



**TOWN OF AMHERSTBURG
DRAINAGE BOARD
Tuesday, October 3, 2023
6:00 PM**

MINUTES

PRESENT

Allan Major
Anthony Campigotto
Murray Sellars
Brian Renaud
Sam Paglia, Drainage Superintendent/Engineering
Coordinator
Nicole Humber, Recording Secretary
Karly Kennedy, Policy and Committee Coordinator

ABSENT

Brad Laramie

1. CALL TO ORDER

The Chair called the meeting to order at 6:00 p.m.

2. DISCLOSURE OF PECUNIARY INTEREST & GENERAL NATURE THEREOF

Board Member Brian Renaud declared an interest with item 4.3.

3. The Chair read the following land acknowledgement:

“We will begin by acknowledging that the land on which we gather is the traditional territory of the Three Fires Confederacy of First Nations (comprising the Ojibway, the Odawa, and the Potawatomie Peoples), and of the Huron- Wendat and Wyandot Peoples. We recognize the land as an expression of gratitude to those whose traditional territory we reside on, and a way of honouring the Indigenous people who have been living and thriving on the land since time immemorial. We value the significant historical and contemporary contributions of local and regional First Nations and all of the Original Peoples of Turtle Island.”

4. NEW BUSINESS

4.1 Lakewood Drive Drain No. 3 and Pumping Scheme

Sam Paglia explained that the reason for the meeting was to gather input from the landowners on the Lakewood Drive Drain No. 3 and Pumping Scheme after the rain event that occurred August 24 and 25, 2023. Mr. Paglia stated that this meeting was not a regulatory meeting through the Drainage Act, and that it was to have a discussion with landowners regarding a back up power system for the Lakewood Drive Drain No. 3 and Pumping Scheme. Mr. Paglia further stated that during the rain event in question, 6 out of the 8 pumping systems had power failure and as a result two landowners have submitted requests to the Town to inquire about back up power supply to those pumping systems. Mr. Paglia noted that this was a good time to reach out and see if it was an option that landowners would like to have backup power included within the Lakewood Drive Drain No. 3 and Pumping Scheme report.

Tim Oliver, P.Eng from Dillon Consulting Ltd addressed the landowners in the audience and advised that adding back up power is not common in his experience, however with the power outage that occurred during the recent rain events may cause flooding if the pumps are not functional and although the Town has standby pumps to provide some temporary pumping, they are not always readily available and they would not provide the same amount of power. Mr. Oliver noted that this particular pump is a medium to large sized pump and using temporary pumps would not match this pump stations capacity.

Mr. Oliver spoke about a diesel generator that is the most common. This system has a transfer switch that starts the engine and the power is supplied to the pump automatically. The generator has its own fuel tank and sound proofing. Mr. Oliver stated that the regulations for Tier 1 generator has high restrictions on emissions, and this particular generator is an 80 kilowatt

generator with a sound enclosure, and an exhaust stack 20' high that would help with emissions control.

Mr. Oliver explained that the cost with the generator, transfer switch, site works, and alarm system would be approximately \$150,000-\$170,000 which is a considerable cost that would be shared amongst all landowners on schedule C. Mr. Oliver noted that the Town of Amherstburg is assessed 44% of the cost and the balance would be assessed to the watershed in the same proportions as in the report.

Mr. Oliver noted that the reason for the recommendations to the Bar Point pump upgrades is due to the pump not being strong enough to accommodate Lakewood Drive, it was also mentioned that everyone on the pumping scheme would benefit from the back up power system.

Mr. Oliver made it clear to the landowners that the report can go through as is, or the report can be referred back and a back up power supply can be added now or provisions in the report can have a back up power supply added in later. Mr. Oliver stated that he has not been instructed to add back up power, and that it was up to the landowners and the Drainage Board to decide if this is something they consider valuable.

Mr. Paglia advised that with 6 of the 8 pumps going without power the Town has received multiple calls to look into back up power on other pump stations, and in 2 of those watersheds, landowners have submitted requests for improvement for the addition of back up power supply. Mr. Paglia indicated that if the decision was made now to look into back up power, the engineering costs would be saved as it can be included in the report Mr. Oliver has worked on. If a request came in afterwards another engineer's report would be required.

Board Chair Anthony Campigotto asked if anyone in the gallery had any questions.

The Board heard from:

- **Brian Balkwill – 148 Lakewood Drive**

Mr. Balkwill stated that the Lakewood Drive area was fine and received no flooding during the rain events in August. Mr. Balkwill agreed that a significant amount of rain fell, however there were no issues in the Lakewood Drive area. Mr. Balkwill stated that the asset management in the Town is non-existent and he would like the power grid looked at to see if it is strong enough, and if not than the hydro infrastructure should be upgraded. Mr. Balkwill felt that a 20' exhaust pipe on the generator

would be an eyesore and a mistake if installed. Mr. Balkwill expressed concern that an 80 kilowatt generator would be too big for the pump station.

Mr. Paglia clarified that the area that received the most amount of rainfall was the Malden Centre area, along County Road 20 east of Concession 5 South. But that at any time, the Lakewood area could receive a similar event.

Board Chair Anthony Campigotto indicated that there were hydro upgrades in the area recently and there does not seem to be an improvement, and stated that the Willow Beach area experienced flooding during that particular rain event, and it is not far from Lakewood Drive. Mr. Campigotto stated that there is an 80 kilowatt generator that services the Libro Centre and it serves its function.

Mr. Paglia thanked Mr. Balkwill for his comments but stated that some of Mr. Balkwill's comments were outside the scope of this meeting. Mr. Paglia stated that he wholeheartedly disagrees with Mr. Balkwill's comments about the area being ok. The fact that the Lakewood area did not get the same amount of water as other areas, but that it did not mean that the area won't experience it one day. Mr. Paglia noted that it was worth discussing with landowners and up to them and the Board about protecting their homes. Mr. Paglia also indicated that others in the Gallery may not have the same opinion, but appreciated Mr. Balkwill's opinions none-the-less.

- **Dan Accetta – 125 Lakewood Drive**

Mr. Accetta asked the Board if it would make sense to evaluate all of the pump stations and possibly obtain better pricing for ordering multiple units. Mr. Accetta asked if it was possible that the Road Authority could request backup generators at all pump stations.

Mr. Paglia stated that the Road Authority (Town) can trigger drainage works, and so can any other landowner in a watershed. The Town appreciates when the requests on Municipal Drains come from the landowners within the watershed and will support the request to provide a better level of service because we all share in the cost.

- **Kathryn McNamara**

Ms. McNamara requested the pricing be confirmed.

Mr. Oliver confirmed the cost would be approximately \$150,000-170,000 with the Town paying 44% of the cost.

- **Harry Vandenbrink**

Mr. Vandenbrink asked if a natural gas generator was ever looked into.

Mr. Campigotto advised that the Ontario Building Code states that only reliable energy back up systems are diesel generators, and that they are always used for health care facilities as they are the only generators that are reliable in case the natural gas system is damaged or disrupted during an event, which would affect the operation of the gas backup powered system.

Mr. Oliver explained that he had discussions with industrial engineers and a natural gas generator is not an option for the Bar Point pump as there is no gas service at the pump station, and strongly suggested diesel would be the choice to take.

Board Chair Anthony Campigotto asked if there were any further questions from the gallery.

There were none.

Board Chair Anthony Campigotto asked if there were any questions from the Board members.

There were none.

Mr. Paglia advised that if the Board wanted to consider back up power, the engineer's report would have to be referred back to the engineer as it is currently provisionally adopted. And that;

(a) the revised report could provide options that could be discussed at a further meeting or

(b) the revised report could be reconsidered with the addition of a back up power source.

Mr. Paglia stated that a reconsideration meeting would be held to provide landowners the opportunity to comment on the technical aspects of the revised report, and a Court of Revision meeting would be held to deal with the revised assessments. Mr. Paglia added that if the report is sent back to the

engineer to be revised and reconsidered, the current adopted report would no longer have its provisional status.

Mr. Paglia advised that the Board has to make a decision whether to move ahead with the adopted report or send the report back to the engineer.

Vice-Chair Allan Major suggested a poll with the landowners in the gallery to see if they are interested in back up power supply.

Mr. Paglia polled the landowners in the audience and of those who voted 6 landowners were in favour of a back up power supply and 2 were not.

Murray Sellars moved, Brian Renaud seconded;

That:

- 1. The engineer's report, prepared by Dillon Consulting Ltd. dated June 27, 2023 for the Lakewood Drive Drain No. 3 & Pumping Scheme BE SENT BACK to the Engineer so that changes to the report can be made to include back up power supply.**

Motion Carried

4.2 Chappus Drain – Town of Lasalle

Mr. Paglia indicated that the Chappus Drain starts in the Town of Lasalle at Turkey Creek and heads southeast into the north end of the Town of Amherstburg. The request for improvement to appoint an engineer was initiated in the Town of Lasalle. Mr. Paglia advised that Gerard Rood, P.Eng of Rood Engineering Inc. was appointed by the Town of Lasalle to prepare the report for the repair and improvement to the Chappus Drain. The meeting to consider was held in Lasalle on September 26th, and other than general comments, all were in favour with only a couple questions from landowners regarding drain spoils. Mr. Paglia indicated that there were no Amherstburg landowners in attendance. Mr. Paglia stated that the bulk of the drainage improvements will be covered by Essex Golf and Country Club who is the requesting the diversion of the drain and is also a requesting landowner, although landowners will be paying for some drain cleaning. Mr. Paglia noted that the Town of Amherstburg will be paying for the cost to produce a future maintenance schedule, but not for any of the construction recommendations in the report. The Town would be invoiced by Lasalle for the entire portion of assessment to Amherstburg lands, then after an Authorizing Bylaw is brought

to Amherstburg Council, the Town will apply for grant and recover the landowner assessed costs through billing.

Mr. Paglia stated that the Drainage Act allows another municipality, other than the initiating municipality to file an appeal on technical merit per Section 75 (1), and Section 97 (3) indicates that one (1) member of any neighbouring municipality's Council or Committee must be appointed to the Court of Revision in the initiating municipality. Mr. Paglia also indicated that once the Town of LaSalle passes their bylaw for the drain, the Town of Amherstburg will pass an authorizing bylaw in order to use the assessment schedule for Amherstburg lands to recover costs assessed to Amherstburg lands.

Board Member Anthony Campigotto asked if the Town would be assessed for the south side of Malden Road.

Mr. Paglia indicated that Malden Road is a County Road, which is owned by the County of Essex, so the County of Essex is assessed for the road. Mr. Paglia indicated that the schedule of assessment for future maintenance includes 12 non-agricultural parcels within the Town of Amherstburg that would be assessed.

Brian Renaud moved, Murray Sellars seconded;

THAT:

- 1. Vice-Chair Allan Major BE APPOINTED to sit on the Court of Revision for the Town of Lasalle as per Section 97(3) of the Drainage Act.**

Motion Carried

4.3 Engineering Appointment – Collison Drain

Mr. Paglia explained that a request for a culvert for a residential lot is the premise for the engineering appointment, noting that the requesting landowner would be responsible for the costs for the engineers report and the initial installation of the culvert. Mr. Paglia further explained that the upstream landowners would be assessed for future maintenance of said culvert. Mr. Paglia stated that Gerard Rood of Rood Engineering Inc. completed that last report on the Collison Drain, therefore it was beneficial to appoint Mr. Rood to this project from a time and efficiency perspective.

Board Member Brian Renaud asked if bridge construction costs are typically the responsibility of the requesting landowners.

Mr. Paglia stated that it is up to the appointed engineer, however most of the time the new installation and cost of the report is generally assessed to the landowner requesting a primary culvert, and any future maintenance after that installation is assessed to upstream landowners.

