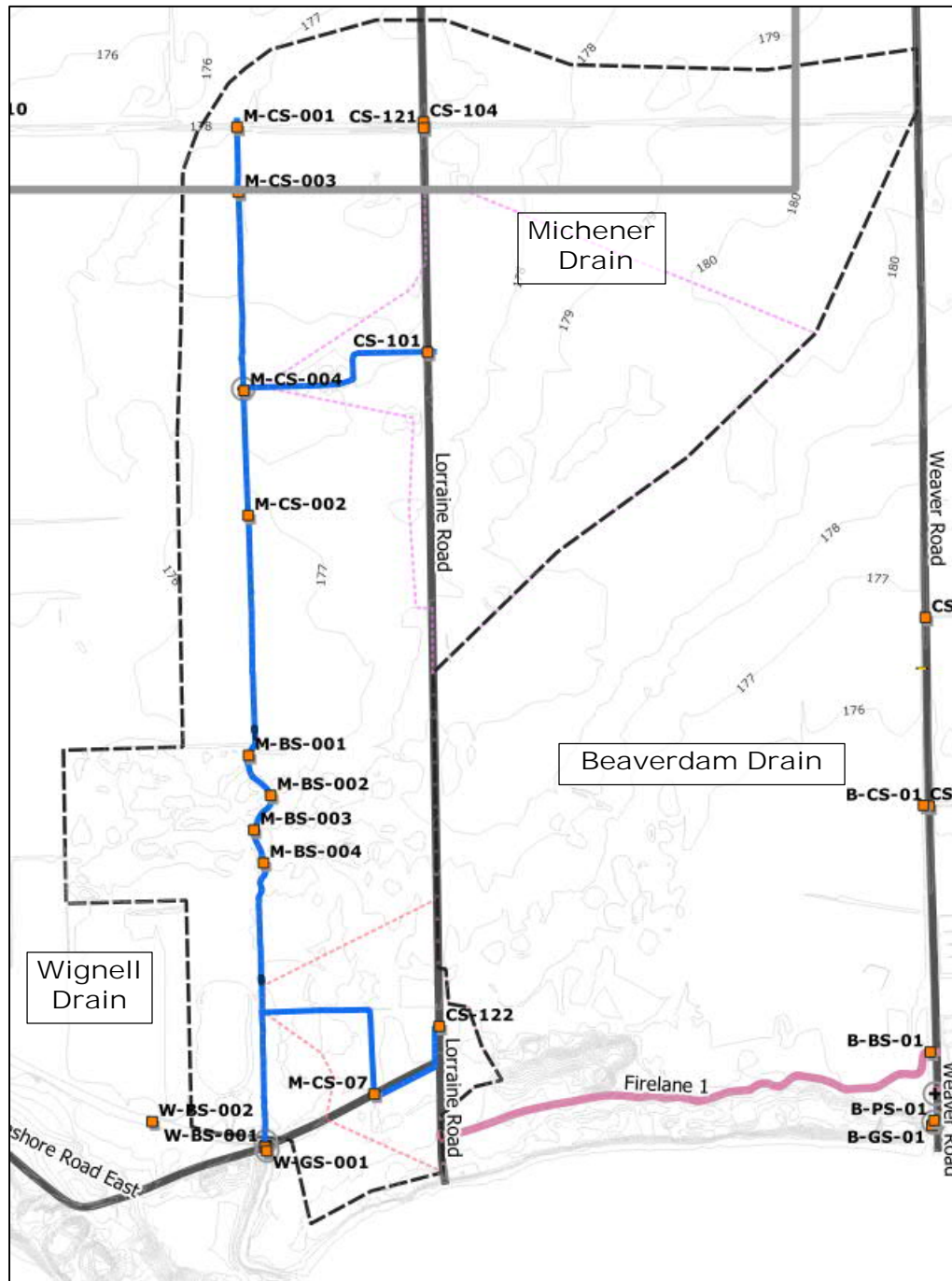


Figure 1 Municipal Drains - Michener Boundary

2.1 Objective

The Michener drain dates back as far as 1855 with the most current report dating back to July 28, 1978 which was adopted through Bylaw #773/89/78. The objective of this new report is to maintain the existing drain in a State of Good

Repair (SOG). The drain has been impacted by changes in land use practices that affect their function. The drain capacity is degraded through growth of vegetation within the banks of the drain.

There are specific new channels proposed to improve drain function.

2.2 Drain History and Past Reports

The Michener Drain Engineer's Report is prepared as follows:

- Baseline Drainage Report; provides an assessment of current drainage problems and identifies the extent of the drainage area to be serviced by the municipal drain. Baseline report includes a history of drainage and presents past design information such as grade lines.
- Wignell Watershed Assessment Report; provides an assessment of existing capacity through the use of hydrologic and hydraulic modelling which identifies the options for resolving problems and recommends a preferred option to improve drainage.

The final Engineer's Report is composed of the two previous reports along with supporting documentation and final drainage cost estimates and assessment schedules.

2.3 Michener Drain Watershed

The Michener Drain Watershed is composed of a single distinct municipal drain that outlets to the Wignell Drain just north of Lakeshore Rd. East. The Michener Drain is 1728m open channel with a predominate top width of 2.5m, with the lower portion dominated by golf course operations and the upper portion agriculture land uses. The Michener drain serves an area of 135 hectares based on the defined drain boundary, refer to Figure 1 Municipal Drains - Michener Boundary.

The watershed boundary is north of the Friendship Trail with a high point of 178m. The upper portion of the drain is a narrow fringe of drainage area north of the Friendship Trail extending eastwards to Weaver Rd. The Michener outlet is just north of Lakeshore Rd East at the Wignell drain and is influenced by the change in Lake Levels. The recorded average lake level is given as 174.15. The lake level fluctuates and for 2018 and 2019 had monthly averages as high as 174.7m, which is higher than average and influences the water surface profile through the Michener Drain.

- Watershed average fall (slope) is given as 0.22% or 2.2m per 1000m
- Drain average fall (slope) is given as 0.13% or 1.30m per 1000m

This slope characterises the Michener drain as low slope or slow watershed. The Michener drain can be segregated into a few distinct geographic areas.

- Outlet; this area starts at station 0+000 chainage marker and is the outlet to the Wignell drain. The outlet is influenced by the water surface elevation in the Wignell drain and is defined by significant vegetation growth for the drain's first 50m.
- From station 0+050 to 0+300 Drain reach to outlet. This portion of the drain lies below the golf course and is a ditch with defined banks that runs to the outlet. Bank full or top width is approximately 4m.
- From station 0+300 to 0+695 Golf course; this reach is heavily managed by the golf course. Includes, pumping to reverse flow to irrigation ponds, changed bridge to culvert, vegetation removal, etc.
- From station 0+695 to 1+728 main drain ends; largely agriculture on either side of the drain but with an identified regulated wetland to the West starting at 1+000 and the drain is vegetated with undergrowth between banks and either side. Above 1+400, the drain has agricultural fields on either side.

Portions of the drain have become overgrown, degrading the performance of the drain throughout the drainage area. Along with physical changes to the Drain needed for continued service have necessitated a new Engineer's report be prepared under Section 78 of the Drainage Act R.S.O. 1990 and that the City petition for new works on this drain under Section 4 of the Drainage Act R.S.O. 1990.

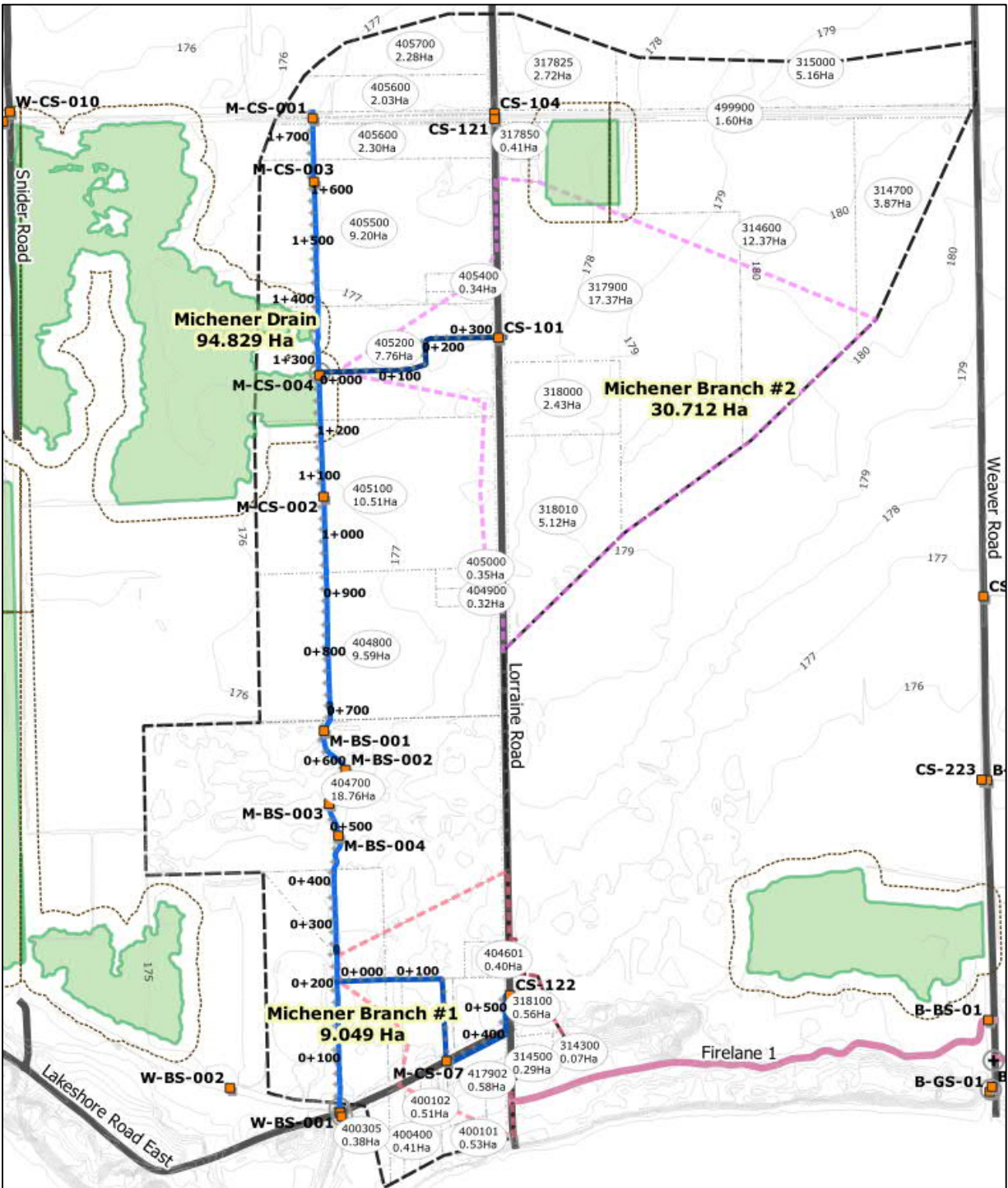


Figure 2 Michener Drain and Proposed Branches

A large format map is included in Appendix A that includes the Wetland boundaries and 30m buffer.

3 Design Considerations

The analysis of the Wignell Watershed is based on Hydrologic and Hydraulic analysis to predict runoff flow requirements and to match channel capacity. Water monitoring and gauge 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.

3.1 Watershed Characterization and Use

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

1. The upper portion of the drain land use is Agriculture with mainly row crops; soya, corn or cereal grains grown. The design service level for agricultural land is flooding with low velocities and drainage of ponding areas of 48 to 72 hours. Drainage is provided to improve working time and to avoid long term submergence leading to crop drowning.
2. Fringe or rural residential is the other major land use with estate lots with houses, buildings, wells and septic beds. Urban expectations of no ponding on residential lots in rural areas can not be met without extensive costs. Acceptable flooding without damage to property contents is the reasonable design service level similar to Agricultural service levels.
3. Whiskey Run Golf Course (WRGC) makes up a significant portion of the drainage area and the golf course operations affect the drain through irrigation and crossings. The WRGC has several permits to take water granted from the MOE that operate on the Wignell Drain but impact the Michener Drain. Past practice indicates the golf course conducted works on the Drain and may have impacted the identified sedimentation pond shown on the plans that were issued to introduce a sinusoidal pattern into the Drain, (Plan dated Nov. 15, 1996)
4. Michener Outlet. The primary design service level for the outlet is merely to have a positive slope to the Wignell Drain with clear and clean flow path to the outlet.

3.2 Former drain changes

The Michener Drain has been in use for a very long time. Over that time, changes have occurred and been abandoned. The description of these changes can be referenced in the Baseline Report.

4 Drain Works Recommendations

4.1 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 cumulative storm with a total rainfall amount of **68.90 mm** using a SCS Type II **24-hr** storm distribution.

The design storm is used to forecast a predicted runoff for identified catchments. Each channel section is designed to convey this runoff.

There are areas that owners have identified as wet and needing drainage. These problem areas are identified for service with underground based piping. Tile Polyethylene Pipe (PE Tile) is below an open channel, which will have conveyance for the design storms. The PE Tile does not meet these design storm criteria but provides post storm drainage in those problem areas. The design storm was based on the IDF curves for Port Colborne.

4.2 Description of the Works

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

4.2.1 Michener Drain Flow Improvement

The primary function of the proposed works for the Michener drain is maintenance of channel section and reduction of flow restrictions. This is for two key restoration efforts as follows:

Restoration works #1 is the removal of vegetation between top of bank to top of bank. This removal is targeted at tree and shrub growth that limits or could obstruct primary flow paths. Every effort to retain trees, not in the channel, and under story growth will be made to reduce environmental impacts of the maintenance work. A work zone is required for the channel improvements and this will be minimized but will remove trees and understory growth.

Restoration works #2 is to remove any deposition humps or deviations that are impeding flow. This does not include any changes to grades that were previously over excavated, past the calculated grade line, but does include channel bank

stabilization where slips or excessive erosion is evidenced during the restoration works #1. Channel restoration is done from one side with effort to reduce existing stable bank cover damage on the opposite side of the work zone.

Most of the proposed work for the Michener Drain is to re-establish the original drain capacity and function through the cutting of trees and vegetation that has grown up through the drain. The following figure illustrates a typical cross-section view of the work and work zone required to do the work.

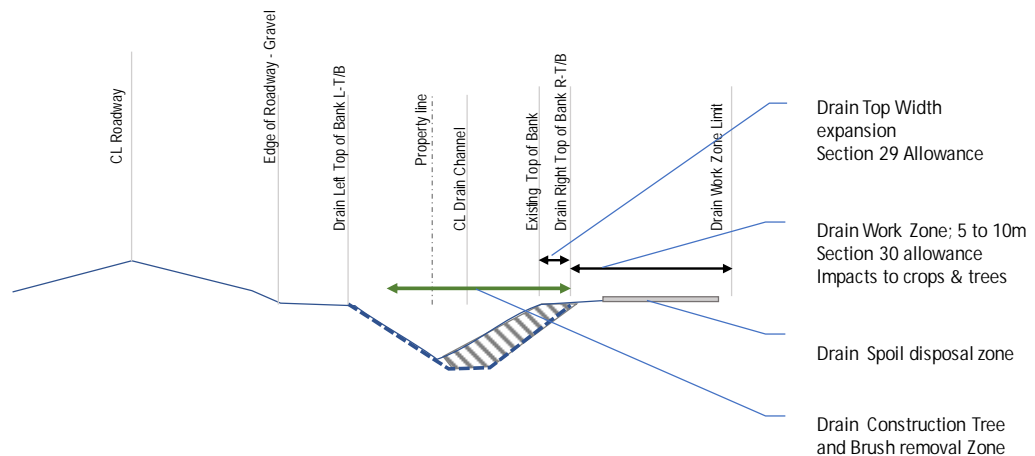


Figure 3 Typical Drain Work and Work Zones

With the main work program the original drain is cleaned down to the proposed grade line and a specific capacity is achieved through removal of soil to the design bottom width and one bank. It is beneficial to only disturb one bank and leave low vegetation in place. Trees through the drain top of bank (T/B) to top of bank (T/B) are removed leaving stump and roots in place if the removal negatively impacts the grade.

Living trees that are removed from the work zone are eligible for the canopy preservation program, replacement of 2 saplings for each removed tree with a DBH of 150mm or greater. Trees within the established banks, top of bank to top of bank, are not eligible unless for a new drain or a re-located drain.

4.2.2 Michener Branch Drains

There are two proposed branch drains identified on the design plans. Branch Drain #1 is an existing channel that flows water from East of Lorraine Rd. and South of Lakeshore Rd East that is clearly visible in the 1934 aerial photography of the area. This originally was an open channel that served an agricultural use, which has now converted to rural residential and golf lands.

Branch Drain #2 is an existing channel that provides outlet to lands East of Lorraine Rd. This channel has existed for a long time and is also visible in the

1934 aerial photo showing the existing pond midway between the outlet and Lorraine Rd. on a bend in the drain. Evergreen Trees outside the top of bank have been planted along the portion East of the pond and West of Lorraine Rd. The large mature trees are outside of the existing top of banks and will remain. One tree has toppled and the roots impact the channel definition, which is to be addressed by cleaning of this section of drain to re-establish the channel.

4.2.3 Municipal Crossings

The drain crossings, Private and Right of Way are shown in Figure 1. Lorraine Rd. presents a barrier to sheet overland flow and the road authority has established several road crossing culverts. These are not part of the drain as their flow is collected within the roadside or Right of Way and there after is conveyed to an outlet. There are three key municipal crossings.

- Lorraine Rd. Culvert CS-101 is an existing culvert currently outlets through a private drain, which the Road Authority has requested be made a Branch Drain (#2) to ensure a SOGR is achieved for the outlet.
- Lorraine Rd. Culvert CS-122 is an existing culvert that outlets flows from the East to Michener through an existing open channel. This is proposed as Michener Branch Drain #1
- Lakeshore Rd. East. Culvert M-CS-007 is an existing roadway culvert that has been the subject of conflict for drainage performance between north and south property owners. This culvert outlets to the open channel drain and is to be converted into a buried pipe to Michener Branch Drain #1.

The Friendship Trail, formerly CNR, is a significant barrier to overland flow and there is a major culvert crossing for flows to pass through the Trail into the Drain. The culvert crossing the Friendship Trail is identified as part of the Drain, while the channels to the North are considered part of the Friendship Trail ROW and not part of the drain.

4.2.4 Private Crossings

There are several private crossings identified on the Main Branch of the Drain as it bisects the agricultural lands. There are also four crossings identified through the golf course lands. The golf course crossings are predominately bridge decks with minimal piers and a replaced new CSP culvert that is undersized and to be replaced by double wall HDPE culvert sized for the design flow.

The farm immediately north of the Golf course has possessed a crossing that is identified as too narrow and fallen into disrepair. The farmer is or has established a fording located to the north property limits. This is to be replaced with a combination sediment basin and crossing located at the South limit of the farm north of the golf course.

4.2.5 Utility Conflicts & Coordination

Utility conflicts may exist with Gas lines and telecommunication lines as identified by the exchange of utility information. In particular, the placement of the proposed Ditch Inlets along Lorraine Rd. and Lakeshore Rd. East are to be field placed to minimize utility conflicts. Re-grading of the Roadside swales are to be positive to the Ditch Inlet.

4.2.6 Plans, Profiles & Specifications

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

Project Specifications are attached in Appendix B.

4.3 Construction and Constructability

The following describes the specific requirements for drain construction.

4.3.1 Vegetation Removal

Vegetation, specifically trees are to be cut down outside of any bird nesting periods. The remaining stumps are to remain in place unless they obstruct flow or they are Ash trees with re-growth from the lower trunk already established. In those cases, the stump will be ground down to match the existing channel section.

Tree removal within the Top of Bank to Top of Bank is to be 100 percent; however, tree removal within the work zone is at the discretion of the 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 as per the tree qualifying criteria.

Where a mature tree is already established and is an individual tree, it can remain on the work zone adjacent to the drain provided there is a working space to provide future maintenance to the drain.

Trees with a DBH greater than 150mm and alive, such trees will be replaced with 2 trees as saplings for future growth in lieu of a damage allowance for the existing tree that is removed. The tree that is removed will be provided to the owner as stacked branches adjacent to the drain and outside of the working zone along with the trunk. The owner shall be wholly responsible for the wood once cut.

New trees can be planted adjacent to a drain following two key criteria:

- The trees are planted back from the top of bank, (the exact distance is determined by tree type and local conditions).
- The trees are planted with adequate space to provide future maintenance access for the drain. Grouping of planted trees is encouraged given that the spacing of the trees and the arrangement permits future maintenance. This is accomplished by providing an angled approach along the tree edge line to the drain and increasing the tree plant density only as the distance from the drain increases.
- Individual hardwood trees may be allowed every 25m. Trees of any type shall not be planted within 6m of an existing drain (solid tile, wrap joints) or 4.5m from existing open drain.
- In certain circumstances where an owner owns property on both sides of the open drain, upon consultation with the Drainage Superintendent, a windbreak may be permitted on one side. On existing drains where windbreaks exist, costs due to trucking material will be the direct responsibility of the owner and not the upstream ratepayers.
- Replacement Trees will be selected from a list of available preferred species at the time of construction for owners eligible for replacements to select their preferred species. Species will be from the identified list of Carolinian species typical for the Region. Owners can select any location for the planting of replacement trees excepting within the work zone.

4.3.2 Spoil Material

Where specified, excavated spoil material shall be disposed of and levelled at a minimum of 2.5 m from the top of 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 shall be placed 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 cost of spoil trucked from the property shall be borne by the benefiting property owner.

Spoil shall be disposed of as noted in the description of the proposed work. Generally, the spoils will be disposed of adjacent to the drain unless otherwise specified. Should any property owner require that all or a portion of the spoil be trucked away from their property, the cost of trucking spoils shall be assessed 100% to the property owner requesting same and will not form part of the total cost of the drainage works. The cost of trucking away spoils from any future maintenance work will be assessed directly to the property owner requesting the same. Debris from vegetation removal will be disposed of in accordance with agreement of the property owner. Debris removal from the site is possible where the owner of the land agrees to pay for the removal.

With respect to the reaches of drain that are within travelled municipal road allowances, the spoil will be trucked away during both 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 existing 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 that is suitable for cultivation of 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 prior to construction.

4.3.3 Sediment Control Basins

The addition of sedimentation basins to the Michener Drain in two locations is done to assist with controlling sediment during maintenance and re-grading to the identified design grade line. Post – Construction these basins remain and continue to provide sedimentation control during precipitation events.

Sediment basins are to be constructed at the locations and to the specifications indicated on the attached drawings. The Contractor will maintain these sediment basins during construction, as directed by the Engineer and/or his designate. The basins are considered to be part of the Municipal Drain and will be maintained in future by the Municipality at the expense of all upstream land and roads owners herein assessed as shown on the attached assessment schedule. Properly maintained sediment basins reduce the incidents of drain maintenance clean out and therefore reduce overall maintenance costs for property owners. It is anticipated that basins will be inspected annually for an assessment of sediment depth and sediment removed where that depth exceeds half the constructed depth.

4.3.4 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 excavation of the existing and proposed channels, and the spoil should be seeded on the day of leveling. Seeding should take place in a manner that optimizes seed germination and establishment of vegetation prior to 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 rye grass	8 kg	20%
Birdsfoot trefoil	12 kg	30%
Total	40 kg/ha	100%

Through the golf course, the owner may choose an alternate re-seeding mix and/or restoration method at their preference and cost.

Where working zone adjacent to the drain is grass and this is affected by construction, this area shall be reseeded with a suitable grass mix to restore to a like or better condition.

4.3.5 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 standards connection designs. 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 sites of potential or evident erosion.
- Tile drain connections – use of PE pipe to connect to a receiving channel.
- Berm and Orifice Flow Control - connections designed to control runoff to specified rates of flow.

Private connections are owned and the landowner is responsible for their construction and maintenance. Where a deficiency is identified by the Drainage Superintendent or Engineer, the landowner is to make good the connection. The landowner can accept to have work done by the City on their behalf to make good the connection based on a 50/50 cost sharing basis. 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.

4.4 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 Michener Drain works prescribed in the Engineer's Report, the City of Port Colborne 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 C, and pro-rating the assessment based on the actual cost using the Outlet Liability Assessment – Section 23. Special Benefit or Special Assessment, Section 24 or Section 26, shall not apply to maintenance work except where maintenance works are related to culvert/bridge replacement or upgrades.

4.5 Summary of Construction

The following table provides a list of construction activities by property starting from the outlet and proceeding upstream.

Michener Drain

Property / Owner / Drain Side	From STA	To STA	Work Description	Access & Disposal
404301 570466 ONTARIO LTD West side	0+004	0+407.5	0+010 to 0+110, 100m of individual tree removal from T/B to T/B 0+260 to 0+268 Construct Sediment Basin - SD-03a) 0+268 to 0+407.5 Re-grade to Design Grade Line 0+000 to 0+215 BW = 1.0m SS=1.5 TW = 4.0m 0+215 to 0+400 BW = 0.8m SS=1.5 TW = 3.8m	Work zone is 10m on the West Side of the Drain. Tree Removal as required for access. Level spoil West Side of Drain
404700 WHISKEY RUN GOLF CLUB LTD Both Sides	0+407.5	0+695.3	0+428 to 0+695.3 sinusoidal channel BW=0.6m SS=1.5 TW=1.5m Preserve existing Bridge Decks through construction Replace existing 500mm CSP with 600mm HDPE	Work Zone is 10m. Side to be determined in cooperation with Golf course. Restore to pre-construction condition.
404800 SPITERI CHARLES Both Sides	0+695.3	0+947	0+705.8 to 0+715.8 Farm Crossing culvert 0+715.8 to 0+723.8 Construct Sediment Basin 0+723.8 to 0+947 Clear vegetation from T/B to T/B and as required in work zone. BW = 1.m SS =1.5m TW = 4m	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Restore to cultivated field condition. Allowance for damage.
405100 VALE CANADA LIMITED Both Sides	0+947	1+206	0+947 to 1+206 Clear vegetation from T/B to T/B and as required in work zone. BW = 1.m SS =1.5m TW = 4m	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Restore to cultivated field condition. Allowance for damage.
405200 VALE CANADA LIMITED Both Sides	1+206	1+399.5	1+206 to 1+280 Clear vegetation from T/B to T/B and as required in work zone. BW = 1.m SS =1.5m TW = 4m 1+280 to 1+286 Culvert to remain as is. 1+290 Branch #2 Confluence 1+290 to 1+399.5 BW=0.6m SS=1.5 TW=3.4m	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Restore to cultivated field condition. Allowance for damage.
405500 ADAMS KEVIN JAMES Both Sides	1+399.5	1+649	Clean and Re-grade to Design Grade Line 1+399.5 to 1+614 BW=0.6m SS=1.5 TW=3.4m 1+614 to 1+624 Replace existing culvert with 600mm HDPE with rip rap headwall.	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Allowance for damage.

Michener Drain

Property / Owner / Drain Side	From STA	To STA	Work Description	Access & Disposal
				Restore to cultivated field condition.
405600 PORT COLBORNE CITY Both Sides	1+649	1+170	Clean and Re-grade to Design Grade Line 1+649 to 1+170 BW=0.4m SS=1.5 TW=3.4m	Work zone is 10m on the East Side of the Drain. Level Spoil on East side. Restore to cultivated field condition. Allowance for damage.
ROW Friendship Trail	1+170	1+729	Existing Culvert to remain as is. Drain Ends north Side of Trail Crossing	Access to East work zone from Friendship Trail.

Michener Branch #1 Drain

Property / Owner / Drain Side	From STA	To STA	Work Description	Access & Disposal
404303 MASON MARTHA JEANNE Both Sides	0+000	0+085	Clean and re-grade to design grade line. BW = 0.4m SS = 1.5 TW = 1.5m	10m Work Zone is on the South Side Restore to pre-construction condition.
404700 WHISKEY RUN GOLF CLUB LTD North Side	0+085	0+217	Clean and re-grade to design grade line. BW = 0.4m SS = 1.5 TW = 1.5m	10m Work Zone is on the South Side – no impact
404400 LEON JOHN South Side	0+085	0+110	Clean and re-grade to design grade line. BW = 0.4m SS = 1.5 TW = 1.5m	10m Work Zone is on the South Side Restore to pre-construction condition.
404500 NICHOLLS LARRY JAMES South Side of Branch #1 with Branch #1 crossing from North to South.	0+110	0+302	67m Open Channel to be cleared of vegetation, cleaned to the design grade line. 0+177 Catchbasin (CB-01) with standard top grate; outlet to open channel with grate. Connect existing PE 150mm tile outlet to CB- 01 (from sump pump) 0+178 to 0+302 Branch #1 PE 200mm Tile with filter sock below open channel drain with side slope 3:1 and BTW = 0.6m.	10m Work Zone for Branch #1 for 67m South side. North South Branch #1 Tile and channel is 10m Work Zone on East Side. Restore all to pre- construction condition.

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Property / Owner / Drain Side	From STA	To STA	Work Description	Access & Disposal
Lakeshore Rd. East Right of Way	0+302	0+324.4	1 - CB-02 (OPSD 700.020) 0+128 & 0+145 200mm PE Tile crossing Lakeshore Rd. E and connect to CB-02 and CBDI-03 1 - CBDI-03 with OPSD 403.010 Existing culvert to remain as is.	Road Crossing to be backfilled with unshrinkable fill and restored to pre-construction condition with asphalt to City of Port Colborne Standards. Grade roadside swales to DICB.
400200 DOOLITTLE ROY W III From ROW - North Side	0+325	0+437	Buried 150mm PE Tile Drain on the ROW property line	City to grade roadside swale to CBDI-03 and CB-04. All work from Road allowance and restored to pre-construction condition.
Lakeshore Rd. East and Lorraine Rd. ROW.	0+437	0+437	1-CB-04 (OPSD 700.0.20) Catchbasin at SW corner of intersection. Top of grate set below edge of road.	City to grade roadside swale to CB-04.
Lakeshore Rd. East Right of Way.	0+437	0+458.6	Buried 150mm PE Tile Drain on the ROW property line. Backfill with U-shrink material under Road portion of ROW	City to restore road crossing.
404600 WINGER LLOYD JAMES JUNIOR From ROW - East side	0+458.36	0+505.5	DI-05 Ditch Inlet with precast concrete headwall and grate.	City to grade roadside swale from Culvert CS-122 to Ditch Inlet @ 0.20%
400101 LEON LOU ANN South Side	0+000	0+018	Branch #1 Buried 150mm PE Tile Drain on the ROW property line	Branch #1 Work Zone is from the ROW. City to grade roadside swale. Restore all to pre-construction condition.
400102 WEEBADUARACHCHIGE ASELA South Side	0+018	0+51	Branch #1 Buried 150mm PE Tile Drain on the ROW property line	Branch #1 Work Zone is from the ROW. City to grade roadside swale. Restore all to pre-construction condition.
400400 MATHESON GARY South Side	0+051	0+60	Branch #1 Buried 150mm PE Tile Drain on the ROW property line Drain Ends with PE cleanout.	Branch #1 Work Zone is from the ROW. City to grade roadside swale. Restore all to pre-construction condition.

Michener Branch #2 Drain

Property / Owner	From STA	To STA	Work Description	Access & Disposal
405200 VALE CANADA LIMITED Both Sides	0+000	0+337.2	0+000 to 0+126 Clear Vegetation and re-grade to Design Grade Line. BW = .4m SS = 1.5 TW = 2.95m 0+126 to 0+180 Pond to remain as is. 0+180 to 0+232 Clear Vegetation and re-grade to Design Grade Line 0+232 to 0+337.2 Spot Tree Removal As Directed.	0+000 to 0+180 North Side 10m Work Zone. Spoil spread adjacent to drain. 0+180 to 0+232 West Side 10m Work Zone. Spoil spread adjacent to drain. 0+232 to 0+337.2 South Side Work Zone. Restoration to cultivated field condition.
Lorraine Rd. Right of Way	0+337.2	0+357.2	Existing Culvert to remain as is. City of Port Colborne responsible for maintenance.	

5 Drainage Works Financing

5.1 Cost of Works

As required by the Drainage Act, Chapter D.17, Section 59(1), Council may call a meeting if the contract price exceeds 133 percent of the estimated construction costs.

5.1.1 Admin & Engineering Costs

At present there are no Administration costs identified with the Michener Drain.

There are three primary engineering costs related to these works for the Michener Drain. There are costs from three separate engineering companies working to prepare the report.

Wiebe Engineering was first hired to prepare the report. Wiebe was paid \$92,511.44 for work completed on the Wignell, Michener and Port Colborne Drains. A portion of this fee, allocated by area of the drain, is charged to the Michener Drain. (See Table 2 Drain Area Ratios)

Amec Foster Wheeler (formerly Amec and now Wood Plc) was appointed to conclude the report after Wiebe Engineering. They prepared a draft of the report, invoiced and were paid \$67,147.23 but they did not finalize the report and ceased to work on the project.

These costs have been allocated to the respective drains using a drain area ratio as per the following table.

Table 2 Drain Area Ratios

Drain	Area, Ha	Area Ratio
Michener Drain Area	135	12.02%
Port Colborne Drain Area	345	30.78%
Wignell Drain Area	641	57.20%
Total:	1121	

The result is a cost allocation to Michener for the portion of engineering fees for each of the two previous engineers.

The fees for EWA Engineering Inc. are recorded for the fees in the preparation of each individual report.

5.1.2 Capital Construction Cost

The estimated cost of construction is shown in the following table.

Table 3 Michener Estimated Cost of Construction

	Sub-Total Costs	Total Cost
Michener Branch Drain #1	\$30,271.50	
Michener Branch Drain #2	\$3,325.00	
Michener Drain	\$32,147.50	
Michener General Construction Costs	\$14,968.00	
Michener Contingency	\$13,148.80	
Estimated Cost of Construction		\$93,860.80

5.2 Maintenance & Program Costs

Included in the estimated cost of construction are allocations for costs related to drain maintenance works including vegetation removal and re-grading.

The Michener Main Branch is a section 78 maintenance project to clean and re-grade to the established design grade line shown on the profile drawing, M.P1. The grade line is based on the AMEC survey of what is already in place for the existing culverts. This work is to be assessed according to the construction schedule prepared and shown as Table 8 Michener Drain Assessment Schedule of Costs

The Michener Branch #1 is a Section 4 drain improvement project to provide sufficient outlet for the Lorraine Rd. and Lakeshore Rd. culverts. The Lakeshore Rd. culvert becomes part of the drain, while the Lorraine Rd. culvert remains a roadway culvert. An allowance is made to landowners for the value of the existing drain channels.

The Michener Branch #2 is a Section 4 drainage petition by road authority to provide sufficient outlet for the Lorraine Rd. culvert, which remains a roadway culvert. An allowance is made to the landowner for the value of the existing drain channel. The pond will become part of the drain but is to remain as is.

5.3 Principles of Assessment

The following are general and specific principles used to assess costs for the Michener Drain according to the Regulations formed under the Drainage Act using our understanding of the Act and seeking the most fair methods to share costs to landowners within the Michener 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 a drainage work if any portion of the property contributes a runoff flow directly or indirectly 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 point of collection to a discharge point, an Outlet.
5. The use of a property; farming, residential, or vacant does not define 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.

As an 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 capacity of the drain, this contribution is deemed to be 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 of this 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, 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 Michener Drain and the works being considered, a channel already exists and the proposed assessment is to recognize a service or benefit that already exists and is being confirmed to exist through an allowance under Section 31.

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

While efforts within the drain design and assessment have been made to address water quality as well as quantity, there are limits within the Drainage Act. The following assessment table is proposed for using those regulations within the Drainage Act to address drainage works.

Benefit (Section 22)

This Assessment is based on the creation of land value through the creation of a new or additional drainage system. The Michener Drain works consists primarily of maintenance; cleaning and clearing.

For this reason, there is not a Benefit Assessment proposed on the main branch of the Michener Drain. However, for the two Branch Drains, a Section 22 benefit does exist and is recognized.

Outlet Liability (Section 23)

This is the primary basis for the assessment of the maintenance and drain works. Assessment is based on each individual property's contributing runoff. This is determined from the area flowing to the drain and from the runoff factor C. The runoff factor C is the Rational Method for predicting peak runoff and does not predict volume of runoff (note special benefit used for Site Specific SWM facilities).

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 potential use in the present and in the future. The following Table of property codes will be used for the determination of C Factor values used in the Runoff Outlet Factor assessment.