THAT:

- 1. The report from the Drainage Superintendent and Engineering Coordinator dated September 14, 2023 regarding the Collison Drain – Engineering Appointment BE RECEIVED;**
- 2. The Drainage Board recommend that Council ACCEPT the request from the landowner for improvements to the Collison Drain drainage system as per Section 78 of the Drainage Act; and,**
- 3. The Drainage Board recommend that the appointment of Rood Engineering Inc. as represented by Mr. Gerard Rood, P.Eng., to examination and report on the repair and improvement to the Collison Drain drainage system BE APPROVED by Council.**

Motion Carried

4.4 Engineering Appointment – Deslippe Drain

Mr. Paglia informed the Board that the Deslippe Drain is currently under examination and report under Section 124 where a culvert had failed on the drain and the Act allows (with permission from the Minister) to replace or repair the culvert, and subsequently bring a report to Council. Mr. Paglia explained that there was already one culvert failure on the drain subsequent to the initial failure, two more are needing replacement. Mr. Paglia stated that the Town received a request from an upstream landowner to clean the drain and the engineer currently appointed has already completed 90% of the report, and if the drain maintenance is added to the scope of the report the Town and the engineer could face appeals for the delay on the report. Mr. Paglia recommended appointing another engineer to examine the drain and prepare a report as the current bylaw on the drain is unusable to recover costs fairly. Mr. Paglia also noted that experience indicates that since most of the culverts on the drain were installed at the same time, and two failures have recently occurred, with the recommendation that two more culverts downstream are in need or replacement, there is a high likelihood that other culverts on the drain outside the scope of the current appointed engineer so maintenance was not

suggested to the requesting landowner as there is no mechanism in the current bylaw to recover cost sharing on culvert replacements. Mr. Paglia confirmed the location of the Deslippe Drain starts along the east side of the 6th Concession S, south of County Rd 18 and heads northerly along the 6th Concession S and cuts across lands near Alma Street, then continues north to Long Marsh Drain.

Murray Sellars moved, Allan Major seconded;

That:

- 1. The report from the Drainage Superintendent and Engineering Coordinator dated September 14, 2023 regarding the Deslippe Drain – Engineering Appointment BE RECEIVED;**
- 2. The Drainage Board recommend that Council ACCEPT the request from the landowner for improvements to the Deslippe Drain drainage system as per Section 78 of the Drainage Act; and,**
- 3. The Drainage Board recommend that the appointment of R. Dobbin Engineering as represented by Mr. Josh Warner, P.Eng., to examination and report on the repair and improvement to the Deslippe Drain drainage system BE APPROVED by Council.**

Motion Carried

4.5 Engineering Appointment – St Theresa Subdivision

Mr. Paglia provided a brief overview of the numerous requests the Town received for improved drainage in the St Theresa Subdivision. Mr. Paglia indicated that the St Theresa subdivision has its own municipal drain within the road right-of-way in the subdivision called the Langlois Drain. Mr. Paglia advised that the area had severe flooding during the rain events on August 24 and 25, and there have been numerous discussions with the landowners in the area since those said rain events. Mr. Paglia stated that he has recommended the Board appoint Oliver Moir, P.Eng from Dillon Consulting Ltd. to examine and prepare a preliminary report for options to provide a higher level of service for the St Theresa subdivision. Mr. Paglia did note that the amount of rain the St Theresa subdivision received, far exceeded the level of service of the majority of drainage schemes in Ontario.

Committee member Brian Renaud asked if it were possible to design a drain to handle the amount of rain the St. Theresa lands received during the rain event.

Mr. Paglia indicated in short that it is possible, but that there are many factors to consider with the economics of a system that large being the major factor. Places in areas where those rainfalls are common do design for those events, but the systems are much larger than anything in Ontario and are simply uneconomical to provide province wide. They would require a much larger footprint and constructability regarding elevations in our area can complicate such a system.

Vice Chair Allan Major asked if the area in question was where one of the pump stations had power failure.

Mr. Paglia stated that this area is not served by a pump station and that the area relies on gravity flows in the Langlois Drain South, Alvin Bondy Drain and the Albert McGee Drain to drain the lands into Big Creek. Mr. Paglia advised that the surface flow travelled from the surrounding farm fields into the subdivision and although there was still some capacity in the Albert McGee Drain, the water couldn't get there and flowed through the subdivision and made its way to County Road 20 (CR20), where it met the municipal drains at Concession 6 South and CR20. Mr. Paglia indicated that the volume of water and the flows associated with such a volume was significant and had also caused a washout over the 5th Concession South.

Board Member Brian Renaud asked if there was anything that could be done as the amount of rain was significant.

Mr. Paglia explained that the engineers are in a difficult place when it comes to design as these rain events are not the norm, there are drainage systems and pump stations to deal with these types of rain events in areas where these intensity and frequencies occur, it would be uneconomical for Ontario to design for such events and the Drainage Act would never impose those costs on landowners unless requested to do so. Engineers utilize the provincial design guides to design for a 1:2 rain event in Ontario for Municipal Drains. Mr. Paglia informed the board that the engineer will provide options in the preliminary report to provide a better level of service for the residents of St. Theresa and surrounding area.

Board Chair Anthony Campigotto asked if anyone in the audience would like to address the Board.

The Board heard from:

- **Harry Vandenbrink – 19 Durango**

Mr. Vandenbrink stated that he built his home 29 years ago and this is the first time his home has flooded, however his battery backup pump failed. Mr. Vandenbrink indicated it is not the first time the road has flooded, and when the field tiles are frozen in the field next to him the water runs off the field and his sump pump fields the water at that time. Mr. Vandenbrink added that the tiles for the field are tiled to drain north of the subdivision.

Murray Sellars moved, Brian Renaud seconded;

That:

- 1. The report from the Drainage Superintendent and Engineering Coordinator dated September 14, 2023 regarding the Request for Improvement – Engineering Appointment BE RECEIVED;**
- 2. The Drainage Board recommend that Council ACCEPT the requests from the landowners for improvements to the drainage systems in their area as per Section 78 of the Drainage Act; and,**
- 3. The Drainage Board recommend that the appointment of Dillon Consulting Ltd., as represented by Mr. Oliver Moir, P.Eng., to examination and produce a preliminary report on any potential repairs or improvements to the Municipal Drain infrastructure that services St. Theresa Subdivision BE APPROVED by Council.**

Motion Carried

4.6 MINUTES OF PREVIOUS MEETING

Board Chair Anthony Campigotto advised that he noticed a typo on page 7 of the August 9, 2023 minutes. In paragraph 2 under the Frank Kemski portion, the minutes read “home setbacks are 20-25 meters” and the wording should say 20-25 feet.

Brian Renaud moved, Allan Major seconded;

That:

The minutes of the previous meeting BE ADOPTED:

- 1. Drainage Board Meeting Minutes AS AMENDED – August 9, 2023**
- 2. Drainage Board Meeting Minutes – September 5, 2023**

Motion Carried

5. NEXT MEETING DATE

November 7, 2023 at 6:00 p.m.

8. ADJOURNMENT

Allan Major moved, Murray Sellars seconded;

That:

The Board rise and adjourn at 7:16 p.m.

Motion Carried

Chair – Anthony Campigotto

Staff Liaison – Sam Paglia



THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF ENGINEERING AND PUBLIC WORKS

MISSION STATEMENT: Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.

Table with 2 columns: Author's Name, Report Date, Author's Phone, Date to Drainage Board, Author's E-mail, Resolution #.

To: Members of the Drainage Board
Subject: Collison Drain – Engineering Appointment

1. RECOMMENDATION:

It is recommended that:

- 1. The report from the Drainage Superintendent and Engineering Coordinator dated September 14, 2023 regarding the Collison Drain – Engineering Appointment BE RECEIVED;
2. The Drainage Board recommend that Council ACCEPT the request from the landowner for improvements to the Collison Drain drainage system as per Section 78 of the Drainage Act; and,
3. The Drainage Board recommend that the appointment of Gerard Rood of Rood Engineering Inc., to examination and report on the repair and improvement to the Collison Drain drainage system BE APPROVED by Council.

2. BACKGROUND:

The Collison Drain drainage system was first petitioned for in 1917, and subsequent reports and bylaws exist from 1927 through to and including 2019. The governing report for the entire drain is a 1981 Report by Wm Settingington which provides the current drain profile grades.

The Town received a request for improvement from a landowner who wishes to install a culvert over the Municipal Drain to access a residential building lot.

3. DISCUSSION:

The current bylaw does not provide a mechanism to install a culvert and fairly assess lands for the required improvement without updating the engineers report appended to the bylaw. The examining engineer in developing recommendations will include in the report, the improvement request, and any future culvert sharing. The Engineer during their examination may also include culvert replacements required downstream of the requesting lands and to a sufficient outlet or any other improvements necessary to bring the bylaw to its current reflection of the watershed and for the benefit of all of its landowners.

4. RISK ANALYSIS:

It is Council's responsibility to maintain and repair Municipal Drains and in doing so, must also maintain the Engineers report that is appended to each By-law for the respective Municipal Drains. For the benefit of all lands including the Town, the current engineers report on the Collison Drain does not include a culvert at the location of this request and does not provide for future maintenance of same for the entire watershed in the drains assessment schedule.

5. FINANCIAL MATTERS:

The financial implications will be determined by the appointed engineer and will be provided in the schedule of assessment within the engineer's drainage report for the improvements to the Collison Drain. Under an improvement request, the requesting landowner is liable for 100% of the cost to produce the updated report and to construct the improvement. Upstream lands are involved in the process as there lands may pay for future maintenance and repair of the added improvements, and perhaps anything deemed necessary downstream of the request as the case may be.

The Town is currently assessed for its roads and lands within the watershed for approximately 8.7% of the works, but this can change under a report by an engineer. All of the affected upstream lands in the watershed share the cost of a project in the ratios set out in the report by the appointed engineer that are directly related to the maintenance and repair of the drain.

6. CONSULTATIONS:

N/A

7. CONCLUSION:

Administration is recommending that the appointment of the firm of Rood Engineering Inc., for the repair and improvement to the Collison Drain drainage system, be brought to

the next available Regular Council meeting for Council's consideration pursuant to the provisions of the Drainage Act.



Sam Paglia, P.Eng.,
**Drainage Superintendent and
Engineering Coordinator**

Attachment(s):

- Request for Improvement received



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN
(Section 78 (1.1) of the Ontario Drainage Act)

FROM: Steeve BOUCHARD

DRAIN: Collison Drain

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

- add a 30'ft bridge to an a VACANT lot.

Property Owners

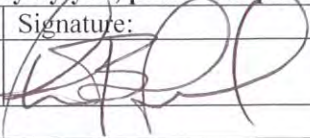

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION	<u>Collison rd</u>	[REDACTED]
GEOGRAPHIC TOWNSHIP	<u>Aburg</u>	PARCEL ROLL NUMBER [REDACTED]

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Steeve BOUCHARD		2023/09/14
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province: ON	Postal Code: N0R 1G0
Telephone Number: 	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

Paglia, Sam
Name of Clerk: (Last, First)


Signature of Clerk



THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF ENGINEERING AND PUBLIC WORKS

MISSION STATEMENT: Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.

Author's Name: Sam Paglia	Report Date: September 14, 2023
Author's Phone: 519 736-3664 ext. 2318	Date to Drainage Board: October 3, 2023
Author's E-mail: spaglia@amherstburg.ca	Resolution #: N/A

To: Members of the Drainage Board

Subject: Deslippe Drain – Engineering Appointment

1. **RECOMMENDATION:**

It is recommended that:

1. The report from the Drainage Superintendent and Engineering Coordinator dated September 14, 2023 regarding the Deslippe Drain – Engineering Appointment **BE RECEIVED**;
2. The Drainage Board recommend that Council **ACCEPT** the request from the landowner for improvements to the Deslippe Drain drainage system as per Section 78 of the Drainage Act; and,
3. The Drainage Board recommend that the appointment of R. Dobbin Engineering as Represented by Mr. Josh Warner, P.Eng., to examination and report on the repair and improvement to the Deslippe Drain drainage system **BE APPROVED** by Council.

2. **BACKGROUND:**

The Deslippe Drain drainage system was first petitioned for in 1905, and has a number of examinations under engineers' report from 1906 through to and including 2006. The governing report for the entire drain is from 1983, under report and bylaw No. 83-13. The Drainage Superintendent for the Town received authorization from the Office of the Minister for Agriculture, Food and Rural Affairs under Emergency Designation (Section

124) in 2021 to replace a failed culvert on the Drain. Council appointed an engineer to include the culvert and update the report.

During the time the engineer worked on the report, there were other failed culverts that occurred. The expected Section 78 report has not been filed with the Town and is not yet adopted.

Administration did however consult with the appointed engineer to potentially request a scope change to include the examination of the entire drain in order to satisfy the current request, but unfortunately, the report is too far along for a change in scope to occur. The Town and Engineer are responsible to move forward with examinations and reports actively and without delay or face potential appeals. With the report almost ready for submission and the potential for more failed culverts on the drain, the current request is for improvements to the entire drain will be completed under a separate appointment.

As a note, the requesting landowner at the time the currently appointed engineer conducted the on-site meeting, ANY landowner could have requested that the entire drain be examined which would provide the engineer with the authority to report therein.

3. DISCUSSION:

The Town received a request for maintenance, but the current bylaw does not provide a mechanism to fairly assess lands for the required maintenance. The Town is restricted under maintenance to only perform repairs where the items being repaired or replaced are "like for like". The fact that an emergency culvert replacement took place in 2021, the fact that the appointed engineers are replacing other culverts on the drain and the fact that the current bylaw is from 1983, there is a high likelihood that other improvements will be necessary on the drain and the current bylaw does not provide a mechanism that allows the Town to improve the drain under maintenance.

4. RISK ANALYSIS:

It is Council's responsibility to maintain and repair Municipal Drains and in doing so, must also maintain the engineers' report that is appended to each By-law for the respective Municipal Drains. For the benefit of all lands including the Town, the current engineers report on the Deslippe Drain is outdated and does not accurately reflect the liabilities of various lands within the watershed.

5. FINANCIAL MATTERS:

The financial implications will be determined by the appointed engineer and will be provided in the schedule of assessment within the engineer's drainage report for the improvements to the Deslippe Drain drainage system. The Town is currently assessed for the Township of Anderdon as well as the Township of Malden drainage assessments

in the report for its roads and lands within the watershed for approximately 24% of the works, but this can change under a report by an engineer. All of the affected lands in the watershed share the cost of the project in the ratios set out in the report by the appointed engineer.

6. CONSULTATIONS:

N/A

7. CONCLUSION:

Administration is recommending that the appointment of the firm of Dillon Consulting Ltd. for the repair and improvement to the Deslippe Drain drainage system, be brought to the next available Regular Council meeting for Council's consideration pursuant to the provisions of the Drainage Act.



Sam Paglia, P.Eng.,
**Drainage Superintendent and
Engineering Coordinator**

Attachment(s):

- Request for Improvement



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: Donald Deslippe

DRAIN: Deslippe Drain

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

The Deslippe Drain is in need or repair from 6321 con 6 S downstream to Alma, or to a sufficient outlet to provide drainage for the upper reaches of the drain.

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION CON 6 S PT LOT 74	
GEOGRAPHIC TOWNSHIP Malden	PARCEL ROLL NUMBER [REDACTED]

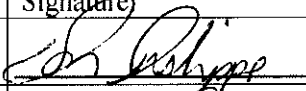
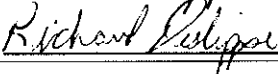
If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature	Date: (yyyy/mm/dd)
Deslippe, Donald		2023-07-18
Deslippe Richard		2023-07-18
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 19 day of July 2023.

per Antonietta Giofu
Name of Clerk: (Last, First)

AGiofu.
Signature of Clerk



THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF ENGINEERING AND PUBLIC WORKS

MISSION STATEMENT: Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.

Table with 2 columns: Author's Name, Report Date, Author's Phone, Date to Drainage Board, Author's E-mail, Resolution #.

To: Members of the Drainage Board
Subject: St. Theresa Subdivision
RE: - Albert McGee, Alvin Bondy and the Langlois Drains Engineering Appointment - Preliminary Report

1. RECOMMENDATION:

It is recommended that:

- 1. The report from the Drainage Superintendent and Engineering Coordinator dated September 14, 2023 regarding the Request for Improvement - Engineering Appointment BE RECEIVED;
2. The Drainage Board recommend that Council ACCEPT the requests from the landowners for improvements to the drainage systems in their area as per Section 78 of the Drainage Act; and,
3. The Drainage Board recommend that the appointment of Dillon Consulting Ltd., as represented by Mr. Oliver Moir, P.Eng., to examination and produce a preliminary report on any potential repairs or improvements to the Municipal Drain infrastructure that services St. Theresa Subdivision BE APPROVED by Council.

2. BACKGROUND:

The Town received multiple requests from landowners on St. Theresa, Durango Avenue and Woodside Avenue subdivision located east of Concession 6 South off of County Road 20.

The requests are to have the Town review the drainage in the area as residents experienced some adversity after the Town received a large rain event on August 24, and 25th which produced surface water that filled the streets and ditches in the area. The rain event in the region that saw between 127mm and 152mm of rain fall on August 24th and an additional 25mm fall on August 25th.

Many homes experienced flooding and landowners are requesting that the Town look at ways to increase the level of service in the area's Municipal Drainage schemes.

It should be noted that the average level of service provided province wide for a municipal Drain is a 1:2 event. The rain received in August 2023 was in the range of a 1:50 event, so flooding would be expected.

Multiple Requests for Improvement forms have been submitted by residents in the area and administration is recommending that Council appoint an engineer to study the area and produce a preliminary report for landowners demonstrating what kind of upgrades can be recommended to provide a better level of service for the area.

3. DISCUSSION:

There are 6 Municipal Drains that service the subdivision and bring the water that they receive to a sufficient outlet are listed below with their respective governing bylaws.

1. Langlois Drain – Bylaw No. 92-31
2. Alvin Bondy Drain Bylaw No. 1586 (1966), Bylaw No. 84-10 (1983) and Bylaw 92-31
3. Parks Drain – Bylaw 2019-058 and Bylaw 2021-046
4. Albert McGee Drain (Upper Portion)-Bylaw 1331 (1957)
5. Malden Center Drain – Bylaw 2011-90
6. Albert McGee Drain (Lower Portion) – Bylaw 92-30 (1991)

Langlois Drain: The drain was created under report by William J, Settingington, P.Eng., dated January 24, 1973 and created a subdivision plan with storm sewers on Woodside Avenue, St. Therese Avenue and Durango Avenue. The outlet for this drainage system at the time of construction was a private drain on the south lot of the farm parcel located at 6687 Concession 6 S. Further to this report, the Town appointed Crozier Baird to examine the area in 1992 and provide for an enclosure to extend from the outlet of the 1973 report to the Municipal Drain known as the Alvin Bondy Drain. This report after reconsideration was adopted under bylaw 92-31.

The Alvin Bondy accepts stormwater from the subdivision approximately mid-way where it traverses lands in a southwest direction and converges with the Upper portion of the Albert McGee Drain just north of CR20 at Concession 6 South.

The Albert McGee Drain (Upper) then crosses Concession 6 South and south side of CR20. The drain then crosses to the south side of CR20. On the South side of CR20, the Albert McGee Lower portion accepts water from the Malden Center Drain at two (2) locations and, ultimately conveys water in a southwesterly and west direction for almost two (2) concessions where it finally outlets to Big Creek.

4. **RISK ANALYSIS:**

It is Council's responsibility to maintain and repair Municipal Drains and in doing so, must also maintain the Engineers report that is appended to each By-law for the respective Municipal Drains. For the benefit of all lands including the Town, the current engineers' reports for the drains listed above can accommodate what the requested landowners have suggested. Council must appoint an Engineer to prepare a report for all 6 drains, or alternatively, appoint an engineer to produce a preliminary report for the area as a whole.

We should not delay the examination requests for these lands so that the communal procedures can transpire allowing landowners the comfort of knowing the level of service they have to capture and convey the rain that their lands receives.

5. **FINANCIAL MATTERS:**

The financial implications will be determined by the appointed engineer and will be provided in the schedule of assessment within the final engineer's drainage report for the improvements to any or all of the drainage systems listed above. The Town is currently assessed for its roads and lands within any watershed and has appeal rights just as any other landowner in the watershed does. All of the affected lands in the watershed share the cost of the project in the ratios set out in the report by the appointed engineer.

6. **CONSULTATIONS:**

N/A

7. **CONCLUSION:**

Administration is recommending that the appointment of the firm of Dillon Consulting Ltd. To prepare a preliminary study and report for the requesting landowners as received for the drainage systems that convey water for the St. Therese subdivision, and that a preliminary report under the provisions of the Drainage Act.



Sam Paglia, P.Eng.,
**Drainage Superintendent and
Engineering Coordinator**

Attachment(s):

- Requests for Improvement



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN
(Section 78 (1.1) of the Ontario Drainage Act)

FROM: Ken Anderson

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
- Residential Bridge Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

add a ditch/drainage between field and houses.

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION <u>Municipal Res. det. rd</u>	
GEOGRAPHIC TOWNSHIP <u>Amherstburg</u>	PARCEL ROLL NUMBER <u>[REDACTED]</u>

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Anderson, Ken		2023/09/11
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
		Durango
City/Town:	Province:	Postal Code:
Harrow	ON	NOR1G0
Telephone Number:	Cell	

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA, SAM
Name of Clerk: (Last, First)


Signature of Clerk



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: Deslippe - Dorothy & Clarence

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

Stop Flooding of Homes

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION	<u>[Redacted] Durango Ave</u>
GEOGRAPHIC TOWNSHIP	<u>Harrow</u>

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- SOLE OWNERSHIP: If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- PARTNERSHIP: If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Deslippe Clarence</i>	<i>C Deslippe</i>	<i>2023/09/10</i>
<i>Deslippe Dorothy</i>	<i>Dorothy Deslippe</i>	<i>2023/09/10</i>
<i>Enter mailing address and primary contact information</i>		
Last Name: <i>Deslippe</i>	First Name: <i>Clarence</i>	
Unit Number:	Street Number: [REDACTED]	Street Name: <i>Durango Ave</i>
City/Town: <i>Harrow</i>	Province: <i>ON</i>	Postal Code: <i>N0R 1G0</i>
Telephone Number: [REDACTED]	Cell phone: [REDACTED]	Email address: (optional) [REDACTED]

- CORPORATION: If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA SAM
Name of Clerk: (Last, First)


Signature of Clerk



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: TREVOR GWINT, AMANNA GUTHRIE

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

OUR STREETS BECOME OVERWHELMED WITH WATER AFTER HEAVY RAINFALL. A MAJORITY OF THE WATER AND DEBRIS COMES FROM THE FARMLAND AT THE END OF OUR STREET, WHICH OVERWHELMS OUR STORM DRAINS AND STREETS, WHICH LEADS TO OUR BASEMENTS FLOODING.

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION	<u>WOODSIDE AVE</u>
GEOGRAPHIC TOWNSHIP	<u>Malden</u>
PARCEL ROLL NUMBER	[REDACTED]

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First) GUILT TREVOR GUTHRIE AMANDA	Signature: 	Date: (yyyy/mm/dd) 2023/09/11
<i>Enter the mailing address</i>		
Unit Number: [REDACTED]	Street Number: [REDACTED]	Street Name: WOODSIDE
City/Town: AMHERSTBURG	Province: ON	Postal Code: N0N 1G0
Telephone Number:	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

Paglia, Sam
Name of Clerk: (Last, First)


Signature of Clerk

NOTE: Received from Sole ownership but listed as partnership.



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: Kareem Mahmoud

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

Flooding in neighborhood & in basement of our house
due to inadequate drainage system in the area

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION	<u>Woodside Ave. Harrow, ON N0R 1G0</u>
GEOGRAPHIC TOWNSHIP	[REDACTED]

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Mahmoud, Kareem	<i>Kareem Mahmoud</i>	2023/09/10
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
	█	Woodside Ave
City/Town:	Province:	Postal Code:
Harrow	ON	NOR 1G0
Telephone Number:	Cell phone:	Email address: (optional)
█		█

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA SAM
Name of Clerk: (Last, First)


Signature of Clerk

NOTES MISSING MIRIAM JABER NAME & SIGNATURE.
IN PARTNERSHIP BOX.