PropCode	CATEGORY	DESCRIPTION	C-Factor Low	C-Factor High
100	LAND	Vacant residential land not on water	10	25
105	LAND	Vacant commercial land		
110	LAND	Vacant residential/recreational land on water		
200	FARM	Farm property without any buildings/structures	20	55
201	FARM	Farm with residence - with or without secondary structures; no farm outbuildings		
210	FARM	Farm without residence - with secondary structures; with farm outbuildings		
211	FARM	Farm with residence - with or without secondary structures; with farm outbuildings		
221	FARM	Farm with residence - with commercial/industrial operation		
228	FARM	Farm with gravel pit		
230	FARM	Intensive farm operation - without residence	20	50
231	FARM	Intensive farm operation - with residence	20	55
234	FARM	Large scale poultry operation	20	30
244	FARM	Managed forest property, residence not on water	20	55
260	FARM	Vacant residential/commercial/ industrial land owned by a non-farmer with a portion being farmed	20	55
261	FARM	Land owned by a non-farmer improved with a non-farm residence with a portion being farmed		
301	RESIDENTIAL	Single family detached (not on water)	15	40
302	RESIDENTIAL	More than one structure used for residential purposes with at least one of the structures occupied permanently		
303	RESIDENTIAL	Residence with a commercial unit		
313	RESIDENTIAL	Single family detached on water year round residence		
322	RESIDENTIAL	Semi-detached residence with both units under one ownership two residential homes sharing a common center wall.		
332	RESIDENTIAL	Typically a Duplex residential structure with two self-contained units.		
334	RESIDENTIAL	Residential property with four self-contained units		
383	RESIDENTIAL	Bed and breakfast establishment		
391	RESIDENTIAL	Seasonal/recreational dwelling - first tier on water		
392	RESIDENTIAL	Seasonal/recreational dwelling - second tier to water		
405	COMMERCIAL	Office use converted from house	20	65
410	COMMERCIAL	Retail - one storey, generally under 10,000 s.f.		
421	COMMERCIAL	Specialty automotive shop/auto repair/ collision service/car or truck wash		
441	COMMERCIAL	Tavern/public house/small hotel		
490	COMMERCIAL	Golf course	12	35
510	INDUSTRIAL	Heavy manufacturing (non-automotive)	45	85
518	INDUSTRIAL	Smelter/ore processing		
520	INDUSTRIAL	Standard industrial properties not specifically identified by other industrial Property Codes		
590	INDUSTRIAL	Water treatment/filtration/water towers/pumping station	*	*
593	INDUSTRIAL	Gravel pit, quarry, sand pit	*	*
597	INDUSTRIAL	Railway right-of-way	40	65
598	INDUSTRIAL	Railway buildings and lands described as assessable in the Assessment Act		
605	INSTITUTIONAL	School (elementary or secondary, including private)	35	50
702	SPECIAL PURPOSE	Cemetery	35	65

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PropCode	CATEGORY	DESCRIPTION	C-Factor Low	C-Factor High
710	SPECIAL PURPOSE	Recreational sport club - non commercial (excludes golf clubs and ski resorts)	35	85
715	SPECIAL PURPOSE	Racetrack - auto	45	85
735	SPECIAL PURPOSE	Assembly hall, community hall	30	85
	ROW	Single lane Municipal Roadway	75	95
	ROW	unopened road allowance	65	85
	ROW	Regional or MTO	90	98

* C factor values are situationally assigned based on land use.

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

In addition to assessed costs considered for special benefits, there is also recognition for stormwater management facilities within the watershed that reduce the peak flow used to determine the outlet assessment. These facilities that may already exist in the watershed and are recognized as having a benefit in the reduction of peak flow by determining the available volume is greater than the 24 hour peak flow volume predicted for the 1:100 year design storm.

- Site Specific Stormwater Management (SWM) Facilities
 - o Wetlands,
 - o Ponds, (natural and stormwater)
- Natural occurring features
 - o Kettle lakes, and
 - o 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.

Table 4 Section 23 Runoff Factor Determination - QRF Ratio

Area Ha	Soil Type	Gradient	Land Factor	Runoff Factor 'C'	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
2.176	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	17	2.41	0	0	2.41	0.1760
1.201	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	1.18	0	0	1.18	0.0857
1.084	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	ROW - paved 2 lane	85	6.01	0	0	6.01	0.4382
0.848	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.83	0	0	0.83	0.0605
0.729	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.71	0	0	0.71	0.0521
0.560	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.55	0	0	0.55	0.0400
0.517	NM - Sandy well drained	0.20%	LAND	12	0.41	0	0	0.41	0.0295

QRF is a predicted runoff factor based on the following variables:

- Area, Ha – each property’s connected area
- Runoff Factor ‘C’ – Coefficient of Runoff of generally accepted values
 - Soil Type – from Niagara Soil Report
 - Gradient – General Value from NPCA contours
 - Land Factor – reflects the impact of landuse on Runoff

$QRF = 0.0028 * \text{Runoff Factor 'C'} * \text{Avg Intensity mm/hr} * \text{Area, Ha}$

QRF-SWMF is the adjusted Runoff Factor used to represent the impact of owner implemented stormwater management facilities.

- SWM is the reduction achieved by the stormwater management facility as determined by the Drainage Engineer / Drainage Superintendent.
- SWMF is the reduction in QRF to be applied.
- $QRF-SWMF = QRF - SWMF$

QRF Ratio is QRF-SWMF divided by the Sum of all QRF-SWMF for each cost allocated area. The QRF Ratio is the value for each property contribution to the outlet liability cost as a portion of all other contributors.

QRF-SWMF and QRF Ratio is to be used for all future Maintenance assessments.

Special Benefit (Section 24)

The following are assessed costs considered special benefits:

- Culverts,
- Fording’s,
- Closed Conduit conveyance (piped flow).

The cost of a culvert is assessed against the property owner based on the incremental cost of the drain. So a new culvert is paid for by the owner less the cost of drain construction on a per metre basis. The drain per metre construction cost will be estimated for the report but the actual cost will be used to calculate the final value.

The proposed closed conduit to provide an outlet for the Lorraine Rd. culvert crossing is assessed in the same manner, as an increase in costs above what would be realized for an open channel in the same location.

Culverts construction costs are shared between the land owner and the rest of the watershed on a 50/50 split basis. Construction costs are based on the City’s typical design standard. Additional costs, headwalls, etc. are at the owners cost unless required by the Engineer to meet requirements.

Special Assessment (Section 26)

There are special assessments, as recognized under the 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.

An example is the Ditch Inlets proposed for construction on the Michener Branch Drain #1. Also in Michener Branch #1 is a \$2,000 cost to protect or possibly move the gas line when the 200mm Tile crosses Lakeshore Rd. E. This cost is assigned to the utility owner, Enbridge.

These costs are 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. Actual costs will be assigned to the project as this is merely an estimate of costs during design.

5.3.1 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.
5. Any tree or feature placed within a drainage works right of access for maintenance is not eligible for compensation in any form. Trees within the work zone are eligible for the 2 for 1 tree replacement program.

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 or a Branch Drain 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. In the case of a close conduit the work zone can be reduced to a 5m zone or a 10m zone with 5m on each side. 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 10 year cycle for maintenance a 1/10 factor is to be applied using the land purchase value.

Where a buffer is established that restricts use of the land adjacent to the drain in favour of permanent vegetation, then a full payment for land taken based on the value established is made. For a buffer, a registered easement on title is recommended.

Section 30 Allowance

(Payment for damages during construction)

This allowance is to compensate landowners for economic damages due to construction and recognizes two types of injury. Immediate loss of crop as a result of working corridor for construction and longer term damage to crops as a result of spoil spreading.

For the Michener Drain, we will award an allowance where work on the drain, such as maintenance, damages crops which can not be restored. Compensation in the form of an allowance does not apply to grass or any other ornamental feature that is restored to similar condition as existed pre-construction. Compensation is paid for the work zone width multiplied by the length affected at the rate of \$4,300 per Hectare.

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

A damage allowance for fences can be paid where the fence is not restored. In any of the planned work for the Michener Drain, fences are to be restored to a like or better condition and no allowance for payment is planned.

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.

This can be applied to the following:

- Michener Branch Drain #1 (portions) includes the open channel portion and the inclusion of the PE tile drain in the channel bottom.
- Michener Branch Drain #2.

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 affect 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.

There are no occurrences of this within the Michener Drain.

Section 33 Allowance
(Loss of Access)

Where a re-aligned Drain crosses property and cuts off access, an allowance can be granted. There are no known such occurrences.

5.3.2 General Instructions to Property Owners, Road Authorities and Public Utilities

The principles of the Drainage Act are:

- Drainage is a collective good that benefits all landowners. However, drainage doesn't have to benefit all landowners equally.
- All landowners cooperatively fund the drainage works proposed. There is no direct financial government role in the drainage works other than administrative.
- Landowners are assessed a financial share of the cost for the drainage works based on their respective drainage benefit.
- All drainage costs are born by landowners including allowances.
- Drainage is provided on the basis of an identified service level for a specified size of storm. The standard storm, 1 in 2 year frequency, for basic open channel design is 49.8mm over 24 hours. For a closed conduit design storm, the rational method is used for a peak capacity determined for a 121.1mm storm over 24 hours. A storm of a larger size or intensity

may cause flooding. Tile placed in the bottom of an open channel is provided for drainage and not conveyance.

For more details, refer to the Wignell Watershed Hydrology and Hydraulics Report.

A best effort has been made to compose a fair and reasonable assessment of costs to each portion of the contributing lands.

5.3.3 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 in Appendix C indicates lands 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 or in combination with the Managed Forest Tax Incentive Program or the Conservation Land Tax Incentive Program for the lands to be drained by the Michener Drain.

For additional information on the Agricultural Drainage Infrastructure Program refer to the OMAFRA website at www.omafra.gov.on.ca.

5.4 Michener Drain Maintenance

From the Michener Outlet to the upstream limit of the drain at the Friendship Trail, basic drain maintenance is required. There is spot vegetation removal at the outlet to ensure a clear and free flowing discharge at the outlet but no re-grading is planned.

From 0+100 to 1+716, the existing grade needs to be checked and confirmed for matching the design grade and any high points removed. There are likely to be low points, which will remain. Vegetation removal is planned from 0+700 to 1+700. Work through the golf course is expected to be coordinated with the owner to reduce impact to the course.

Added to the cost of maintenance is the full engineering and administration costs less any costs directly assigned to specific Section 22, Section 24 benefit assessments.

With the Runoff Ratio, there is a Stormwater Management Facility reduction in Section 23 that can be applied for those properties that can demonstrate a runoff amendment structure that reduces peak flow contributions to the drain subject to evaluation and confirmation by the Drainage Superintendent and the Engineer.

For the purposes of the submission of the report, no SWMF assessments are recognized and the individual property owners can make a request for assessment and this will be recognized by the Engineer on project completion.

5.4.1 New Drain Crossings

The original bridge surveyed by AMEC on the golf course property was later changed to a 500mm CSP at some point and is to be replaced with a properly sized culvert at the landowner's expense.

A new farm access crossing is identified at 0+710 and is a combination crossing and sediment basin. The cost of the crossing is 50% owner and 50% outlet benefit. The sediment basin is a cost shared among upstream landowners.

The existing crossing located at 1+615 is to be re-constructed on grade to ensure clear and free flowing inlet and outlet. The re-constructing of a new culvert is to be 50% owner and 50% outlet benefit.

5.4.2 Sediment Basins

The original sediment basin constructed south of the golf course is no longer visible as being an intact drainage structure. It will be reconstructed as part of the Drain Maintenance works in the location shown on the plans and as per the proposed Sediment Basin Standard drawings (M.GD-10).

The sediment basin associated with the crossing structure located at 0+710 is to be a modified version of the M.GD-10.

The cost of constructing sediment basins are shared among upstream landowners through a Section 23 assessment. However, the sediment basin on the golf course property was shown to exist in the Wiebe Drawing from November 15, 1996 and the reconstruction is 100% allocated to the Whiskey Run Golf Course as a Section 24 Special Benefit.

5.5 Allowance and Assessment Schedules

The Assessments calculations in Tables are included in Appendix C. The following sections provide a summary reporting of those calculations.

5.5.1 Drain Allowances

5.5.1.1 Michener Drain

The improvement of the Michener Drain using Section 78 is to perform drain maintenance using an updated schedule and to achieve enhanced stormwater management functions.

The channel will require an allowance under Section 29 for land taken as well as a work zone allowance for future access. The original land required for the drain is recognized by previous report and an assumed work zone of 5m. An additional 5m of work zone to a total of 10m is achieved through a Section 29 allowance based on purchase price of agricultural land as per the Schedule of Costs times the 1/10 ratio.

A section 30 allowance is recognized for the damage to crops during construction and is paid at the rate of \$4,300 per hectare applied to the 10m work zone.

No other allowances are recognized for the maintenance of this existing drain.

Table 5 Michener Allowances

Drain	Section 29	Section 30	Section 31	Section 32	Section 33
Michener	\$2,107.81	\$1,253.69	\$0.00	\$0.00	\$0.00
Sub-Total of Allowances:					\$3,361.50

Additional to these costs will be Administration and Engineering Costs related to the design.

5.5.1.2 Michener Branch Drain #1

As the drainage channel has existed and been providing drainage service since before 1934 when it is clearly visible in the aerial photograph, recognizing the channel with formal status under the drainage act ensures that future maintenance can be performed to ensure adequate outlet is realized for the upstream areas.

This existing channel should have been recognized in previous drain reports but may not have been established under the drainage act if deemed a private drain not crossing multiple properties. Since that time, several small properties have segregated the original property and recognition of the channel as a municipal drain under the Act is requested by the City of Port Colborne to recognize sufficient outlet for road drainage across properties. The branch drain is an addition to the existing drainage recognized through Section 4 of the Act as requested by the road authority for sufficient outlet.

The previous channel will require an allowance under Section 29 for land taken as well as a work zone allowance for future access. Additional allowance for the original cost of construction is also identified by the Act under Section 31, which is being awarded to current property owners when originally incurred by the agricultural property owner.

Table 6 Michener Branch #1 Allowances

Drain	Section 29	Section 30	Section 31	Section 32	Section 33
Michener Branch #1	\$3,510.25	\$0	\$2,393.	\$0	\$0
Sub-Total of Allowances:					\$ 5,903.25

Additional to these costs will be Administration and Engineering Costs related to the design.

5.5.1.3 Michener Branch Drain #2

Existing channel services as an outlet for upstream area East of the Lorraine Rd. with a cross culvert identified as CS-101

Pond to remain as is without additional work or cleaning. Lower reach of the drain to be cleared of vegetation between banks and as required or needed to clear and clean to the design grade.

Allowance calculated for land taken and for the original cost of construction, valued today.

Table 7 Michener Branch #2 Allowances

Drain	Section 29	Section 30	Section 31	Section 32	Section 33
Michener Branch #2	\$2,513.80	\$1,621.10	\$3,770.00	\$0	\$0
Sub-Total of Allowances:					\$7,904.90

Maintenance works for channel restoration are assessed across upstream landowners on a runoff factor basis, see Section 23.

No Section 30 allowance for damages to existing crops is anticipated for the work proposed.

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5.5.2 Michener Drain Assessment Tables

The planned construction works for Michener and Branch Drains have been calculated and assessed as shown in the following 3 tables.

Table 8 Michener Drain Assessment Schedule of Costs

Michener Drain Assessment of Costs				Schedule Assessed Costs				Total Allowance	Net
				Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Total Assessment		
Owner	Legal Text	Roll No	Area						
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.07	\$0.00	\$67.30	\$0.00	\$67.30	\$0.00	\$67.30
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.29	\$0.00	\$273.17	\$0.00	\$273.17	\$0.00	\$273.17
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	12.37	\$0.00	\$11,703.24	\$0.00	\$11,703.24	\$0.00	\$11,703.24
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	3.87	\$0.00	\$3,664.77	\$0.00	\$3,664.77	\$0.00	\$3,664.77
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	5.16	\$0.00	\$5,156.99	\$0.00	\$5,156.99	\$0.00	\$5,156.99
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	2.72	\$0.00	\$2,719.58	\$0.00	\$2,719.58	\$0.00	\$2,719.58
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	0.41	\$0.00	\$405.81	\$0.00	\$405.81	\$0.00	\$405.81
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	17.37	\$0.00	\$16,431.47	\$0.00	\$16,431.47	\$0.00	\$16,431.47
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.43	\$0.00	\$1,971.61	\$0.00	\$1,971.61	\$0.00	\$1,971.61
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.12	\$0.00	\$3,874.95	\$0.00	\$3,874.95	\$0.00	\$3,874.95
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.56	\$0.00	\$423.89	\$0.00	\$423.89	\$0.00	\$423.89
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.36	\$0.00	\$270.29	\$0.00	\$270.29	\$0.00	\$270.29
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.53	\$0.00	\$402.79	\$0.00	\$402.79	\$0.00	\$402.79

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Michener Drain Assessment of Costs				Schedule Assessed Costs				Total Allowance	Net
				Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Total Assessment		
Owner	Legal Text	Roll No	Area						
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.51	\$0.00	\$443.04	\$0.00	\$443.04	\$0.00	\$443.04
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.36	\$0.00	\$270.07	\$0.00	\$270.07	\$0.00	\$270.07
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.38	\$0.00	\$672.86	\$0.00	\$672.86	\$0.00	\$672.86
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRTS 2 & 3	271104000400305	0.38	\$0.00	\$670.47	\$0.00	\$670.47	\$0.00	\$670.47
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.41	\$0.00	\$502.43	\$0.00	\$502.43	\$0.00	\$502.43
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	0.00	\$0.00	\$0.41	\$0.00	\$0.41	\$0.00	\$0.41
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	4.79	\$0.00	\$5,822.18	\$0.00	\$5,822.18	\$0.00	\$5,822.18
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	3.07	\$0.00	\$3,730.03	\$0.00	\$3,730.03	\$0.00	\$3,730.03
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.44	\$0.00	\$477.52	\$0.00	\$477.52	\$0.00	\$477.52
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.22	\$0.00	\$1,154.45	\$0.00	\$1,154.45	\$0.00	\$1,154.45
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.85	\$0.00	\$801.78	\$0.00	\$801.78	\$0.00	\$801.78
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.40	\$0.00	\$492.23	\$0.00	\$492.23	\$0.00	\$492.23
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	18.76	\$0.00	\$18,766.31	\$4,110.00	\$22,876.31	\$0.00	\$22,876.31
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	9.59	\$0.00	\$11,660.28	\$1,250.00	\$12,910.28	\$0.00	\$12,910.28
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	0.32	\$0.00	\$384.13	\$0.00	\$384.13	\$0.00	\$384.13
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.35	\$0.00	\$422.55	\$0.00	\$422.55	\$0.00	\$422.55
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	10.51	\$0.00	\$12,788.68	\$0.00	\$12,788.68	\$0.00	\$12,788.68
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	7.76	\$0.00	\$7,756.27	\$0.00	\$7,756.27	\$0.00	\$7,756.27

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Michener Drain Assessment of Costs				Schedule Assessed Costs				Total Allowance	Net
				Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Total Assessment		
Owner	Legal Text	Roll No	Area						
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.24	\$0.00	\$236.25	\$0.00	\$236.25	\$0.00	\$236.25
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.34	\$0.00	\$340.10	\$0.00	\$340.10	\$0.00	\$340.10
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	9.20	\$0.00	\$9,205.38	\$750.00	\$9,955.38	\$0.00	\$9,955.38
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.30	\$0.00	\$2,299.86	\$0.00	\$2,299.86	\$0.00	\$2,299.86
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.03	\$0.00	\$2,026.41	\$0.00	\$2,026.41	\$0.00	\$2,026.41
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	2.28	\$0.00	\$2,285.09	\$0.00	\$2,285.09	\$0.00	\$2,285.09
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.58	\$0.00	\$580.43	\$0.00	\$580.43	\$0.00	\$580.43
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	1.60	\$0.00	\$1,599.13	\$0.00	\$1,599.13	\$0.00	\$1,599.13
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	0.69	\$0.00	\$688.34	\$0.00	\$688.34	\$0.00	\$688.34
City of Port Colborne	Lorraine Rd. from Lake edge to Killaly St. East	Lorraine ROW	3.25	\$0.00	\$7,290.84	\$0.00	\$7,290.84	\$0.00	\$7,290.84
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW	0.56	\$0.00	\$1,277.26	\$0.00	\$1,277.26	\$0.00	\$1,277.26
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW	0.12	\$0.00	\$310.71	\$0.00	\$310.71	\$0.00	\$310.71
				\$0.00	\$142,321.33	\$6,110.00	\$148,431.33	\$0.00	\$148,431.33

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Table 9 Michener Branch #1 Assessment Schedule of Costs

Michener Branch #1				Assessed Costs				Total Allowance	Net
Owner	Legal Text	Roll No	Area	Benefit Section 22	Outlet Liability Section 23	Special Assessment Section 26	Total Assessment		
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	2.176	\$237.50	\$6,096.20	\$0.00	\$6,333.70	\$1,077.23	\$5,256.47
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.201	\$975.00	\$2,691.00	\$0.00	\$3,666.00	\$2,842.74	\$823.26
CofPC	Lakeshore Rd. East ROW	ROW	0.556	\$535.00	\$5,294.96	\$6,590.43	\$12,420.38	\$0.00	\$12,420.38
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	\$430.50	\$1,424.32	\$0.00	\$1,854.82	\$0.00	\$1,854.82
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	0.729	\$200.00	\$1,634.46	\$0.00	\$1,834.46	\$1,590.74	\$243.73
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	\$0.00	\$1,255.02	\$0.00	\$1,255.02	\$0.00	\$1,255.02
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.517	\$0.00	\$695.64	\$0.00	\$695.64	\$0.00	\$695.64
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	\$45.00	\$680.10	\$0.00	\$725.10	\$0.00	\$725.10
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	\$280.00	\$479.76	\$0.00	\$759.76	\$0.00	\$759.76
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.295	\$0.00	\$660.60	\$0.00	\$660.60	\$0.00	\$660.60
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	\$0.00	\$647.01	\$0.00	\$647.01	\$0.00	\$647.01
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.205	\$70.00	\$459.96	\$0.00	\$529.96	\$392.54	\$137.42
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.134	\$82.50	\$300.46	\$0.00	\$382.96	\$0.00	\$382.96
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.122	\$37.50	\$272.75	\$0.00	\$310.25	\$0.00	\$310.25
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	\$150.00	\$159.39	\$0.00	\$309.39	\$0.00	\$309.39
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.042	\$22.50	\$94.24	\$0.00	\$116.74	\$0.00	\$116.74

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Michener Branch #1				Assessed Costs				Total Allowance	Net
Owner	Legal Text	Roll No	Area	Benefit Section 22	Outlet Liability Section 23	Special Assessment Section 26	Total Assessment		
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	0.012	\$0.00	\$33.13	\$0.00	\$33.13	\$0.00	\$33.13
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.000	\$0.00	\$0.75	\$0.00	\$0.75	\$0.00	\$0.75
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	0.689	\$607.50	\$6,947.53	\$0.00	\$7,555.03	\$0.00	\$7,555.03
Enbridge						\$2,000.00	\$2,000.00		\$2,000.00
				\$3,065.50	\$22,879.76	\$8,590.43	\$42,090.71	\$5,903.25	\$36,187.46

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Table 10 Michener Branch #2 Assessment Schedule of Costs

Owner	Legal Text	Roll No	Area	Benefit Section 22	Outlet Liability Section 23	Total Assessment	Total Allowance	Net
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.108	\$0.00	\$2,278.34	\$2,278.34	\$0.00	\$2,278.34
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	3.545	\$0.00	\$3,255.29	\$3,255.29	\$0.00	\$3,255.29
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	2.799	\$845.00	\$2,570.32	\$3,415.32	\$7,904.90	-\$4,489.58
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	\$0.00	\$2,870.63	\$2,870.63	\$0.00	\$2,870.63
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	14.499	\$0.00	\$11,411.96	\$11,411.96	\$0.00	\$11,411.96
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	1.380	\$4,000.00	\$3,257.92	\$7,257.92	\$0.00	\$7,257.92
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	0.554	\$0.00	\$407.12	\$407.12	\$0.00	\$407.12
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.154	\$0.00	\$181.95	\$181.95	\$0.00	\$181.95
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.096	\$0.00	\$113.61	\$113.61	\$0.00	\$113.61
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	0.075	\$0.00	\$59.15	\$59.15	\$0.00	\$59.15
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.058	\$0.00	\$42.93	\$42.93	\$0.00	\$42.93
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	0.012	\$0.00	\$14.26	\$14.26	\$0.00	\$14.26
				\$4,845.00	\$26,463.48	\$31,308.48	\$7,904.90	\$23,403.58

5.5.3 Michener Drain Maintenance Schedules

The following are maintenance schedules for use with future maintenance work conducted in each of the Drain catchments.

5.5.3.1 Michener Drain Maintenance Schedule

The following is the Maintenance Assessment table for assigning future maintenance costs using Section 23, refer to Appendix C for the calculations.

Table 11 Michener Drain Maintenance Assessment Schedule

Owner	Legal Text	Roll No	Area Ha	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	0.16	0	0	0.16	0.0005
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	0.66	0	0	0.66	0.0019
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	12.371	28.25	0	0	28.25	0.0822
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	3.874	8.85	0	0	8.85	0.0257
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	5.156	12.45	0	0	12.45	0.0362
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	2.719	6.56	0	0	6.56	0.0191
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	0.406	0.98	0	0	0.98	0.0029
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	17.369	39.66	0	0	39.66	0.1155
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	4.76	0	0	4.76	0.0139
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.120	9.35	0	0	9.35	0.0272
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	1.02	0	0	1.02	0.0030
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.357	0.65	0	0	0.65	0.0019
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.532	0.97	0	0	0.97	0.0028
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.512	1.07	0	0	1.07	0.0031
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	0.65	0	0	0.65	0.0019
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.383	1.62	0	0	1.62	0.0047
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRS 2 & 3	271104000400305	0.382	1.62	0	0	1.62	0.0047
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.413	1.21	0	0	1.21	0.0035
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	0.000	0.00	0	0	0.00	0.0000
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	4.787	14.05	0	0	14.05	0.0409
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	3.067	9.00	0	0	9.00	0.0262
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.442	1.15	0	0	1.15	0.0034
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.220	2.79	0	0	2.79	0.0081
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	1.94	0	0	1.94	0.0056
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	1.19	0	0	1.19	0.0035
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	18.764	45.30	0	0	45.30	0.1319
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	9.586	28.14	0	0	28.14	0.0819

City of Port Colborne
Michener Drain Report

Owner	Legal Text	Roll No	Area Ha	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	0.316	0.93	0	0	0.93	0.0027
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.347	1.02	0	0	1.02	0.0030
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	10.514	30.87	0	0	30.87	0.0899
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	7.756	18.72	0	0	18.72	0.0545
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.236	0.57	0	0	0.57	0.0017
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.340	0.82	0	0	0.82	0.0024
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	9.204	22.22	0	0	22.22	0.0647
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.300	5.55	0	0	5.55	0.0162
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.026	4.89	0	0	4.89	0.0142
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	2.285	5.52	0	0	5.52	0.0161
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.580	1.40	0	0	1.40	0.0041
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	1.599	3.86	0	0	3.86	0.0112
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	0.688	1.66	0	0	1.66	0.0048
City of Port Colborne	Lorraine Rd. from Lake edge to Killaly St. East	Lorraine ROW	3.250	17.60	0	0	17.60	0.0512
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW	0.563	3.08	0	0	3.08	0.0090
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW	0.121	0.75	0	0	0.75	0.0022
			134.55				343.51	1.0000

5.5.3.2 Michener Branch Drain #1 Maintenance Schedule

The following is the Maintenance Assessment table for assigning future maintenance costs using Section 23, refer to Appendix C for the calculations.

Table 12 Michener Branch Drain #1 Maintenance Schedule

Owner	Legal Text	Roll No	Area Ha	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP:59R8112 PAR	271104000404700	2.176	3.55	0	0	3.55	0.2044
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.201	1.57	0	0	1.57	0.0902
City of Port Colborne	Lakeshore Rd. East ROW	ROW	0.556	3.08	0	0	3.08	0.1775
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	0.83	0	0	0.83	0.0478
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	0.729	0.95	0	0	0.95	0.0548
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	0.73	0	0	0.73	0.0421
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.517	0.41	0	0	0.41	0.0233
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	0.40	0	0	0.40	0.0228
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	0.28	0	0	0.28	0.0161
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.295	0.38	0	0	0.38	0.0221
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	0.38	0	0	0.38	0.0217
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.205	0.27	0	0	0.27	0.0154
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.134	0.17	0	0	0.17	0.0101
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.122	0.16	0	0	0.16	0.0091
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	0.09	0	0	0.09	0.0053
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.042	0.05	0	0	0.05	0.0032
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	0.012	0.02	0	0	0.02	0.0011
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.000	0.00	0	0	0.00	0.0000
City of Port Colborne	ROW	Lorraine Rd. ROW	0.689	4.05	0	0	4.05	0.2329
			9.208	17.37	0.00	0.00	17.37	1.00

5.5.3.3 Michener Branch Drain #2 Maintenance Schedule

The following is the Maintenance Assessment table for assigning future maintenance costs using Section 23, refer to Appendix C for the calculations.

Table 13 Michener Branch Drain #2 Maintenance Schedule

Owner	Legal Text	Roll No	Area Ha	QRF	SWM	SWMF	QRF-SWMF	QRF Ratio
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.108	5.67	0	0	5.67	0.0885
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	3.545	8.09	0	0	8.09	0.1264
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	2.799	8.22	0	0	8.22	0.1283
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	3.17	0	0	3.17	0.0495
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	14.499	28.38	0	0	28.38	0.4431
CofPC	ROW	Lorraine ROW	1.380	8.10	0	0	8.10	0.1265
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	0.554	1.01	0	0	1.01	0.0158
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.154	0.25	0	0	0.25	0.0039
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.096	0.16	0	0	0.16	0.0025
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	0.075	0.15	0	0	0.15	0.0023
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.058	0.11	0	0	0.11	0.0017
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	0.012	0.04	0	0	0.04	0.0006
City of Port Colborne	ROW	Weaver Rd. ROW	0.121	0.71	0.00	0.00	0.71	0.01
			30.833	64.05	0.00	0.00	64.05	1.00

6 Michener Drain Report Conclusions

This report has identified a series of drain improvements that include drain maintenance to ensure suitable channel design flows are achieved. The drain improvements have been developed through plan and profile drawings.

The following are summary descriptions of the planned improvements:

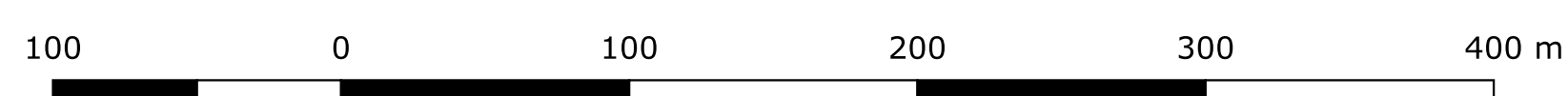
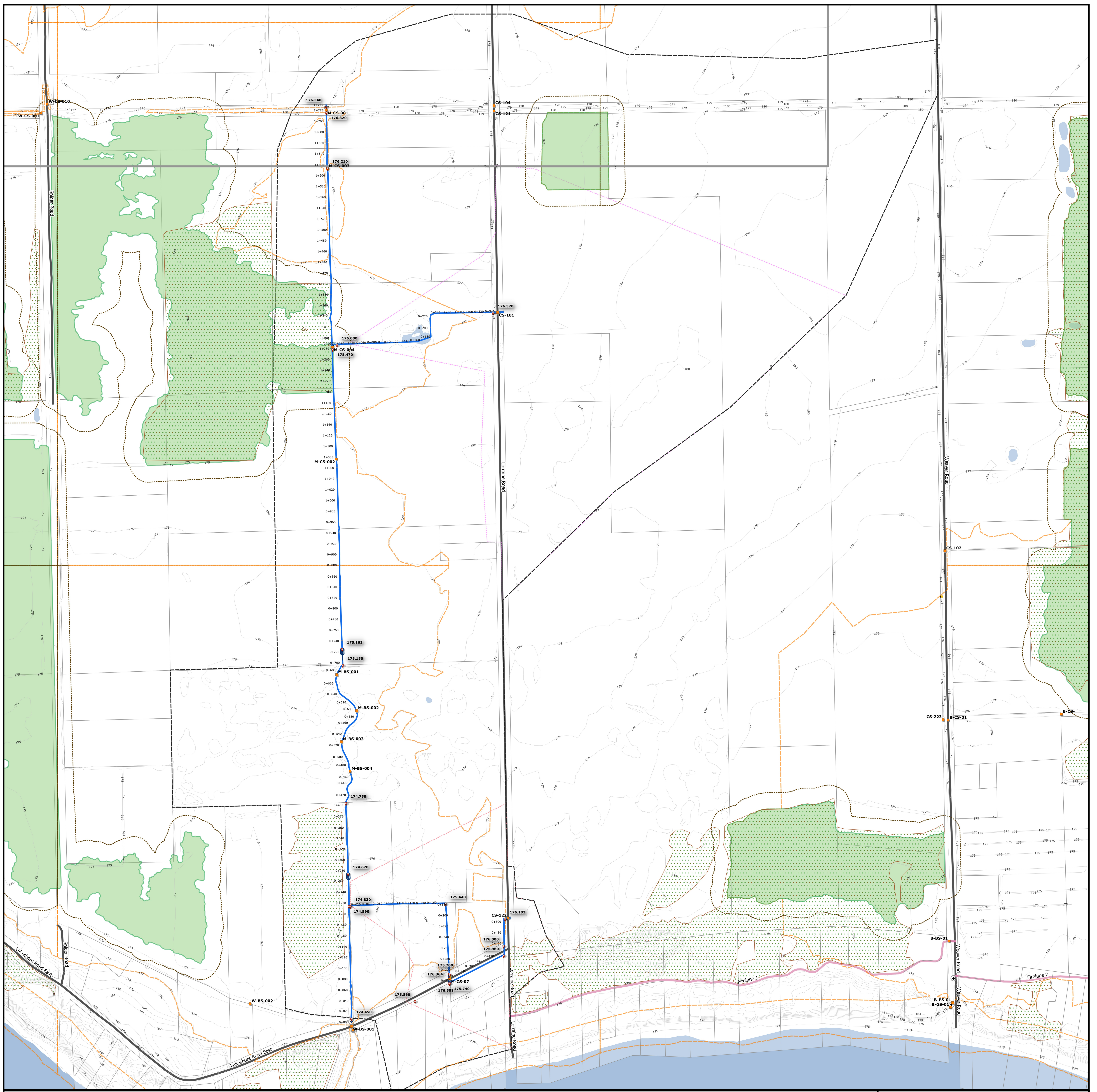
1. Spot Vegetation removal and basic maintenance at the outlet.
2. A specific program of improvement for the Michener Drain involving vegetation removal and re-grading to design grade line from 0+700 to 1+728.
3. An original private drain is to be converted to Michener Branch Drain #1 supplementing the existing roadway culvert on Lakeshore Rd. East and providing a suitable outlet for the culvert crossing Lorraine Rd. for the Section 4 petition by Road Authority. The cost of the bottom tile in channel swale and other improvements are shared with the City of Port Colborne, and the local benefitting landowners. The cost sharing is on a per metre basis for landowners and on the basis of area runoff as calculated. The Ditch Inlets and tile roadway crossing costs are 100% assigned to the City. An allowance is set aside for the possible construction impacts related to the gas line on Lakeshore Rd. E and such costs will be borne by the gas utility owner.
4. Inclusion of an original private drain as part of the Municipal Drain identified as Michener Branch Drain #2. This drain ensures the Lorraine Rd. Culvert CS-101 has a suitable outlet on the basis of a Section 4 Road Authority petition. Clearing and re-grading to design grade is planned west of the existing pond. Upstream of the pond minimal works is proposed except spot clearing of fallen trees impacting the newly identified Branch drain. No change is planned to the existing pond.

Construction of these works is to be recognized as a Section 29 allowance for land access, which has been assumed to already be in place for the main branch of the Michener for top width and a 5m allowance and is introduced for Branch #1 and Branch #2. Damages for construction, Section 30 allowances, are implemented for economic harm for crop damage from construction work impacts for farming properties only. All other construction impacts are to be restored to an equal or better condition.

Assessment is based on a shared benefit for the increased construction costs for the underground pipe works on Michener Branch #1 and allocated as a Section 22 adjacent benefit. Assessment for works related to Michener Branch #2 is Section 23 outlet benefit/liability. Assessment for the Michener Main Drain is based on Section 23 with special benefit assessed for new culvert works. The proposed new sediment basin is a Section 23 outlet liability benefit along with the overall construction costs.

This report and the proposed improvements are based on instructions from the City of Port Colborne and the local landowners. The cost of these improvements are shared across all areas that drain into the Drain by way of allowances and assessments consistent with the Drainage Act of Ontario.