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: BERNARD & AMY MAYBEE

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

Drainage to handle more capacity

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION <u>DURANGO AVE R.R. #5</u>	
GEOGRAPHIC TOWNSHIP <u>MALDEN CENTRE NOR160</u>	PARCEL ROLL NUMBER [REDACTED]

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
MAYBEE, Bernard + Amy	<i>[Signature]</i>	2023/09/08
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
	[REDACTED]	Durango Ave
City/Town:	Province:	Postal Code:
Amherstburg	ONTARIO	NOR1G0
Telephone Number:	[REDACTED]	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA SAM
Name of Clerk: (Last, First)


Signature of Clerk

NOTE: MISSING SIGNATURES IN PARTNERSHIP
BOX, BUT ^A PRESENT IN SOLE OWNERSHIP BOX
BOTH



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: Sydney Melorhe + Wes Ewer
DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

When there is major rain events our entire neighbourhood floods. The storm sewers are not effectively working to move water quickly. Please assess the flow of water in to the storm drain

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION <u>Residential</u>	
GEOGRAPHIC TOWNSHIP <u>Malden Centre</u>	PARCEL ROLL NUMBER <u>[REDACTED]</u>

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Melochte, Sydney WES	<i>[Signature]</i>	2023 09 09
Ewer, WES	<i>[Signature]</i>	2023 09 09
<i>Enter mailing address and primary contact information</i>		
Last Name: Ewer	First Name: Wes	
Unit Number: 444	Street Number: [REDACTED]	Street Name: Woodside
City/Town: Amherstburg	Province: ON	Postal Code: N2R 1G0
Telephone Number:	Cell phone: [REDACTED]	Email address: (optional)


- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA, Sam
Name of Clerk: (Last, First)


Signature of Clerk



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: DANNY OUELLETTE

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

PUT IN ADEQUATE DRAINAGE

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION	
<u>[REDACTED] ST. THERESE</u>	
GEOGRAPHIC TOWNSHIP	PARCEL ROLL NUMBER
<u>MAHDEN/AMHERSTBURG</u>	<u>[REDACTED]</u>

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
QUELLETTE	<i>Danny Quellette</i>	
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
	[REDACTED]	ST THERESE
City/Town:	Province:	Postal Code:
AMHERSTBURG	ONTARIO	NOR-1G0
Telephone Number:	Cell phone:	Email address: (optional)
	-	-

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Quellette, Gwilym		2023/08/12
<i>Enter mailing address and primary contact information</i>		
Last Name: Quellette	First Name: Danny	
Unit Number:	Street Number:	Street Name: ST THERESE
City/Town: AMHERSTBURG	Province:	Postal Code: NOR1G0
Te [REDACTED]	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following


Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA SAM

Name of Clerk: (Last, First)


Signature of Clerk

NOTE: MISSING SIGNATURE FROM GWILYN OUELLETTE



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: Bruce & Bea Patterson

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
- Residential Bridge Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

To prevent water from draining onto the subdivision areas

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION <u>St. Therese Ave</u>	
GEOGRAPHIC TOWNSHIP	PARCEL ROLL NUMBER

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Patterson, Bruce	<i>Bruce Patterson</i>	2024/09/08
Patterson, Beatrice	<i>Beatrice Patterson</i>	2024/09/08
<i>Enter mailing address and primary contact information</i>		
Last Name: Patterson	First Name: Bruce	
Unit Number: 10	Street Number: [REDACTED]	Street Name:
City/Town: RRS Harrow	Province: ON	Postal Code: N0R1G0
Telephone: [REDACTED]	Cell phone: [REDACTED]	Email address: (optional) [REDACTED]

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September, 2023.

PAGLIA SAM
Name of Clerk: (Last, First)


Signature of Clerk



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: Robert Perron

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

Property Owners

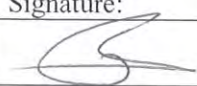
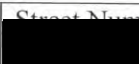

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION	<u>PLAN M56 LOT 9</u>
GEOGRAPHIC TOWNSHIP	<u>Amherstburg</u>
PARCEL ROLL NUMBER	[REDACTED]

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Perron Robert		2023/09/11
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
		Woodside Ave.
City/Town: Harrow	Province: ON	Postal Code: N0E 1G0
Telephone Number:		

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)


- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA, SAM
Name of Clerk: (Last, First)


Signature of Clerk

NOTE: NO DESCRIPTION.



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN

(Section 78 (1.1) of the Ontario Drainage Act)

FROM: Larry & Cathy Robertson

DRAIN: Area covering Albert Mcbee Drain and
Alvin Bondy Drain & Branches

In accordance with section 78 (1.1) of the Drainage Act, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

Clean ditch, improve drainage, clean storm
sewers leading to drain, control drainage from
surrounding fields & roads into neighbourhood

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION	<u>St. Therese Ave. (Malden Centre)</u>
GEOGRAPHIC TOWNSHIP	<u>Amherstburg (former Malden)</u>
PARCEL ROLL NUMBER	[REDACTED]

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Robertson, Harry	<i>Harry Robertson</i>	2023/09/11 (1984/03/01 ownership)
Robertson, Cathy	<i>Harry Robertson</i> (for Cathy Robertson)	2023/09/11 (1984/03/01 ownership)
<i>Enter mailing address and primary contact information</i>		
Last Name: Robertson	First Name: Harry & Cathy	
Unit Number:	Street Number: [REDACTED]	Street Name: St. Therese
City/Town: RR5, Harrow	Province: ON	Postal Code: N0B 1G0
Telephone Number: [REDACTED]	Cell phone: [REDACTED]	Email address: [REDACTED]

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

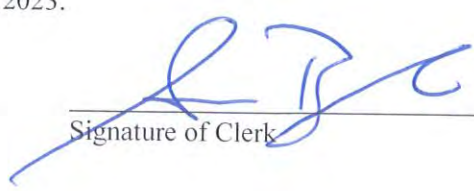
Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

Paglia, Sam

Name of Clerk: (Last, First)


Signature of Clerk



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN

(Section 78 (1.1) of the Ontario Drainage Act)

FROM: Duane Sinasac

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78) 3
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION <u>Single Family Dwelling</u>	<u>Herrow, ONT, N0R1G0</u>
GEOGRAPHIC TOWNSHIP <u>Amherstburg (Malden)</u>	PARCEL ROLL NUMBER [REDACTED]

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Sinascue, Duane	Duane Sinascue	2023/09/12
<i>Enter the mailing address</i>		
Unit Number:	Street Number: [REDACTED]	Street Name: Durango Ave
City/Town: Harrow	Province: ONT	Postal Code: N0R1G0
Telephone Number: [REDACTED]	Cell phone: SAME	Email address (optional): [REDACTED]

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA SAM
Name of Clerk: (Last, First)


Signature of Clerk

NOTE: No Description.



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: Harry / Patricia Vandenberg

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

- FIGURE OUT HOW TO STOP THE FLOODING OF THIS NEIGHBOURHOOD

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION	<u>Durango Ave</u>
GEOGRAPHIC TOWNSHIP	<u>Malden / Amherstburg</u>

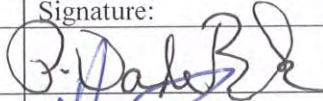



If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
VandenBerk Patricia		2023 09 07
VandenBerk ^{HERMAN} (HARRY)		2023 / 09 / 07
<i>Enter mailing address and primary contact information</i>		
Last Name: VandenBerk	First Name: HARRY	
Unit Number:	Street Number: 	Street Name: Durand Ave
City/Town: Amherstburg	Province: ON	Postal Code: N0R1S0
Telephone Number:		Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA, SAM
Name of Clerk: (Last, First)


Signature of Clerk



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: GARY WILSON

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
- Residential Bridge Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

STOP RUNOFF FROM ADJACENT FARM

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION

[REDACTED] ST. THERESE HARROW

GEOGRAPHIC TOWNSHIP

MALDEN - AMHERSTBURG

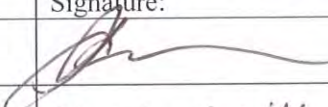
If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
WILLSON, GARY		2023/9/9
WILLSON, MILLIE	Millie Willson	2023/9/9
<i>Enter mailing address and primary contact information</i>		
Last Name: WILLSON	First Name: GARY	
Unit Number:	Street Number: [REDACTED]	Street Name: ST. THERESA
City/Town: HARROW	Province: ONT.	Postal Code: N0R 1G0
Te [REDACTED]	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA SAM

Name of Clerk: (Last, First)



Signature of Clerk



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: MICHAEL & MICHELLE RICHARD

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

Looking to have improved drainage to the street as it floods quite heavily when we get heavy rains, causing water in many basements in the subdivision

Property Owners

- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION <u>Woodside Ave</u>	[REDACTED]
GEOGRAPHIC TOWNSHIP <u>Amherstburg</u>	PARCEL ROLL NUMBER [REDACTED]

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter the mailing address</i>		
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
Richard, Michelle	<i>[Signature]</i>	2023/09/10
Richard, Michael	<i>[Signature]</i>	2023/09/10
<i>Enter mailing address and primary contact information</i>		
Last Name: Richard	First Name: Michelle	
Unit Number:	Street Number: [REDACTED]	Street Name: Woodside
City/Town: Amherstburg	Province: ON	Postal Code: N0R1G0
Telephone Number: [REDACTED]	Cell phone: same	Email address: (optional)

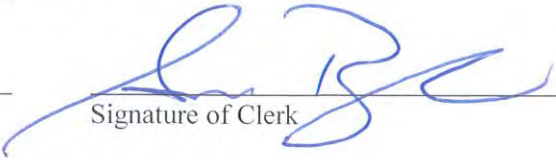
- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

PAGLIA, SAM
Name of Clerk: (Last, First)


Signature of Clerk



The Corporation of The Town of Amherstburg

MAJOR IMPROVEMENT of a MUNICIPAL DRAIN (Section 78 (1.1) of the Ontario Drainage Act)

FROM: MEIGHEN VERGUNST

DRAIN: Langlois Drain South

In accordance with section 78 (1.1) of the *Drainage Act*, take notice that I/We, as owner of land affected, request that the above mentioned drain be improved.

- a) Repair/Improvements upon Examination and Report of Engineer (Section 78)
- b) New Access Bridge Section 78 (1.1)
 - Residential Bridge
 - Agricultural Bridge

The work being requested is (check all appropriate boxes):

- Changes the course of drainage works;
- Making a new outlet for the whole or any part of the drainage works;
- Constructing a tile under the bed of the whole or any part of the drainage works;
- Constructing, reconstructing or extending bridges or culverts;
- Extending the drainage works to an outlet;
- Improving or altering the drainage works if the drainage works is located on more than one property;
- Covering all or part of the drainage works;
- Consolidating two or more drainage works; and/or
- Any other activity to improve the drainage works, other than an activity prescribed by the Minister as a major improvement.

Provide a more specific description of the proposed drain major improvement you are requesting.

ANYTHING TO STOP THE FLOODING OF THE STREETS + HOUSES
IN THE SUBDIVISION.

Property Owners

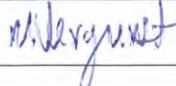

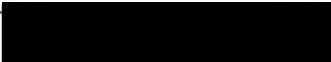
- Your municipal property tax bill will provide the property description and parcel roll number.
- In Rural areas, the property description should be in the form of (part), lot, concession and civic address.
- In Urban areas, the property description should be in the form of street address and lot and plan number, if available.

PROPERTY DESCRIPTION <u>[REDACTED]</u>	
GEOGRAPHIC TOWNSHIP <u>MALDEN CENTRE</u>	PARCEL ROLL NUMBER <u>[REDACTED]</u>

If the property is owned in partnership, all partners must be listed. If the property is owned by a Corporation, list the Corporation's name and the name and corporate position of the authorized officer. **ONLY THE OWNER OF THE PROPERTY MAY REQUEST A DRAIN IMPROVEMENT.**

Please select the ownership Type and complete the applicable information box below;

- **SOLE OWNERSHIP:** If the land is owned solely by you, please complete the following

Owner Name: (Last, First)	Signature:	Date: (yyyy/mm/dd)
VERGUNST, MEIGHAN		2023/09/09
<i>Enter the mailing address</i>		
Unit Number:	Street Number: 	Street Name: ST. THERESE
City/Town: HARROW	Province: ONT	Postal Code: N0R1G0
Telephone Number: 	Cell phone:	Email address: (optional)

- **PARTNERSHIP:** If the land is owned by a Partnership, please complete the following

Names of Owners: (Last, First)	Signature:	Date: (yyyy/mm/dd)
<i>Enter mailing address and primary contact information</i>		
Last Name:	First Name:	
Unit Number:	Street Number:	Street Name:
City/Town:	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address: (optional)

- **CORPORATION:** If the land is owned by a Corporation, please complete the following

Name of Signing Officer: (Last, First)	Name of Corporation:	
I have the authority to bind the Corporation. Signature:	Position Title:	Date: (yyyy/mm/dd)
<i>Enter the mailing address of the primary contact</i>		
(Name, Last):	(Name, First):	
Unit Number:	Street Number:	Street Name:
City/Town	Province:	Postal Code:
Telephone Number:	Cell phone:	Email address (optional)

To be completed by the Clerk of the Corporation of the Town of Amherstburg.

Notice filed this 14th day of September 2023.

REGINA SAM

Name of Clerk: (Last, First)



Signature of Clerk

**DRAINAGE REPORT
FOR THE**

**LAKWOOD DRIVE DRAIN No. 3
& PUMPING SCHEME**

TOWN OF AMHERSTBURG



27 JUNE 2023
TIM R. OLIVER, P.ENG.
FILE No. 20-2190

File No. 20-2190

Drainage Board
The Corporation of the Town of Amherstburg
271 Sandwich St. South
Amherstburg, Ontario
N9V 2A5



10 Fifth Street South
Chatham, Ontario
Canada
N7M 4Y4
Telephone
519.354.7802
Fax
519.354.2050

**Drainage Report for the
LAKEWOOD DRIVE DRAIN NO. 3
& PUMPING SCHEME
Town of Amherstburg**

Gentlemen:

Instructions

On June 13, 2019 the Municipality received a petition from the Town of Amherstburg Public Works, acting on behalf of the road authority. The petition was for a new drainage works under the Drainage Act citing that McLeod Avenue, Ridgewood Lane and Lakewood Drive are requiring improved drainage. Council accepted the petition in accordance with Section 4 of the Drainage Act and on 10th September, 2019 appointed Dillon Consulting Limited to prepare a report.

Area Requiring Drainage

The area requiring drainage is described as the McLeod Avenue, Ridgewood Lane, and Lakewood Drive road allowances and private lands that are abutting these roads. These lands are bounded by Lake Erie to the south and by the existing pumped drainage systems located to the west (Bar Point Pump) and to the east (Lakewood Beach Drain No. 1 Pump).

Existing residential comprises the primary land use, while some existing agricultural lands and provincially significant wetlands are located to the north of Lakewood Drive. Frequent flooding and slow drainage have been the problems experienced for some time and have worsened in recent years due to high water levels in Lake Erie.

The existing stormwater infrastructure and its dependency on a gravity outlet is insufficient in its operation under the prevalent high water and wind conditions affecting Lake Erie. Efforts by the Town Public Works to keep existing gravity outlets flowing to Lake Erie has proven to be inefficient and ineffective. In addition, landowners in the Lakewood Drive area have reported flooding and standing water within yards and catch basins and an overall lack of drainage.

In terms of validity of the petition, we have determined it to be valid, in accordance with Section 4(1)(c) of the Drainage Act, since the Road Authority is represented on the petition.

On-Site Meeting

We conducted an on-site meeting on 27th February 2020. A record of the meeting is provided in Schedule 'A-1', which is appended hereto.

Drainage History

While no municipal drain has been constructed along Lakewood Drive, a summary of the records relevant to the area are summarized as follows:

- **Bar Point Storm Sewer and Pumping Scheme, 26 June 1975 - M. Armstrong, P. Eng.:**

The recommended works included construction of a new pipe drain along the north side of Lakewood Drive and a new pumping system. The report was appealed and original petitioners withdrew their names from the petition. The report was never adopted and the project was not constructed.

- **Bar Point Storm Sewer and Pumping Scheme, 2 September 1981 - Wm. J. Settingington, P. Eng.:** The recommended works included the construction of a pumping scheme to service the residential lands bounded by Claremont Lane, Lakewood Drive and McLeod Avenue. The pump was designed to have a capacity equivalent to 4320 usgpm and storm sewers were also recommended to be installed to service the residential area including Ridgewood Lane and Lakewood Drive. Some landowners within the Lakewood Drive area were opposed to being included within the proposed drainage works. The drainage report was amended to exclude storm sewers on Ridgewood Lane and Lakewood Drive, thereby providing no connection for Lakewood Drive residents to the proposed pump being situated further west at the south end of Essex Boulevard. The reconsidered report was adopted, and by-law was passed. However, additional appeals were subsequently received by the Town, and the by-law was repealed. The project was not constructed.

Bar Point Storm Sewer and Pumping Scheme, 2 July 1987 - Ian T. Cowie, P.Eng.: In 1986, the Town decided that the drainage works previously recommended under the 1981 drainage report be completed under the Municipal Act with partial funding being obtained from the Ontario Neighbourhood Improvement Program (ONIP). ONIP provided funding for 49% of the drainage costs and the remaining costs were being shared equally between the Town (50%) and the landowners (50%) enacted under a separate by-law. A schedule of assessment was completed to provide the assessment breakdown for both construction and engineering costs being against the Town and the landowners within the watershed for the portion of costs not previously covered by ONIP. These works were completed under the Municipal Act and do not constitute as a municipal drain.

Survey

Our survey and examination of the lands, roads, and existing drainage infrastructure was carried out in May 2020. The survey comprised the recording of topographic data and examining existing stormwater infrastructure including sewers and roadside ditches. We commenced our survey at the intersection of McLeod Avenue and Lakewood Drive and then proceeded to survey the road and surrounding lands along Lakewood Drive, Ridgewood Lane, and McLeod Avenue. The boundary limits of the existing wetlands were surveyed as well as parts of the agricultural property to determine flow paths and the watershed area.

Our survey revealed the existing drainage system along Lakewood Drive comprises of three independent piped drainage systems each with their own associated outlet into Lake Erie.

independent piped drainage systems each with their own associated outlet into Lake Erie. Two of the outlets are existing shallow ditches situated at the south ends of both Ridgewood Lane and McLeod Avenue, and the remaining outlet being a piped outlet across Lakewood Drive that is approximately midway between Ridgewood Lane and McLeod Avenue. At the time of our May 2020 survey, the standing water condition was leaving existing catch basins and ditches full of water and backed up by the highwater within Lake Erie.

Design Considerations

Lakewood Drive and lands between Ridgewood Lane and McLeod Avenue rely on existing drainage infrastructure which consists of catch basins and pipe drains varying in size from 200 mm to 300 mm in diameter. During high static water levels within Lake Erie, water backs up into the existing drainage infrastructure, limiting any capacity available for draining the municipal road right-of-ways and adjacent properties.

According to soil maps provided by Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA), the soil type within the drainage area is Brookston Clay, a poorly drained soil. Agricultural lands within the northerly section of the watershed area contribute surface water that is intercepted and transported by the existing roadside ditches of McLeod Avenue and Ridgewood Lane southward to Lake Erie.

Consideration has been given to soil type, land use, topography, existing utilities, existing drainage systems, the receiving drainage system, and cost of the drainage recommendations.

Drainage of existing residential lands located to the west of the Ridgewood Lane have been adequately served by the existing Bar Point Pump and its associated piped drainage system conveying all drainage flows to the pump since 1987. The pump's capacity however is only sufficient for the lands which it serves.

Recommendations (Bar Point Pump Upgrades)

The existing Bar Point pump currently provides a drainage removal rate of approximately 78.5 mm within a 24 hour period. To provide a similar capacity for the additional watershed area from the Lakewood Drive area, the existing pump would need to be capable of pumping a minimum of 8,000 usgpm which is 85% more capacity than what is currently available. To achieve this, a number of upgrades to the pump have been recommended.

They include the full replacement of the axial flow propeller pump and motor to increase the pump station's capacity. An expansion of the pump shed is required to adhere to electrical safety standards, while most of the existing electrical equipment is generally in good repair for salvaging and reinstallation with the new pump and motor. With the new motor, it is recommended a new pump starter with combination circuit breaker and voltage soft start capability be provided to reduce wear and tear on the motor. It is also recommended the new pump be operated by a more reliable mechanical float system to start and stop pump. With a larger pump shed and pump, an expanded foundation is recommended to support the said structure on concrete piers in lieu of the steel pump well.

Both the existing asphalt coated corrugated steel pump well and intake pipe may remain in place and are both adequate to accommodate the pump upgrade, however we recommend that anti-vortexing and anti-rotation measures be added to prevent the formation of vortices from a higher capacity pump. The pump's discharge pipe is sufficient to remain in use.

We recommend these upgrades to the Bar Point Pump be incorporated as a municipal drainage works to be hereby known as Lakewood Drive Drain No. 3 & Pumping Scheme.

Recommendations (Lakewood Drive Drain No. 3)

To provide drainage to Ridgewood Lane, McLeod Avenue, Lakewood Drive and abutting lands, we recommend a new covered drain be constructed along Lakewood Drive, extending from McLeod Avenue westerly and outlet into the existing 600 mm diameter storm sewer on Claremont Lane. The size of drain varying from 375 mm diameter to 525 mm diameter.

Existing catch basins found along both sides of Lakewood Drive are recommended to be either replaced or be made to connect to the new drain. New catch basins are being added to provide adequate surface drainage to the lands and roads where no catch basins currently exist. New and existing catch basins connected to the new drain shall form part of the drainage works and shall be hereby named the Lakewood Drive Drain No. 3 and constitute a part of the Lakewood Drive Drain No. 3 and Pumping Scheme.

The Lakewood Drive Drain No. 3 shall also incorporate the existing 600 mm diameter storm sewer infrastructure on Claremont Lane and the 1630 mm x 1120 mm pipe arch culvert on Essex Boulevard that will be conveying the new drainage flows downstream towards the pump.

It is recommended that the ditch located at the south end of McLeod Avenue be filled in, and the existing storm drain pipe outlet to the lake that is located in between Mun No. 137 and Mun No. 145 be capped as to prevent backwater effects on the system from Lake Erie. We also recommend that the ditch located at the south end of Ridgewood Lane remain in place and serve as an overflow for the Lakewood Drive Drain No. 3. The new overflow outlet shall consist of a 375 mm diameter pipe complete with sliding backwater gate control. The slide gate is intended to remain open during times of lower lake levels such that during instances of large rainfall events or during times of pump failure, an overflow outlet is available.

The road side ditch located on the east side of Ridgewood Lane is recommended to be cleaned and connected to the new covered drain through a ditch inlet catch basin. Ditch cleanouts along Ridgewood Lane and McLeod Avenue are to avoid disturbance to the ditch banks adjacent to the wetland areas such that no change to the drainage condition occurs.

Utility Conflicts

The Lakewood Drive right-of-way has a width of only 9.1 m (30 feet) which is less than half the width of a typical 20 m wide right-of-way. The narrow right-of-way makes it very congested for existing utilities in close proximity to each other. In terms of utility conflicts, the new drain's vertical alignment has been considered to avoid utility conflicts, however there will be required relocations of the existing watermain in two locations and potentially several existing water and sanitary private drain connections.

The new drain's horizontal alignment is recommended to be within the travelled road surface to avoid existing utilities, service poles, driveways and grassed lawn areas, with the exception of the most upstream 106 metres in front of Municipal Nos. 160 and No. 178 where it is more practical to locate the new drain on private lands and reduce the costs of road restoration. The proposed drain alignment requires the deflection a watermain in two locations, as well as the relocation of water services and sanitary private drain connections. The proposed alignment is proposed to be on private property between Municipal No. 160 and Municipal No. 178 to avoid extensive utility relocations and reducing the cost of the new drainage infrastructure.

Allowances (Bar Point Pump Upgrades)

In accordance with Section 31 of the Drainage Act, we have determined allowances be given to the lands presently served by the existing Bar Point pump for the incorporation of the existing sewer system on Claremont Lane from Ridgewood Lane to Essex Boulevard and on Essex Boulevard, for the incorporation of the existing intake pipe heading southward to the Bar Point pump, to be part of the Lakewood Drive Drain No. 3 and Pumping Scheme, as described on the drawings attached herein. This allowance is representative of a proportionate share of the said infrastructure's value for which it was designed for, however was never connected to the Lakewood Drive drainage area. Schedule 'B-1' shows the distribution of this allowance in the total amount of \$25,000.00 that we recommend be provided to the lands within the original Bar Point Pump watershed.

Allowances (Lakewood Drive Drain No. 3)

In accordance with Section 29 of the Drainage Act, we have determined allowances be given for the land used for the placement of the new drain across Municipal Nos. 160 and No. 178 in establishing the working corridor for the new drain as described further in the Specifications (Schedule 'F' herein). The working corridors provide the Municipality access onto private lands for both construction and future maintenance of the municipal drain. Schedule 'B-2' shows the distribution of the allowances in the total amount of \$5,800.00.

In accordance with Section 30 of the Drainage Act, we do not anticipate any agricultural lands being damaged as a result of the proposed drainage works. Any damage resulting to existing driveways and grassed areas shall be restored to original conditions as part of the work.