**Appendix A:
Plans, Profiles**



Map Scale 1:2500

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> MapBook_index2500 M_designpnt crossings | <ul style="list-style-type: none"> michener_branches entities 0-michener drain #1 0-michener drain #1 text 0-michener drain #2 0-michener drain #2 text 0-michener drain main 0-michener drain main text michener_sediment basin entities | <ul style="list-style-type: none"> Contours ECA_Sig_Woodlands GR_WetlandAllowance_NPCA GR_RegulatedWetlands_NPCA GR_RegulationAreaLimit_NPCA Mich_catch DrainC Michener Drain Michener Branch #2 | <ul style="list-style-type: none"> Michener Branch #1 rowculv ALL_ASSESSMENT_PARCELS All_Drain_Parcel_Roads MUN PRIV IntegratedWaterbody |
|---|---|---|---|

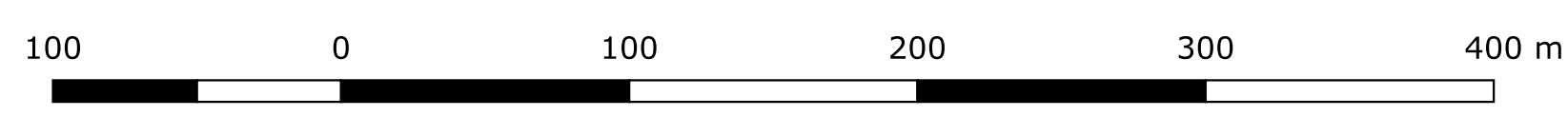
M.EP

Michener Drain

Environmental Plan

EWA Engineering Inc.
 84 Fair Street, Toronto, Ontario
 L4R 3J7
 416-460-2824
 www.ewaeng.com

Printed on: 2020-01-30



Map Scale 1:2500

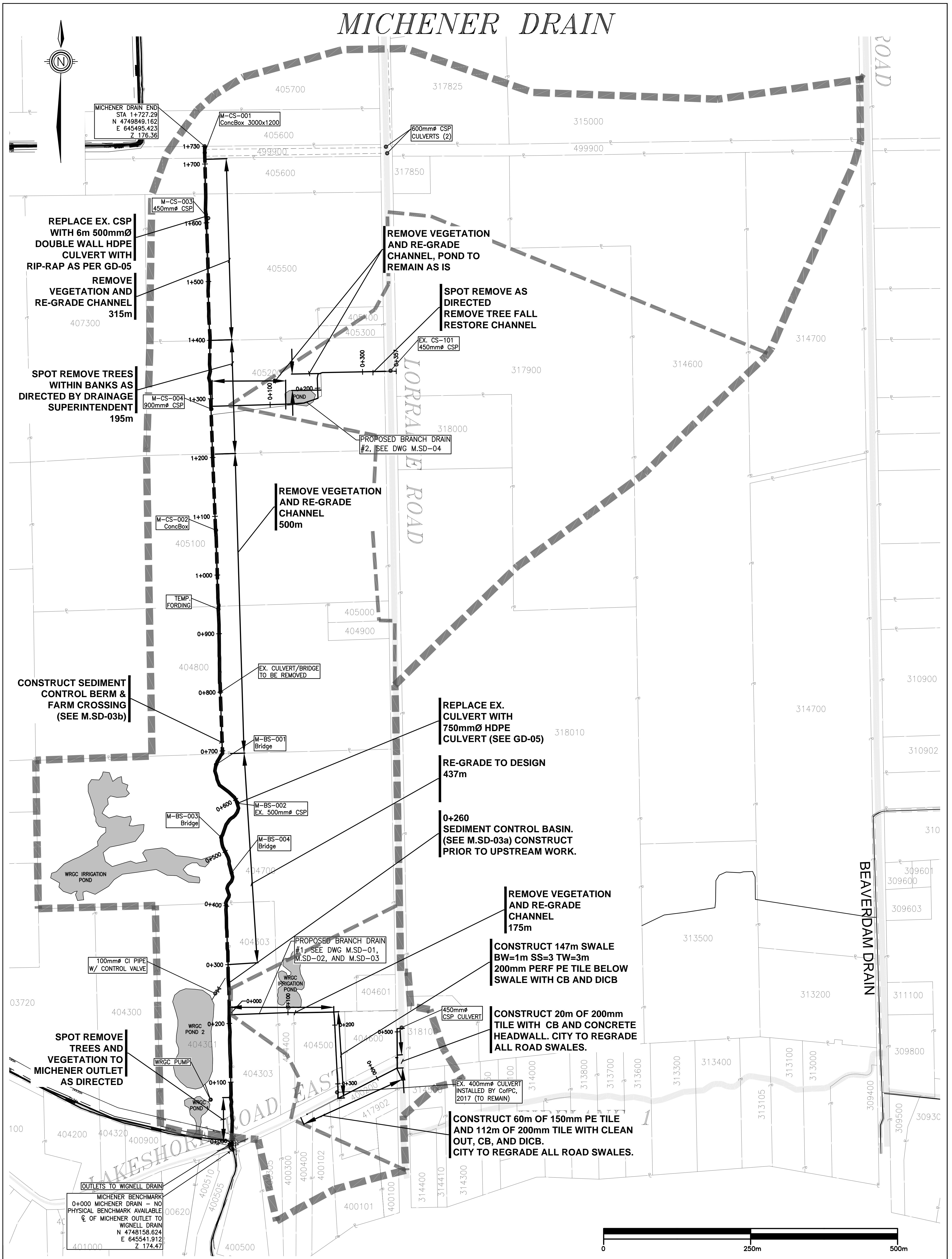
- | | | | |
|--|---|--|--|
| <ul style="list-style-type: none"> michener_branches entities 0-michener drain #1 text 0-michener drain #2 text 0-michener drain main text 0-michener drain main text michener_branches entities 0-michener drain #1 text 0-michener drain #1 text | <ul style="list-style-type: none"> 0-michener drain #2 0-michener drain #2 text 0-michener drain main 0-michener drain main text M_designpt crossings drain_benchmarks | <ul style="list-style-type: none"> Contours Mich_catch DrainC Michener Drain Michener Branch #2 Michener Branch #1 michener_sediment basin entities | <ul style="list-style-type: none"> Michener Branch #2 Properties Michener Branch #1 Properties rowculv All_Drain_Parcel_Roads MUN PRIV |
|--|---|--|--|

[id]

Michener Drain
Assessed Properties by Drainage Area and ARN
 EWA Engineering Inc.
 84 Fair Street, Williams, Ontario
 L9R 3J7
 416-260-2824
 www.ewaeng.com

Printed on: 2020-01-27

MICHENER DRAIN



- NOTES:**
- DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED
 - CATCHMENT BOUNDARIES ARE BASED ON THE NPCA DIGITAL ELEVATION MODEL (DEM) 2010
 - SPECIFIC POINTS IN THE SURFACE ARE BASED ON THE FOLLOWING SURVEYS:
 - DRAIN CROSSINGS & SPOT CHANNELS AMEC SURVEY, 2013
 - AS CONSTRUCTED SURVEY BY CoPC, 2016 STATION 0+000-1+940
 - SUPPLEMENTARY SURVEY BY CoPC, 2018
 - WEIBE ENGINEERING SURVEY, 2008

- PLAN VIEW LEGEND:**
- DRAINAGE AREA BOUNDARY
 - SUB-DRAINAGE AREA BOUNDARY
 - DRAIN CENTERLINE
 - PROPOSED DRAIN CENTERLINE
 - 0+000** DRAIN CHAINAGE
 - SITE SPECIFIC DETAIL I.D.
 - BOUNDARY OF AREA CAPTURED IN SITE DETAIL
 - DRAINAGE WORK PROPOSED
 - DRAINAGE WORK COMPLETED - TO BE ASSESSED



NO.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REPORT	April 15, 2020

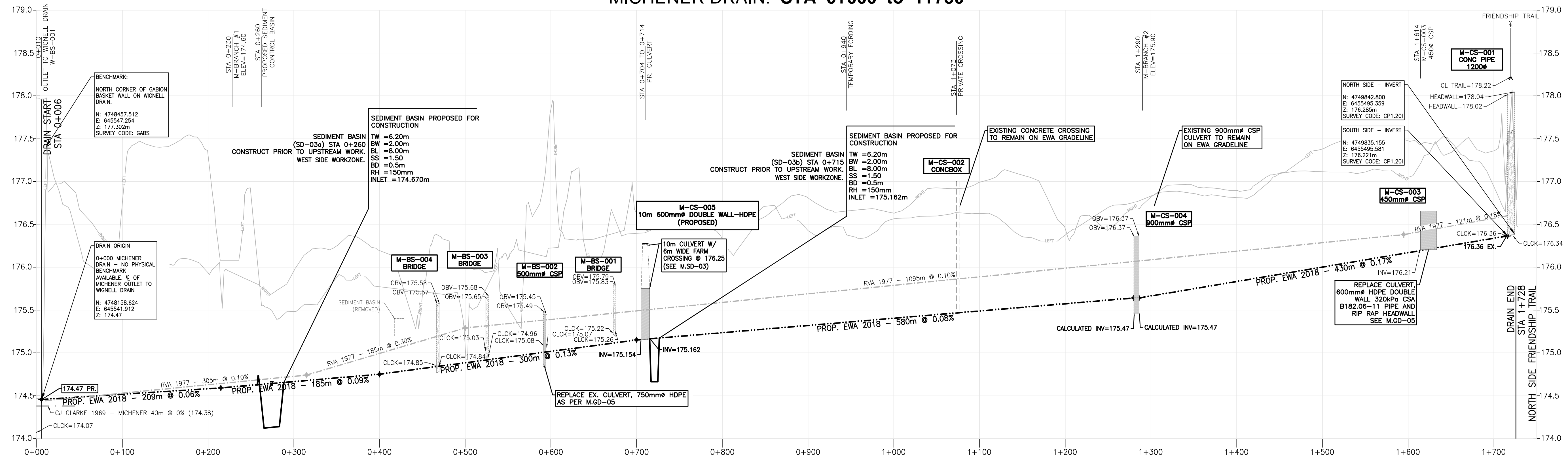
MICHENER DRAIN PLAN

Paul C. Marsh, P.Eng. Principal Engineer
EWA Engineering Inc.
 84 Main Street, Unionville, Ontario
 L3R 2E7
 647.400.2824
 www.ewaeng.com

City of Port Colborne
 Michener Municipal Drain

DRAWN BY :	APPROVED BY :	PROJECT NO. :	DRAWING NO. :
DAC	PCM	183927	M.PLAN
DESIGNED BY :	DATE :	SCALE :	
PCM	14-Apr-20	F.T.P.	

MICHENER DRAIN: STA 0+000 to 1+750



PR	EX	DATA	DESIGN	CONSTRUCTION	PROPERTY
174.07	174.07	AMEC SURVEY, 2013	STA: 0+006 N=4748165.6 E=645541.6 ELEV=174.45	WEST SIDE WORKZONE	0+004
174.52	174.52	AMEC SURVEY, 2013	PROP. CHANNEL: TW=4.0m BW=1.0m SS=1.5	WEST SIDE WORKZONE	ARN:404301 403.5m
174.75	174.75	AMEC SURVEY, 2013	STA: 0+215 N=4748372.8 E=645537.2 ELEV=174.59	RESTORE GRADELINE TO DESIGN GRADELINE: 160m	ARN:404303 403.5m
174.66	174.66	AMEC SURVEY, 2013	PROP. CHANNEL: TW=3.8m BW=0.8m SS=1.5	RESTORE GRADELINE TO DESIGN GRADELINE: 282m	ARN:404700 287.8m
175.02	175.02	AMEC SURVEY, 2013	STA: 0+400 N=4748557.6 E=645532.2 ELEV=174.75	RESTORE GRADELINE TO DESIGN GRADELINE: 282m	ARN:404800 251.7m
175.15	175.15	AMEC SURVEY, 2013	PROP. CHANNEL: TW=3.6m BW=0.6m SS=1.5	CONSTRUCT 6m WIDE FARM CROSSING c/w 10m HDPE CULVERT CLEAR VEG. AND RE-GRADE CHANNEL. 516m	ARN:405100 259m
175.32	175.32	EWA/CoFPC RTK GPS, MARCH 2019	STA: 0+700 N=4748821.2 E=645525.7 ELEV=175.15	CLEAR VEG. AND RE-GRADE CHANNEL. 193.5m	ARN:405200 193.5m
175.49	175.49	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+280 N=4749399.9 E=645506.3 ELEV=175.64	SPOT REMOVE TREES WITHIN BANKS AS DIRECTED BY DRAINAGE SUPERINTENDENT. 193.5m	ARN:405500 249.5m
175.57	175.57	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+286 N=4749399.9 E=645506.3 ELEV=175.64	CLEAR VEG. AND RE-GRADE CHANNEL. 214m	ARN:405600 61m
175.83	175.83	EWA/CoFPC RTK GPS, MARCH 2019	PROP. CHANNEL: TW=3.4m BW=0.4m SS=1.5	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN:405700 83m
176.00	176.00	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+716 N=474934.9 E=645495.5 ELEV=176.36	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN:405800 61m
176.17	176.17	EWA/CoFPC RTK GPS, MARCH 2019	PROP. CHANNEL: TW=3.4m BW=0.4m SS=1.5	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN:405900 61m
176.34	176.34	EWA/CoFPC RTK GPS, MARCH 2019	STA: 1+716 N=474934.9 E=645495.5 ELEV=176.36	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN:406000 61m
176.34	176.34	EWA/CoFPC RTK GPS, MARCH 2019	PROP. CHANNEL: TW=3.4m BW=0.4m SS=1.5	CLEAR VEG. AND RE-GRADE CHANNEL. 83m	ARN:406100 61m

- NOTES:**
- DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED
 - CATCHMENT BOUNDARIES ARE BASED ON THE NPCA DIGITAL ELEVATION MODEL (DEM) 2010
 - SPECIFIC POINTS IN THE SURFACE ARE BASED ON THE FOLLOWING SURVEYS:
 - DRAIN CROSSINGS & SPOT CHANNELS AMEC SURVEY, 2013
 - AS CONSTRUCTED SURVEY BY CoFPC, 2016 STATION 0+000-1+940
 - SUPPLEMENTARY SURVEY BY CoFPC, 2018
 - WEIBE ENGINEERING SURVEY, 2008

THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.

BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE DONE TO THEM.

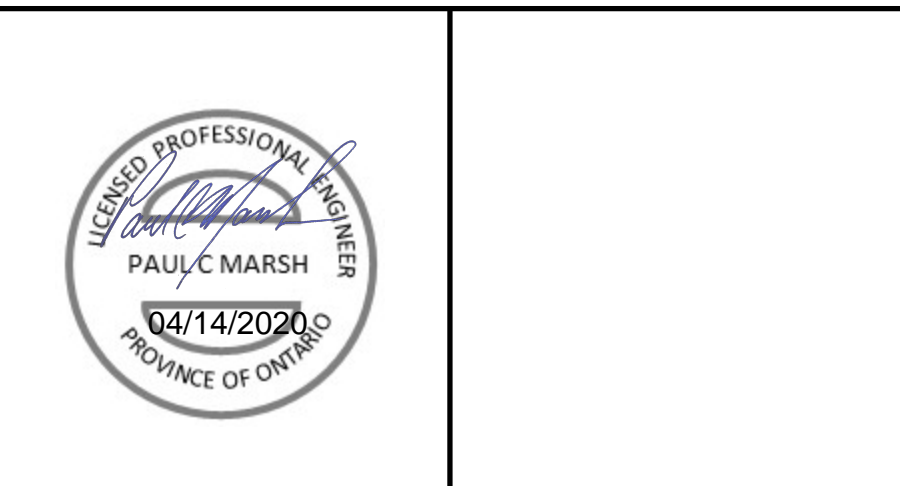
- SPATIAL DATA:**
- DTM DATA FROM NIAGARA PENINSULA CONSERVATION AUTHORITY
 - HORIZONTAL DATUM: UTM NAD83-CSR5 ZONE 17N
 - VERTICAL DATUM: CGVD28-1978
 - ACCURACY: ABSOLUTE HORIZONTAL AND VERTICAL POSITIONAL ACCURACIES OF ±0.5m

LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE - EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE RVA, 1979

1	ISSUED FOR BASELINE REPORT	April 15, 2020
NO.	REVISION DESCRIPTION	DATE

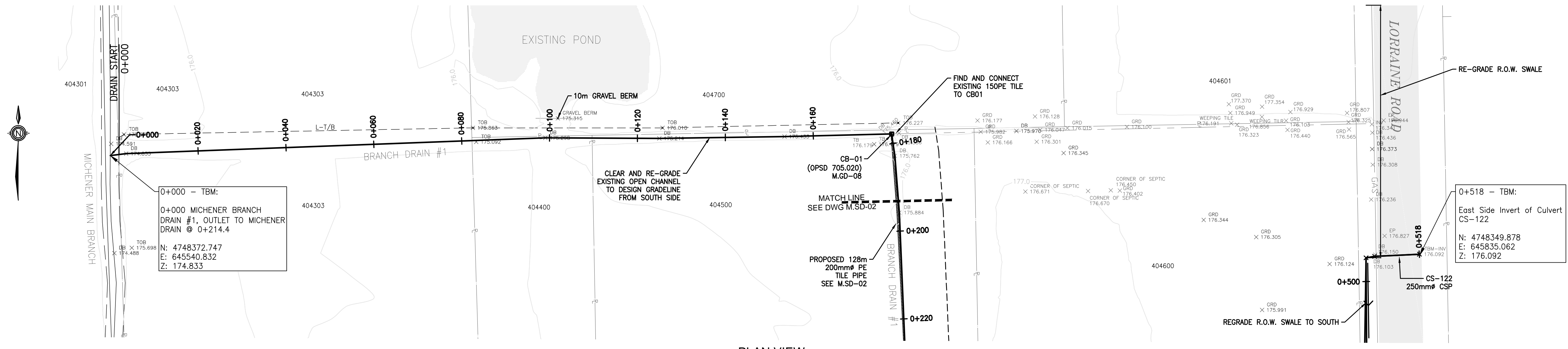
MICHENER MUNICIPAL DRAIN PROFILE



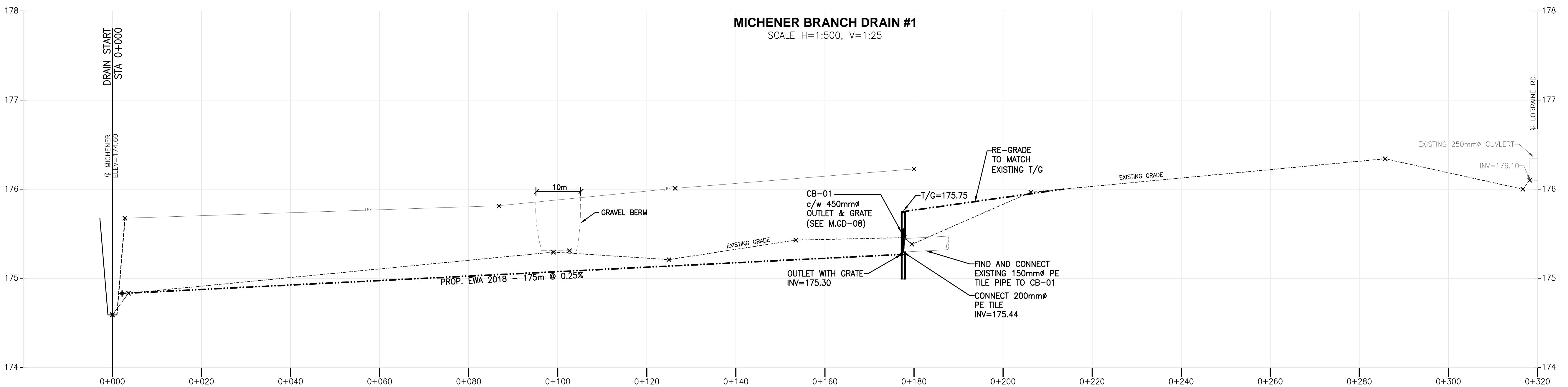
CITY OF PORT COLBORNE

Paul C. Marsh, P.Eng. Principal Engineer
EWA Engineering Inc.
 84 Main Street, Unionville, Ontario
 L3R 2E7
 647.400.2824
www.ewaeng.com

DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : -	DRAWING NO. : M.P1
DESIGNED BY : PCM	DATE : 14-Apr-20	SCALE : H=1:2500 V=1:25	



PLAN VIEW
SCALE 1:500



MICHENER BRANCH DRAIN #1
SCALE H=1:500, V=1:25

PROPERTY INFO	CONSTRUCTION DESIGN GRADE	DATA NOTES	DRAIN CENTERLINE ELEVATION
0+002	PR EX 174.99 (m)		174.99
0+022	PR EX 174.87 (-0.04m)		174.87
0+042	PR EX 175.01 (-0.06m)		175.01
0+062	PR EX 174.97 (-0.13m)		174.97
0+082	PR EX 175.00 (-0.18m)		175.00
0+102	PR EX 175.07 (-0.12m)		175.07
0+122	PR EX 175.12 (-0.10m)		175.12
0+142	PR EX 175.17 (-0.15m)		175.17
0+162	PR EX 175.22 (-0.21m)		175.22
0+177	PR EX 175.39 (m)		175.39
0+197	PR EX 175.83 (m)		175.83
0+217	PR EX 176.03 (m)		176.03
0+237	PR EX 176.13 (m)		176.13
0+257	PR EX 176.22 (m)		176.22
0+277	PR EX 176.31 (m)		176.31
0+297	PR EX 176.18 (m)		176.18
0+318	PR EX (m)		

Notes: STA: 0+002 N=4748372.6, E=645539.2, ELEV=174.83; STA: 0+177 N=4748372.2, E=645714.1, ELEV=175.27, INV=175.30

EX. OPEN CHANNEL: BW=0.4m, TW=2.0m, SS=1.5

CLEAR AND RE-GRADE TO DESIGN GRADELINE. SOUTH SIDE WORKZONE

Property Info: ARN: 404303 (80m), ARN: 404400 (28m), ARN: 404700 (67m), ARN: 404500 (20m), ARN: 404601, ARN: 404600

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 - SUPPLEMENTARY SURVEY BY Co/PC, 2018
 - WEIBE ENGINEERING SURVEY, 2008

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SPATIAL DATA:

DTM DATA FROM NIAGARA PENINSULA CONSERVATION AUTHORITY

- HORIZONTAL DATUM: UTM NAD83-CSR5 ZONE 17N
- VERTICAL DATUM: CGVD28-1978
- ACCURACY: ABSOLUTE HORIZONTAL AND VERTICAL POSITIONAL ACCURACIES OF ±0.5m

LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE RIA, 1979

1	ISSUED FOR REPORT	April 15, 2020
NO.	REVISION DESCRIPTION	DATE

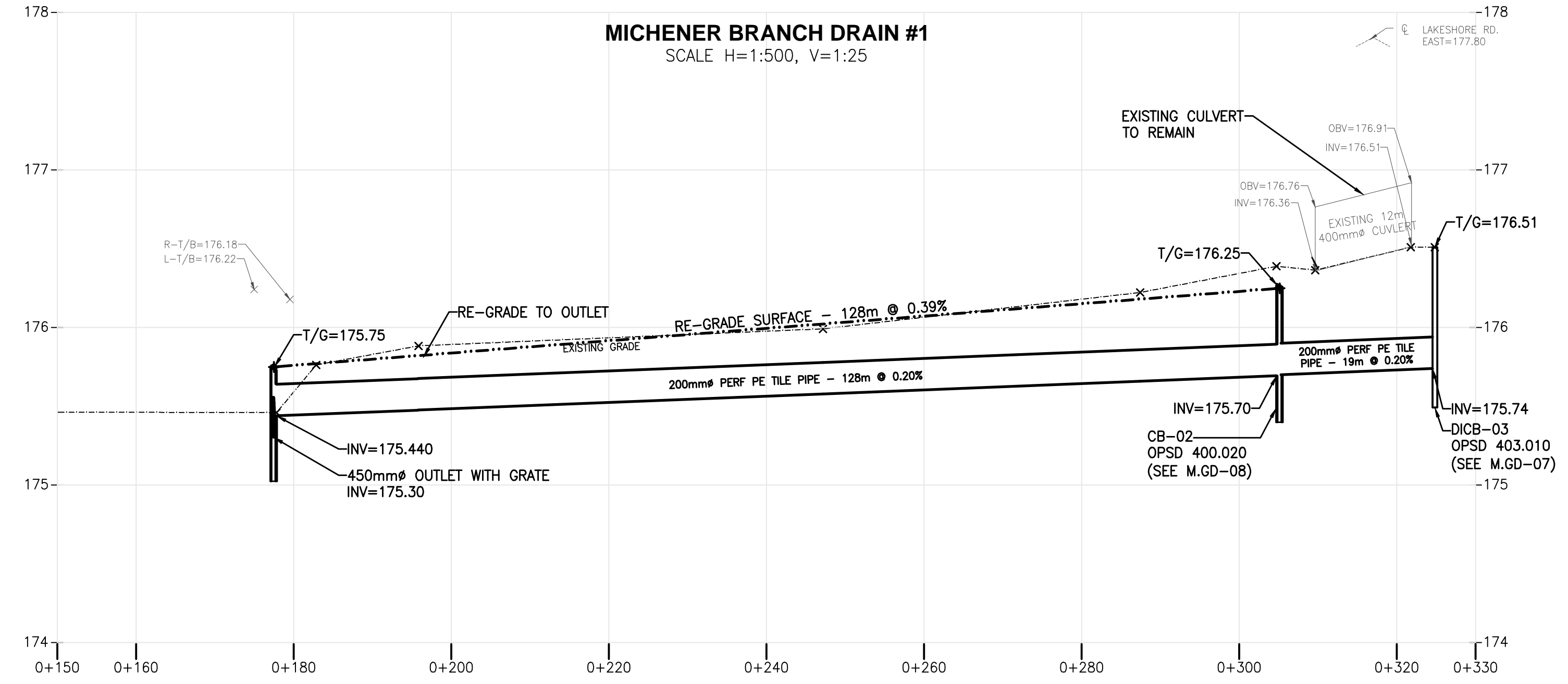
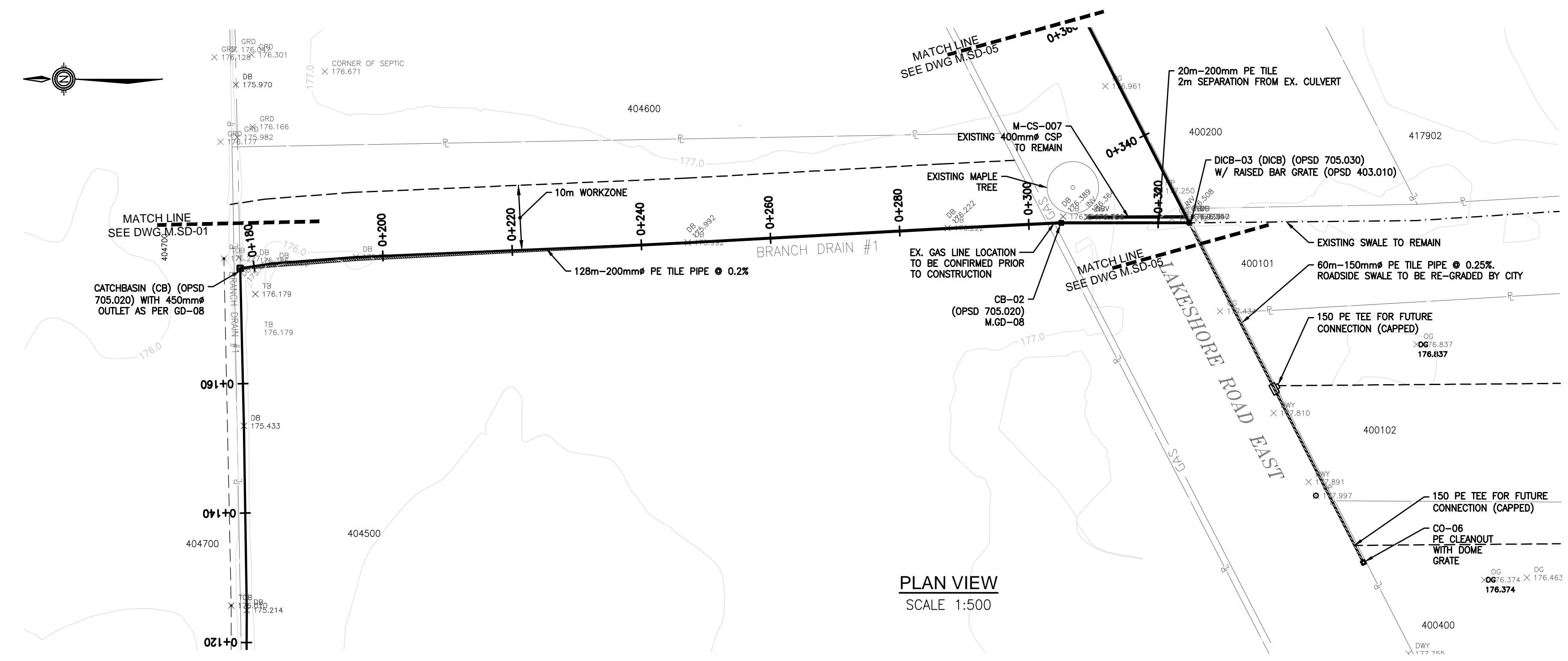


MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

CITY OF PORT COLBORNE

Paul C. Marsh, P.Eng. Principal Engineer
EWA Engineering Inc.
 84 Main Street, Unionville, Ontario L3R 2E7
 647.400.2824 www.ewaeng.com

DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : 189399	DRAWING NO. : M.SD-01
DESIGNED BY : PCM	DATE : 14-Apr-20	SCALE : AS SHOWN	



PROPERTY INFO	CONSTRUCTION NOTES	DESIGN POINT DATA	DATA NOTES	INVERT CENTERLINE ELEVATION
ARN: 404700		STA: 0+177 N=4748357.3 E=645716.8 ELEV=175.75	EWA/CoIPC RTK GPS SURVEY, DEC. 2018	PR EX 175.46 (m)
		V-CHANNEL: BW=0.6m TW=2.1m SS=3		PR EX 175.46 (m)
	128m - 200mm ^Ø PERF PE TILE PIPE @ 0.20% AND RE-GRADE TO OUTLET.			PR EX 175.92 (-0.05%)
	10m EAST SIDE WORKZONE			PR EX 175.99 (-0.02%)
				PR EX 176.07 (-0.01%)
				PR EX 176.15 (-0.03%)
				PR EX 176.23 (-0.11%)
				PR EX 176.49 (m)
				PR EX 175.74 (m)
				PR EX 175.30 (m)

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LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION
	DATA POINT FROM HISTORICAL DESIGN GRADELINE

1	ISSUED FOR REPORT	April 15, 2020
NO.	REVISION DESCRIPTION	DATE



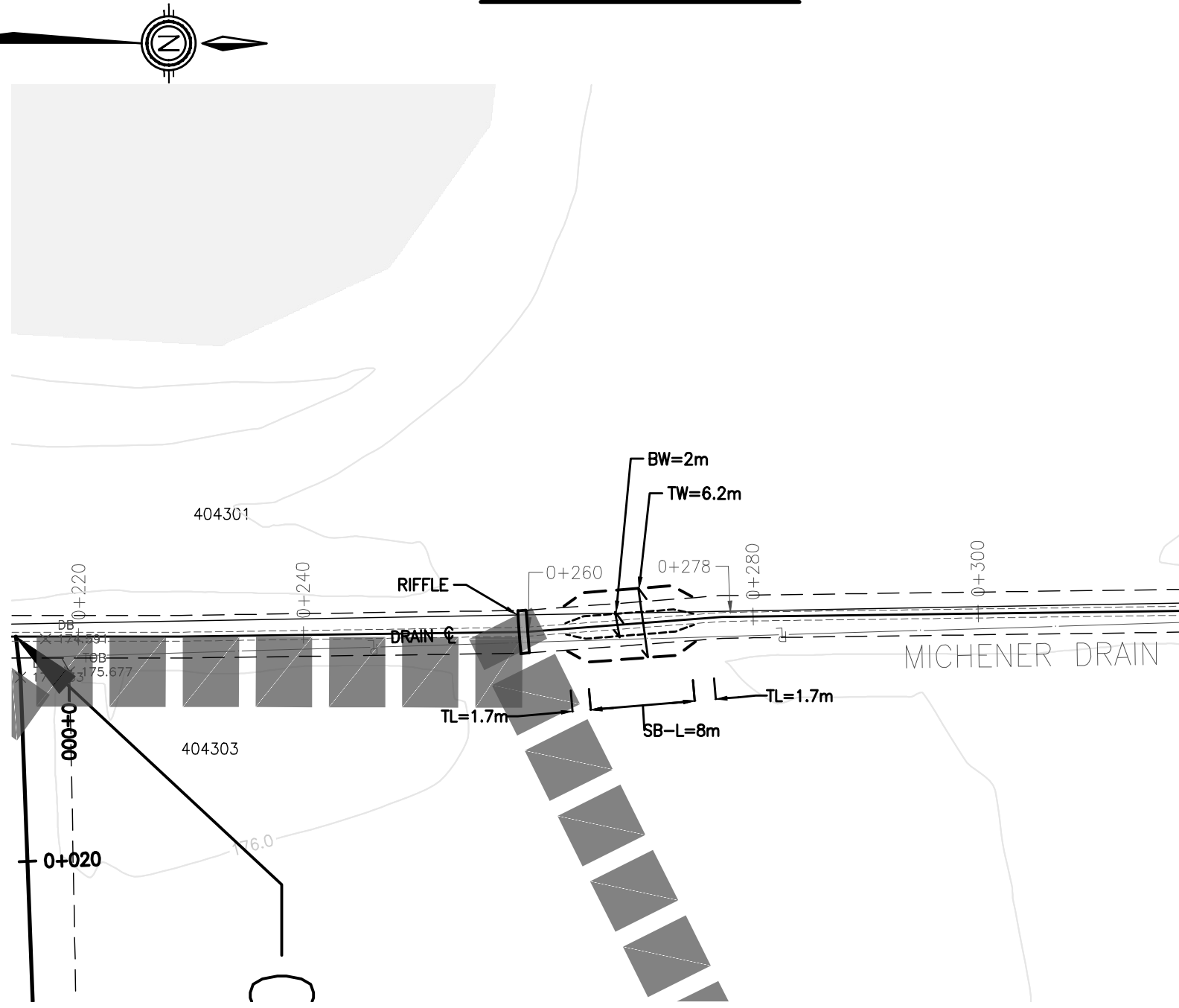
MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

CITY OF PORT COLBORNE

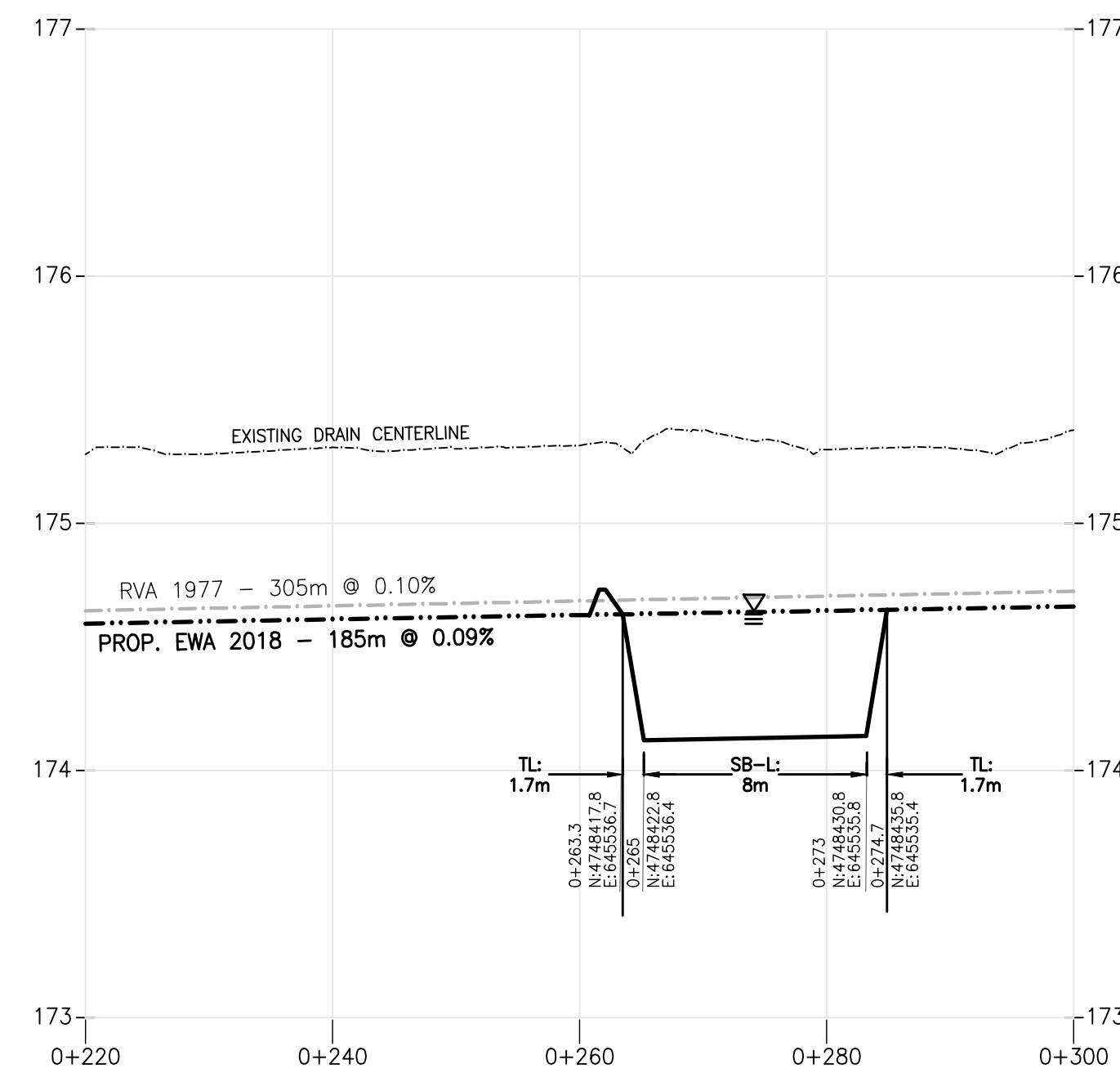
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DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : 189399	DRAWING NO. : M.SD-02
DESIGNED BY : PCM	DATE : 14-Apr-20	SCALE : AS SHOWN	