Cost Estimate

Based on our review of the history, the information obtained during the site meeting and our examination and analysis of the survey data, we recommend that the Bar Point Pump upgrades in conjunction with the construction of the new Lakewood Drive Drain No. 3 as further described below respectively:

Item	Description	Amount
	<u>BAR POINT PUMP UPGRADES</u>	
1.	Dismantle and salvage existing electrical components prior to carefully removing pump assembly and motor, removing and disposing of pumphouse and steel support framing off site. Extreme care shall be taken not to damage the pump, motor, pump well and discharge pipe. Work to also include returning the existing pump, motor, starter and relay controls including level sensor switch to the Town of Amherstburg Public Works Yard (512 Sandwich St. South). The Contractor shall arrange for Hydro One to temporarily disconnect the power feed to the pump station and to later reconnect once the new electrical works are completed and the Electrical safety Authority inspection is completed. Any Hydro One costs where applicable to be paid by Contractor.	\$10,000.00
2.	Temporary pumping with the use of portable pumps for dewatering throughout the construction period as required.	\$7,500.00

Item	Description	Amount
3.	Supply and installation of a new 1800 mm wide x 350 mm high anti-vortex cruciform above pump well base consisting of A-36 steel angle (150 mm x 150 mm x 12 mm thickness) to support A-36 steel flat bar vertical cross members (254 mm high x 6 mm thickness) welded together and anchored to concrete sump floor. Works shall include the supply and installation of a 2130 mm diameter level concrete base poured in place, minimum 200 mm thickness 40 MPa concrete.	\$5,000.00
4.	Supply and installation of ten (10) 450 mm diameter concrete support piers, a minimum 1.2 metres in length, poured in place consisting of 40 MPa concrete within sonotube. Work to include auger drilling excavation for each pier.	\$3,500.00
5.	Supply and installation of Granular "A" base, minimum 200 mm thickness compacted to surround pump well and concrete piers and fully extending below and beyond new pumphouse steel base frame including approach ramp (2 m x 2 m) on the north side at the pumphouse door. Work to include all required excavation, removal and re-use of excavated materials for site grading, topsoil placement, fine grade and seed all disturbed areas around pumphouse.	\$2,500.00
6.	Supply and installation of A-36 steel angle iron base frame for pumphouse floor (as per Specifications) to be anchored to concrete piers, complete with supply and installation of 9.5 mm thickness steel (diamond plate tread) decking welded to base frame.	\$20,000.00
7.	Supply and installation of two (2) new vertical anti-rotation vanes consisting of 5.75 m long A-36 steel rectangular tube (300 mm x 50 mm x 6 mm thickness) welded to both steel base frame and anti-vortex cruciform.	\$4,000.00
8.	Supply and installation of 305 mm diameter, 5.5 m long vertical stilling column consisting of galvanized Schedule 40 pipe complete with bottom plate, seepage holes and collar plate to be fastened to pump floor decking and to be strapped to anti-rotation vane with 19 mm wide SS band straps.	\$4,000.00
9.	Supply and construction of a new 3.86 m x 3.86 m wood framed pump house building to be fastened to pump floor frame complete with new corrugated metal wall and roof siding and salvaged door from existing pumphouse.	\$10,000.00
10.	Re-install salvaged main disconnect, meter socket, meter c/w enclosure/ indoor cabinet, red/green pump status exterior lights, splitter box, fused switch, transformer, load centre panel, light switch and receptacles including two (2) new circuits for new relay controls and pump lube solenoid.	\$4,000.00

Item	Description	Amount
11.	Supply and installation of all low voltage wiring and galvanized steel electrical conduits as per specifications including ESA inspection.	\$5,000.00
12.	Supply and installation of combination circuit breaker and reduced voltage soft starter c/w Nema 3R enclosure (Eaton Cutler- Hammer Class ECS95S2DAG-S811+N6N3S or approved equal), 50 Hp rating.	\$9,500.00
13.	Supply and installation of ball float switch system including two SS304 ball floats (Square 'D' 9049), two SS rods (4.57 m and 2.28 m length) and two switches (Schneider Pumptrol Square 'D' 9036GG, or approved equal), for both pump on/off and highwater alarm.	\$3,000.00
14.	Supply and installation of heat trace system for stilling column including controller (Thermon TCM2 or approved equal), MIQ heat trace cable, cold lead, junction box and ambient sensing probe (RTD-500-3). The work shall also include supply and installation of 22 gauge stainless steel skirt 1.5 m height wrapped and secured around heat trace cable and stilling column.	\$4,500.00
15.	Supply and installation of two (2) new wall mounted LED light fixtures, minimum 6000 lumens without motion sensor.	\$1,000.00
16.	Supply and installation of a new 40 Hp, 575 V, 900 RPM, 3 phase electric vertical hollow shaft motor (Nidec Motors or approved equal) complete with axial flow single stage propeller pump assembly (Lo-Lift Pump Company Model #2017 or approved equal), including oil lube solenoid dripper valve, one gallon reservoir tank and grease line connection to suction bowl bushing, minimum capacity of 8,000 USGPM at 12 feet TDH.	\$90,000.00
17.	Supply and installation of a new 610 mm diameter dresser Style 38 coupling to pump discharge elbow to outlet pipe.	\$1,500.00
18.	Pump setup and commissioning.	\$1,000.00
	SUB-TOTAL (BAR POINT PUMP UPGRADES)	\$186,000.00
19.	Allowances under Section 31	\$25,000.00
20.	Survey, Report, Assessment and Final Inspection (cost portion)	\$26,000.00
21.	Construction observation and administration (cost portion)	\$4,500.00
22.	Expenses and incidentals including Net HST (cost portion)	\$700.00
23.	Net HST on construction and engineering costs	\$3,700.00
	TOTAL – BAR POINT PUMP IMPROVEMENTS	\$245,900.00

Item	Description	Amount
	<u>LAKEWOOD DRIVE DRAIN No. 3</u>	
1.	Supply and install high density polyethylene pipe (HDPE) smooth interior wall (Boss 2000, 320 kPa or approved equivalent) with bell & spigot joining system. For every third pipe length, one pipe shall be perforated HDPE pipe complete with filter sock. This work is to include clear stone pipe bedding from minimum 150 mm below pipe up to the pipe springline, Granular 'A' backfill up to underside of surface material. This work is to also include connection of existing lateral storm drains where encountered.	
	a) Sta. 0+234.5 to Sta. 0+244.5 - Supply and install 10 m of 525 mm diameter HDPE pipe.	\$5,500.00
	b) Sta. 0+244.5 to Sta. 0+269 - Supply and install 24.5 m of 525 mm diameter HDPE pipe.	\$10,500.00
	c) Sta. 0+269 to Sta. 0+401.5 - Supply and install 132.5 m of 525 mm diameter HDPE pipe.	\$59,000.00
	d) Sta. 0+401.5 to Sta. 0+530.5 - Supply and install 129 m of 450 mm diameter HDPE pipe.	\$54,000.00
	e) Sta. 0+530.5 to Sta. 0+599.5 - Supply and install 69 m of 375 mm diameter HDPE pipe.	\$26,000.00
	f) Sta. 0+599.5 to Sta. 0+682.5 - Supply and install 83 m of 375 mm diameter HDPE pipe.	\$31,000.00
	g) Sta. 0+682.5 to Sta. 0+689 - Supply and install 6.5 m of 375 mm diameter HDPE pipe.	\$3,000.00
	h) Ridgewood Lane Ditch Overflow Outlet – Supply and install 11.5 m of 375 mm diameter HDPE pipe.	\$4,000.00
2.	Supply and installation of a poured in-place concrete headwall around the 375 mm diameter emergency overflow pipe outlet at Station 1+000 (3.6 m wide x 0.9 m in high x 0.15 m thickness) complete with 15M steel reinforcement bars placed around pipe insert. This work includes the supply and installation of a 381 mm (15") diameter galvanized flat back C-10 slide gate complete with appurtenances as manufactured by Waterman (or approved equal) mounted on the headwall over the outlet of the pipe. Supply and install rodent gate inside of pipe immediately upstream of slide gate. Work also includes excavation of the ditch immediately downstream of the headwall to provide minimum 0.10 m of clearance between ditch bottom and slide gate, as well as the supply and installation of stone erosion protection of the banks (1 m wide) of the ditch, 300 mm thickness (approximately 5 m ²).	\$3,700.00

Item	Description	Amount
3.	Supply and install high density polyethylene pipe (HDPE) smooth interior wall (Boss 2000, 320 kPa or approved equivalent) with bell & spigot joining system. For every third pipe length, one pipe shall be perforated HDPE pipe complete with filter sock. This work is to include Granular 'B' pipe bedding from minimum 150 mm below pipe up to the pipe springline, and native material backfill up to surface material. Top surface to be minimum 50 mm thickness layer of top soil, fine graded and seeded. This work is to also include connection of existing tile drains encountered during trenching, additional labour and materials required in locating, supporting, redirecting, and/or working around existing utilities.	
	a) Sta. 0+689 to Sta. 0+776 - Supply and install 87 m of 375 mm diameter HDPE pipe.	\$27,000.00
	b) Sta. 0+776 to Sta. 0+795 - Supply and install 19 m of 375 mm diameter HDPE pipe.	\$6,000.00
4.	Supply and installation of two (2) new 1500 mm diameter pre-cast concrete maintenance holes (denoted MH5 & MH6) with minimum 300 mm sump complete with cast iron frame and grate (OPSD 401.010). Work also to include the connection and grouting of all inlet pipes.	\$13,850.00
5.	Supply and installation of four (4) new 1200 mm diameter pre-cast concrete maintenance holes (denoted MH7, MH8, MH9 & MH10) with minimum 300 mm sump, complete with cast iron frame and grate (OPSD 401.010). Work also to include the connection and grouting of all inlet pipes.	\$13,750.00
6.	Supply and installation of two (2) new 600 mm x 600 mm pre-cast concrete catch basins (denoted CB11 & CB12) with minimum 300 mm sump, complete with cast iron frame and grate (OPSD 401.010). Work also to include the connection and grouting of all inlet pipes.	\$3,450.00
7.	Supply and installation of eight (8) new 600 mm x 600 mm pre-cast concrete catch basins off-line of main drain with maximum depth of 1.2 m, complete with minimum 300 mm sump, cast iron frame and grate (OPSD 400.02), and 200 mm diameter leader pipe. This work to include grouting of all inlet pipes and connection of leader pipe to main drain.	\$36,500.00

Item	Description	Amount
8.	Replace existing round catch basin near property line between Mun. No. 103 and Mun. No. 106 with a new 600 mm x 600 mm pre-cast concrete catch basin off-line of main drain, complete with minimum 300 mm sump, cast iron frame and grate (OPSD 400.02), and 200 mm diameter leader pipe. This work includes connection of all existing pipes and grouting of all inlet pipes and connection of leader pipe to main drain with pre-fabricated tee.	\$5,100.00
9.	Re-connect eighteen (18) existing catch basins to new drain with new 200 mm diameter HDPE pipe and pre-fabricated tee. Work includes restoration of asphalt.	\$64,500.00
10.	Temporary Silt Control Measures During Construction	\$750.00
	SUB-TOTAL – EXCLUDING SECTION 26 COSTS	\$367,600.00
11.	Survey, Report, Assessment and Final Inspection (cost portion)	\$51,000.00
12.	Construction observation and administration (cost portion)	\$9,000.00
13.	Expenses and incidentals (cost portion)	\$2,000.00
14.	Net HST on construction and engineering costs	\$7,600.00
15.	ECRA permit fee (Lakewood Drive Drain No. 3)	<u>\$800.00</u>
	TOTAL – EXCLUDING SECTION 26 COSTS	\$438,000.00
	SECTION 26 NON PRO-RATEABLE COSTS	
16.	Fill portion of Ridgewood Lane ditch (approximately 25 m ³) south of Lakewood Drive including trucking and compaction of material in 300 mm lifts. Prior to infilling, remove all vegetation and organic debris from the existing roadside ditch slopes. Work includes supply and placement of top soil (50 mm minimum thickness), fine graded and seeded.	\$700.00
17.	Fill portion of Ridgewood Lane ditch (approximately 25 m ³) north of Lakewood Drive including trucking and compaction of material in 300 mm lifts. Prior to infilling, remove all vegetation and organic debris from the existing roadside ditch slopes. Work includes supply and placement of top soil (50 mm minimum thickness), fine graded and seeded.	\$700.00

Item	Description	Amount
18.	Fill existing McLeod Avenue ditch (approximately 175 m ³) south of Lakewood Drive including trucking and compaction of material in 300 mm lifts. Prior to infilling, remove all vegetation and organic debris from the existing roadside ditch slopes. Work includes supply and placement of top soil (50 mm minimum thickness), fine graded and seeded. Work also includes supply & installation of sloping stone end treatment approximately 20 m ² of riprap (300 mm minimum thickness) including new filter fabric underlay over south end of infilling.	\$5,700.00
19.	Remove and dispose of existing corrugated steel pipe road crossing at Station 0+795. Supply and installation of a new 600 mm x 600 mm pre-cast concrete catch basins (denoted CB14) with minimum 300 mm sump, complete with cast iron frame and grate (OPSD 401.010). Work includes the supply and installation of 16 m long, 250 mm diameter leader pipe across Lakewood Drive and connection and grouting of all inlet pipes.	\$7,100.00
20.	Supply and installation of a new 600 mm x 600 mm pre-cast concrete ditch inlet catch basin off-line of drain (DICB16), complete with minimum 300 mm sump, sloped 2:1 heavy duty galvanized steel grate, 7 m long, 300 mm diameter leader pipe, and restoration of lands with top soil (50 mm minimum thickness), fine graded and seeded. Work to include the supply and installation of approx. 5 m ² (300 mm minimum thickness) of stone erosion protection (SEP) including new filter fabric underlay around inlet. Work also to include connection to drain and grouting of all inlet pipes.	\$4,800.00
21.	Supply and installation of a new 600 mm x 600 mm pre-cast concrete catch basin (denoted CB13) with minimum 300 mm sump, complete with cast iron frame and grate (OPSD 401.010). Work includes the connection and grouting of all inlet pipes. Work also includes the supply and installation of 6 m long, 300 mm diameter leader pipe complete with rodent gate, backfill of existing ditch as shown on the plan herein, and restoration of land with topsoil (minimum 50 mm thickness), fine graded and seeded. Work to include the supply and installation of approx. 8 m ² (300 mm minimum thickness) of stone erosion protection (SEP) including new filter fabric underlay around inlet.	\$3,500.00
22.	Supply and installation of a new 600 mm x 600 mm pre-cast concrete catch basin (CB15), complete with minimum 300 mm sump, cast iron frame and grate (OPSD 400.01), 5 m long, 300 mm diameter leader pipe connected to new drain with pre-fabricated tee, and restoration of asphalt surface. Work also to include connection of existing drain pipe and grouting of all inlet pipes.	\$3,600.00

Item	Description	Amount
23.	Brushing and bottom cleanout of Ridgewood Lane east side ditch from McLeod Avenue to DICB16, totalling approximately 226 m of ditch and approximately 50 m ³ of excavated material to be trucked and disposed of off-site.	\$4,000.00
24.	Flush and clean existing 300 mm diameter culvert under McLeod Avenue in line with Ridgewood Lane east side ditch.	\$700.00
25.	Fill existing 300 mm diameter and 400 mm diameter pipe crossing Lakewood Drive near Station 0+272. Work includes supply and installation of a new 300 mm diameter leader pipe from the existing maintenance hole to the new 525 mm diameter drain with pre-fabricated tee at Station 0+263 (approx.), and backfill with full Granular 'A.	\$4,100.00
26.	Supply and place hot mix asphalt (80 mm HL4 base course - two lifts & 40 mm HL3 surface course-one lift) to reconstruct Lakewood Drive and Ridgewood Lane where disturbed by new drain construction.	\$99,000.00
27.	Excess soils management – Trucking of excess soils off-site approximately 715 m ³	\$57,200.00
28.	Traffic control as per OTM Book 7	\$10,000.00
29.	Utility work(s), as follows:	
	a) Co-ordination with Town of Amherstburg to field locate existing water utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor. The installation of the drainage works crosses approximately 26 existing water services and two (2) water main crossings that will require relocation under the drain pipe. Insulation to be provided by the Contractor where cover over water services is less than 1.2 m deep.	\$33,000.00
	b) Co-ordination with Town of Amherstburg to field locate existing sanitary sewer utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor. The installation of the drainage works crosses approximately 21 existing sanitary private drain connection services of which two (2) will require relocation (Mun No. 119 & Mun. No. 178) under the drain pipe.	\$11,100.00

Item	Description	Amount
	c) Co-ordination with G-Tel to field locate existing underground Enbridge utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor. The installation of the drainage works crosses approximately 18 existing gas connection services. The Contractor shall coordinate with Enbridge for providing sand bedding support of utility pipes where crossed under by new drain at the expense of the operating utility. Costs shall include third party inspection provided by Enbridge.	\$12,600.00
	d) Co-ordination with G-Tel to field locate existing underground Hydro One utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor. Approximately two (2) hydro poles shall require temporary partial support at the expense of the operating utility. Costs shall include any inspection or supervision provided by Hydro One.	\$6,000.00
	e) Co-ordination with G-Tel to field locate existing underground Cogeco utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor.	\$1,000.00
	SUB-TOTAL – SECTION 26 NON PRO-RATEABLE COSTS	\$264,800.00
30.	Allowances under Section 29	\$5,800.00
31.	Survey, Report, Assessment & Final Inspection (cost portion)	\$38,500.00
32.	Construction observation and administration (cost portion)	\$6,500.00
33.	Expenses & Incidentals (cost portion)	\$1,600.00
34.	Net HST on construction and engineering costs (cost portion)	<u>\$5,500.00</u>
	TOTAL – SECTION 26 NON PRO-RATEABLE COSTS	\$322,700.00
	TOTAL - LAKEWOOD DRIVE DRAIN No. 3	\$760,700.00
	TOTAL –LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME	\$1,006,600.00

The estimate provided in this report was prepared according to current materials and installation prices as of the date of this report. In the event of delays from the time of filing of the report by the Engineer to the time of tendering the work, it is understood that the estimate of cost is subject to inflation. The rate of inflation shall be calculated using the Consumer Price Index applied to the cost of construction from the date of the report to the date of tendering.

Should the Road Authority elect to construct the drainage works across their road right-of-ways (Section 26.0 increased cost items) with their own forces, as per Section 69 of the Drainage Act, R.S.O., 1990, the Road Authority shall remain responsible for their allotment of costs for the preparation of this report as outlined in our estimate. Should the Road Authority elect not to undertake this work, the work items, as noted under Section 26 above, should be kept separate when tendering out the entire drainage works.

Assessment of Costs

The individual assessments are comprised of three (3) assessment components:

- i. Benefit (*advantages relating to the betterment of lands, roads, buildings, or other structures resulting from the improvement to the drain*).
- ii. Outlet Liability (*part of cost required to provide outlet for lands and roads*).
- iii. Special Benefit (*additional work or feature that may not affect function of the drain*).

Assessment Rationale (Bar Point Pump Upgrades)

The Bar Point Pump was originally designed to serve the lands within the Bar Point area between Claremont Lane and Ridgewood Lane. The pump having a capacity of 4,320 usgpm. The recommended pump upgrades will provide a capacity of 8,000 usgpm and allow for the inclusion of the Lakewood Drive Drain No. 3 connection to the pump. There is a benefit exclusively for these additional lands, as part of the Lakewood Drain No. 3, to utilize the existing Bar Point pump with upgrades in lieu of a completely new and separate pump for the new drain only. The amount of the benefit is derived by considering the residual value remaining within the existing pump and pumphouse.

The pump and its accessory electrical components would typically have an estimated life span of approximately 50 years while the pumphouse structure and pump well would be anticipated to extend its use beyond 75 years to 100 years. Given that the existing pumping system is over 35 years old and would be pre-maturely replaced with the new pump upgrade, the residual value based on a weighted average scale would represent approximately 40% of the new pump and pumphouse costs. We have therefore assessed 40% of the overall costs for the Bar Point pump upgrades as a Benefit assessment being solely against new lands and roads being provided a connection to and a legal outlet to the pumping scheme. For the works associated with the upgrades to the Bar Point pump, we have assessed the estimated costs against the affected lands and roads as listed in Schedule 'C-1' under "Special Benefit," "Benefit," and "Outlet."

Assessment Rationale (Lakewood Drive Drain No. 3)

For the works associated with the construction the Lakewood Drive Drain No. 3, we have assessed the estimated costs against the affected lands and roads as listed in Schedule 'C-2' under "Special Benefit," "Benefit," and "Outlet." Details of Special Benefit listed in Schedule 'C-2' are provided in Schedule 'D.'

Special Benefit Assessment to Town of Amherstburg Road Authority (Pro-Ratable)

Special Benefit assessments have been levied against the Town of Amherstburg's Road Authority for a portion of the construction costs including engineering apportionment applicable to the Lakewood Drive Drain No. 3. Given the narrow right-of-way of Lakewood Drive, there is insufficient space available to locate the new drainage works within the roadway. The increased costs have been assessed as a special benefit and pro-ratable assessment as shown in Schedule 'C-2' and detailed within Schedule 'D,' as noted below:

1. We have assessed 25% of the costs of the pipe installation for the Lakewood Drive Drain against the road authority as a pro-ratable assessment.
2. We have assessed 25% of the costs of the maintenance hole installation (MH5, MH6, MH7, MH8, MH9 & MH10) for the Lakewood Drive Drain against the road authority as a pro-ratable assessment.
3. We have assessed 50% of the costs for the supply, installation and/or replacement of eight (8) new off-line catch basins against the road authority as a pro-ratable assessment.
4. We have assessed 50% of the costs for re-connection of eighteen (18) off-line catch basins to the new drain against the road authority as a pro-ratable assessment.
5. We have assessed 50% of the costs for replacing the existing catch basin between Mun. No. 103 and Mun. No. 106 including connection and re-connection to the new drain against the road authority as a pro-ratable assessment.

Special Benefit Assessment to Town of Amherstburg Road Authority (Section 26 Non Pro-Ratable)

Special Benefit assessments have been levied against the Town of Amherstburg's Road Authority for the entire portion of the increased construction costs including engineering apportionment applicable to the Lakewood Drive Drain No. 3 and the adjacent roadside drainage from Ridgewood Lane and McLeod Avenue. The costs have been assessed as a special benefit and non-pro-ratable assessment in accordance with Section 26 of the Drainage Act, as noted below:

1. We have assessed 100% of the costs for the infilling of a portion of the existing ditches along Ridgewood Lane, McLeod Avenue, and Lakewood Drive against the road authority as a non-pro-ratable assessment.
2. We have assessed 100% of the costs for brushing and cleaning of the east ditch along Ridgewood Lane against the road authority as a non-pro-ratable assessment.
3. We have assessed 100% of the costs for traffic control, apportioned 25% to Ridgewood Lane and 75% to Lakewood Drive being against the road authority as a non-pro-ratable assessment.
4. We have assessed 100% of the costs for the installation of DICB13, DICB16 and CB15 complete with associated leader pipe connections to the new drain against the road authority as a non-pro-ratable assessment.
5. We have assessed 100% of the costs to remove and dispose of existing culvert crossing Lakewood Drive at Station 0+795 and installation of a new CB14 and associated leader pipe connection to the new drain against the road authority as a non-pro-ratable assessment.

6. We have assessed 100% of the costs to cap and fill the existing culvert crossing of Ridgewood Lane and Lakewood Drive intersection apportioned 50% to each road respectively being assessed against the road authority as a non-pro-ratable assessment.
7. We have assessed 100% of the costs to flush and clean the existing culvert across McLeod Avenue at Ridgewood Lane east ditch being against the road authority as a non-pro-ratable assessment.
8. We have assessed 100% of the costs of asphalt roadway repairs and restoration against the road authority as a non-pro-ratable assessment.
9. We have assessed 100% of the costs of Section 29 allowances for land used for the drain located on private property against the road authority as a non-pro-ratable assessment.
10. We have assessed 100% of the costs of the costs for excess soils management including the trucking and disposal of excess excavated materials off-site against the road authority as a non-pro-ratable assessment.

Special Benefit Assessment to Town of Amherstburg Public Works (Section 26 Non-Pro-Ratable)

Special Benefit assessments have been levied against the Town of Amherstburg Public Works department for the entire portion of the increased construction costs including engineering costs apportionment applicable to existing sanitary and watermain servicing being crossed by the Lakewood Drive Drain No. 3. The costs have been assessed as a special benefit and non-pro-ratable assessment in accordance with Section 26 of the Drainage Act, as noted below:

1. We have assessed 100% of the costs for locating and deflecting existing water and sanitary services, and for lowering of an existing watermain in two locations against the Public Works department as a non-pro-ratable assessment.

Special Benefit Assessment to Public Utilities (Section 26 Non-Pro-Ratable)

Special Benefit assessments have been levied against the affected Public Utilities for the entire portion of the increased construction costs including engineering costs apportionment applicable to existing public utility being crossed by the Lakewood Drive Drain No. 3. The costs have been assessed as a special benefit and non-pro-ratable assessment in accordance with Section 26 of the Drainage Act, as noted below:

1. We have assessed 100% of the costs for coordinating locates, locating and supporting existing gas lines against Enbridge Gas Inc. as a non-pro-ratable assessment.
2. We have assessed 100% of the costs of coordinating locates, locating and working around existing buried communication lines against Cogeco Inc. as a non-pro-ratable assessment.
3. We have assessed 100% of the costs of coordinating locates, partial support of utility poles and guy wires against Hydro One Networks Inc. as a non-pro-ratable assessment.

Public Utilities

It may become necessary to temporarily or permanently relocate public utilities that may

conflict with the construction recommended under this report. In accordance with Section 26 of the Drainage Act, we assess any relocation cost against the public utility having jurisdiction. Under Section 69 of the Drainage Act, the public utility is at liberty to do the work with its own forces, but if it should not exercise this option within a reasonable time, the Municipality will arrange to have this work completed and the costs will be charged to the appropriate public utility.

Future Maintenance (Bar Point Pump)

Notwithstanding the Benefit assessments levied for the improvements identified herein, we recommend that future work of repair, operation costs and maintenance of the Bar Point Pump be carried out by the Municipality and the costs assessed against the affected lands and roads in the same relative proportions as an Outlet assessment only, as set out in Schedule 'C-1' under this report.