M.SD-03a



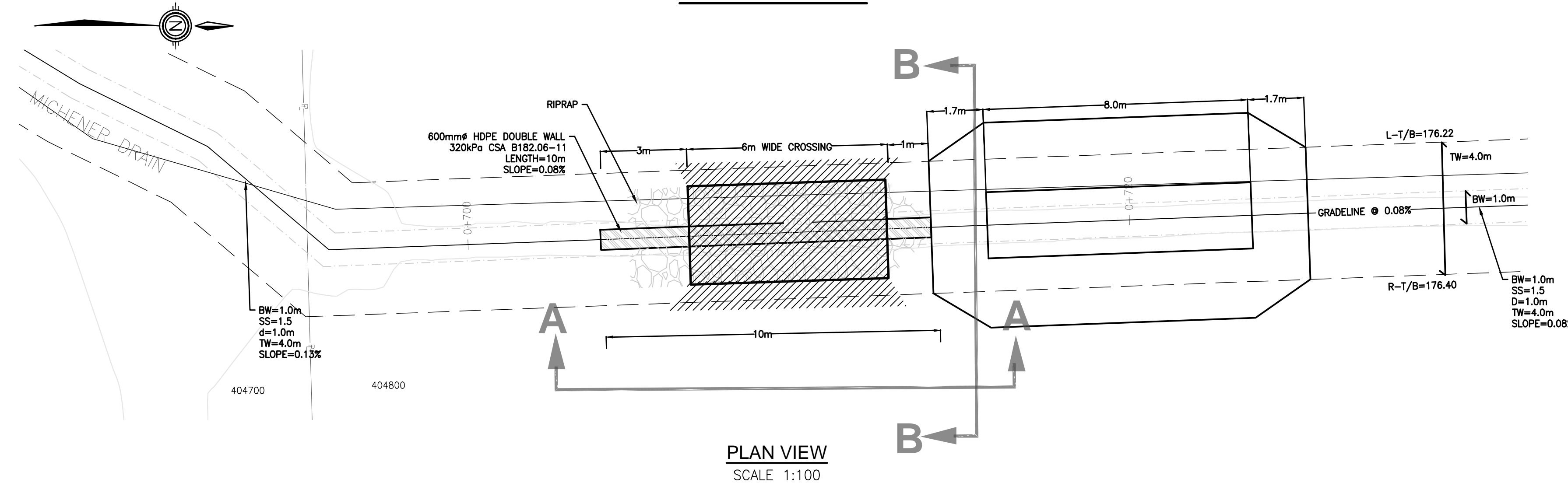
PLAN VIEW
SCALE 1:500



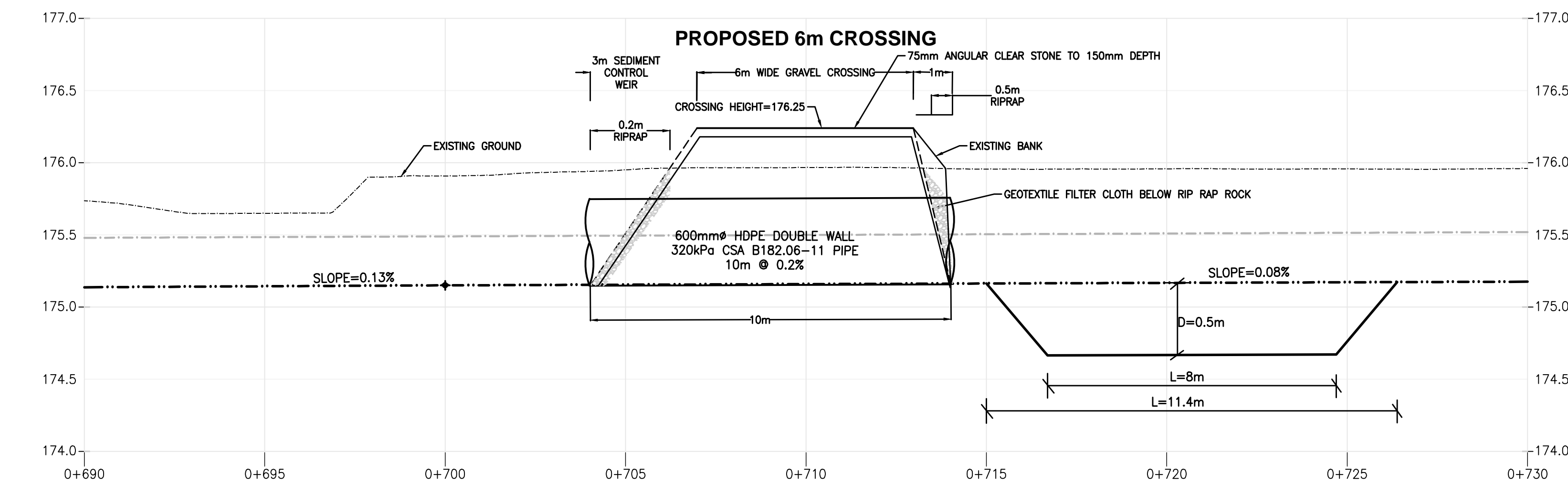
PROFILE VIEW
SCALE H=1:500, V=1:25

PROPERTY	INFO	CONSTRUCTION	DESIGN GRADE	POINT DATA
DRAIN CENTERLINE ELEVATION	PR 174.59	EX 175.25		(-0.69m)
DRAIN CENTERLINE ELEVATION	PR 174.61	EX 175.31		(-0.70m)
DRAIN CENTERLINE ELEVATION	PR 174.93	EX 175.63		(-0.69m)
DRAIN CENTERLINE ELEVATION	PR 174.65	EX 175.30		(-0.65m)
DRAIN CENTERLINE ELEVATION	PR 174.66	EX 175.38		(-0.71m)
DATA NOTES	NPCA DEM DATA			
CONSTRUCTION NOTES	STA: 0+274.7 N=4748432.536 E=645535.878 ELE=174.670 CONSTRUCT SEDIMENT BASIN (0+10) STA 0+280 TW=6.2m BW=2.0m SB=L=8.0m ADJACENT TO SEDIMENT BASIN ON THE BANK SS=1.5 D=40.0mm BH=150mm ARN:404301 ARN:404303			

M.SD-03b

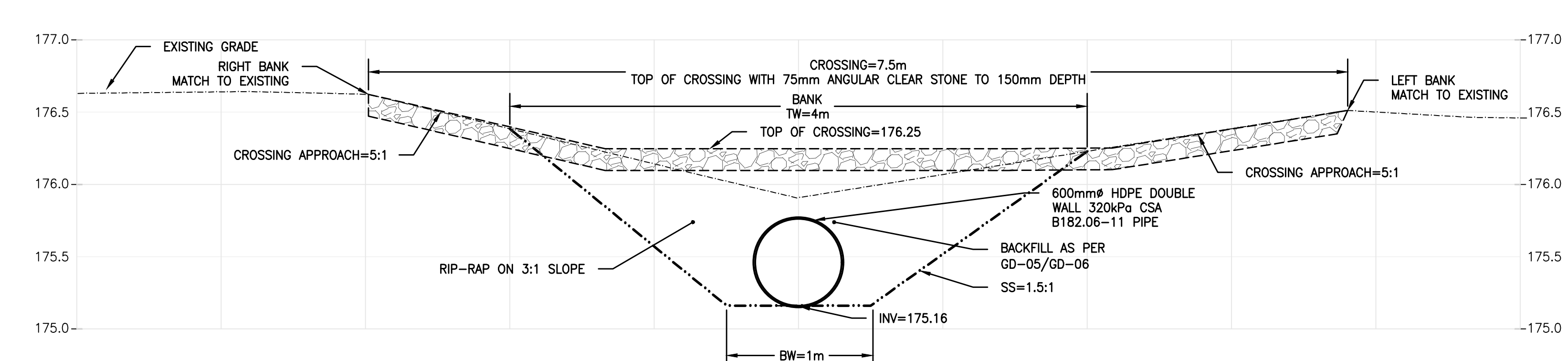


PLAN VIEW
SCALE 1:100



SECTION A-A
SCALE H=1:100, V=1:25

PROPERTY	INFO	CONSTRUCTION	DESIGN GRADE	POINT DATA
DRAIN CENTERLINE ELEVATION	PR 175.14	EX 175.65		(-0.69m)
DRAIN CENTERLINE ELEVATION	PR 175.15	EX 175.91		(-0.51m)
DRAIN CENTERLINE ELEVATION	PR 175.16	EX 175.96		(-0.76m)
DRAIN CENTERLINE ELEVATION	PR 175.15	EX 175.95		(-0.69m)
DRAIN CENTERLINE ELEVATION	PR 175.16	EX 175.97		(-0.81m)
DRAIN CENTERLINE ELEVATION	PR 175.16	EX 175.96		(-0.79m)
DRAIN CENTERLINE ELEVATION	PR 175.17	EX 175.96		(-0.79m)
DRAIN CENTERLINE ELEVATION	PR 175.17	EX 175.96		(-0.79m)
DRAIN CENTERLINE ELEVATION	PR 175.18	EX 175.98		(-0.76m)
DATA NOTES	STA: 0+700 D/S INVERT N=4748821.2 E=645525.7 ELE=175.15 STA: 0+704 N=4748825.2 E=645525.5 ELE=175.154 EWA 2018 600mm HDPE DOUBLE WALL 320kPa CSA B182.06-11 PIPE 10m Ø 0.2% U/S INVERT STA 0+714 N=4748835.2 E=645525.2 ELE=175.162 EWA 2018 CONSTRUCT 6m WIDE CROSSING WITH 5:1 APPROACH INSTALL 10m OF 600mm HDPE DOUBLE WALL PIPE 11.4m SEDIMENT BASIN ARN: 404700 0+894.9 ARN: 404800			



SECTION B-B
SCALE 1:25

- NOTES:**
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SPATIAL DATA:

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LEGEND

	EXISTING DITCH BOTTOM (NPCA DEM DATA)
	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE RA, 1979

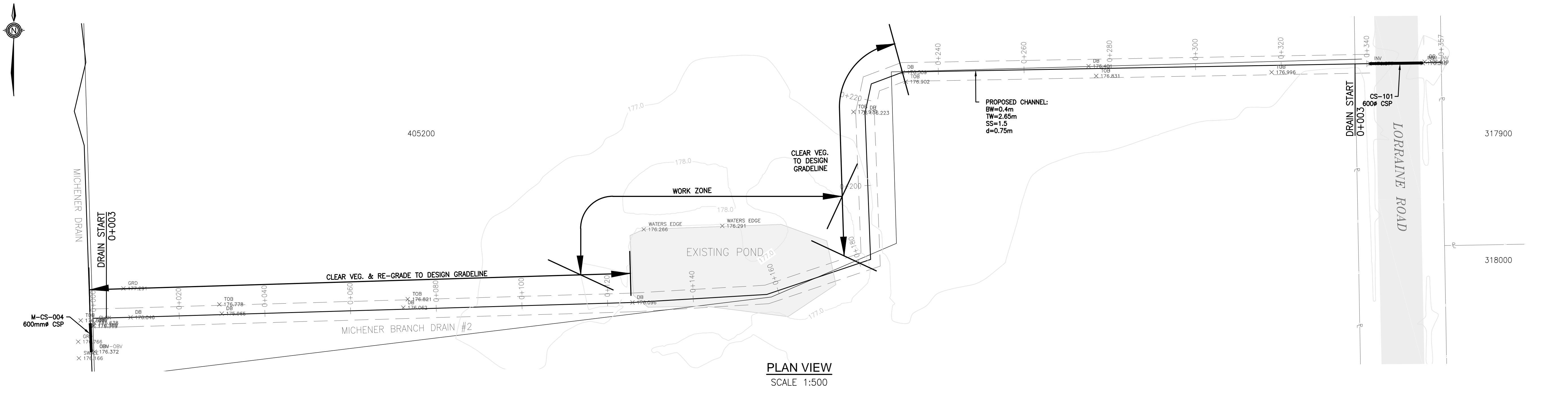
NO.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REPORT	April 15, 2020

PAUL C. MARSH
 P.Eng. Principal Engineer
 04/14/2020
 PROVINCE OF ONTARIO

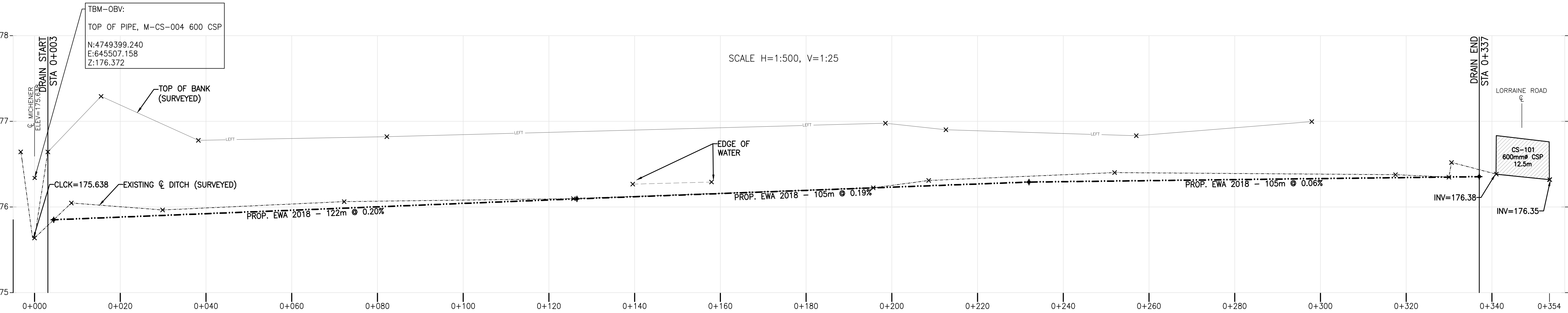
MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

CITY OF PORT COLBORNE
Paul C. Marsh, P.Eng. Principal Engineer
EWA Engineering Inc.
 84 Main Street, Unionville, Ontario
 L3R 2E7
 647.400.2824 www.ewaeng.com

DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : 189399	DRAWING NO. : M.SD-03
DESIGNED BY : PCM	DATE : 14-Apr-20	SCALE : N/A	



PLAN VIEW
SCALE 1:500



SCALE H=1:500, V=1:25

DRAIN ELEVATION	DATA NOTES	CONSTRUCTION NOTES	PROPERTY INFO
PR 175.64 EX 175.64 (-0.00 m)	EWA/CoPC RTK GPS SURVEY, DEC. 2018	0+000	ARN: 405200 340m
PR 175.86 EX 175.86 (-0.12 m)		CLEAR VEGETATION AND RE-GRADE TO DESIGN GRADELINE. NORTH SIDE WORKZONE	
PR 175.92 EX 175.92 (-0.07 m)			
PR 175.96 EX 175.96 (-0.07 m)			
PR 176.04 EX 176.04 (-0.04 m)			
PR 176.08 EX 176.08 (-0.01 m)			
PR 176.12 EX 176.12 (0.00 m)			
PR 176.16 EX 176.16 (0.00 m)			
PR 176.19 EX 176.19 (0.00 m)			
PR 176.23 EX 176.23 (-0.02 m)			
PR 176.27 EX 176.27 (-0.07 m)			
PR 176.29 EX 176.29 (-0.09 m)			
PR 176.31 EX 176.31 (-0.09 m)			
PR 176.33 EX 176.33 (-0.05 m)			
PR 176.34 EX 176.34 (-0.03 m)			
PR 176.40 EX 176.40 (m)			

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LEGEND

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	EXISTING DITCH BOTTOM (SURVEYED)
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	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE RIA, 1979

NO.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REPORT	April 15, 2020

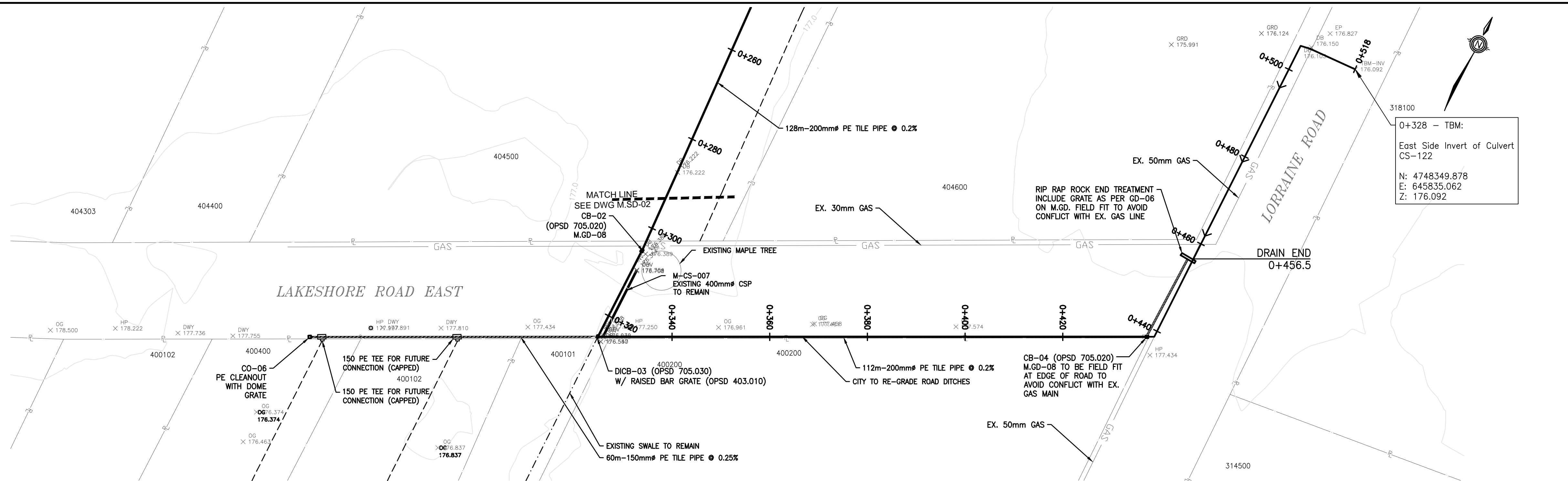


MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

CITY OF PORT COLBORNE

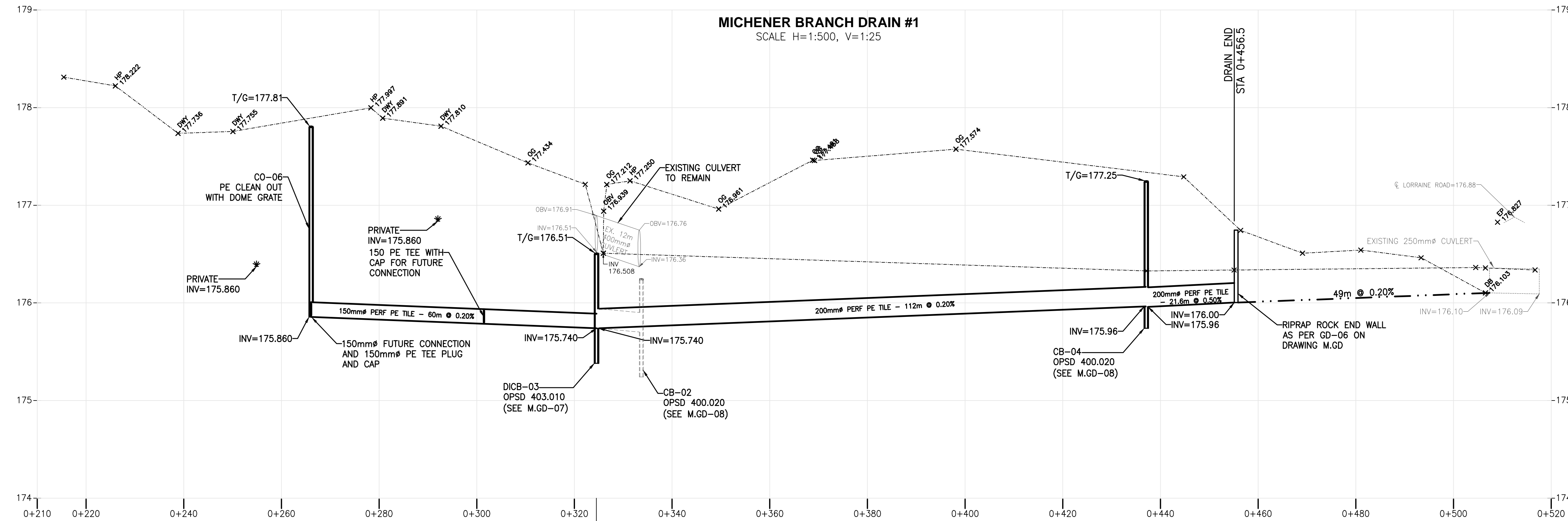
Paul C. Marsh, P.Eng. Principal Engineer
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 84 Main Street, Unionville, Ontario
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DRAWN BY: DAC	APPROVED BY: PCM	PROJECT NO.: 189399	DRAWING NO.: M.SD-04
DESIGNED BY: PCM	DATE: 14-Apr-20	SCALE: AS SHOWN	



PLAN VIEW
SCALE 1:500

MICHENER BRANCH DRAIN #1
SCALE H=1:500, V=1:25



DRAIN CENTERLINE ELEVATION	PR	EX	(m)
178.27	PR	EX	()
177.74	PR	EX	()
177.84	PR	EX	()
177.92	PR	EX	()
177.66	PR	EX	()
177.26	PR	EX	()
177.49	PR	EX	()
176.45	PR	EX	()
177.50	PR	EX	()
176.42	PR	EX	()
176.33	PR	EX	()
176.54	PR	EX	()
176.35	PR	EX	()
176.28	PR	EX	()
176.35	PR	EX	()

DATA NOTES
EWA/CoIFC RTK GPS SURVEY, SEPT. 2019

CONSTRUCTION DESIGN GRADE POINT DATA				
STA: -0+060 N=4748203.639 E=645669.745 ELE=175.86	STA: -0+325 N=4748230.424 E=645722.024 ELE=175.74	STA: 0+437 N=4748281.877 E=645822.427 ELE=175.96	STA: 0+458.6 N=4748299.625 E=645822.204 ELE=176.00	STA: 0+505.5 N=4748349.396 E=645824.803 ELE=176.10

PROPERTY INFO	CONSTRUCTION NOTES	PROPERTY INFO
LAKESHORE ROAD E R.O.W. 30m ARN: 400102	-0+060 60m - 150mm PERFORM PE TILE PIPE @ 0.20% AND RE-GRADE TO OUTLET.	LAKESHORE ROAD E R.O.W. 31m ARN: 400400
LAKESHORE ROAD E R.O.W. 33m ARN: 400102	0+325 112m - 200mm PERFORM PE TILE PIPE @ 0.20% AND RE-GRADE TO OUTLET.	LAKESHORE ROAD E R.O.W. 18m ARN: 400101
LAKESHORE ROAD E R.O.W. 112m ARN: 400200	0+437 21.6m - 200mm PERFORM PE TILE PIPE @ 0.20% AND BACKFILL WITH NON-SHRINK MATERIAL	LAKESHORE ROAD E R.O.W. 68m ARN: 404600
LAKESHORE ROAD E R.O.W.	0+458.6 CITY OF PORT COLBORNE TO REGRADE ROADSIDE SWALE TO OUTLET 49m @ 0.20%	LORRAINE ROAD R.O.W. 0+505.5

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LEGEND

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	EXISTING DITCH BOTTOM (SURVEYED)
	HISTORICAL GRADELINE
	PROPOSED DRAIN GRADELINE-EWA, 2018
	LEFT BANK
	RIGHT BANK
	EXISTING DRAIN SECTION
	EXISTING STRUCTURE DETAILS
	ASSUMED EXISTING STRUCTURE DETAILS
	EXISTING DRAIN ELEVATION
	PROPOSED DRAIN CENTERLINE ELEVATION
	PROPOSED DRAIN ELEVATION (WHERE MATCHES EXISTING ELEVATION)
	DATA POINT FROM HISTORICAL DESIGN GRADELINE (RIA, 1979)

NO.	REVISION DESCRIPTION	DATE
1	ISSUED FOR REPORT	MAY/06/2020

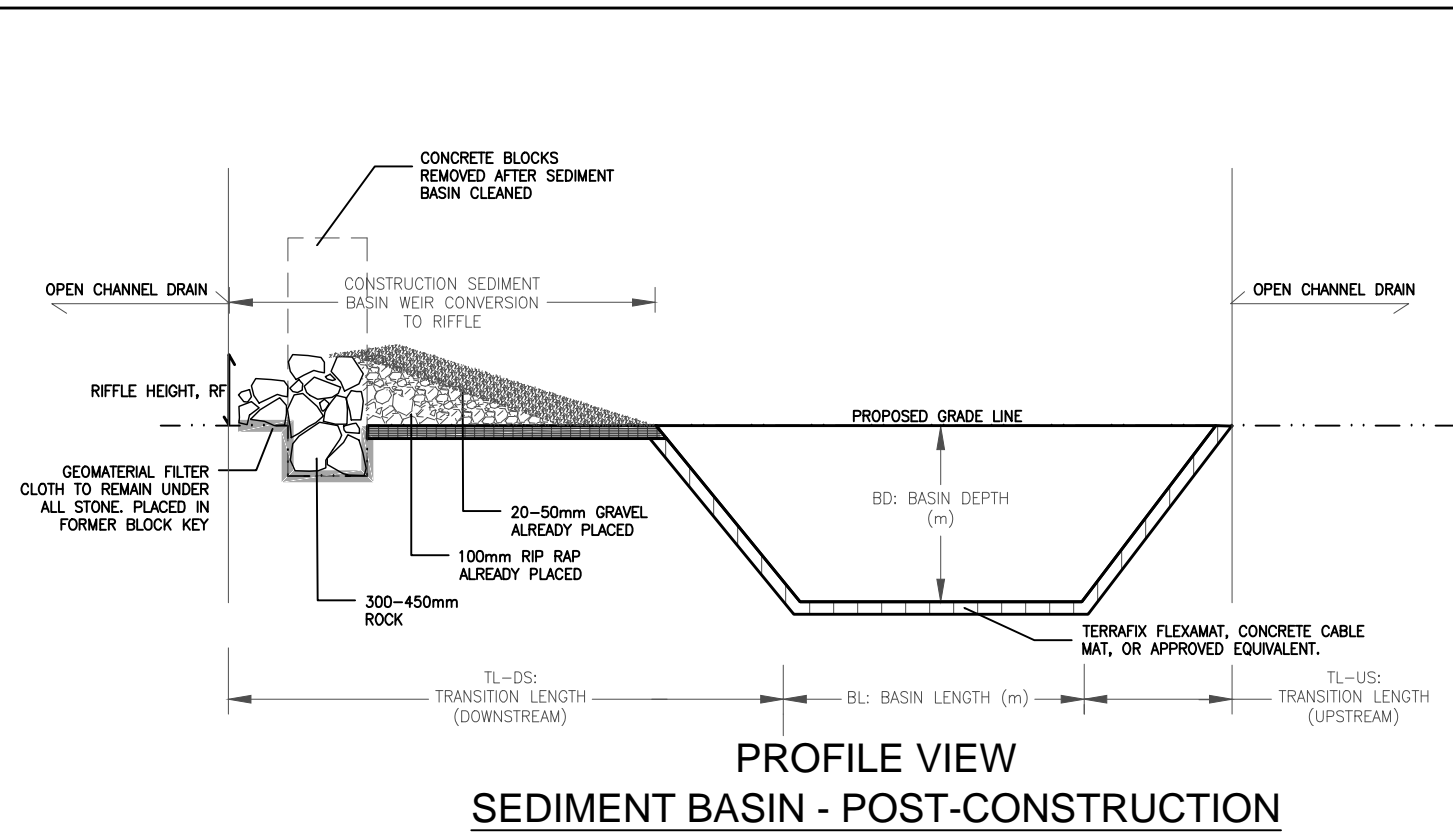
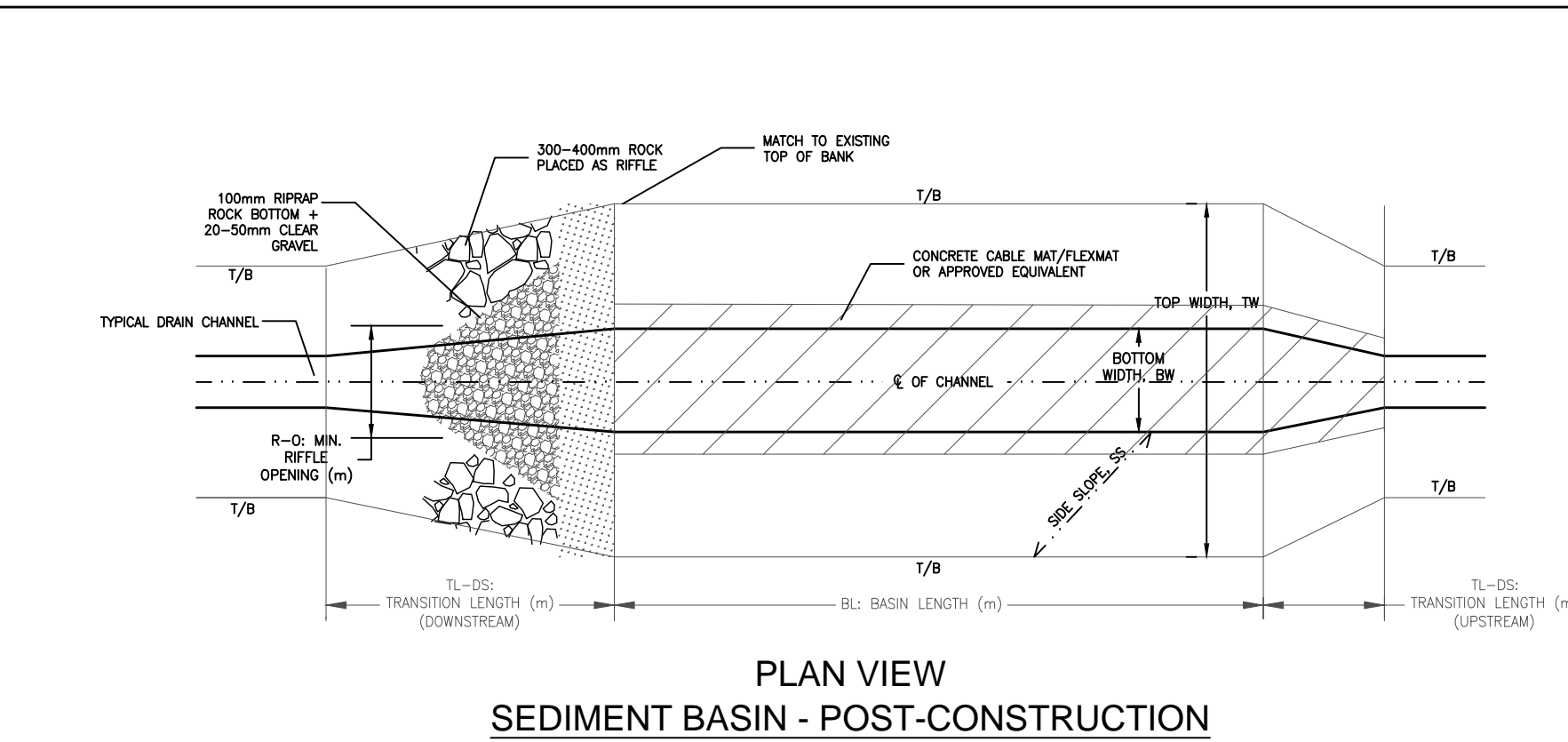
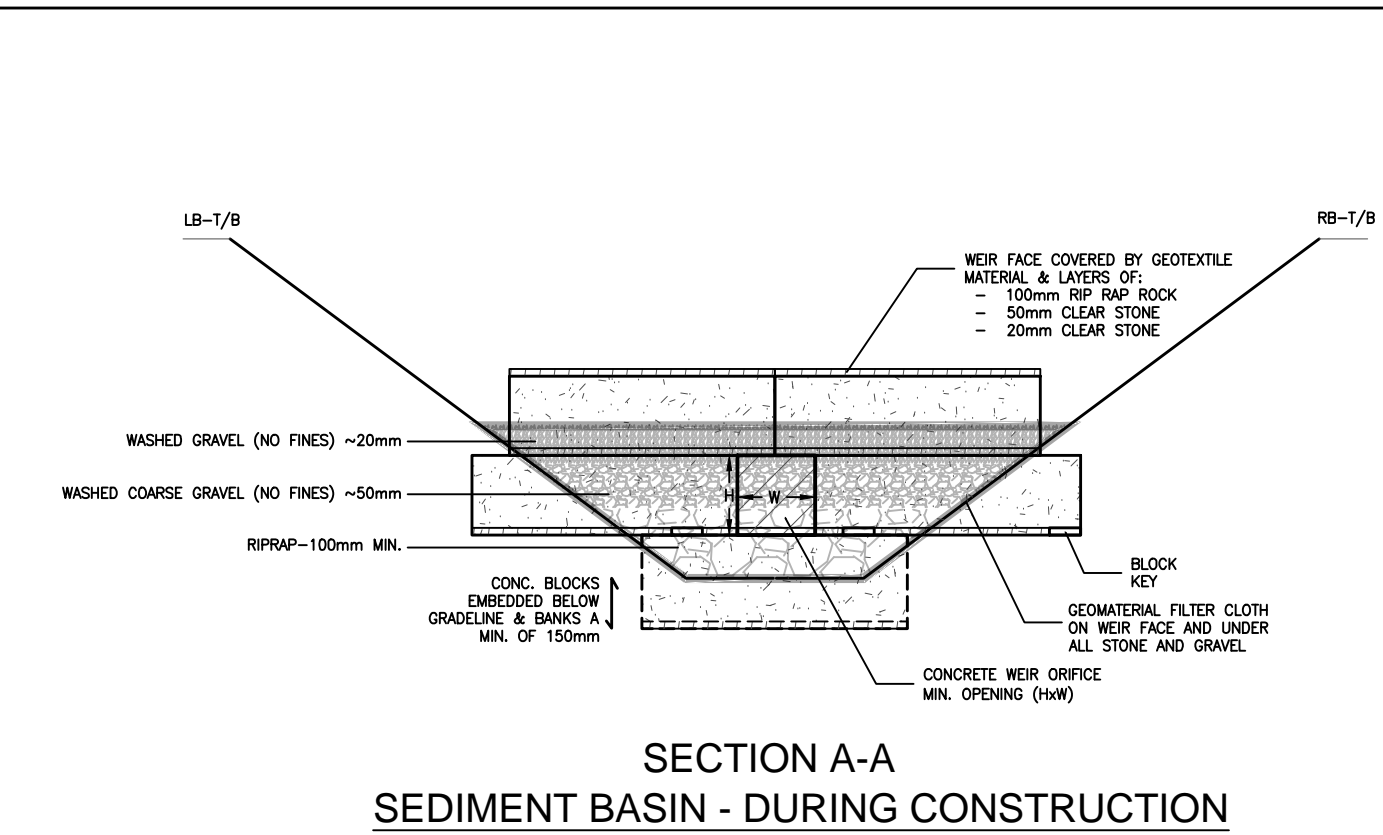
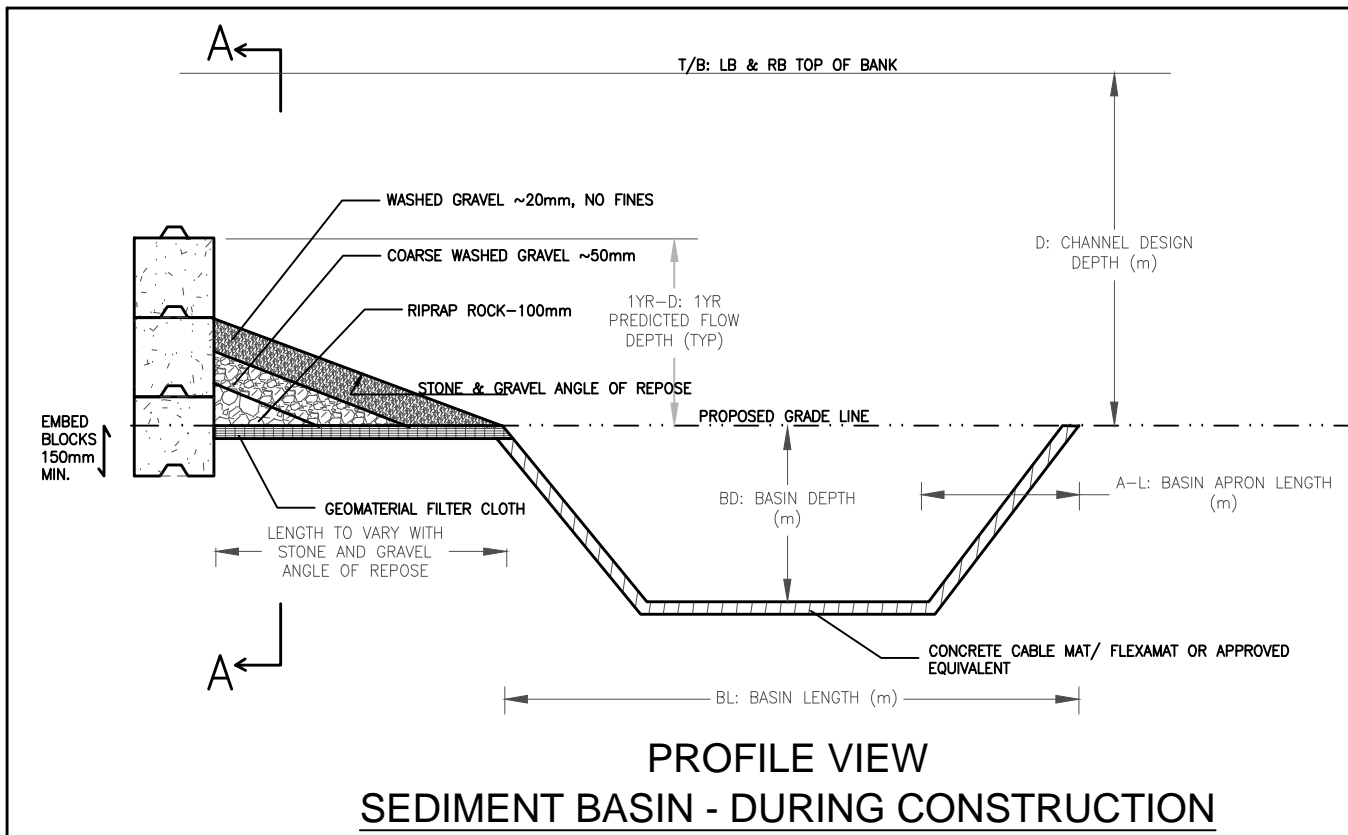
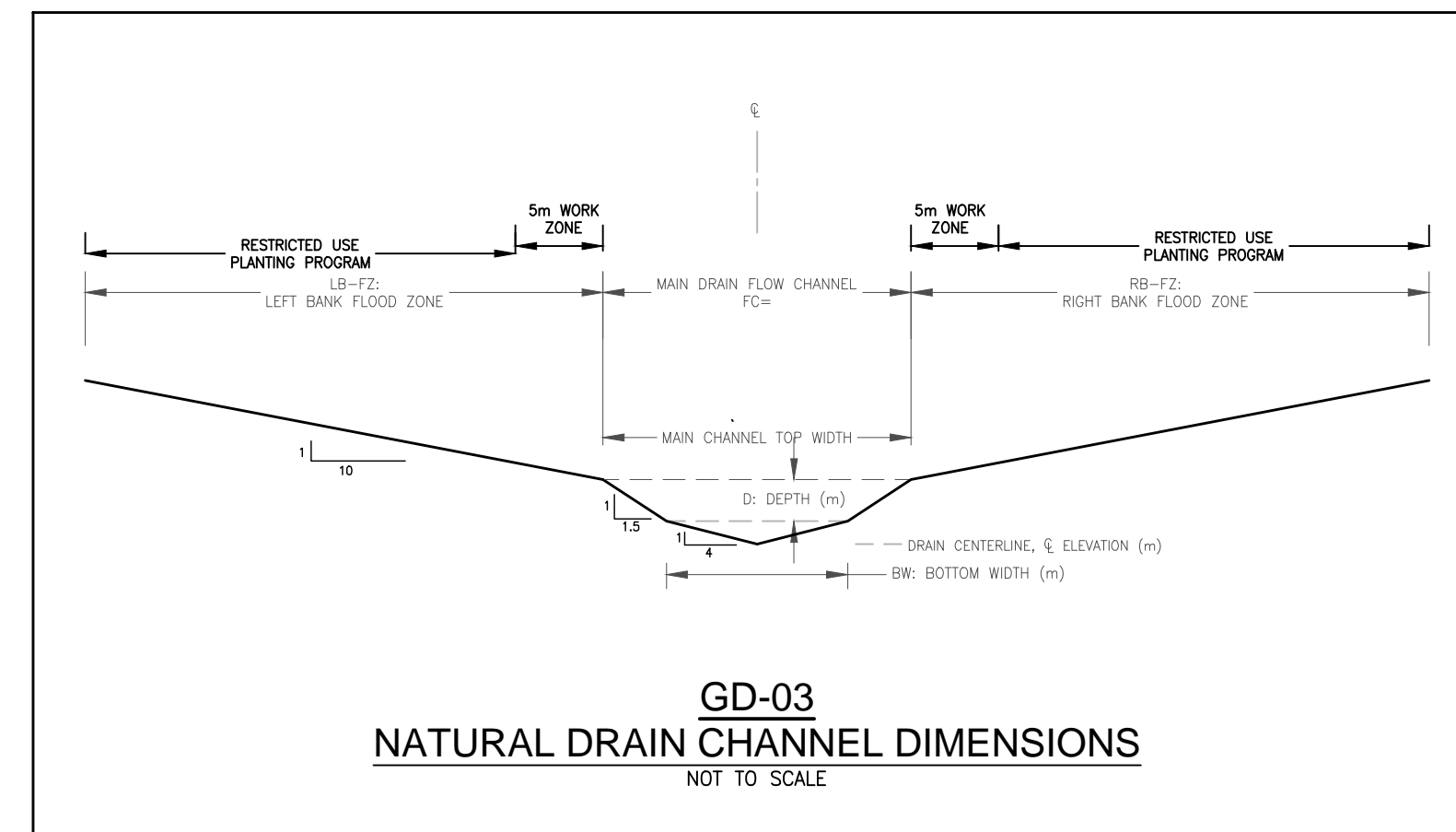
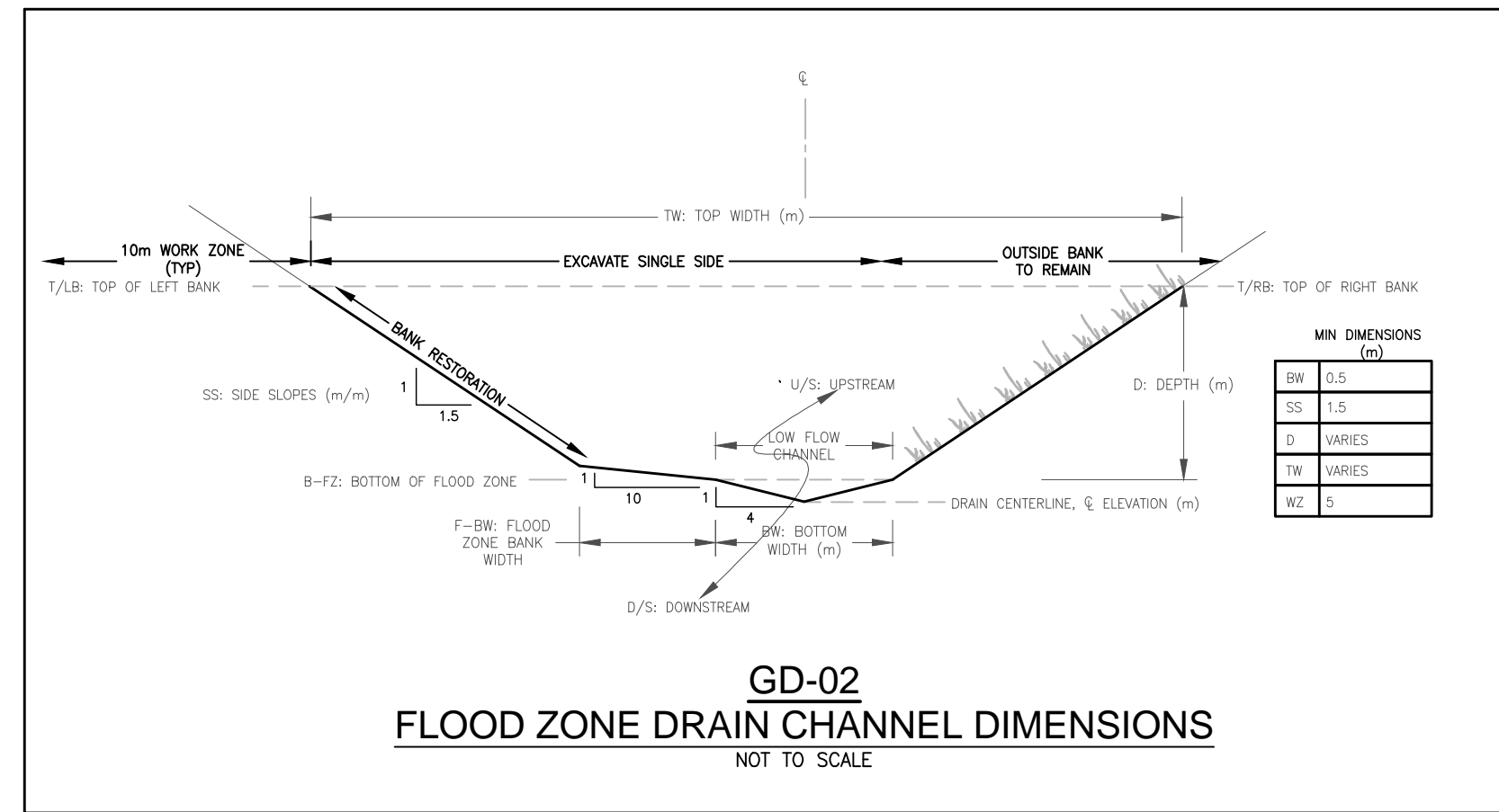
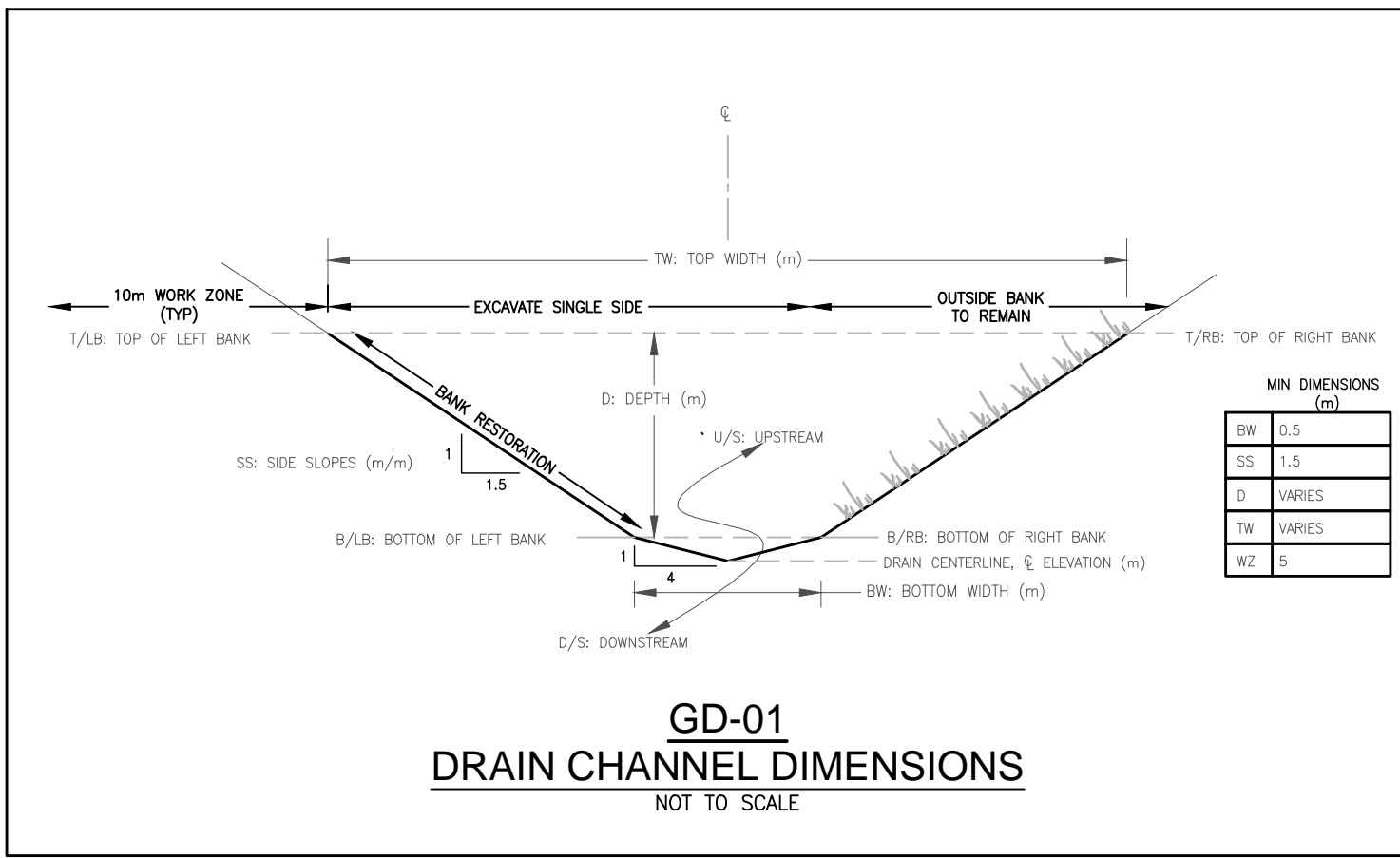


MICHENER MUNICIPAL DRAIN SPECIFIC DETAIL

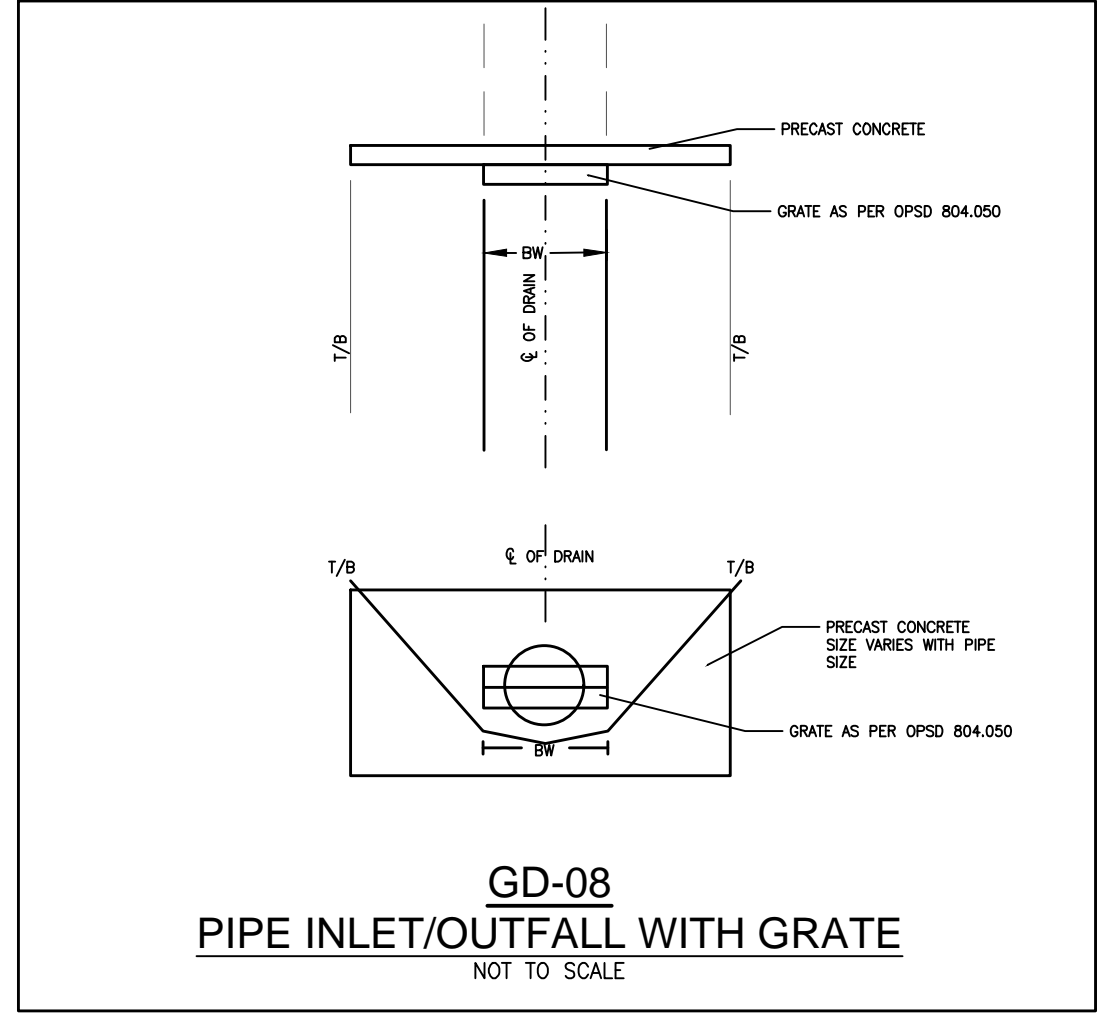
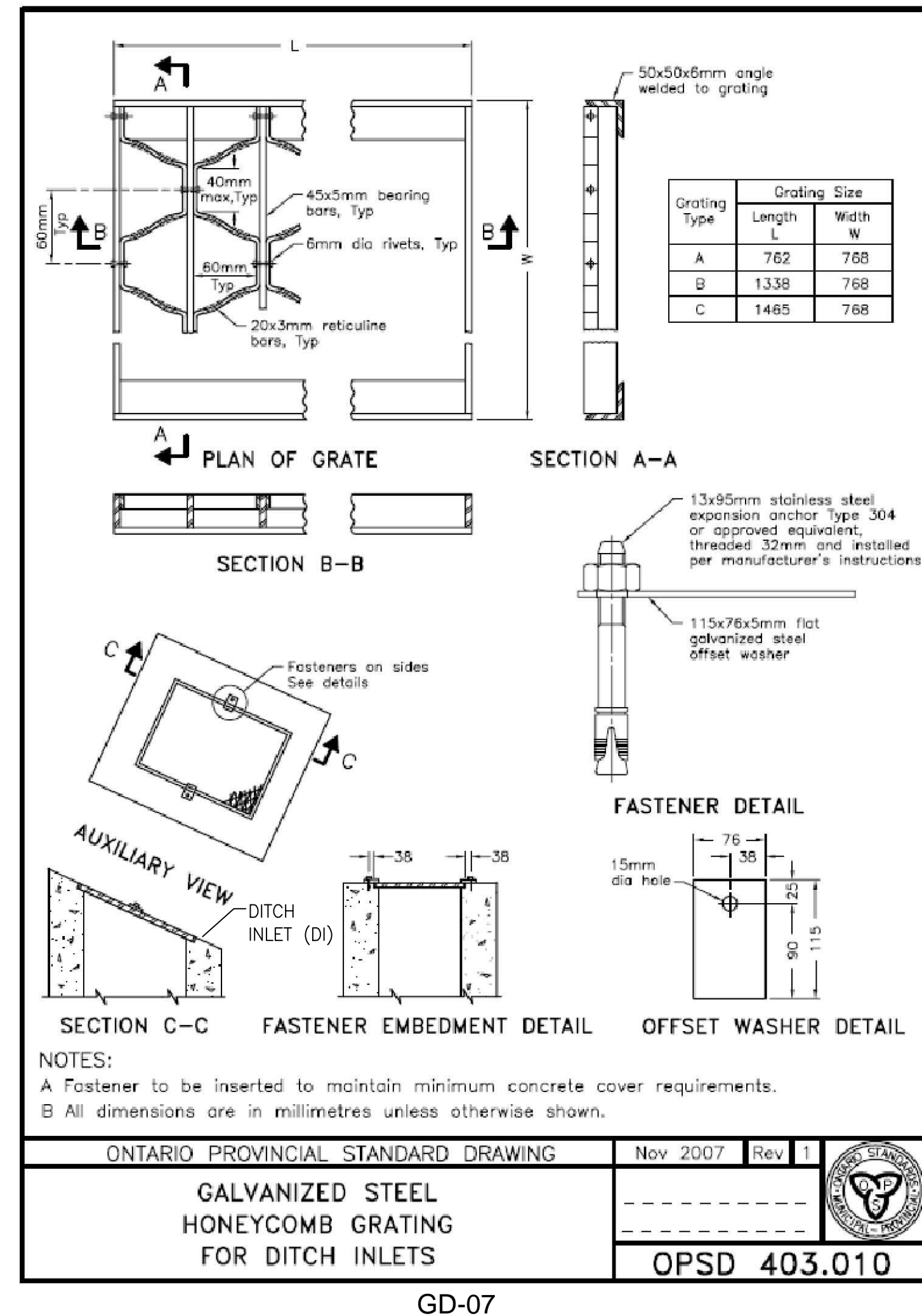
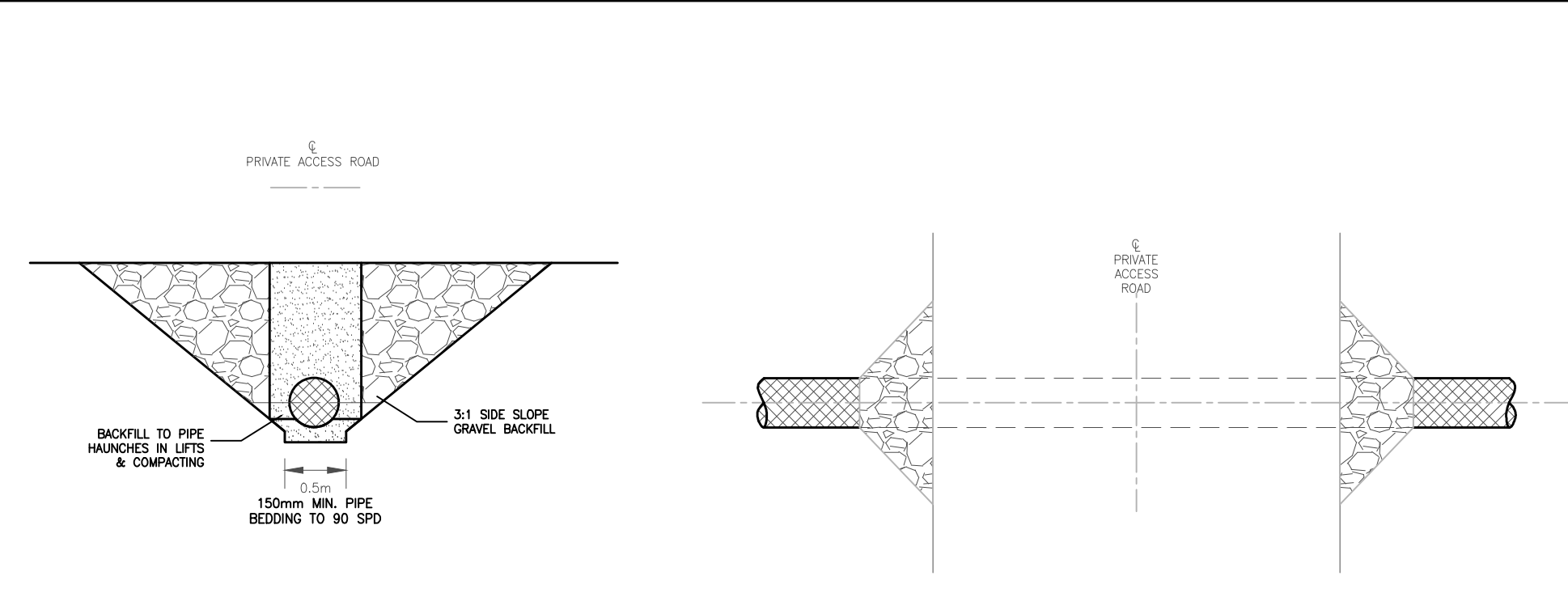
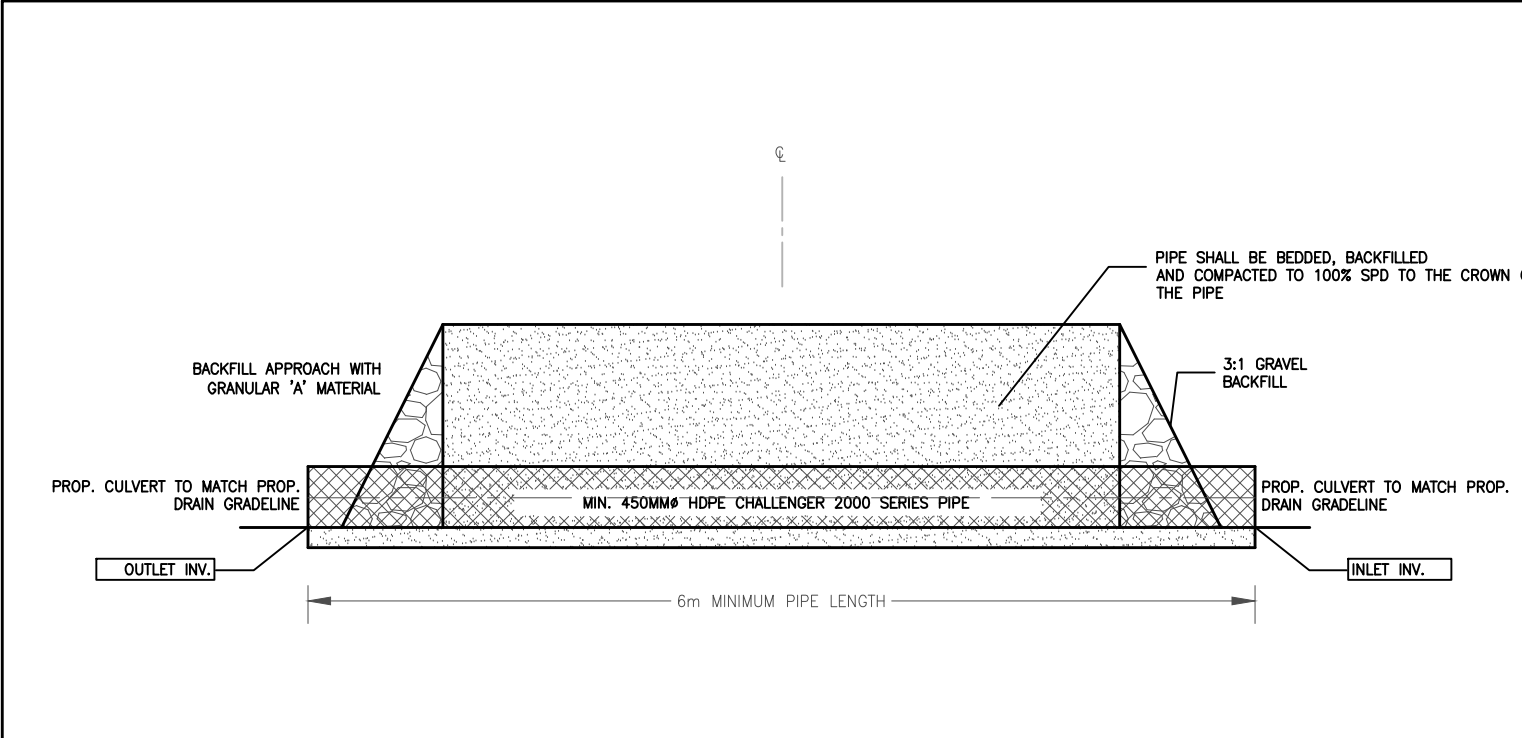


Paul C. Marsh, P.Eng. Principal Engineer
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DRAWN BY: DAC	APPROVED BY: PCM	PROJECT NO.: 189399	DRAWING NO.: M.SD-05
DESIGNED BY: PCM	DATE: 06-May-20	SCALE: AS SHOWN	



GD-10
SEDIMENT BASIN
NOT TO SCALE



MICHENER MUNICIPAL DRAIN GENERAL DETAILS

CITY OF PORT COLBORNE

Paul C. Marsh, P.Eng. Principal Engineer
EWA Engineering Inc.
4400 Lakeshore Blvd. East, Suite 100
Scarborough, Ontario M1S 2S1
416-291-3244
www.ewaeng.com

PAUL C. MARSH
LICENSED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO
May 07, 2028

DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : -	DRAWING NO. : M.GD
DESIGNED BY : PCM	DATE : 06-May-20	SCALE : N/A	

CITY OF PORT COLBORNE DRAINAGE CONTACTS:

APPOINTED DRAINAGE ENGINEER:

MR. PAUL C. MARSH, P.ENG.
EWA ENGINEERING INC.
84 MAIN STREET, UNIONVILLE, ON L3R 2E7
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DRAINAGE SUPERINTENDENT
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MINISTRY OF NATURAL RESOURCES AND FORESTRY

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905-562-4147

NIAGARA PARKS CONSERVATION AUTHORITY, NPCA

DARREN MACKENZIE, C.TECH., RCSI
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ONE CALL ONTARIO

HTTPS://WWW.ONTARIOONECALL.CA/

CITY OF PORT COLBORNE FOR WATER/WASTEWATER

PETER PAGET
1 KILLALY STREET W.
PORT COLBORNE, ON, CANADA L3K 6H1
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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.

ABBREVIATIONS USED:

- BD - SEDIMENT BASIN BOTTOM DEPTH (FROM GRADE LINE)
- BL - SEDIMENT BASIN LENGTH
- 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 - NOTHING
- 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
- T/C - TOP OF CONCRETE
- T/B - TOP OF BANK
- T/G - TOP OF GRATE (BOTTOM ELEV. FOR SLANT TOP)
- TL - TRANSITION LENGTH FROM CHANNEL TO SEDIMENT BASIN BOTTOM WIDTH
- 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

MICHENER MUNICIPAL DRAIN CONSTRUCTION NOTES			
 CITY OF PORT COLBORNE			
Paul C. Marsh, P.Eng. Principal Engineer EWA Engineering Inc. 84 Main Street, Unionville, Ontario L3R 2E7 416-460-2824 www.ewaeng.com			
DRAWN BY : DAC	APPROVED BY : PCM	PROJECT NO. : -	DRAWING NO. : M.CN
DESIGNED BY : PCM	DATE : 14-Apr-20	SCALE : N/A	

**Appendix B:
Specifications**

SPECIAL PROVISIONS - MUNICIPAL DRAIN

I N D E X

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	a)	Stakes	3
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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, who is further recognized as The Owner, shall be responsible party for allocation of 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 to this item.

Michener Drain

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.

A5 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.(missing is a description of where a silt fence is to be placed. How frequently across the drain.)

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 leveled 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.

Michener Drain

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 PAYMENT; For progress payment, fifty (50) percent of the lump sum price will be paid upon installation with the balance to be paid with the final payment.

A6 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 PAYMENT; Payment as a lump sum bid for this item shall be full compensation for all labour, equipment and materials necessary to meet the above requirements. Fifty (50) percent of the lump sum price will be paid on the first payment certificate. The balance will be prorated over the remainder of the working period.

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

Michener Drain

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

Michener Drain

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

Michener Drain

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.

Payment shall be as per Plan Quantity.

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.

Michener Drain

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. 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.

Payment shall be as per Plan Quantity.

C1 COMPLETION

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

PAYMENT; 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.

Michener Drain

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 C:
Cost Estimates &
Assessment Tables**

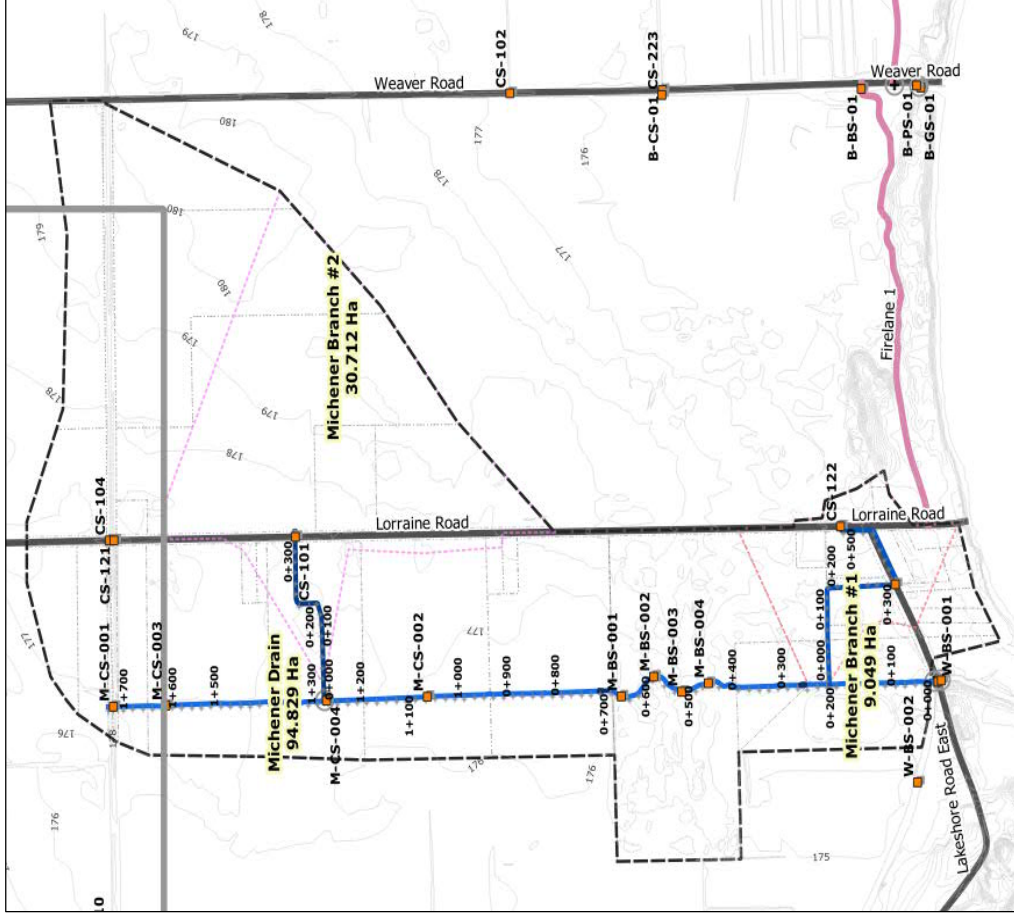
Michener Municipal Drain
City of Port Colborne
Regional Municipality of Niagara

Section 78 and Section 4 Works under the Municipal Drainage Act.

Item	Drainage Assessment	Summary Cover page	Costs
1	None Identified		
2	Estimated Construction Costs		
	Michener Branch Drain #1		\$ 30,271.50
	Michener Branch Drain #2		\$ 3,325.00
	Michener Drain		\$ 32,147.50
	Michener General Construction Costs		\$ 14,968.00
	Michener Contingency		\$ 13,148.80
		Estimated Cost of Construction	\$ 93,860.80
3	Previous Construction Works Completed but not Assessed		
	None Identified		
4	Eligible Administration Costs		
	Previous Construction, (Prior to 2018)		
	Engineering		\$ 87,990.88
	Administration Cost Allocations		\$ -
	Allocating Admin costs to each catchment for Section 23		\$ 5,915.96
	30.712 Michener Branch Drain #1		\$ 20,078.58
	94.829 Michener Branch Drain #2		\$ 61,996.34
		Administration Costs	\$ 87,990.88
5	Drain Allowances		
	Michener Branch Drain #1		\$ 5,903.25
	Michener Branch Drain #2		\$ 7,904.90
	Michener Drain		\$ 3,361.49
		Allowances	\$ 17,169.64
		Forecasted Total Drain Costs	\$ 199,021.32
6	Benefit Assessment (Section 22)		
	Michener Branch Drain #1		\$ 3,673.00
	Michener Branch Drain #2		\$ 4,845.00
	Michener Drain		\$ -
		Total - Benefit Assessment (Section 22)	\$ 8,518.00
7	Outlet Liability Assessment (Section 23)		
	Michener Branch Drain #1		\$ 29,827.28
	Michener Branch Drain #2		\$ 26,463.48
	Michener Drain		\$ 119,512.13
		Total - Outlet Liability Assessment (Section 23)	\$ 175,802.89
8	Special Benefit Assessment (Section 24)		
	Michener Branch Drain #1		\$ -
	Michener Branch Drain #2		\$ -
	Michener Drain		\$ 6,110.00
		Total - Special Benefit Assessment (Section 24)	\$ 6,110.00
9	Special Assessments (Section 26)		
	Michener Branch Drain #1		\$ 6,590.43
	City of Port Colborne		\$ 2,000.00
	Enbridge		\$ 8,590.43
	Michener Branch Drain #2		\$ 0.00
	City of Port Colborne		\$ 0.00
	Michener Drain		\$ 0.00
	City of Port Colborne		\$ 0.00
		Total - Special Assessments (Section 26)	\$ 8,590.43
			\$ 199,021.32

10 Drain Assessment Summary Table

Prepared by: _____
Dated: _____
Assessment Schedule Balance: _____
Paul C. Marsh, P.Eng.



Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Proposed Construction - Cost Estimate

Michener Branch #1

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M1-11	0+000	0+177	Remove Vegetation, Clear and Grade to Design Grade Line	Perform work from the South Side	Linear	177	\$15		\$ 2,655.00	
M1-12	0+177		Catch Basin, CB-01 Construct to Grade and match outlet with grate to channel		Lump Sum			1	\$ 2,200.00	\$ 2,200.00
M1-13	0+177	0+305	Combined Swale and 150mm Perforated PE Drainage Pipe		Linear	67	\$ 45.00		\$ 3,015.00	
M1-14	0+305	0+305	Catch Basin, CB-02		Lump Sum			1	\$ 1,850.00	\$ 1,850.00
M1-15	0+302		Enbridge Gas Line Protection during construction and lowering if required.		Lump Sum			1	\$ 2,000.00	\$ 2,000.00
M1-16	0+305	0+323.8	400mm Drainage Pipe, CSA 182.2-11 (existing) 200mm PE Tile with Sock	Crossing Lakeshore Rd. E (already installed no cost estimate shown); Tile crossing from CB-02 to CBDI-03	Linear	18.8	\$ 55.00	1	\$ 750.00	\$ 1,784.00
M1-17	0+323.8		CBDI-03, Ditch Inlet with GA bar screen as per OPSD 403.010		Lump Sum			1	\$ 2,050.00	\$ 2,050.00
M1-18	0+049	0+109	150mm Perforated PE Drainage Pipe	excludes ROW re-grading by CofPC		60	\$ 45.00		\$ 2,700.00	\$ 2,700.00
M1-19	0+049		CO-06, PE Clean out access chamber with Dome Drain for cleaning access.		Lump Sum			1	\$ 1,500.00	\$ 1,500.00
M1-20	0+109	0+223	150mm Perforated PE Drainage Pipe	Excludes ROW re-grading by CofPC		114	\$ 45.00		\$ 5,130.00	Road edge backfill with non-shrink material.
M1-21	0+233		Catch Basin, CB-04		Lump Sum			1	\$ 2,000.00	\$ 2,000.00
M1-22	0+233	0+244.5	150mm Perforated PE Drainage Pipe	Crossing Lakeshore Rd. E Tile crossing		11.5	\$ 55.00	1	\$ 750.00	\$ 1,382.50
M1-23	0+244.5		DI-03, Ditch Inlet with grate	Rip Rap end treatment with grate	Lump Sum			1	\$ 1,000.00	\$ 1,000.00
M1-24	0-177	0+244	Remove Vegetation, Clear working zone	As - directed by Drainage superintendent. Re-seeding to original or better.	Linear	67	\$ 15.00		\$ 1,005.00	re-grade excess material from trenching.
M1-25			Road side swales re-grading						\$ -	Cost covered by CofPC.

SubTotal for: Michener Branch #1 \$ 30,271.50

Michener Branch #2

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M2-3	0+000	0+125	Remove Vegetation, Clear and Grade to Design Grade Line	Perform work from the North side	Linear	125	\$ 15.00		\$ 1,875.00	
M2-4	0+125	0+200	existing channel and pond to remain as is.		No cost					
M2-5	0+200	0+345	Selective Vegetation removal and bank stablization.	Spot removals from South side	Linear	145	\$ 10.00		\$ 1,450.00	

SubTotal for: Michener Branch #2 \$ 3,325.00

Michener Drain

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M-1	1+286	1+710	Remove Vegetation, Clean and Grade to Design Grade Line	Perform work from the East side of the Drain.	Linear	424			\$ 6,360.00	
	1+612		Re-place existing culvert	M-CS-003, existing culvert to be improved by replacement.	Lump Sum		1	\$ 1,500.00	\$ 1,500.00	
M-2	0+690	1+286	Remove Vegetation, Clean and Grade to Design Grade Line	Perform work from the East side of the Drain.	Linear	591			\$ 8,865.00	
M-6a	0+700	0+710	Construct Farm Crossing culvert.	This is a combination flow detention berm and farm crossing. The culvert is sized to pass the 1 year design flow while detaining higher flows to then overflow the crossing as a broad crested weir.	Lump Sum		1	\$ 2,500.00	\$ 2,500.00	
M-6a	0+710		Construct Sediment Basin upstream of culvert	Remove material and dispose by spreading adjacent to the drain. Sediment Basin constructed in coordination with culvert crossing and prior to commencing work upstream.	per m + per m2	8	40	\$ 55.00	\$ 2,600.00	
M-7	0+407.5	0+690	Re-store Grade to design Grade Line		Linear	282.5			\$ 4,237.50	
M-8	0+593		Replace ex. Culvert with properly sized 750mm 2W smooth PE culvert - 3m	M-BS-002 replace with new.	Lump Sum		1	\$ 1,500.00	\$ 1,500.00	
M-9	0+260	0+250	Construct Sediment Basin at STA 2+400 as per Design and GD-10.	Remove material and dispose by spreading adjacent to the drain. Sediment Basin constructed prior to commencing work upstream.	per m + per m2	10	52	\$ 55.00	\$ 3,360.00	
M-10	0+000	0+075	Spot tree removal	Remove between top of bank to top of bank that are reducing outlet flow.	each		35	\$ 35.00	\$ 1,225.00	

SubTotal for: Cost ID: \$ 32,147.50

Construction Mgmt Michener Drain

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
			Bonding	Construction Security	% of Constr \$				\$ 1,972.32	
			Environmental Management - Compliance with legislative requirements	Preparation of Environmental Management Plan - Exclusions for SAR incidents that require on site expertise.	Lump Sum				\$ 2,500.00	Program budget - actual cost will vary
			Erosion Control During construction - including conversion of sediment ponds to permanent drain features		Lump Sum				\$ 3,500.00	Program budget - actual cost will vary
			Construction Management	Traffic Control, Layout, and all compliance items for submission on construction startup.	% of Constr \$				\$ 8,218.00	Budget, 12.5% of construction
			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		15	50	\$ 750.00	Program budget - actual cost will vary

SubTotal for: Construction Mgmt Michener Drain \$ 14,968.00

SubTotal for: Michener Drain \$ 80,712.00

Contingency Allowance, (20%) \$ 13,148.80

Cost of Construction: \$ 93,860.80

Michener Municipal Drain
City of Port Colborne
Regional Municipality of Niagara

Administration Costs

Categories	Costs	Cost Items	Sub-totals, \$	Totals, \$
			Area, Ha	Area Ratio
		Michener Drain Area	135	12.02%
		Port Colborne Drain Area	345	30.78%
		Wignell Drain Area	641	57.20%
			1120	
ADMINISTRATION				
	Interim Financing Allowance			0
	Legal and Permitting Fees			0
	Expenses, where applicable			0
	Applicable Taxes			0
	Total - ADMINISTRATION		\$	-
ENGINEERING				
	Preliminary Design and Report			0
	Survey, Design, Plans, Engineer's Report and Assessment Schedule (Wiebe)*1			
		Survey; \$8,342.93	\$ 1,002.81	
		Report Preparation; \$83,533.94	\$ 10,040.66	
	Survey, Design, Plans, Engineer's Report (AMEC)*2			
		3-561-33229; 2012 to 2014; \$67,147.23	\$ 8,071.00	
	Survey, Design, Plans, Engineer's Report and Assessment Schedule (EWA)			
		Design Services	\$ 45,480.00	
		Change Orders	\$ 13,948.00	
		Portion of Expenses	\$ 1,514.04	
		Portion of Project Mgmt	\$ 4,434.38	
	Sub-total: Survey, Design, Plans, Engineer's Report and Assessment Schedule (EWA)		\$	84,490.88
	Tribunal Costs (not estimated and assumed to be zero)			0
	Tendering, and contract agreements (estimated)		\$	3,500.00
	Total - ENGINEERING		\$	87,990.88
TOTAL ADMINISTRATION AND ENGINEERING			\$	87,990.88

*1 Wiebe Engineering was appointed as the Drainage Engineer by Council with an approved budget. The firm declared bankruptcy after having been paid for a portion of the work. This is the amount originally paid and not recovered.

*2 AMEC was appointed as the Drainage Engineer by Council in 2013, assuming work already completed by Wiebe and with an approved budget. After having been paid for 70% of the work, the company refused to complete the project without additional funds being allocated. The contract was cancelled. This is the fee for service paid for partially completed work on the drain.

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Allowances
 Michener Branch #1

Owner	Legal Text	Roll No	ARN ABBREV	Area Ha	Land and Rights of Way		Work Zone			Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances		
					Length m	Top Width	Section 29 Allowance Area, Ha	Section 29 Allowance \$	Work Access \$	Length m	Section 30 Allowance Area, Ha	Section 30 Allowance \$	From STN	To STN	Length, m	Section 31 Allowance		Section 32 Allowance \$	Section 33 Allowance \$
																\$			
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	404700	2.176	97.0	2.50	0.0243	\$ 599.23	\$ -	135.0	0.135	0			95.6	\$ 478.00			\$1,077.23
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.201	126.0	3.00	0.0378	\$ 934.06	\$ 311.35	126.0	0.126	0			126	\$ 630.00			\$1,875.41
					69.0	2.65	0.0183	\$ 451.83	\$ 170.50	69.0	0.069	0			69	\$ 345.00			\$967.33
City of Port Colborne	Lakeshore Rd. East ROW		ROW	ROW	0.556						0.000	0				\$ -			\$0.00
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848	0.0	0.00	0.0000	\$ -		0.0	0.000	\$ -			0	\$ -			\$0.00
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	0.729	80.0	3.00	0.0240	\$ 593.05	\$ 197.68	80.0	0.080	0			80	\$ 800			\$1,590.74
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	318100	0.560			0.0000				0.000	0				\$ -			\$0.00
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	417902	0.517			0.0000					0				\$ -			\$0.00
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	404601	0.405			0.0000					0				\$ -			\$0.00
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357			0.0000					0				\$ -			\$0.00
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.295			0.0000					0				\$ -			\$0.00
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	314500	0.289			0.0000					0				\$ -			\$0.00
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.205	28.0	2.65	0.0074	\$ 183.35	\$ 69.19	28.0	0.028	0			28	\$ 140			\$392.54
WEEBADUARACHHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.134			0.0000					0				\$ -			\$0.00
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	400101	0.122			0.0000					0				\$ -			\$0.00
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071			0.0000					0				\$ -			\$0.00
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.042			0.0000					0				\$ -			\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	0.012			0.0000					0				\$ -			\$0.00
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.000			0.0000					0				\$ -			\$0.00
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW		0.689								0				\$ -			\$0.00
				8.519					\$ 3,510.25			\$ -			\$ 2,393.00	\$ -	\$ -	\$ -	\$5,903.25

Michener Branch #2

Owner	Legal Text	Roll No	ARN ABBREV	Area Ha	Land and Rights of Way		Work Zone			Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances		
					Length m	Top Width	Section 29 Allowance Area, Ha	Section 29 Allowance \$	Work Access \$	Length m	Section 30 Allowance Area, Ha	Section 30 Allowance \$	From STN	To STN	Length, m	Section 31 Allowance		Section 32 Allowance \$	Section 33 Allowance \$
																\$			
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.108								0							\$0.00
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	3.545								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	2.799	337.0	1.900	0.0640	\$ 1,582.21	\$ 931.59	377	0.377	\$ 1,621.10	0	377	377	\$ 3,770			\$7,904.90
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431								0							\$0.00
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	14.499								0							\$0.00
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	ROW	1.380								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	0.554								0							\$0.00
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.154								0							\$0.00
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.096								0							\$0.00
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	314700	0.075								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	405000	0.058								0							\$0.00
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	0.012								0							\$0.00
				30.712					\$ 2,513.80			\$ 1,621.10			\$ 3,770.00	\$ -	\$ -	\$ -	\$7,904.90

Michener Drain

* Section 30 Allowance for damages are based on construction impacts (damages) to cultivated fields only. Actual allowance to be calculated by site impact post construction.

Owner	Legal Text	Roll No	Land and Rights of Way			Work Zone		Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances
			ARN	Area	Length	Top Width	Section 29 Allowance	Work Access	Length	Section 30 Allowance	Section 31 Allowance	Section 32 Allowance	Section 33 Allowance		
			ABBREV	Ha										Area, Ha	
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071											\$0.00
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26:NP778	271104000314500	314500	0.289											\$0.00
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	12.371											\$0.00
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	314700	3.874											\$0.00
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	315000	5.156											\$0.00
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	317825	2.719											\$0.00
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	317850	0.406											\$0.00
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	17.369											\$0.00
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431											\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.120											\$0.00
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	318100	0.560											\$0.00
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.357											\$0.00
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	400101	0.532											\$0.00
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.512											\$0.00
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357											\$0.00
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.383											\$0.00
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRTS 2 & 3	271104000400305	400305	0.382											\$0.00
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.413											\$0.00
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	404300	0.000											\$0.00
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	404301	4.787	403.5	5.0	0.202	\$ 498.53	403.5	0.000	\$0.00				\$498.53
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	3.067											\$0.00
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.442											\$0.00
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.220											\$0.00
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848											\$0.00
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	404601	0.405											\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	404700	18.764	287.8	5.0	0.144	\$ 355.58	287.8	0.000	\$0.00				\$355.58
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	404800	9.586	251.7	5.0	0.126	\$ 310.98	251.7	0.252	\$310.98				\$621.96
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	404900	0.316				\$ -							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	405000	0.347				\$ -							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	10.514	259	5.0	0.130	\$ 320.00	259	0.259	\$320.00				\$640.00
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	7.756	193.5	5.0	0.097	\$ 239.07	193.5	0.194	\$239.07				\$478.15
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.236				\$ -							\$0.00
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.340				\$ -							\$0.00
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	9.204	249.5	5.0	0.125	\$ 308.26	249.5	0.250	\$308.26				\$616.53
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.300	61	5.0	0.031	\$ 75.37	61	0.061	\$75.37				\$150.73
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.026											\$0.00
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	405700	2.285											\$0.00
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	417902	0.580											\$0.00
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	1.599											\$0.00
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	0.688											\$0.00
City of Port Colborne	Lorraine Rd. from Lake to Killaly St. East	Lorraine Rd. ROW		3.250											\$0.00
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW		0.563											\$0.00
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW		0.121											\$0.00
			111.590					\$2,107.81			\$1,253.69				\$3,361.49

Drain Allowance Total \$17,169.64

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

23.3
 2 yr avg. Intensity
 for a 1 hour storm

Section 23 Outlet Benefit / Outlet Liability

Owner	Legal Text	Roll No	ARN		Soil Type	Gradient	Land Factor	Runoff Factor				ORF Ratio	Michener	ORF Ratio	Michener	ORF Ratio	Michener Drain	Total Section 23		
			ABBREV	Area				'C'	ORF	SWM	SWMF		ORF-SWMF		Branch #1		Branch #2		\$	Assessment
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP:59R8112 PAR	271104000404700	404700	2.176	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	25	3.55	0	0	3.55	0.2044	\$	6,096		\$	6,096		
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.201	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	1.57	0	0	1.57	0.0902	\$	2,691		\$	2,691		
City of Port Colborne	Lakeshore Rd. East ROW	ROW	ROW	0.556	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	ROW - paved 2 lane	85	3.08	0	0	3.08	0.1775	\$	5,295		\$	5,295		
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.83	0	0	0.83	0.0478	\$	1,424		\$	1,424		
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	0.729	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.95	0	0	0.95	0.0548	\$	1,634		\$	1,634		
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493:PART 1	271104000318100	318100	0.560	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.73	0	0	0.73	0.0421	\$	1,255		\$	1,255		
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013:PART 1	271104000417902	417902	0.517	NM - Sandy well drained	0.20%	LAND	12	0.41	0	0	0.41	0.0233	\$	696		\$	696		
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790:PART 1	271104000404601	404601	0.405	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.40	0	0	0.40	0.0228	\$	680		\$	680		
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357	NM - Sandy well drained	0.20%	LAND	12	0.28	0	0	0.28	0.0161	\$	480		\$	480		
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.295	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.38	0	0	0.38	0.0221	\$	661		\$	661		
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26:NP778	271104000314500	314500	0.289	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.38	0	0	0.38	0.0217	\$	647		\$	647		
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.205	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.27	0	0	0.27	0.0154	\$	460		\$	460		
WEEBADUARACHHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.134	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.17	0	0	0.17	0.0101	\$	300		\$	300		
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21:PT WATER LOT	271104000400101	400101	0.122	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.16	0	0	0.16	0.0091	\$	273		\$	273		
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.09	0	0	0.09	0.0053	\$	159		\$	159		
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.042	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.05	0	0	0.05	0.0032	\$	94		\$	94		
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	0.012	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	25	0.02	0	0	0.02	0.0011	\$	33		\$	33		
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.000	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.00	0	0	0.00	0.0000	\$	1		\$	1		
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW		0.689		0.20%		90	4.05	0	0	4.05	0.2329	\$	6,948		\$	6,948		
				9.208					17.37	0.00	0.00	17.37	1.00	\$	29,827					
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.108	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	COMMERCIAL	17	5.67	0	0	5.67				0.0861	\$	2,278	\$	2,278
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	3.545	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	35	8.09	0	0	8.09				0.1230	\$	3,255	\$	3,255
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	2.799	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	35	6.39	0	0	6.39				0.0971	\$	2,570	\$	2,570
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	45	7.14	0	0	7.14				0.1085	\$	2,871	\$	2,871
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	14.499	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	30	28.38	0	0	28.38				0.4312	\$	11,412	\$	11,412
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	ROW	1.380	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	ROW - paved 2 lane	90	8.10	0	0	8.10				0.1231	\$	3,258	\$	3,258
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	0.554	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	28	1.01	0	0	1.01				0.0154	\$	407	\$	407
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.154	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	0.45	0	0	0.45				0.0069	\$	182	\$	182
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.096	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	0.28	0	0	0.28				0.0043	\$	114	\$	114
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136:PARTS 1 AND	271104000314700	314700	0.075	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	30	0.15	0	0	0.15				0.0022	\$	59	\$	59
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448:PART 1	271104000405000	405000	0.058	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	LAND	28	0.11	0	0	0.11				0.0016	\$	43	\$	43
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	0.012	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	45	0.04	0	0	0.04				0.0005	\$	14	\$	14
				30.712					65.80	0.00	0.00	65.80				1.00	\$	26,463		

Owner	Legal Text	Roll No	ARN		Soil Type	Gradient	Land Factor	Runoff Factor				QRF Ratio	Michener		QRF Ratio	Michener Drain	Total Section 23 Assessment		
			ABBREV	Area Ha				'C'	QRF	SWM	SWMF		QRF-SWMF	Branch #1				Branch #2	
													\$ 29,827.28	\$ 26,463.48		\$ 119,512.13			
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	35	0.16	0	0	0.16			0.0005	\$ 57	\$ 57		
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26:NP778	271104000314500	314500	0.289	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	35	0.66	0	0	0.66			0.0019	\$ 229	\$ 229		
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	12.371	NM - Sandy well drained	0.20%	FARM	35	28.25	0	0	28.25			0.0822	\$ 9,828	\$ 9,828		
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	314700	3.874	NM - Sandy well drained	0.20%	FARM	35	8.85	0	0	8.85			0.0257	\$ 3,077	\$ 3,077		
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	315000	5.156	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	37	12.45	0	0	12.45			0.0362	\$ 4,331	\$ 4,331		
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	317825	2.719	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	FARM	37	6.56	0	0	6.56			0.0191	\$ 2,284	\$ 2,284		
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	317850	0.406	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	37	0.98	0	0	0.98			0.0029	\$ 341	\$ 341		
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	17.369	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	35	39.66	0	0	39.66			0.1155	\$ 13,798	\$ 13,798		
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	30	4.76	0	0	4.76			0.0139	\$ 1,656	\$ 1,656		
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.120	NM - Sandy well drained	0.20%	COMMERCIAL	28	9.35	0	0	9.35			0.0272	\$ 3,254	\$ 3,254		
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	318100	0.560	NM - Sandy well drained	0.20%	RESIDENTIAL	28	1.02	0	0	1.02			0.0030	\$ 356	\$ 356		
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT:RP 59R5808	271104000400100	400100	0.357	NM - Sandy well drained	0.20%	RESIDENTIAL	28	0.65	0	0	0.65			0.0019	\$ 227	\$ 227		
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	400101	0.532	NM - Sandy well drained	0.20%	RESIDENTIAL	28	0.97	0	0	0.97			0.0028	\$ 338	\$ 338		
WEEBADUARACHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT:RP 59R5808	271104000400102	400102	0.512	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	32	1.07	0	0	1.07			0.0031	\$ 372	\$ 372		
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357	NM - Sandy well drained	0.20%	LAND	28	0.65	0	0	0.65			0.0019	\$ 227	\$ 227		
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.383	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	65	1.62	0	0	1.62			0.0047	\$ 565	\$ 565		
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R:9880 PRS 2 & 3	271104000400305	400305	0.382	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	65	1.62	0	0	1.62			0.0047	\$ 563	\$ 563		
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.413	Welland (WLL) - mainly reddish-hued lacustrine heavy clay - Poor Drainage - Orthic Humic Gleysol / Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	45	1.21	0	0	1.21			0.0035	\$ 422	\$ 422		
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22:RP 59R13926A	271104000404300	404300	0.000	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	45	0.00	0	0	0.00			0.0000	\$ 0	\$ 0		
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	404301	4.787	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	45	14.05	0	0	14.05			0.0409	\$ 4,889	\$ 4,889		
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	3.067	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	9.00	0	0	9.00			0.0262	\$ 3,132	\$ 3,132		
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.442	Welland (WLL) - mainly reddish-hued lacustrine heavy clay - Poor Drainage - Orthic Humic Gleysol	0.20%	RESIDENTIAL	40	1.15	0	0	1.15			0.0034	\$ 401	\$ 401		
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.220	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	35	2.79	0	0	2.79			0.0081	\$ 969	\$ 969		
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	35	1.94	0	0	1.94			0.0056	\$ 673	\$ 673		
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	404601	0.405	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	1.19	0	0	1.19			0.0035	\$ 413	\$ 413		
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP:59R8112 PAR	271104000404700	404700	18.764	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	37	45.30	0	0	45.30			0.1319	\$ 15,759	\$ 15,759		
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	404800	9.586	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	45	28.14	0	0	28.14			0.0819	\$ 9,792	\$ 9,792		
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	404900	0.316	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	0.93	0	0	0.93			0.0027	\$ 323	\$ 323		
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	405000	0.347	Chinguacousy (CGU4) - Mainly clay loam till - Imperfect draining - Gleyed Brunisolic Gray Brown Luvisol	0.20%	LAND	45	1.02	0	0	1.02			0.0030	\$ 355	\$ 355		
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	10.514	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	45	30.87	0	0	30.87			0.0899	\$ 10,739	\$ 10,739		
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	7.756	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	37	18.72	0	0	18.72			0.0545	\$ 6,513	\$ 6,513		
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.236	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	37	0.57	0	0	0.57			0.0017	\$ 198	\$ 198		
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.340	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	37	0.82	0	0	0.82			0.0024	\$ 286	\$ 286		
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	9.204	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	37	22.22	0	0	22.22			0.0647	\$ 7,730	\$ 7,730		
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.300	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	37	5.55	0	0	5.55			0.0162	\$ 1,931	\$ 1,931		
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.026	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	37	4.89	0	0	4.89			0.0142	\$ 1,702	\$ 1,702		
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	405700	2.285	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	37	5.52	0	0	5.52			0.0161	\$ 1,919	\$ 1,919		
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	417902	0.580	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	37	1.40	0	0	1.40			0.0041	\$ 487	\$ 487		
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	1.599	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	INDUSTRIAL	37	3.86	0	0	3.86			0.0112	\$ 1,343	\$ 1,343		
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	0.688	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	INDUSTRIAL	37	1.66	0	0	1.66			0.0048	\$ 578	\$ 578		
City of Port Colborne	Lorraine Rd. from Lake to Killaly St. East	Lorraine Rd. ROW		3.250		0.20%		83	17.60	0	0	17.60			0.0512	\$ 6,122	\$ 6,122		
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW		0.563		0.20%		84	3.08	0	0	3.08			0.0090	\$ 1,073	\$ 1,073		
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW		0.121		0.20%		95	0.75	0	0	0.75			0.0022	\$ 261	\$ 261		
				134.55													343.51		
				134.59															
																	1.0000	\$ 119,512	\$ 175,803
																	\$	175,803	

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Drain Assessment Summary Table

Benefits realized from drainage improvements 23(1) Outlet Liability for right of drainage.
 23(2) Injuring liability of discharge Additional works or features above the base functioning of the Drain System Roads & Utilities assessed the actual cost of additional works.

Michener Branch #1

Owner	Legal Text	Roll No	Area Ha	Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Special Assessment Section 26	Total Assessment	Total Allowance	Net
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	2.176	\$237.50	\$6,096.20	\$0.00	\$0.00	\$6,333.70	\$1,077.23	\$5,256.47
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.201	\$975.00	\$2,691.00	\$0.00	\$0.00	\$3,666.00	\$2,842.74	\$823.26
City of Port Colborne	Lakeshore Rd. East ROW	ROW	0.556	\$535.00	\$5,294.96	\$0.00	\$6,590.43	\$12,420.38	\$0.00	\$12,420.38
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	\$430.50	\$1,424.32	\$0.00	\$0.00	\$1,854.82	\$0.00	\$1,854.82
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	0.729	\$200.00	\$1,634.46	\$0.00	\$0.00	\$1,834.46	\$1,590.74	\$243.73
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	\$0.00	\$1,255.02	\$0.00	\$0.00	\$1,255.02	\$0.00	\$1,255.02
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.517	\$0.00	\$695.64	\$0.00	\$0.00	\$695.64	\$0.00	\$695.64
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	\$45.00	\$680.10	\$0.00	\$0.00	\$725.10	\$0.00	\$725.10
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	\$280.00	\$479.76	\$0.00	\$0.00	\$759.76	\$0.00	\$759.76
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.295	\$0.00	\$660.60	\$0.00	\$0.00	\$660.60	\$0.00	\$660.60
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	\$0.00	\$647.01	\$0.00	\$0.00	\$647.01	\$0.00	\$647.01
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.205	\$70.00	\$459.96	\$0.00	\$0.00	\$529.96	\$392.54	\$137.42
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.134	\$82.50	\$300.46	\$0.00	\$0.00	\$382.96	\$0.00	\$382.96
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.122	\$37.50	\$272.75	\$0.00	\$0.00	\$310.25	\$0.00	\$310.25
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	\$150.00	\$159.39	\$0.00	\$0.00	\$309.39	\$0.00	\$309.39
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.042	\$22.50	\$94.24	\$0.00	\$0.00	\$116.74	\$0.00	\$116.74
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	0.012	\$0.00	\$33.13	\$0.00	\$0.00	\$33.13	\$0.00	\$33.13
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.000	\$0.00	\$0.75	\$0.00	\$0.00	\$0.75	\$0.00	\$0.75
City of Port Colborne Enbridge	Lorraine Rd. ROW	Lorraine Rd. ROW	0.689	\$607.50	\$6,947.53	\$0.00	\$0.00	\$7,555.03	\$0.00	\$7,555.03
							\$2,000.00	\$2,000.00		\$2,000.00
				\$3,065.50	\$22,879.76	\$0.00	\$8,590.43	\$42,090.71	\$5,903.25	\$36,187.46

Michener Branch #2

WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.108	\$0.00	\$2,278.34	\$0.00	\$0.00	\$2,278.34	\$0.00	\$2,278.34
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	3.545	\$0.00	\$3,255.29	\$0.00	\$0.00	\$3,255.29	\$0.00	\$3,255.29
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	2.799	\$845.00	\$2,570.32	\$0.00	\$0.00	\$3,415.32	\$7,904.90	-\$4,489.58
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	\$0.00	\$2,870.63	\$0.00	\$0.00	\$2,870.63	\$0.00	\$2,870.63
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	14.499	\$0.00	\$11,411.96	\$0.00	\$0.00	\$11,411.96	\$0.00	\$11,411.96
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	1.380	\$4,000.00	\$3,257.92	\$0.00	\$0.00	\$7,257.92	\$0.00	\$7,257.92
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	0.554	\$0.00	\$407.12	\$0.00	\$0.00	\$407.12	\$0.00	\$407.12
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.154	\$0.00	\$181.95	\$0.00	\$0.00	\$181.95	\$0.00	\$181.95
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.096	\$0.00	\$113.61	\$0.00	\$0.00	\$113.61	\$0.00	\$113.61
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	0.075	\$0.00	\$59.15	\$0.00	\$0.00	\$59.15	\$0.00	\$59.15
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.058	\$0.00	\$42.93	\$0.00	\$0.00	\$42.93	\$0.00	\$42.93
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	0.012	\$0.00	\$14.26	\$0.00	\$0.00	\$14.26	\$0.00	\$14.26
				\$4,845.00	\$26,463.48	\$0.00	\$0.00	\$31,308.48	\$7,904.90	\$23,403.58

Owner	Legal Text	Roll No	Area Ha	Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Special Assessment Section 26	Total Assessment	Total Allowance	Net
Michener Drain										
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.07	\$0.00	\$56.51	\$0.00		\$56.51	\$0.00	\$56.51
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.29	\$0.00	\$229.39	\$0.00		\$229.39	\$0.00	\$229.39
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	12.37	\$0.00	\$9,827.62	\$0.00		\$9,827.62	\$0.00	\$9,827.62
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	3.87	\$0.00	\$3,077.43	\$0.00		\$3,077.43	\$0.00	\$3,077.43
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	5.16	\$0.00	\$4,330.51	\$0.00		\$4,330.51	\$0.00	\$4,330.51
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	2.72	\$0.00	\$2,283.72	\$0.00		\$2,283.72	\$0.00	\$2,283.72
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	0.41	\$0.00	\$340.77	\$0.00		\$340.77	\$0.00	\$340.77
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	17.37	\$0.00	\$13,798.07	\$0.00		\$13,798.07	\$0.00	\$13,798.07
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.43	\$0.00	\$1,655.63	\$0.00		\$1,655.63	\$0.00	\$1,655.63
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.12	\$0.00	\$3,253.93	\$0.00		\$3,253.93	\$0.00	\$3,253.93
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.56	\$0.00	\$355.95	\$0.00		\$355.95	\$0.00	\$355.95
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.36	\$0.00	\$226.97	\$0.00		\$226.97	\$0.00	\$226.97
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.53	\$0.00	\$338.24	\$0.00		\$338.24	\$0.00	\$338.24
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.51	\$0.00	\$372.04	\$0.00		\$372.04	\$0.00	\$372.04
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.36	\$0.00	\$226.78	\$0.00		\$226.78	\$0.00	\$226.78
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.38	\$0.00	\$565.02	\$0.00		\$565.02	\$0.00	\$565.02
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRTS 2 & 3	271104000400305	0.38	\$0.00	\$563.01	\$0.00		\$563.01	\$0.00	\$563.01
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.41	\$0.00	\$421.91	\$0.00		\$421.91	\$0.00	\$421.91
								\$0.35		\$0.35
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	0.00	\$0.00	\$0.35	\$0.00		\$0.35	\$0.00	\$0.35
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	4.79	\$0.00	\$4,889.09	\$0.00		\$4,889.09	\$498.53	\$4,390.55
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	3.07	\$0.00	\$3,132.24	\$0.00		\$3,132.24	\$0.00	\$3,132.24
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.44	\$0.00	\$400.99	\$0.00		\$400.99	\$0.00	\$400.99
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.22	\$0.00	\$969.43	\$0.00		\$969.43	\$0.00	\$969.43
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.85	\$0.00	\$673.28	\$0.00		\$673.28	\$0.00	\$673.28
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.40	\$0.00	\$413.34	\$0.00		\$413.34	\$0.00	\$413.34
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	18.76	\$0.00	\$15,758.71	\$4,110.00		\$19,868.71	\$355.58	\$19,513.13
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	9.59	\$0.00	\$9,791.54	\$1,250.00		\$11,041.54	\$621.96	\$10,419.57
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	0.32	\$0.00	\$322.57	\$0.00		\$322.57	\$0.00	\$322.57
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.35	\$0.00	\$354.83	\$0.00		\$354.83	\$0.00	\$354.83
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	10.51	\$0.00	\$10,739.09	\$0.00		\$10,739.09	\$640.00	\$10,099.09
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	7.76	\$0.00	\$6,513.21	\$0.00		\$6,513.21	\$478.15	\$6,035.06
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.24	\$0.00	\$198.39	\$0.00		\$198.39	\$0.00	\$198.39
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.34	\$0.00	\$285.60	\$0.00		\$285.60	\$0.00	\$285.60
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	9.20	\$0.00	\$7,730.08	\$750.00		\$8,480.08	\$616.53	\$7,863.55
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.30	\$0.00	\$1,931.27	\$0.00		\$1,931.27	\$150.73	\$1,780.54
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.03	\$0.00	\$1,701.64	\$0.00		\$1,701.64	\$0.00	\$1,701.64
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	2.28	\$0.00	\$1,918.87	\$0.00		\$1,918.87	\$0.00	\$1,918.87
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.58	\$0.00	\$487.41	\$0.00		\$487.41	\$0.00	\$487.41
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	1.60	\$0.00	\$1,342.85	\$0.00		\$1,342.85	\$0.00	\$1,342.85
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	0.69	\$0.00	\$578.02	\$0.00		\$578.02	\$0.00	\$578.02
City of Port Colborne	Lorraine Rd. from Lake to Killaly St. East	Lorraine Rd. ROW	3.25	\$0.00	\$6,122.37	\$0.00		\$6,122.37	\$0.00	\$6,122.37
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW	0.56	\$0.00	\$1,072.56	\$0.00		\$1,072.56	\$0.00	\$1,072.56
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW	0.12	\$0.00	\$260.91	\$0.00		\$260.91	\$0.00	\$260.91
				\$0.00	\$119,512.13	\$6,110.00	\$0.00	\$125,622.13	\$3,361.49	\$122,260.64

Appendix D:
Supplementary Information

**City of Port Colborne
Regular Council Meeting 18-18
Minutes**

Date: July 23, 2018
Time: 7:32 p.m.
Place: Council Chambers, Municipal Offices, 66 Charlotte Street, Port Colborne

Members Present: R. Bodner, Councillor
B. Butters, Councillor
F. Danch, Councillor
A. Desmarais, Councillor
D. Elliott, Councillor
B. Kenny, Councillor
J. Maloney, Mayor (presiding officer)

Absent: Y. Doucet, Councillor (due to vacation)
J. Mayne, Councillor (leave of absence)

Staff Present: D. Aquilina, Director of Planning and Development
T. Cartwright, Fire Chief
A. Grigg, Director of Community and Economic Development
N. Halasz, Manager of Parks and Recreation
A. LaPointe, Manager of Legislative Services/City Clerk (minutes)
C. Lee, Director of Engineering and Operations
S. Luey, Chief Administrative Officer
P. Senese, Director of Corporate Services

Also in attendance were interested citizens, members of the news media and WeeStream.

1. Call to Order:

Mayor Maloney called the meeting to order.

2. Introduction of Addendum Items:

Nil.

3. Confirmation of Agenda:

No. 110 Moved by Councillor R. Bodner
Seconded by Councillor A. Desmarais

That the agenda dated July 23, 2018 be confirmed, as circulated
or as amended.

CARRIED.

4. Disclosures of Interest:

Nil.

5. Adoption of Minutes:

No. 111 Moved by Councillor B. Kenny
Seconded by Councillor A. Desmarais

- (a) That the minutes of the special meeting of Council 16-18, July 9, 2018, be approved as presented.
- (b) That the minutes of the regular meeting of Council 17-18, July 9, 2017, be approved as presented.

CARRIED.

6. Determination of Items Requiring Separate Discussion:

Nil.

7. Approval of Items Not Requiring Separate Discussion:

No. 112 Moved by Councillor F. Danch
 Seconded by Councillor B. Butters

That items 1 to 7 on the agenda be approved, with the exception of items that have been deferred, deleted or listed for separate discussion, and the recommendation contained therein adopted.

Motions Arising from Committee of the Whole Meeting Delegations:

Dianna M. Carle regarding a request for an exemption to By-law 1117/64/81, Section 3.2.2 for 1056 Steele Street to Allow for a Second Curb/Driveway Cut

Council resolved:

That an exemption of By-law 1117/64/81, Section 3.2.2, for 1056 Steele Street be granted to allow for a second curb cut and driveway.

Items:

1. Planning and Development Department, Planning Division, Report 2018-105, Subject: Recommendation Report for Official Plan Amendment D09-01-18 & Zoning By-law Amendment D14-02-18, n/s Killaly Street West

Council resolved:

That the Official Plan Amendment attached to Planning and Development Department, Planning Division Report 2018-105 as Appendix A be approved, adding a special policy to the Highway Commercial designation to support the use of warehousing on the property; and

That the Zoning By-law Amendment attached to Planning and Development Department, Planning Division Report 2018-105 as Appendix B be approved, rezoning the land from "HC – Highway Commercial" to "HC-48"; and

That staff be directed to prepare the Notice of Passing in accordance with the Planning Act and circulate to all applicable parties; and

That the Director of Planning and Development be directed to present for Council's consideration a report and the proposed site plan of the warehousing facility.

2. Engineering and Operations Department, Engineering Division, Report 2018-103, Subject: Wignell, Michener, Port Colborne and Beaverdam Municipal Drains Engineer Appointment

Council resolved:

That the appointment of Paul Smeltzer P. Eng. of AMEC(FW) be rescinded as per Section 39(2) Chapter D.17 of the *Drainage Act R.S.O. 1990*; and

That Paul Marsh P. Eng. of EWA Engineers Inc. be appointed under Section 78(1) Chapter D.17 of the *Drainage Act R.S.O. 1990*, and that this appointment become effective once the conditions of Section 78(2) have been met; and

That staff be authorized to execute a petition under Section 4 Chapter D.17 of the *Drainage Act R.S.O. 1990* to initiate/incorporate any new works related to municipal roads and/or property; and

That Paul Marsh P. Eng. of EWA Engineers Inc., be appointed under Section 8 Chapter D.17 of the *Drainage Act R.S.O. 1990* for the new works contemplated and any additional petitions under Section 4, related to the Wignell, Michener Port Colborne and Beaver Dam Drains, that may come forward during the Drainage Act process; and

That the Mayor and Clerk be authorized to sign the requisite Engineering Services Agreement for the preparation of new engineer(s) reports for the Wignell, Michener, Port Colborne and Beaverdam Municipal Drains.

**3. Corporate Services Department, Clerk's Division, Report 2018-109,
Subject: Leave of Absence from Council**

Council resolved:

That a leave of absence be approved for Councillor John Mayne for a period ending November 30, 2018, or until he resumes attendance, whichever occurs first.

**4. Corporate Services Department, Finance Division, Report 2018-108,
Subject: Development Charge Reserve Funds – January 1, 2017 to
December 31, 2017**

Council resolved:

That report Corporate Services Department, Finance Division report 2018-108 with respect to Development Charge Reserve Funds January 1, 2017 to December 31, 2017 be received for information.

**5. Cynthia B. Skinner, Member of The Friends of Port Colborne Lighthouses
Re: Request for Proclamation of Lighthouse Day, August 7, 2018**

Council resolved:

That August 7, 2018 be proclaimed as "Lighthouse Day" in the City of Port Colborne in accordance with the request received from Cynthia B. Skinner, Member, The Friends of Port Colborne Lighthouses.

**6. Region of Niagara Re: Comments of Province's Draft Agricultural Impact
Assessment Guidance Document (PDS Report 29-2018)**

Council resolved:

That the correspondence received from the Region of Niagara Re: Comments on Province's Draft Agricultural Impact Assessment Guidance Document (PDS Report 29-20178), be received for information.

**7. Niagara Central Airport Commission Re: 2nd Quarter Report 2018 for the
Niagara Central Dorothy Rungeling Airport**

Council resolved:

That the correspondence received from Richard Rybiak, Chair, Niagara Central Airport Commission Re: Niagara Central Airport Commission 2nd Quarter Report for the Niagara Central Dorothy Rungeling Airport, be received for information.

CARRIED.

8. Consideration of Items Requiring Separate Discussion:

Nil.

9. Proclamations:

No. 113 Moved by Councillor B. Butters
 Seconded by Councillor D. Elliott

Whereas the 7th of August is International Lighthouse Day, therefore we seek recognition here by having Lighthouse Day declared in Port Colborne; and

Whereas this recognition acknowledges our rich marine based history, culture and industry; and

Whereas Port Colborne is unique, having 2 lighthouses connected by a tunnel; and

Whereas we are able to have tours to same, through co-operative inter-agency agreements, thus meeting the publics ever growing interest in lighthouses; and

Whereas this public interest re-enforces Friends of Port Colborne Lighthouses efforts to increase access and gain stewardship so that they may be properly preserved, restored, maintained and shared with the public for future generations; and

Now therefore, I, Mayor, John Maloney, proclaim August 7th as "Lighthouse Day" in the City of Port Colborne.

CARRIED.

10. Minutes of Boards, Commissions & Committees:

No. 114 Moved by Councillor A. Desmarais
 Seconded by Councillor B. Butters

- a) That the minutes of the Port Colborne Public Library Board meeting of June 5, 2018, be received.

CARRIED.

11. Consideration of By-laws:

No. 115 Moved by Councillor B. Butters
 Seconded by Councillor B. Kenny

That the following by-laws be enacted and passed:

6600/55/18 Being a By-law to Adopt Amendment No. 5 to the Official Plan for the City of Port Colborne

6601/56/18 Being a By-law to Amend Zoning By-law 6575/30/18 Respecting Lands Legally Described as Part Lot 32, Concession 2, Municipally Known as Killaly Street West

6602/57/18 Being a By-law to Appoint Paul Marsh P. Eng. Of EWA Engineers Inc. for the Completion of a New Engineer's Report for the Repair and Improvement of the Wignell, Michener, Port Colborne and Beaverdam Drains situated in the City of Port Colborne and to Rescind By-law No. 5653/84/11 and By-law No. 5666/97/11

6603/58/18 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 Regular Meeting of July 23, 2018

CARRIED.

12. Council in Closed Session:

Motion to go into closed session – 7:38 p.m.

No. 116 Moved by Councillor F. Danch
Seconded by Councillor B. Kenny

That Council do now proceed into closed session in order to address the following matter(s):

- (a) Minutes of the closed session portion of the following Council meetings: July 9, 2018.
- (b) Planning and Development Department, Planning Division Report 2018-102, concerning the potential sale of City-owned land, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(c) a proposed or pending acquisition or disposition of land by the municipality or local board.
- (c) Corporate Services Department, Clerk's Division Report 2018-104, Subject: Appointments to Boards and Committees, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees.
- (d) Planning and Development Department, By-law Enforcement Division Report 2018-106, concerning an update with respect to ongoing property investigations, pursuant to *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees and Subsection 239(2)(e) litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board.
- (e) Verbal report from the Chief Administrative Officer concerning a human resources matter, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees.

CARRIED.

Motion to rise with report – 9:10 p.m.

No. 117 Moved by Councillor A. Desmarais
Seconded by Councillor B. Butters

That Council do now rise from closed session with report at approximately 9:10 p.m.

CARRIED.

13. Disclosures of Interest Arising From Closed Session:

Nil.

14. Report/Motions Arising From Closed Session:

- (b) **Planning and Development Department, Planning Division Report 2018-102, concerning the potential sale of City-owned land, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(c) a proposed or pending acquisition or disposition of land by the municipality or local board.**

The City Clerk reported that direction was provided to the Direct of Planning and Development during closed session in accordance with the *Municipal Act, 2001*.

- (c) **Corporate Services Department, Clerk’s Division Report 2018-104, Subject: Appointments to Boards and Committees, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees.**

That the Deputy Clerk be directed to bring forward a report in open session with respect to appointments to boards and committees recommended by Council, as follows;

That Alison Chambers be appointed to the Accessibility Advisory Committee for a term ending December 31, 2022; and

That Connie Butter be appointed to the Senior Citizen Advisory Council for a term ending December, 31, 2019.

- (d) **Planning and Development Department, By-law Enforcement Division Report 2018-106, concerning an update with respect to ongoing property investigations, pursuant to *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees and Subsection 239(2)(e) litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board.**

The City Clerk reported that direction was provided to the Supervisor, By-law Enforcement during closed session in accordance with the *Municipal Act, 2001*.

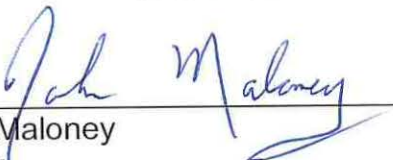
- (e) **Verbal report from the Chief Administrative Officer concerning a human resources matter, pursuant to the *Municipal Act, 2001*, Subsection 239(2)(b), personal matters about an identifiable individual, including municipal or local board employees.**

The City Clerk reported that Council received the verbal report from the Chief Administrative Officer during closed session in accordance with the *Municipal Act, 2001*.

15. **Adjournment:**

No. 118 Moved by Councillor F. Danch
 Seconded by Councillor D. Elliott

That the Council meeting be adjourned at approximately 9:11 p.m.
 CARRIED.


 John Maloney
 Mayor


 Amber LaPointe
 City Clerk

AL/cm

**City of Port Colborne
Regular Committee of the Whole Meeting 16-18
Minutes**

Date: July 23, 2018
Time: 6:30 p.m.
Place: Council Chambers, Municipal Offices, 66 Charlotte Street, Port Colborne

Members Present: R. Bodner, Councillor
B. Butters, Councillor
F. Danch, Councillor
A. Desmarais, Councillor
D. Elliott, Councillor
B. Kenny, Councillor
J. Maloney, Mayor (presiding officer)

Absent: Y. Doucet, Councillor (due to vacation)
J. Mayne, Councillor (leave of absence)

Staff Present: D. Aquilina, Director of Planning and Development
T. Cartwright, Fire Chief
A. Grigg, Director of Community and Economic Development
N. Halasz, Manager of Parks and Recreation
A. LaPointe, Manager of Legislative Services/City Clerk (minutes)
C. Lee, Director of Engineering and Operations
S. Luey, Chief Administrative Officer
P. Senese, Director of Corporate Services

Also in attendance were interested citizens, members of the news media and WeeStream.

1. Call to Order:

Mayor Maloney called the meeting to order.

2. Introduction of Addendum Items:

Nil.

3. Confirmation of Agenda:

Moved by Councillor B. Kenny
Seconded by Councillor A. Desmarais

That the agenda dated July 23, 2018 be confirmed, as circulated or as amended.

CARRIED.

2. Engineering and Operations Department, Engineering Division, Report 2018-103, Subject: Wignell, Michener, Port Colborne and Beaverdam Municipal Drains Engineer Appointment

Moved by Councillor R. Bodner
Seconded by Councillor B. Butters

That the appointment of Paul Smeltzer P. Eng. of AMEC(FW) be rescinded as per Section 39(2) Chapter D.17 of the *Drainage Act R.S.O. 1990*; and

That Paul Marsh P. Eng. of EWA Engineers Inc. be appointed under Section 78(1) Chapter D.17 of the *Drainage Act R.S.O. 1990*, and that this appointment become effective once the conditions of Section 78(2) have been met; and

That staff be authorized to execute a petition under Section 4 Chapter D.17 of the *Drainage Act R.S.O. 1990* to initiate/incorporate any new works related to municipal roads and/or property; and

That Paul Marsh P. Eng. of EWA Engineers Inc., be appointed under Section 8 Chapter D.17 of the *Drainage Act R.S.O. 1990* for the new works contemplated and any additional petitions under Section 4, related to the Wignell, Michener Port Colborne and Beaver Dam Drains, that may come forward during the Drainage Act process; and

That the Mayor and Clerk be authorized to sign the requisite Engineering Services Agreement for the preparation of new engineer(s) reports for the Wignell, Michener, Port Colborne and Beaverdam Municipal Drains.

CARRIED.

14. Notice of Motion:

Nil.

15. Adjournment:

Moved by Councillor F. Danch
Seconded by Councillor D. Elliott

That the Committee of the Whole meeting be adjourned at approximately 7:31p.m.

CARRIED.

AL/cm

**Appendix C:
Cost Estimates &
Assessment Tables**

Michener Municipal Drain
City of Port Colborne
Regional Municipality of Niagara

Section 78 and Section 4 Works under the Municipal Drainage Act.

Item	Drainage Assessment	Costs
1	Summary Cover page	
2	Estimated Construction Costs	
	Michener Branch Drain #1	\$ 30,271.50
	Michener Branch Drain #2	\$ 3,325.00
	Michener Drain	\$ 32,147.50
	Michener General Construction Costs	\$ 14,968.00
	Michener Contingency	\$ 13,148.80
	Estimated Cost of Construction	\$ 93,860.80
3	Previous Construction Works Completed but not Assessed	
	None Identified	
	Previous Construction, (Prior to 2018)	\$0.00
4	Eligible Administration Costs	
	Engineering	\$ 87,990.88
	Administration Cost Allocations	\$ -
Ha Ratio	Allocating Admin costs to each catchment for Section 23	
0.067	9.049 Michener Branch Drain #1	\$ 5,915.96
0.228	30.712 Michener Branch Drain #2	\$ 20,078.58
0.705	94.829 Michener Drain	\$ 61,996.34
	Administration Costs	\$ 87,990.88
5	Drain Allowances	
	Michener Branch Drain #1	\$ 5,903.25
	Michener Branch Drain #2	\$ 7,904.90
	Michener Drain	\$ 3,361.49
	Allowances	\$ 17,169.64
	Forecasted Total Drain Costs	\$ 199,021.32
6	Benefit Assessment (Section 22)	
	Michener Branch Drain #1	\$ 3,673.00
	Michener Branch Drain #2	\$ 4,845.00
	Michener Drain	\$ -
	Total - Benefit Assessment (Section 22)	\$ 8,518.00
7	Outlet Liability Assessment (Section 23)	
	Michener Branch Drain #1	\$ 29,827.28
	Michener Branch Drain #2	\$ 26,463.48
	Michener Drain	\$ 119,512.13
	Total - Outlet Liability Assessment (Section 23)	\$ 175,802.89
8	Special Benefit Assessment (Section 24)	
	Michener Branch Drain #1	\$ -
	Michener Branch Drain #2	\$ -
	Michener Drain	\$ 6,110.00
	Total - Special Benefit Assessment (Section 24)	\$ 6,110.00
9	Special Assessments (Section 26)	
	Michener Branch Drain #1	
	City of Port Colborne	\$ 6,590.43
	Enbridge	\$ 2,000.00
		\$ 8,590.43
	Michener Branch Drain #2	
	City of Port Colborne	\$0.00
	Michener Drain	
	City of Port Colborne	\$0.00
	Total - Special Assessments (Section 26)	\$ 8,590.43
	Total - Forecasted Total Drain Costs	\$ 199,021.32

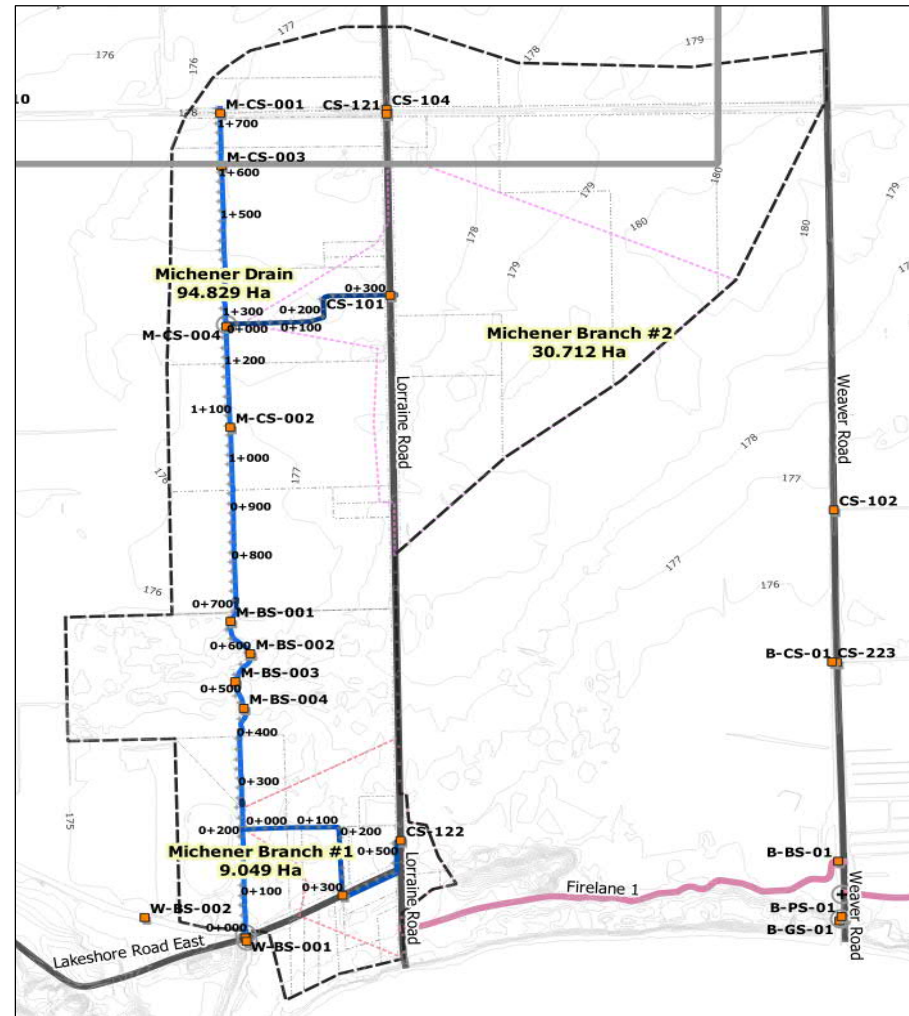
10 Drain Assessment Summary Table

Assessment Schedule Balance:

Paul C. Marsh, P.Eng.

Prepared by:

Dated:



Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Proposed Construction - Cost Estimate

Michener Branch #1

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M1-11	0+000	0+177	Remove Vegetation, Clear and Grade to Design Grade Line	Perform work from the South Side	Linear	177			\$ 2,655.00	
M1-12	0+177		Catch Basin, CB-01 Construct to Grade and match outlet with grate to channel		Lump Sum		1	\$ 2,200.00	\$ 2,200.00	
M1-13	0+177	0+305	Combined Swale and 150mm Perforated PE Drainage Pipe		Linear	67		\$ 45.00	\$ 3,015.00	
M1-14	0+305	0+305	Catch Basin, CB-02		Lump Sum		1	\$ 1,850.00	\$ 1,850.00	
M1-15	0+302		Enbridge Gas Line Protection during construction and lowering if required.		Lump Sum		1	\$ 2,000.00	\$ 2,000.00	
M1-16	0+305	0+323.8	400mm Drainage Pipe, CSA 182.2-11 (existing) 200mm PE Tile with Sock	Crossing Lakeshore Rd. E (already installed no cost estimate shown); Tile crossing from CB-02 to CBDI-03	Linear	18.8		\$ 55.00	\$ 1,784.00	roadway crossing backfill with non-shrink material
M1-17	0+323.8		CBDI-03, Ditch Inlet with GA bar screen as per OPSD 403.010		Lump Sum		1	\$ 2,050.00	\$ 2,050.00	
M1-18	0+049	0+109	150mm Perforated PE Drainage Pipe	excludes ROW re-grading by CofPC		60		\$ 45.00	\$ 2,700.00	backfill with native material.
M1-19	0+049		CO-06, PE Clean out access chamber with Dome Drain for cleaning access.		Lump Sum		1	\$ 1,500.00	\$ 1,500.00	
M1-20	0+109	0+223	150mm Perforated PE Drainage Pipe	Excludes ROW re-grading by CofPC		114		\$ 45.00	\$ 5,130.00	Road edge backfill with non-shrink material.
M1-21	0+233		Catch Basin, CB-04		Lump Sum		1	\$ 2,000.00	\$ 2,000.00	
M1-22	0+233	0+244.5	150mm Perforated PE Drainage Pipe	Crossing Lakeshore Rd. E Tile crossing		11.5		\$ 55.00	\$ 1,382.50	roadway crossing backfill with non-shrink material
M1-23	0+244.5		DI-03, Ditch Inlet with grate	Rip Rap end treatment with grate	Lump Sum		1	\$ 1,000.00	\$ 1,000.00	
M1-24	0-177	0+244	Remove Vegetation, Clear working zone	As - directed by Drainage superintendent. Re-seeding to original or better.	Linear	67		\$ 15.00	\$ 1,005.00	re-grade excess material from trenching.
M1-25			Road side swales re-grading						\$ -	Cost covered by CofPC.

SubTotal for: Michener Branch #1 \$ 30,271.50

Michener Branch #2

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M2-3	0+000	0+125	Remove Vegetation, Clear and Grade to Design Grade Line	Perform work from the North side	Linear	125		\$ 15.00	\$ 1,875.00	
M2-4	0+125	0+200	existing channel and pond to remain as is.		No cost					
M2-5	0+200	0+345	Selective Vegetation removal and bank stablization.	Spot removals from South side	Linear	145		\$ 10.00	\$ 1,450.00	

SubTotal for: Michener Branch #2 \$ 3,325.00

Michener Drain

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
M-1	1+286	1+710	Remove Vegetation, Clean and Grade to Design Grade Line	Perform work from the East side of the Drain.	Linear	424			\$ 6,360.00	
	1+612		Re-place existing culvert	M-CS-003, existing culvert to be improved by replacement.	Lump Sum		1	\$ 1,500.00	\$ 1,500.00	
M-2	0+690	1+286	Remove Vegetation, Clean and Grade to Design Grade Line	Perform work from the East side of the Drain.	Linear	591			\$ 8,865.00	
M-6a	0+700	0+710	Construct Farm Crossing culvert.	This is a combination flow detention berm and farm crossing. The culvert is sized to pass the 1 year design flow while detaining higher flows to then overflow the crossing as a broad crested weir.	Lump Sum		1	\$ 2,500.00	\$ 2,500.00	
M-6a	0+710		Construct Sediment Basin upstream of culvert	Remove material and dispose by spreading adjacent to the drain. Sediment Basin constructed in coordination with culvert crossing and prior to commencing work upstream.	per m + per m2	8	40	\$ 55.00	\$ 2,600.00	
M-7	0+407.5	0+690	Re-store Grade to design Grade Line		Linear	282.5			\$ 4,237.50	
M-8	0+593		Replace ex. Culvert with properly sized 750mm 2W smooth PE culvert - 3m	M-BS-002 replace with new.	Lump Sum		1	\$ 1,500.00	\$ 1,500.00	
M-9	0+260	0+250	Construct Sediment Basin at STA 2+400 as per Design and GD-10.	Remove material and dispose by spreading adjacent to the drain. Sediment Basin constructed prior to commencing work upstream.	per m + per m2	10	52	\$ 55.00	\$ 3,360.00	
M-10	0+000	0+075	Spot tree removal	Remove between top of bank to top of bank that are reducing outlet flow.	each		35	\$ 35.00	\$ 1,225.00	

SubTotal for: Cost ID: \$ 32,147.50

Construction Mgmt Michener Drain

Cost ID:	From STA	To STA	Work	Description	Linear, Each or Lump Sum		Qnty	/each	\$	Notes
					Cost Type	Length				
			Bonding	Construction Security	% of Constr \$				\$ 1,972.32	
			Environmental Management - Compliance with legislative requirements	Preparation of Environmental Management Plan - Exclusions for SAR incidents that require on site expertise.	Lump Sum				\$ 2,500.00	Program budget - actual cost will vary
			Erosion Control During construction - including conversion of sediment ponds to permanent drain features		Lump Sum				\$ 3,500.00	Program budget - actual cost will vary
			Construction Management	Traffic Control, Layout, and all compliance items for submission on construction startup.	% of Constr \$				\$ 8,218.00	Budget, 12.5% of construction
			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		15	50	\$ 750.00	Program budget - actual cost will vary

SubTotal for: Construction Mgmt Michener Drain \$ 14,968.00

SubTotal for: Michener Drain \$ 80,712.00

Contingency Allowance, (20%) \$ 13,148.80

Cost of Construction: \$ 93,860.80

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Administration Costs

	Area, Ha	Area Ratio
Michener Drain Area	135	12.02%
Port Colborne Drain Area	345	30.78%
Wignell Drain Area	641	57.20%
	1120	

Categories	Costs	Cost Items	Sub-totals, \$	Totals, \$
ADMINISTRATION				
	Interim Financing Allowance			0
	Legal and Permitting Fees			0
	Expenses, where applicable			0
	Applicable Taxes			0
Total - ADMINISTRATION			\$	-
ENGINEERING				
	Preliminary Design and Report			0
	Survey, Design, Plans, Engineer's Report and Assessment Schedule (Wiebe)*1			
		Survey; \$8,342.93	\$ 1,002.81	
		Report Preparation; \$83,533.94	\$ 10,040.66	
	Survey, Design, Plans, Engineer's Report (AMEC)*2			
		3-561-33229; 2012 to 2014; \$67,147.23	\$ 8,071.00	
	Survey, Design, Plans, Engineer's Report and Assessment Schedule (EWA)			
		Design Services	\$ 45,480.00	
		Change Orders	\$ 13,948.00	
		Portion of Expenses	\$ 1,514.04	
		Portion of Project Mgmt	\$ 4,434.38	
	Sub-total: Survey, Design, Plans, Engineer's Report and Assessment Schedule (EWA)		\$ 84,490.88	
	Tribunal Costs (not estimated and assumed to be zero)			0
	Tendering, and contract agreements (estimated)		\$ 3,500.00	
Total - ENGINEERING			\$	87,990.88
TOTAL ADMINISTRATION AND ENGINEERING			\$	87,990.88

*1 Wiebe Engineering was appointed as the Drainage Engineer by Council with an approved budget. The firm declared bankruptcy after having been paid for a portion of the work. This is the amount originally paid and not recovered.

*2 AMEC was appointed as the Drainage Engineer by Council in 2013, assuming work already completed by Wiebe and with an approved budget. After having been paid for 70% of the work, the company refused to complete the project without additional funds being allocated. The contract was cancelled. This is the fee for service paid for partially completed work on the drain.

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Allowances
 Michener Branch #1

Owner	Legal Text	Roll No	ARN ABBREV	Area Ha	Land and Rights of Way		Work Zone			Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances		
					Length m	Top Width	Section 29 Allowance Area, Ha	Section 29 Allowance \$	Work Access \$	Length m	Section 30 Allowance Area, Ha	Section 30 Allowance \$	From STN	To STN	Length, m	Section 31 Allowance		Section 32 Allowance \$	Section 33 Allowance \$
																\$			
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	404700	2.176	97.0	2.50	0.0243	\$ 599.23	\$ -	135.0	0.135	0			95.6	\$ 478.00			\$1,077.23
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.201	126.0	3.00	0.0378	\$ 934.06	\$ 311.35	126.0	0.126	0			126	\$ 630.00			\$1,875.41
					69.0	2.65	0.0183	\$ 451.83	\$ 170.50	69.0	0.069	0			69	\$ 345.00			\$967.33
City of Port Colborne	Lakeshore Rd. East ROW		ROW	ROW	0.556		0.0000				0.000	0				\$ -			\$0.00
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848	0.0	0.00	0.0000	\$ -		0.0	0.000	\$ -			0	\$ -			\$0.00
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	0.729	80.0	3.00	0.0240	\$ 593.05	\$ 197.68	80.0	0.080	0			80	\$ 800			\$1,590.74
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	318100	0.560			0.0000				0.000	0				\$ -			\$0.00
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	417902	0.517			0.0000					0				\$ -			\$0.00
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	404601	0.405			0.0000					0				\$ -			\$0.00
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357			0.0000					0				\$ -			\$0.00
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.295			0.0000					0				\$ -			\$0.00
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	314500	0.289			0.0000					0				\$ -			\$0.00
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.205	28.0	2.65	0.0074	\$ 183.35	\$ 69.19	28.0	0.028	0			28	\$ 140			\$392.54
WEEBADUARACHHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.134			0.0000					0				\$ -			\$0.00
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	400101	0.122			0.0000					0				\$ -			\$0.00
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071			0.0000					0				\$ -			\$0.00
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.042			0.0000					0				\$ -			\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	0.012			0.0000					0				\$ -			\$0.00
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.000			0.0000					0				\$ -			\$0.00
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW		0.689								0				\$ -			\$0.00
				8.519					\$ 3,510.25			\$ -			\$ 2,393.00	\$ -	\$ -	\$ -	\$5,903.25

Michener Branch #2

Owner	Legal Text	Roll No	ARN ABBREV	Area Ha	Land and Rights of Way		Work Zone			Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances		
					Length m	Top Width	Section 29 Allowance Area, Ha	Section 29 Allowance \$	Work Access \$	Length m	Section 30 Allowance Area, Ha	Section 30 Allowance \$	From STN	To STN	Length, m	Section 31 Allowance		Section 32 Allowance \$	Section 33 Allowance \$
																\$			
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.108								0							\$0.00
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	3.545								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	2.799	337.0	1.900	0.0640	\$ 1,582.21	\$ 931.59	377	0.377	\$ 1,621.10	0	377	377	\$ 3,770			\$7,904.90
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431								0							\$0.00
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	14.499								0							\$0.00
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	ROW	1.380								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	0.554								0							\$0.00
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.154								0							\$0.00
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.096								0							\$0.00
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	314700	0.075								0							\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	405000	0.058								0							\$0.00
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	0.012								0							\$0.00
				30.712					\$ 2,513.80			\$ 1,621.10			\$ 3,770.00	\$ -	\$ -	\$ -	\$7,904.90

Michener Drain

* Section 30 Allowance for damages are based on construction impacts (damages) to cultivated fields only. Actual allowance to be calculated by site impact post construction.

Owner	Legal Text	Roll No	ARND		Land and Rights of Way		Work Zone		Damages			For Existing Drain		Insufficient Outlet	Loss of Access	Total of Allowances	
			ABBREV	Area Ha	Length m	Top Width	Section 29 Allowance Area, Ha	Work Access	Length m	Section 30 Allowance Area, Ha		Section 31 Allowance	Section 32 Allowance	Section 33 Allowance			
							\$	\$			\$	From STN	To STN	Length, m	\$		\$
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071													\$0.00
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26:NP778	271104000314500	314500	0.289													\$0.00
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	12.371													\$0.00
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	314700	3.874													\$0.00
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	315000	5.156													\$0.00
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	317825	2.719													\$0.00
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	317850	0.406													\$0.00
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	17.369													\$0.00
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431													\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.120													\$0.00
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	318100	0.560													\$0.00
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.357													\$0.00
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	400101	0.532													\$0.00
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.512													\$0.00
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357													\$0.00
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.383													\$0.00
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRTS 2 & 3	271104000400305	400305	0.382													\$0.00
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.413													\$0.00
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	404300	0.000													\$0.00
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	404301	4.787	403.5	5.0	0.202	\$ 498.53	403.5	0.000	\$0.00						\$498.53
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	3.067													\$0.00
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.442													\$0.00
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.220													\$0.00
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848													\$0.00
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	404601	0.405													\$0.00
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	404700	18.764	287.8	5.0	0.144	\$ 355.58	287.8	0.000	\$0.00						\$355.58
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	404800	9.586	251.7	5.0	0.126	\$ 310.98	251.7	0.252	\$310.98						\$621.96
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	404900	0.316				\$ -									\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	405000	0.347				\$ -									\$0.00
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	10.514	259	5.0	0.130	\$ 320.00	259	0.259	\$320.00						\$640.00
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	7.756	193.5	5.0	0.097	\$ 239.07	193.5	0.194	\$239.07						\$478.15
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.236				\$ -									\$0.00
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.340				\$ -									\$0.00
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	9.204	249.5	5.0	0.125	\$ 308.26	249.5	0.250	\$308.26						\$616.53
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.300	61	5.0	0.031	\$ 75.37	61	0.061	\$75.37						\$150.73
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.026													\$0.00
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	405700	2.285													\$0.00
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	417902	0.580													\$0.00
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	1.599													\$0.00
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	0.688													\$0.00
City of Port Colborne	Lorraine Rd. from Lake to Killaly St. East	Lorraine Rd. ROW		3.250													\$0.00
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW		0.563													\$0.00
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW		0.121													\$0.00
			111.590					\$2,107.81			\$1,253.69						\$3,361.49

Drain Allowance Total \$17,169.64

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

23.3
 2 yr avg. Intensity
 for a 1 hour storm

Section 23 Outlet Benefit / Outlet Liability

Owner	Legal Text	Roll No	ARN		Soil Type	Gradient	Land Factor	Runoff Factor				ORF Ratio	Michener	ORF Ratio	Michener	ORF Ratio	Michener Drain	Total Section 23	
			ABBREV	Area				'C'	ORF	SWM	SWMF		ORF-SWMF		Branch #1		Branch #2		\$
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP:59R8112 PAR	271104000404700	404700	2.176	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	25	3.55	0	0	3.55	0.2044	\$	6,096		\$	6,096	
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.201	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	1.57	0	0	1.57	0.0902	\$	2,691		\$	2,691	
City of Port Colborne	Lakeshore Rd. East ROW	ROW	ROW	0.556	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	ROW - paved 2 lane	85	3.08	0	0	3.08	0.1775	\$	5,295		\$	5,295	
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.83	0	0	0.83	0.0478	\$	1,424		\$	1,424	
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	0.729	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.95	0	0	0.95	0.0548	\$	1,634		\$	1,634	
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493:PART 1	271104000318100	318100	0.560	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.73	0	0	0.73	0.0421	\$	1,255		\$	1,255	
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013:PART 1	271104000417902	417902	0.517	NM - Sandy well drained	0.20%	LAND	12	0.41	0	0	0.41	0.0233	\$	696		\$	696	
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790:PART 1	271104000404601	404601	0.405	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	15	0.40	0	0	0.40	0.0228	\$	680		\$	680	
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357	NM - Sandy well drained	0.20%	LAND	12	0.28	0	0	0.28	0.0161	\$	480		\$	480	
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	400100	0.295	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.38	0	0	0.38	0.0221	\$	661		\$	661	
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26:NP778	271104000314500	314500	0.289	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.38	0	0	0.38	0.0217	\$	647		\$	647	
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.205	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.27	0	0	0.27	0.0154	\$	460		\$	460	
WEEBADUARACHHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	400102	0.134	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.17	0	0	0.17	0.0101	\$	300		\$	300	
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21:PT WATER LOT	271104000400101	400101	0.122	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.16	0	0	0.16	0.0091	\$	273		\$	273	
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	20	0.09	0	0	0.09	0.0053	\$	159		\$	159	
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.042	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.05	0	0	0.05	0.0032	\$	94		\$	94	
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	0.012	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	25	0.02	0	0	0.02	0.0011	\$	33		\$	33	
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.000	NM - Sandy well drained	0.20%	RESIDENTIAL	20	0.00	0	0	0.00	0.0000	\$	1		\$	1	
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW		0.689		0.20%		90	4.05	0	0	4.05	0.2329	\$	6,948		\$	6,948	
								17.37	0.00	0.00	17.37	1.00	\$	29,827					
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.108	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	COMMERCIAL	17	5.67	0	0	5.67			0.0861	\$	2,278	\$	2,278
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	3.545	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	35	8.09	0	0	8.09			0.1230	\$	3,255	\$	3,255
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	2.799	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	35	6.39	0	0	6.39			0.0971	\$	2,570	\$	2,570
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	45	7.14	0	0	7.14			0.1085	\$	2,871	\$	2,871
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	14.499	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	30	28.38	0	0	28.38			0.4312	\$	11,412	\$	11,412
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	ROW	1.380	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	ROW - paved 2 lane	90	8.10	0	0	8.10			0.1231	\$	3,258	\$	3,258
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	0.554	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	28	1.01	0	0	1.01			0.0154	\$	407	\$	407
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.154	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	0.45	0	0	0.45			0.0069	\$	182	\$	182
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.096	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	0.28	0	0	0.28			0.0043	\$	114	\$	114
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136:PARTS 1 AND	271104000314700	314700	0.075	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	30	0.15	0	0	0.15			0.0022	\$	59	\$	59
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448:PART 1	271104000405000	405000	0.058	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	LAND	28	0.11	0	0	0.11			0.0016	\$	43	\$	43
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	0.012	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	45	0.04	0	0	0.04			0.0005	\$	14	\$	14
								0.00	0.00	0.00	0.00			0.0000	\$	-	\$	-	
								65.80	0.00	0.00	65.80			1.00	\$	26,463			
				30.712															

Owner	Legal Text	Roll No	ARN ABBREV	Area Ha	Soil Type	Gradient	Land Factor	Runoff Factor				QRf Ratio	Michener Branch #1 \$ 29,827.28	QRf Ratio	Michener Branch #2 \$ 26,463.48	QRf Ratio	Michener Drain \$ 119,512.13	Total Section 23 Assessment
								'C'	QRf	SWM	SWMF							
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	314300	0.071	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	35	0.16	0	0	0.16				0.0005	\$ 57	\$ 57
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26:NP778	271104000314500	314500	0.289	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	35	0.66	0	0	0.66				0.0019	\$ 229	\$ 229
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	314600	12.371	NM - Sandy well drained	0.20%	FARM	35	28.25	0	0	28.25				0.0822	\$ 9,828	\$ 9,828
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	314700	3.874	NM - Sandy well drained	0.20%	FARM	35	8.85	0	0	8.85				0.0257	\$ 3,077	\$ 3,077
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	315000	5.156	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	37	12.45	0	0	12.45				0.0362	\$ 4,331	\$ 4,331
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	317825	2.719	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	FARM	37	6.56	0	0	6.56				0.0191	\$ 2,284	\$ 2,284
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	317850	0.406	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	37	0.98	0	0	0.98				0.0029	\$ 341	\$ 341
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	317900	17.369	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	35	39.66	0	0	39.66				0.1155	\$ 13,798	\$ 13,798
NERO FELICE	CON 1 PT LOT 20	271104000318000	318000	2.431	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	30	4.76	0	0	4.76				0.0139	\$ 1,656	\$ 1,656
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	318010	5.120	NM - Sandy well drained	0.20%	COMMERCIAL	28	9.35	0	0	9.35				0.0272	\$ 3,254	\$ 3,254
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	318100	0.560	NM - Sandy well drained	0.20%	RESIDENTIAL	28	1.02	0	0	1.02				0.0030	\$ 356	\$ 356
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT:RP 59R5808	271104000400100	400100	0.357	NM - Sandy well drained	0.20%	RESIDENTIAL	28	0.65	0	0	0.65				0.0019	\$ 227	\$ 227
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	400101	0.532	NM - Sandy well drained	0.20%	RESIDENTIAL	28	0.97	0	0	0.97				0.0028	\$ 338	\$ 338
WEEBADUARACHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT:RP 59R5808	271104000400102	400102	0.512	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	32	1.07	0	0	1.07				0.0031	\$ 372	\$ 372
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	400200	0.357	NM - Sandy well drained	0.20%	LAND	28	0.65	0	0	0.65				0.0019	\$ 227	\$ 227
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	400300	0.383	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	65	1.62	0	0	1.62				0.0047	\$ 565	\$ 565
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R:9880 PRS 2 & 3	271104000400305	400305	0.382	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	65	1.62	0	0	1.62				0.0047	\$ 563	\$ 563
MATHESON GARY	CON 1 PT LOT 21	271104000400400	400400	0.413	Welland (WLL) - mainly reddish-hued lacustrine heavy clay - Poor Drainage - Orthic Humic Gleysol / Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	RESIDENTIAL	45	1.21	0	0	1.21				0.0035	\$ 422	\$ 422
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22:RP 59R13926A	271104000404300	404300	0.000	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	45	0.00	0	0	0.00				0.0000	\$ 0	\$ 0
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	404301	4.787	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	45	14.05	0	0	14.05				0.0409	\$ 4,889	\$ 4,889
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	404303	3.067	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	9.00	0	0	9.00				0.0262	\$ 3,132	\$ 3,132
LEON JOHN	CON 1 PT LOT 21	271104000404400	404400	0.442	Welland (WLL) - mainly reddish-hued lacustrine heavy clay - Poor Drainage - Orthic Humic Gleysol	0.20%	RESIDENTIAL	40	1.15	0	0	1.15				0.0034	\$ 401	\$ 401
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	404500	1.220	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	35	2.79	0	0	2.79				0.0081	\$ 969	\$ 969
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	404600	0.848	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	35	1.94	0	0	1.94				0.0056	\$ 673	\$ 673
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	404601	0.405	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	1.19	0	0	1.19				0.0035	\$ 413	\$ 413
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP:59R8112 PAR	271104000404700	404700	18.764	Bookton (BOK2) - 40to100 cm sandy textures over lacustrine silty clay - Well Drained - Brunisolic Gray Brown Luvisol	0.20%	COMMERCIAL	37	45.30	0	0	45.30				0.1319	\$ 15,759	\$ 15,759
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	404800	9.586	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	45	28.14	0	0	28.14				0.0819	\$ 9,792	\$ 9,792
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	404900	0.316	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	45	0.93	0	0	0.93				0.0027	\$ 323	\$ 323
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	405000	0.347	Chinguacousy (CGU4) - Mainly clay loam till - Imperfect draining - Gleyed Brunisolic Gray Brown Luvisol	0.20%	LAND	45	1.02	0	0	1.02				0.0030	\$ 355	\$ 355
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	405100	10.514	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	45	30.87	0	0	30.87				0.0899	\$ 10,739	\$ 10,739
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	405200	7.756	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	FARM	37	18.72	0	0	18.72				0.0545	\$ 6,513	\$ 6,513
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	405300	0.236	Farmington (FRM) - 10 to 20cm variable textures over mainly limestone and dolostone bedrock - Rapid Draining - Orthic Melanic Brunisol	0.20%	RESIDENTIAL	37	0.57	0	0	0.57				0.0017	\$ 198	\$ 198
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	405400	0.340	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	RESIDENTIAL	37	0.82	0	0	0.82				0.0024	\$ 286	\$ 286
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	405500	9.204	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	37	22.22	0	0	22.22				0.0647	\$ 7,730	\$ 7,730
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.300	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	37	5.55	0	0	5.55				0.0162	\$ 1,931	\$ 1,931
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	405600	2.026	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	37	4.89	0	0	4.89				0.0142	\$ 1,702	\$ 1,702
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	405700	2.285	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	FARM	37	5.52	0	0	5.52				0.0161	\$ 1,919	\$ 1,919
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	417902	0.580	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	LAND	37	1.40	0	0	1.40				0.0041	\$ 487	\$ 487
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	1.599	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	INDUSTRIAL	37	3.86	0	0	3.86				0.0112	\$ 1,343	\$ 1,343
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	499900	0.688	Jeddo (JDD) - Mainly Clay Loam Till - Poor Draining - Humic Luvic Gleysol	0.20%	INDUSTRIAL	37	1.66	0	0	1.66				0.0048	\$ 578	\$ 578
City of Port Colborne	Lorraine Rd. from Lake to Killaly St. East	Lorraine Rd. ROW		3.250		0.20%		83	17.60	0	0	17.60				0.0512	\$ 6,122	\$ 6,122
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW		0.563		0.20%		84	3.08	0	0	3.08				0.0090	\$ 1,073	\$ 1,073
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW		0.121		0.20%		95	0.75	0	0	0.75				0.0022	\$ 261	\$ 261

134.55
134.59

343.51

1.0000 \$ 119,512 \$ 175,803

\$ 175,803

Michener Municipal Drain
 City of Port Colborne
 Regional Municipality of Niagara

Drain Assessment Summary Table

Benefits realized from drainage improvements 23(1) Outlet Liability for right of drainage.
 23(2) Injuring liability of discharge Additional works or features above the base functioning of the Drain System Roads & Utilities assessed the actual cost of additional works.

Michener Branch #1

Owner	Legal Text	Roll No	Area Ha	Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Special Assessment Section 26	Total Assessment	Total Allowance	Net
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	2.176	\$237.50	\$6,096.20	\$0.00	\$0.00	\$6,333.70	\$1,077.23	\$5,256.47
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.201	\$975.00	\$2,691.00	\$0.00	\$0.00	\$3,666.00	\$2,842.74	\$823.26
City of Port Colborne	Lakeshore Rd. East ROW	ROW	0.556	\$535.00	\$5,294.96	\$0.00	\$6,590.43	\$12,420.38	\$0.00	\$12,420.38
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.848	\$430.50	\$1,424.32	\$0.00	\$0.00	\$1,854.82	\$0.00	\$1,854.82
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	0.729	\$200.00	\$1,634.46	\$0.00	\$0.00	\$1,834.46	\$1,590.74	\$243.73
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.560	\$0.00	\$1,255.02	\$0.00	\$0.00	\$1,255.02	\$0.00	\$1,255.02
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.517	\$0.00	\$695.64	\$0.00	\$0.00	\$695.64	\$0.00	\$695.64
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.405	\$45.00	\$680.10	\$0.00	\$0.00	\$725.10	\$0.00	\$725.10
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.357	\$280.00	\$479.76	\$0.00	\$0.00	\$759.76	\$0.00	\$759.76
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.295	\$0.00	\$660.60	\$0.00	\$0.00	\$660.60	\$0.00	\$660.60
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.289	\$0.00	\$647.01	\$0.00	\$0.00	\$647.01	\$0.00	\$647.01
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.205	\$70.00	\$459.96	\$0.00	\$0.00	\$529.96	\$392.54	\$137.42
WEEBADUARACHCHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.134	\$82.50	\$300.46	\$0.00	\$0.00	\$382.96	\$0.00	\$382.96
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.122	\$37.50	\$272.75	\$0.00	\$0.00	\$310.25	\$0.00	\$310.25
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.071	\$150.00	\$159.39	\$0.00	\$0.00	\$309.39	\$0.00	\$309.39
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.042	\$22.50	\$94.24	\$0.00	\$0.00	\$116.74	\$0.00	\$116.74
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	0.012	\$0.00	\$33.13	\$0.00	\$0.00	\$33.13	\$0.00	\$33.13
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.000	\$0.00	\$0.75	\$0.00	\$0.00	\$0.75	\$0.00	\$0.75
City of Port Colborne Enbridge	Lorraine Rd. ROW	Lorraine Rd. ROW	0.689	\$607.50	\$6,947.53	\$0.00	\$0.00	\$7,555.03	\$0.00	\$7,555.03
							\$2,000.00	\$2,000.00		\$2,000.00
				\$3,065.50	\$22,879.76	\$0.00	\$8,590.43	\$42,090.71	\$5,903.25	\$36,187.46

Michener Branch #2

WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.108	\$0.00	\$2,278.34	\$0.00	\$0.00	\$2,278.34	\$0.00	\$2,278.34
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	3.545	\$0.00	\$3,255.29	\$0.00	\$0.00	\$3,255.29	\$0.00	\$3,255.29
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	2.799	\$845.00	\$2,570.32	\$0.00	\$0.00	\$3,415.32	\$7,904.90	-\$4,489.58
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.431	\$0.00	\$2,870.63	\$0.00	\$0.00	\$2,870.63	\$0.00	\$2,870.63
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	14.499	\$0.00	\$11,411.96	\$0.00	\$0.00	\$11,411.96	\$0.00	\$11,411.96
City of Port Colborne	Lorraine Rd. ROW	Lorraine Rd. ROW	1.380	\$4,000.00	\$3,257.92	\$0.00	\$0.00	\$7,257.92	\$0.00	\$7,257.92
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	0.554	\$0.00	\$407.12	\$0.00	\$0.00	\$407.12	\$0.00	\$407.12
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.154	\$0.00	\$181.95	\$0.00	\$0.00	\$181.95	\$0.00	\$181.95
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.096	\$0.00	\$113.61	\$0.00	\$0.00	\$113.61	\$0.00	\$113.61
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	0.075	\$0.00	\$59.15	\$0.00	\$0.00	\$59.15	\$0.00	\$59.15
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.058	\$0.00	\$42.93	\$0.00	\$0.00	\$42.93	\$0.00	\$42.93
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	0.012	\$0.00	\$14.26	\$0.00	\$0.00	\$14.26	\$0.00	\$14.26
				\$4,845.00	\$26,463.48	\$0.00	\$0.00	\$31,308.48	\$7,904.90	\$23,403.58

Owner	Legal Text	Roll No	Area Ha	Benefit Section 22	Outlet Liability Section 23	Special Benefit Section 24	Special Assessment Section 26	Total Assessment	Total Allowance	Net
Michener Drain										
DOOLITTLE ROY W III	PLAN 19 LOT 23 LOT 24 NP778	271104000314300	0.07	\$0.00	\$56.51	\$0.00		\$56.51	\$0.00	\$56.51
HANNAH ELISABETH WANLESS	PLAN 19 PT LOT 25 PT LOT 26;NP778	271104000314500	0.29	\$0.00	\$229.39	\$0.00		\$229.39	\$0.00	\$229.39
PYE LAURIE LYNNE	CON 1 PT LOT 19 PT LOT 20	271104000314600	12.37	\$0.00	\$9,827.62	\$0.00		\$9,827.62	\$0.00	\$9,827.62
BANKERT DAVID ROY	CON 1 PT LOT 19 RP 59R12136;PARTS 1 AND	271104000314700	3.87	\$0.00	\$3,077.43	\$0.00		\$3,077.43	\$0.00	\$3,077.43
VANDEBELD GRACE ELIZABETH	CON 1 PT LOT 19 PT LOT 20	271104000315000	5.16	\$0.00	\$4,330.51	\$0.00		\$4,330.51	\$0.00	\$4,330.51
HOCKLEY BRENDA LEE	CON 1 PT LOT 20	271104000317825	2.72	\$0.00	\$2,283.72	\$0.00		\$2,283.72	\$0.00	\$2,283.72
GRIST WILLIAM JOSEPH	CON 1 PT LOT 20 RP59R 11429;PART 1	271104000317850	0.41	\$0.00	\$340.77	\$0.00		\$340.77	\$0.00	\$340.77
VAN KRALINGEN ALLERT	CON 1 PT LOT 20	271104000317900	17.37	\$0.00	\$13,798.07	\$0.00		\$13,798.07	\$0.00	\$13,798.07
NERO FELICE	CON 1 PT LOT 20	271104000318000	2.43	\$0.00	\$1,655.63	\$0.00		\$1,655.63	\$0.00	\$1,655.63
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 20	271104000318010	5.12	\$0.00	\$3,253.93	\$0.00		\$3,253.93	\$0.00	\$3,253.93
NIEUWLAND LIEUWE CORNELIS	CON 1 PT LOT 20 RP 59R5493;PART 1	271104000318100	0.56	\$0.00	\$355.95	\$0.00		\$355.95	\$0.00	\$355.95
O'HARA GREGORY G	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400100	0.36	\$0.00	\$226.97	\$0.00		\$226.97	\$0.00	\$226.97
LEON LOU ANN	HUMBERSTONE CON 1 PT LOT 21;PT WATER LOT	271104000400101	0.53	\$0.00	\$338.24	\$0.00		\$338.24	\$0.00	\$338.24
WEEBADUARACHIGE ASELA	CON 1 PT LOT 21 PT WATER LOT;RP 59R5808	271104000400102	0.51	\$0.00	\$372.04	\$0.00		\$372.04	\$0.00	\$372.04
DOOLITTLE ROY W III	CON 1 PT LOT 21	271104000400200	0.36	\$0.00	\$226.78	\$0.00		\$226.78	\$0.00	\$226.78
NEUMANN GARY	CON 1 PT LOT 21	271104000400300	0.38	\$0.00	\$565.02	\$0.00		\$565.02	\$0.00	\$565.02
FRAME JOHN DOUGLAS	CON 1 PT LOT 21 PLAN 59R;9880 PRTS 2 & 3	271104000400305	0.38	\$0.00	\$563.01	\$0.00		\$563.01	\$0.00	\$563.01
MATHESON GARY	CON 1 PT LOT 21	271104000400400	0.41	\$0.00	\$421.91	\$0.00		\$421.91	\$0.00	\$421.91
								\$0.35		\$0.35
570466 ONTARIO LIMITED	HUMBERSTONE CON 1 PT LOT 22;RP 59R13926A	271104000404300	0.00	\$0.00	\$0.35	\$0.00		\$0.35	\$0.00	\$0.35
570466 ONTARIO LTD	CON 1 PT LOT 21	271104000404301	4.79	\$0.00	\$4,889.09	\$0.00		\$4,889.09	\$498.53	\$4,390.55
MASON MARTHA JEANNE	CON 1 PT LOT 21	271104000404303	3.07	\$0.00	\$3,132.24	\$0.00		\$3,132.24	\$0.00	\$3,132.24
LEON JOHN	CON 1 PT LOT 21	271104000404400	0.44	\$0.00	\$400.99	\$0.00		\$400.99	\$0.00	\$400.99
NICHOLLS LARRY JAMES	CON 1 PT LOT 21	271104000404500	1.22	\$0.00	\$969.43	\$0.00		\$969.43	\$0.00	\$969.43
WINGER LLOYD JAMES JUNIOR	CON 1 PT LOT 21	271104000404600	0.85	\$0.00	\$673.28	\$0.00		\$673.28	\$0.00	\$673.28
RIVANDO CHRISTOPHER ANTHONY	CON 1 PT LOT 21 PLAN 59R6790;PART 1	271104000404601	0.40	\$0.00	\$413.34	\$0.00		\$413.34	\$0.00	\$413.34
WHISKEY RUN GOLF CLUB LTD	CON 1 PT LOT 21 PT LOT 22 RP;59R8112 PAR	271104000404700	18.76	\$0.00	\$15,758.71	\$4,110.00		\$19,868.71	\$355.58	\$19,513.13
SPITERI CHARLES	CON 1 PT LOT 21	271104000404800	9.59	\$0.00	\$9,791.54	\$1,250.00		\$11,041.54	\$621.96	\$10,419.57
TALBOT JASON JONATHAN ARTHUR	CON 1 PT LOT 21	271104000404900	0.32	\$0.00	\$322.57	\$0.00		\$322.57	\$0.00	\$322.57
VALE CANADA LIMITED	CON 1 PT LOT 21 RP 59R9448;PART 1	271104000405000	0.35	\$0.00	\$354.83	\$0.00		\$354.83	\$0.00	\$354.83
VALE CANADA LIMITED	CON 1 PT LOT 21 PT LOT 22	271104000405100	10.51	\$0.00	\$10,739.09	\$0.00		\$10,739.09	\$640.00	\$10,099.09
VALE CANADA LIMITED	CON 1 PT LOT 21	271104000405200	7.76	\$0.00	\$6,513.21	\$0.00		\$6,513.21	\$478.15	\$6,035.06
ARSENAULT ROBERT EUGENE	CON 1 PT LOT 21	271104000405300	0.24	\$0.00	\$198.39	\$0.00		\$198.39	\$0.00	\$198.39
NIEUWLAND LUKE	CON 1 PT LOT 21	271104000405400	0.34	\$0.00	\$285.60	\$0.00		\$285.60	\$0.00	\$285.60
ADAMS KEVIN JAMES	CON 1 PT LOT 21	271104000405500	9.20	\$0.00	\$7,730.08	\$750.00		\$8,480.08	\$616.53	\$7,863.55
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.30	\$0.00	\$1,931.27	\$0.00		\$1,931.27	\$150.73	\$1,780.54
PORT COLBORNE CITY	PT LOT 21 CON 1 RP 59R10301;PARTS 2 AND	271104000405600	2.03	\$0.00	\$1,701.64	\$0.00		\$1,701.64	\$0.00	\$1,701.64
MOSKALYK JOHN JOSEPH	CON 1 PT LOT 21	271104000405700	2.28	\$0.00	\$1,918.87	\$0.00		\$1,918.87	\$0.00	\$1,918.87
LEON LOU ANN	CON 1 PT LOT 21 RP 59R13013;PART 1	271104000417902	0.58	\$0.00	\$487.41	\$0.00		\$487.41	\$0.00	\$487.41
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	1.60	\$0.00	\$1,342.85	\$0.00		\$1,342.85	\$0.00	\$1,342.85
PORT COLBORNE CITY	CON 1 PT LOTS 1-22	271104000499900	0.69	\$0.00	\$578.02	\$0.00		\$578.02	\$0.00	\$578.02
City of Port Colborne	Lorraine Rd. from Lake to Killaly St. East	Lorraine Rd. ROW	3.25	\$0.00	\$6,122.37	\$0.00		\$6,122.37	\$0.00	\$6,122.37
City of Port Colborne	Lakeshore Rd. East west of Lorraine	Lakeshore Rd. E ROW	0.56	\$0.00	\$1,072.56	\$0.00		\$1,072.56	\$0.00	\$1,072.56
City of Port Colborne	Weaver Rd. N of Friendship Trail	Weaver Rd. ROW	0.12	\$0.00	\$260.91	\$0.00		\$260.91	\$0.00	\$260.91
				\$0.00	\$119,512.13	\$6,110.00	\$0.00	\$125,622.13	\$3,361.49	\$122,260.64

The Corporation of the City of Port Colborne

By-law No. 6828/78/20

Being a By-law to Authorize Entering into a Contract Agreement with V. Gibbons Contracting LTD. for Project 2020-02, Elm Street Bulk Water Station Replacement

Whereas at its meeting of October 26, 2020 the Council of The Corporation of the City of Port Colborne approved the recommendations of the Engineering and Operations Department, Engineering Division, Report No. 2020-160, Subject: Project No.: 2020-02, Elm Street Bulk Water Station Replacement; and

Whereas the Council of The Corporation of the City of Port Colborne is desirous of entering into a contract agreement with V. Gibbons Contracting LTD. regarding Tender 2020-02, Elm Street Bulk Water Station Replacement; and

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

1. That The Corporation of the City of Port Colborne enter into a contract agreement with V. Gibbons Contracting LTD. regarding Tender 2020-02, Elm Street Bulk Water Station Replacement.
2. That the Mayor and the Clerk be and each of them is hereby authorized and directed to sign said agreement, together with any documents necessary to complete the conditions of said agreement, and the Clerk is hereby authorized to affix the Corporate Seal thereto.

Enacted and passed this 26th day of October 2020.

William C. Steele
Mayor

Amber LaPointe
City Clerk

The Corporation of the City of Port Colborne

By-Law No. 6829/79/20

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 Regular Meeting of October 26, 2020

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 Regular Meeting of October 26, 2020 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; and further
2. 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.

Enacted and passed this 26th day of October, 2020.

William C. Steele
Mayor

Amber LaPointe
City Clerk

**City of Port Colborne
Regular Council Meeting 27-20
Minutes**

Date: October 13, 2020

Time: 6:30 p.m.

Place: Council Chambers, Municipal Offices, 66 Charlotte Street, Port Colborne

Members Present: M. Bagu, Councillor
E. Beauregard, Councillor (via Zoom)
R. Bodner, Councillor
G. Bruno, Councillor
F. Danch, Councillor (via Zoom)
A. Desmarais, Councillor
D. Kalailieff, Councillor (via Zoom)
W. Steele, Mayor (presiding officer)
H. Wells, Councillor (via Zoom)

Staff Present: D. Aquilina, Director of Planning and Development Department (via Zoom)
B. Boles, Director of Corporate Services/Treasurer (via Zoom)
A. Grigg, Director of Community and Economic Development (via Zoom)
A. LaPointe, Manager of Legislative Services/City Clerk
S. Luey, Chief Administrative Officer
C. Madden, Deputy Clerk (minutes)
S. Shypowskyj, Acting Director of Engineering and Operations (via Zoom)

Also in attendance was one member of WeeStream.

1. Call to Order:

Mayor Steele called the meeting to order.

Mayor Steele delivered his Mayor's Report, a copy of which is attached.

Regional Councillor Butters reported to Council on the number of positive COVID-19 cases in the Niagara Region to date. She informed Council that there have been 1,214 positive cases, 1000 resolved cases and 65 deaths. Councillor Butters encouraged residents to continue wearing a mask, maintain social distancing and to follow the news provided on the Region of Niagara's website with respect to COVID-19. Councillor Butters then indicated that poppies will be available for sale towards the end of October and that there isn't going to be an in-person gathering

ceremony for Remembrance Day, rather the Region is hoping to plan a Cyber ceremony. She concluded her report by informing Council of the upcoming Regional Standing Committee and Council meetings taking place in the near future.

2. **Introduction of Addendum Items:**

None.

3. **Confirmation of Agenda:**

No. 206 Moved by Councillor R. Bodner
Seconded by Councillor M. Bagu

That the agenda dated October 13, 2020 be confirmed, as circulated.

CARRIED

4. **Disclosures of Interest:**

Councillor Beauregard declared a pecuniary interest regarding item 4 (Corporate Services Department, Financial Services Division, Report 2020-145, Subject: Niagara South Coast Tourism Association By-Laws), as he is employed by Sullivan Mahoney and the firm has provided legal advice with respect to this item. Councillor Beauregard refrained from discussing and voting on item 4.

5. **Adoption of Minutes:**

No. 207 Moved by Councillor H. Wells
Seconded by Councillor F. Danch

(a) That the minutes of the special meeting of Council 25-20, held on September 28, 2020, be approved as presented.

(b) That the minutes of the regular meeting of Council 26-20, held on September 28, 2020, be approved as presented.

CARRIED

6. **Determination of Items Requiring Separate Discussion:**

The following items were identified for separate discussion:

Items 1, 3, 4, and 5.

7. **Approval of Items Not Requiring Separate Discussion:**

No. 208 Moved by Councillor E. Beauregard
Seconded by Councillor D. Kalailieff

That Items 1 to 7 on the agenda be approved, with the exception of items that have been deferred, deleted or listed for separate discussion, and the recommendation contained therein adopted.

Items:

2. Planning and Development Department, By-law Enforcement Division, Report 2020-135, Subject: By-law Appointment of Municipal Law Enforcement Officer

Council Resolved:

That Christopher Botts be appointed as a Municipal Law Enforcement Officer, Property Standards Officer and Weed Inspector.

6. The Royal Canadian Legion, Branch 56, Re: Request for Proclamation of Poppy Week, October 30 – November 11, 2020

Council Resolved:

That the week of October 30th – November 11th, 2020 be proclaimed as “Poppy Week” in the City of Port Colborne in accordance with the request received from Carol Madden, Poppy Chairman, Royal Canadian Legion, Branch 56, Port Colborne.

7. Town of Fort Erie Re: Request Province of Ontario to Investigate the Level of On-site Licensed Nursing Care – Private Sector Retirement Homes

Council Resolved:

That the resolution received from the Town of Fort Erie Re: Request Province of Ontario to Investigate the Level of On-site Licensed Nursing Care – Private Sector Retirement Homes, be received for information.

CARRIED

8. Delegations/Presentations

None.

9. Councillors' Items:

Staff Responses to Previous Councillors' Enquiries

(a) The Niagara Region's Environmental Work Program Policies (Aquilina)

The Director of Planning and Development informed Council that the Niagara Region is in the midst of preparing policies as part of their Environmental Work Program and Niagara Region staff confirmed that the City of Port Colborne's aquifer will be embarked on during the drafting of these policies.

(b) Meadow Heights Subdivision Agreement Amendment (Shypowskyj)

The Acting Director of Engineering and Operations informed Council that the change with respect to including only native trees in the Meadow Heights subdivision agreement will be reflected in the amended final version which will be brought forward to Council by the Director of Planning and Development at the next Council meeting.

(c) Queries regarding the Watermains (Shypowskyj)

The Acting Director of Engineering and Operations reported that the Niagara Region has been inspecting the interior of the water tower and this has caused differences in the pressure that the City's watermain system typically sees. As such, this has identified a few weak spots in the distribution system. He further informed Council that no further breaks are anticipated but that staff are continuing to monitor the situation.

Councillors' Issues/Enquiries

(a) Watermain breaks at Erie and Minto street (Bruno)

Councillor Bruno expressed appreciation towards the Acting Director of Engineering and Operations for investigating the watermain breaks at Erie and Minto Streets.

(b) Street Light Repairs on Barrick Road (Bruno)

Councillor Bruno expressed gratitude toward the Acting Director of Engineering and Operations for repairing the street lights on Barrick Road near the marsh.

(c) Accessibility of Street Light Signals (Bruno)

Councillor Bruno inquired as to whether the City's street lights have an accessibility function that notifies an individual at an intersection via sound that it is safe to use the cross walk as well as a sound function that notifies the individual what direction the cross walk is. The Acting Director of Engineering and Operations confirmed that he will investigate this matter and bring forward

a report to Council with potential costs of adding in this function if the City doesn't already currently have it.

(d) Exemption of Small Trailers from the October 15 Deadline (Bruno)

In response to Councillor Bruno's inquiry regarding whether small utility trailers could be exempted from the Zoning By-law October 15th deadline to remove trailers from front yards, the Director of Planning and Development informed Council that this would require an amendment to the Zoning By-law and that he will prepare a report to bring forward at the November 23 Council meeting regarding this matter.

(e) Status of New City Website (Bagu)

In response to Councillor Bagu's inquiry regarding the status of the City's new website launch, the City Clerk informed Council that staff recently completed the content writing component and that the target date for implementation is January 2021.

(f) Letters to Residents Regarding the Parking of Trailers/Boats (Bodner)

Councillor Bodner informed Council that By-law staff had hand delivered letters notifying residents of the October 15th deadline as prescribed under the Zoning By-law to remove trailers and boats from front yards. He proceeded to inquire as to whether staff were scheduled for the sole purpose of hand delivering these letters or if they were instructed to deliver them during in their usual travels to complete other tasks. The Director of Planning and Development informed Council that he would investigate this matter and inform Council of his findings.

(g) Highway 3 Detour (Bodner)

In response to Councillor Bodner's inquiry regarding when the construction on Highway 3 will be completed the Acting Director of Engineering and Operations confirmed that work is still being done for approximately the next two weeks and plans to reopen the highway are aimed for the end of October.

(h) Access Gate at the end of Wyldewood Road (Wells)

Councillor Wells informed Council that he has received reports of off-roading vehicles maneuvering around the access gate at the end of Wyldewood Road and entering the beach. In response to Councillor Wells' inquiry regarding whether the gates could be extended to property lines, the Acting Director of Engineering and Operations informed Council they are currently conducting a review to improve all road ends but will look into a temporary solution for the interim.

Notice of Motion

Councillor Wells provided notice of his intention to introduce a motion at the October 26, 2020 Council meeting with respect to the aquifer being designated as a source water for the rural portion of Port Colborne.

(i) Street Light on Barrick Road (Danch)

Councillor Danch informed Council and staff that there is a streetlight out on Barrick Road. The Acting Director of Engineering and Operations confirmed that he will investigate this issue.

(j) Halloween (Kalailieff)

Councillor Kalailieff expressed appreciation towards the Mayor for addressing the upcoming Halloween procedures in his Mayor's report. She further requested that staff spread this information out on the City's social media outlets. The City Clerk informed Council that there is a Region-wide approach to Halloween this year and the Communications staff will be spreading information on this in the near future.

(k) Excessive Muffler Noise (Kalailieff)

Councillor Kalailieff expressed appreciation towards the Niagara Regional Police's Staff Sergeant for addressing the issue of excessive muffler noise in Port Colborne. She informed Council that the Staff Sergeant will be asking his officers to add excessive muffler noise to their enforcement actions and that the Niagara Regional Police will notify the public via Twitter that they will be monitoring this issue in Port Colborne. Councillor Kalailieff further reported that the Niagara Regional Police will provide an educational component to the public on this issue as well. She concluded this Councillor's Item by encouraging residents to stay informed on information of this nature by checking the Niagara Regional Police's social media outlets.

10. Consideration of Items Requiring Separate Discussion:

1. Planning and Development Department, Building Division, Report 2020-126, Subject: Request for Reduction of Building Permit Fees for South Niagara Gateway Family Homes – 340 Wellington Street

Mark Shoalts, P.Eng., CAHP, Shoalts Engineering, provided a verbal report and responded to questions received from Council. A copy of his speaking notes are attached.

No. 209

Moved by Councillor D. Kalailieff
Seconded by Councillor A. Desmarais

That Council approve the reduction in building permit fees for South Niagara Gateway Family Homes Corporation from \$10,220 to \$1,000, and the difference of \$9,220 be refunded to the applicant; and

That South Niagara Gateway Family Homes Corporation be so notified.

CARRIED

3. Corporate Services Department, Financial Services, Report 2020-144, Subject: Reserve and Reserve Fund Policy

No. 210

Moved by Councillor M. Bagu
Seconded by Councillor R. Bodner

That the Reserve and Reserve Fund Policy attached as Appendix A be approved; and

That the reserves and reserve funds be consolidated as outlined in Appendix B and C.

Moved in amendment by Councillor H. Wells
Seconded by Councillor G. Bruno

That the main motion be amended by striking out the first paragraph and adding the following thereto:

“That the Reserve and Reserve Fund Policy attached as Appendix A to Corporate Services Report 2020-144 be amended to change Infrastructure Reserve to General TCA Reserve; and

That the Reserve and Reserve Fund Policy attached as Appendix A to Corporate Services Report 2020-144 be amended to add Goderich Maintenance Reserve (W) with a purpose of “a working reserve to accumulate unallocated Goderich maintenance funding between fiscal years” and a primary source of funding as “Goderich Maintenance agreement with third party”; and

That the Reserve and Reserve Fund Policy attached as Appendix A to Corporate Services Report 2020-144 be approved as amended; and”

CARRIED

Moved in amendment by Councillor G. Bruno
Seconded by Councillor R. Bodner

That the main motion be amended adding the following as the third paragraph:

“That the Reserve and Reserve Fund Policy attached as Appendix A to Corporate Services Report 2020-144 be amended to add Opportunities Fund with a purpose of “to fund investment opportunities with visibility to a reasonable rate of return” and a primary source of funding as “Seed funding (\$2 million) from the sale of Port Colborne’s share of Niagara Region Broadband Network (NRBN)”; and”

CARRIED

The vote was then called on the main motion, as amended, as follows:

That the Reserve and Reserve Fund Policy attached as Appendix A to Corporate Services Report 2020-144 be amended to change Infrastructure Reserve to General TCA Reserve; and

That the Reserve and Reserve Fund Policy attached as Appendix A to Corporate Services Report 2020-144 be amended to add Goderich Maintenance Reserve (W) with a purpose of “a working reserve to accumulate unallocated Goderich maintenance funding between fiscal years” and a primary source of funding as “Goderich Maintenance agreement with third party”; and

That the Reserve and Reserve Fund Policy attached as Appendix A to Corporate Services Report 2020-144 be amended to add Opportunities Fund with a purpose of “to fund investment opportunities with visibility to a reasonable rate of return” and a primary source of funding as “Seed funding (\$2 million) from the sale of Port Colborne’s share of Niagara Region Broadband Network (NRBN)”; and

That the Reserve and Reserve Fund Policy attached as Appendix A to Corporate Services Report 2020-144 be approved as amended; and

That the reserves and reserve funds be consolidated as outlined in Appendix B and C.

CARRIED

4. Corporate Services Department, Financial Services Division, Report 2020-145, Subject: Niagara South Coast Tourism Association By-laws

No. 211 Moved by Councillor M. Bagu
Seconded by Councillor D. Kalailieff

That the by-laws attached as Appendix A to Corporate Services Department, Financial Services Division, Report No. 2020-145, Subject: Niagara South Coast Tourism Association By-Laws, be approved.

CARRIED

5. Memorandum of Understanding Re: Hamilton-Oshawa Port Authority

No. 212 Moved by Councillor G. Bruno
Seconded by Councillor D. Kalailieff

That Council support the Memorandum of Understanding (MOU) between the Hamilton-Oshawa Port Authority (HOPA) and the municipalities of Port Colborne, Thorold, and Welland; and

That that Mayor be directed to sign the HOPA MOU.

Moved in referral by Councillor M. Bagu
Seconded by Councillor R. Bodner

That consideration of the Memorandum of Understanding Re: Hamilton-Oshawa Port Authority, be referred to the Chief Administrative Officer to arrange for the Hamilton-Oshawa Port Authority to attend a closed session Council meeting.

CARRIED

11. Proclamations:

(a) Poppy Week, October 30 – November 11, 2020

No. 213 Moved by Councillor R. Bodner
Seconded by Councillor A. Desmarais

That October 30 – November 11, 2020 be proclaimed as “Poppy Week” in the City of Port Colborne in accordance with the request received from The Royal Canadian Legion, Branch 56.

CARRIED

12. Minutes of Boards, Commissions & Committees:

None.

13. Consideration of By-laws:

No. 214 Moved by Councillor H. Wells
 Seconded by Councillor F. Danch

That the following by-laws be enacted and passed:

6824/74/20	Being a By-law to Amend By-law No. 89-2000, As Amended, Being a By-law Regulating Traffic and Parking on City Roads (Bell Street)
6825/75/20	Being a By-law to Appoint Christopher Botts as a Municipal Law Enforcement Officer, Property Standards Officer and Weed Inspector
6826/76/20	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 Regular Meeting of October 13, 2020

CARRIED

14. Adjournment:

Mayor Steele adjourned the meeting at approximately 8:38 p.m.

 William C. Steele
 Mayor

 Amber LaPointe
 City Clerk

AL/cm

Mr. Mayor and Councillors:

Thank you for the opportunity to address you regarding the building permit fees for 340 Wellington St. You have my letter to Todd Rogers which gives you an overview of the project, my request on behalf of the board of South Niagara Gateway Family Homes for relief from the building permit fees, and our reasons for the request.

I'd like to add a bit of detail to help with your deliberations. The original concerns with the building arose because of some spalling bricks. Removal of the obviously damaged bricks for replacement revealed many more bricks that were crumbling from the back but that still appeared good from the face. At this point we produced specifications and obtained quotes for replacing the brick on the top three storeys, but the cost was beyond the capacity of the corporation to carry; the building operates on a cost-recovery basis for rent and although there are reserves for larger expenditures, the reserves are not this large. We changed the design to prefinished steel cladding instead of brick, we retendered the project, and the board got financing approved by the Region for the reduced amount.

Building departments are supposed to be self-financing from permit fees, and the fees are set based on studies done to determine costs, projected numbers of permits of various types, and requirements for reserves to cover variations in revenue. Most permit fees are based on a charge per square metre of building area, but some projects do not fit this model and the fees are calculated as a percentage of project value. Because this project is limited in scope and has regular review and reporting by the design professionals, there are few inspections required by the building department, which keeps the cost to the city down. In light of this and in light of the non-profit nature of the building and the burden that this project puts on their finances, we request some relief from the City. We think it is a welcome and relatively painless action for the city to assist in this way a corporation providing high-quality social housing in Port Colborne.



Mark Shoalts, P.Eng., CAHP



MAYOR'S REPORT
OCTOBER 13, 2020 COUNCIL MEETING

COVID-19 UPDATE

Good evening and welcome to our virtual council meeting.

Tonight we are welcoming Councillors Bagu, Bodner, Bruno and Desmarais into the council chambers. Also joining us are our CAO Scott Luey, Clerk Amber LaPointe, Deputy Clerk Charlotte Madden, and a member of Wee Stream who are live streaming this meeting for us.

Our other four city councillors and various city directors are each attending from home.

Niagara remains in Stage 3 of the COVID-19 recovery process. You have seen the province roll back several regions to a modified Stage 2. We don't want to go there.

We emphasize the need for social distancing, hand washing and face coverings where social distancing can't be maintained or where required by the Region's face covering by-law.

We ask that you continue to support our local businesses, including restaurants as patio season will be coming to an end soon and these businesses still need our support.

Christmas Card Contest

Just a reminder that the deadline for our annual Christmas Card colouring contest is Thursday, October 22.

The contest is open to all children who live or go to school in Port Colborne up to and including those in grade 8. Parents and grandparents, please encourage your children to PORTicipate.

Submissions may be painted with fingers or brushes, or drawn with pencils, crayons, pastels, or markers on a standard white sheet of paper, 8 ½" X 11" in vertical or horizontal format. Remember that deep, dark colours produce a better illustration. Please include your child's name, address, and telephone number on the back of the artwork.

Region Garbage Collection

Starting next week the Region is moving to an every-other-week schedule for garbage pick-up.

How does that impact Port Colborne? Residents **will not** have garbage collection the week of October 19. Garbage will be collected the week of October 26, continuing on an every-other-week basis.

What will be collected the week of October 19 and weekly thereafter are your:

Blue Box

Grey Box

Green Bin

Leaf and yard waste

What you can put out bi-weekly, starting October 26 - Garbage with to a 2 bag limit

So be a good neighbour next week and if you notice neighbour has put out their garbage, remind them of the new schedule.

And if you need an additional blue, grey or green bin, call our Customer Service Representatives at 905-835-2900 and set up a time to come to city hall to buy one.

Meals on Wheels Bottle Drive

On Sunday, October 18th, Meals on Wheels Port Colborne will be holding a Bottle Drive to raise funds to support their meal program.

A drive-through collection will take place in the No Frills Plaza from 10-5.

So, clean up your garage and bring your empties to the collection point next Sunday.

Hallowe'en

I wanted to get everyone thinking about Hallowe'en even though it is three weeks away. While the Region has not released specific guidelines for Niagara, we have received these guidelines from the province.

- Stay home if feeling ill or if you have mild symptoms.
- Only go out with members of your direct household.
- Only trick or treat outside.
- Both trick or treaters and people handing out candy should wear a face covering:
 - A costume mask is not a substitute for a face covering and should not be worn over a face covering as it may make it difficult to breathe.
 - Consider building your face covering into your, or your child's, costume.
- Do not congregate or linger at doorsteps. Line up two metres apart if waiting. Avoid high-touch surfaces and objects.
- Whether collecting or handing out treats, wash your hands often and thoroughly or use hand sanitizer:
- Do not leave treats in a bucket or bowl for children to grab.
- Consider using tongs, or other similar tools to hand out treats.

Parents will need to make a personal decision about participating this year. If you do PORTicipate, please do it safely.

Closing

In closing, we ask for your patience while we all work together for a safe and gradual return of services. We must remain vigilant in fighting this virus.

Our number one priority is the health and safety of our staff and citizens as we continue the safe and gradual reopening of services and business activities.

Please stay safe.