Future Maintenance (Lakewood Drive Drain No. 3)

Notwithstanding the Special Benefit assessments levied for the improvements identified herein, we recommend that future work of repair and maintenance of the Lakewood Drive Drain No. 3 be carried out by the Municipality and the costs assessed against the affected lands and roads in the same relative proportions as Benefit and Outlet assessments set out in Schedule 'C-2' under this report.

Drawings and Specifications

Attached to this report is Schedule 'F', which are Specifications setting out the details of the recommended works, and Schedule 'G', which represents the following drawings included herein:

- Page 1 of 14: Overall Plan**
- Page 2 of 14: Landowners Information**
- Page 3 of 14: Plan & Profile 1**
- Page 4 of 14: Plan & Profile 2**
- Page 5 of 14: Plan & Profile 3**
- Page 6 of 14: Plan & Profile 4**
- Page 7 of 14: Plan & Profile 5**
- Page 8 of 14: Plan 2A**
- Page 9 of 14: Structure Details**
- Page 10 of 14: Miscellaneous Details**
- Page 11 of 14: Pump Details 1**
- Page 12 of 14: Pump Details 2**
- Page 13 of 14: Pump Electrical – Layout Plan**
- Page 14 of 14: Pump Electrical – Controls**

Approvals

The construction and/or improvement to a drainage works, including repair and maintenance activities, and all operations connected therewith are subject to the approval, inspection, by-laws and regulations of all Municipal, Provincial, Federal and other authorities having jurisdiction in respect to any matters embraced by the proposed works. Prior to any construction or maintenance works, the Municipality or proponent designated on the Municipality's behalf shall obtain all required approvals/permits and confirm any construction limitations including timing windows, mitigation/off-setting measures, standard practices or any other limitations related to in-stream works.

Page 11 of 14: Pump Details 1
Page 12 of 14: Pump Details 2
Page 13 of 14: Pump Electrical – Layout Plan
Page 14 of 14: Pump Electrical – Controls



Approvals

The construction and/or improvement to a drainage works, including repair and maintenance activities, and all operations connected therewith are subject to the approval, inspection, by-laws and regulations of all Municipal, Provincial, Federal and other authorities having jurisdiction in respect to any matters embraced by the proposed works. Prior to any construction or maintenance works, the Municipality or proponent designated on the Municipality’s behalf shall obtain all required approvals/permits and confirm any construction limitations including timing windows, mitigation/off-setting measures, standard practices or any other limitations related to in-stream works.

The Essex Region Conservation Authority (ERCA) has reviewed and accepted the proposed drainage works. Correspondence received on March 29, 2023 is included herein within Schedule ‘A-2’ of this report. An application for ERCA permit and associated fee payment of \$800.00 will subsequently be addressed by the Town of Amherstburg, and will form part of the costs of the drainage works for the Lakewood Drive Drain No. 3.

Grants

In accordance with the provisions of Sections 85, 86 and 87 of the Drainage Act, a grant in the amount of 33–1/3 percent of the assessment eligible for a grant may be made in respect to the assessment made under this report upon privately owned lands used for agricultural purposes. The assessments levied against privately owned agricultural land must also satisfy all other eligibility criteria set out in the Agricultural Drainage Infrastructure Program policies. Most of the privately owned lands are used for agricultural purposes and are eligible under the A.D.I.P. policies. We are not aware of any lateral drains involved in this work that would not be eligible for a grant. We recommend that application be made to the Ontario Ministry of Agriculture and Food in accordance with Section 88 of the Drainage Act, for this grant, as well as for all other grants for which this work may be eligible.

Respectfully submitted,

DILLON CONSULTING LIMITED

Tim R. Oliver, P.Eng.
TRO:oem:



SCHEDULE 'A-1'

SUMMARY OF ON-SITE MEETING

February 27, 2020 @ 6:00 p.m.

Libro Centre Community Room, 3295 Meloche Road

Present:

Kristi & John Farmer

Lance Huver

Maurice Nagtegaal

Brian & Debra Balkwill

Erwin Pare

Dave Kopchek

Sheri Mayville

Frank & Gina Storino

Jim Ferrar

Sandy Kennedy

Michael Brauss

John Mitchell

Garry Fortune

Robert Smith

Ashley Gyori

James Bryant

Kevin Money

Shane McVitty

Tim Oliver

104 Lakewood Dr.

136 Lakewood Dr.

153 Claremont Ln.

148 Lakewood Dr.

137 Lakewood Dr.

130 Lakewood Dr.

144 Lakewood Dr.

107 Lakewood Dr.

140 Ridgewood Ln.

146 Claremont Ln.

103 Lakewood Dr.

175 Lakewood Dr.

596 McLeod Ave.

Essex Region Conservation Authority (ERCA)

ERCA

ERCA

Town of Amherstburg

Dillon Consulting Limited

Introduction

Shane McVitty gave introductions and an explanation of the petition for a Municipal Drain submitted by the Town's Road Authority under Section 4 of the Drainage Act. Shane attempted to have landowners sign a petition, however did not receive sufficient signatures. The roads require improved drainage and protection from high lake levels. The Town plans to reconstruct McLeod Avenue but cannot justify the works while the drainage issues persist. The purpose of the onsite meeting was to discuss drainage issues along Lakewood Drive, McLeod Avenue and Ridgewood Lane, and to get input and or requests from the landowners.

Tim Oliver provided an overview of the drainage issues in the area and a history of the Bar Point pumping system, including how the record high water level in the Great Lakes affect drainage. In the 1970s, landowners along Lakewood Drive were opposed to being included in the Bar Point system. They were excluded from the drainage scheme and associated costs. Drainage working continued for the lands and roads in the Bar Point area only where costs of the drainage works were distributed. The existing pump does not have capacity for the lands proposed to be added. A possible solution would be to use the existing pump house and electrical, and only upgrade the motor and assembly.

Discussions with landowners was as follows:

- Corrections to the watershed plan shown were provided.
- The Vandenbrink Development would use the Willow Beach Drain pump located to the west of Bar Point.

- The land owned by ERCA is a wetland and not developable. ERCA and the Town would be in close contact regarding this project. ERCA will review the proposed solution in consultation with the landowners
- Mr. Kennedy expressed concern that he believed ERCA caused most of the flooding by making landowners raise their homes years ago, which should make ERCA responsible.
- Gary Fortune stated that the issue now is due to the lack of planning from the previous municipality, and suggested the water from Lakewood should be drained easterly.
 - A summary of the existing infrastructure along Lakewood Drive between Ridgewood Lane and beyond was provided, which includes multiple pumping stations and storm sewers (Lakewood Beach Drains No. 1 and No. 2). It was explained that these systems are municipal drain systems, paid for by the landowners that use them.
- Completed work to attempt to improve drainage were discussed.
 - The Town cleans out the existing gravity outlets and flushes the culverts, however it's ineffective in improving drainage due to the high lake level. Mr. Brauss identified that the works completed were effective.
 - Any flooding is not due to the marsh, but from the high lake levels backing up through the sewers
 - A dyke as part of the easterly pump system breached recently, and it was the pump which saved flooding in the area.
 - A drainage system along Lakewood is still required for the area in order to be effectively drained and for the drainage area to effectively utilize the pump.
 - The municipal easement struggles with flooding, but has three separate gravity outlets along Lakewood Drive.
- Costs of the project was discussed. An overview of assessments was provided and payments would invoiced following construction. Any landowners developing or entering the watershed in the future would have to 'buy-in'. Any development would require stormwater management.
- Mr. Kennedy asked for the water to be removed from the pond.
- Mr. Brauss inquired about temporarily berming up the area. Mr. Bryant advised although the idea is good, in this case it doesn't work.
- The meeting concluded with a discussion regarding available grants under ADIP, obtaining information for the report, the process of bringing the report before the Drainage Board, the different types of meetings that will be held, and the landowner's right to appeal.

The meeting summary was prepared by Tim Oliver who should be notified of any errors and/or omissions.

SCHEDULE 'A-2'

From: **Ashley Gyori** <AGyori@erca.org>

Date: Wed, Mar 29, 2023 at 9:53 AM

Subject: RE: Lakewood Drive Drain No. 3 & Pumping Scheme (Town of Amherstburg) - request for ERCA review

To: Oliver, Tim <toliver@dillon.ca>

Cc: Sam Paglia <spaglia@amherstburg.ca>

Good morning Tim,

Thank you for sending the draft proposal for the proposed works for the Lakewood Drive Drain No. 3 and the Application for Permit form. Our office has had an opportunity to review the proposal and can confirm that we are generally supportive of the design as presented, with respect to Section 28 of the *Conservation Authorities Act*. However, we do have the following additional comments to note.

While our office typically advocates for raising low-lying roads to bring them up to current access standards, our office is aware that this is not generally feasible in this area given the current infrastructure and elevation of the surrounding lands. Additionally, due to the nature of this area being below the 1:100-year water levels, it should be noted that the proposed works were to address localized flooding issues as a result of high-water levels and may not alleviate coastal flooding issues in this area.

Please note that as our office reviewed the above proposal with respect to the natural hazards under Section 28 of the *Conservation Authorities Act* only, the pump station was not reviewed for adherence to standard engineering principles.

For this project to proceed, we will require the Final Drainage Report and Drawings and for the municipality to sign the attached Application for Permit form. The Town of Amherstburg will be invoiced the Application for Permit fee of \$800.00, in accordance with the ERCA Board-approved Fee Schedule.

If you have any questions, or if further clarification is required, please do not hesitate to contact me.



ASHLEY GYORI

Regulations Analyst

Essex Region Conservation Authority

360 Fairview Avenue West, Suite 311 • Essex, Ontario • N8M 1Y6

agyori@erca.org • essexregionconservation.ca

"SCHEDULE B-1"
SCHEDULE OF ALLOWANCES (BAR POINT PUMP UPGRADES)
LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME
TOWN OF AMHERSTBURG

Parcel No.	Owner	Section 31 Value	Section 30 Damages	Section 29 Land	Total Allowances
<u>ORIGINAL LANDS SERVED BY THE BAR POINT PUMP</u>					
46	James A. & Mary S. Ferrar	\$552.00	\$0.00	\$0.00	\$552.00
47	Paul D. Kelly	\$355.00	\$0.00	\$0.00	\$355.00
48	Suzanne, Patricia, Mara & Richard Ignatius & Linda Belkin	\$158.00	\$0.00	\$0.00	\$158.00
49	Cheryl M. Watson & Sima B. Sprackman	\$394.00	\$0.00	\$0.00	\$394.00
50	Christopher M. Chumko & Jacqueline E. Mickle	\$276.00	\$0.00	\$0.00	\$276.00
51	Stefan & Mirosława Starczewski	\$513.00	\$0.00	\$0.00	\$513.00
52	Charles Leonard, Mary Wheeler & Joan Lentine	\$592.00	\$0.00	\$0.00	\$592.00
53	John H. W. & Kristi L. Farmer	\$513.00	\$0.00	\$0.00	\$513.00
54	Maureen O'Shea	\$316.00	\$0.00	\$0.00	\$316.00
55	Craig A. & Mary J. Wheeler	\$513.00	\$0.00	\$0.00	\$513.00
56	Jay Garner	\$513.00	\$0.00	\$0.00	\$513.00
57	John D. Garner	\$136.00	\$0.00	\$0.00	\$136.00
58	Kary M. & Shannon D. Coulson	\$355.00	\$0.00	\$0.00	\$355.00
59	Thomas G. & Valerie Wilson	\$473.00	\$0.00	\$0.00	\$473.00
60	Jody F. Gagnon	\$434.00	\$0.00	\$0.00	\$434.00
61	Patricia L. Laframboise	\$237.00	\$0.00	\$0.00	\$237.00
62	Lawrence N. & Patricia L. Laframboise	\$592.00	\$0.00	\$0.00	\$592.00
63	Rebecca L. Wigle	\$552.00	\$0.00	\$0.00	\$552.00
64	Gordon R. Hoyt & Robin Skov	\$276.00	\$0.00	\$0.00	\$276.00
66	Mathew M. Duby & Emily R. Vandenharn	\$513.00	\$0.00	\$0.00	\$513.00
67	Patrick H. & Annette M. Pettypiece	\$957.00	\$0.00	\$0.00	\$957.00
68	Denis Larocque	\$957.00	\$0.00	\$0.00	\$957.00
69	Gordon R. Crawford	\$513.00	\$0.00	\$0.00	\$513.00
70	Ronald S. & Lorraine E. Rousseau	\$355.00	\$0.00	\$0.00	\$355.00
71	Leonard T. Pare	\$884.00	\$0.00	\$0.00	\$884.00
72	Daniel E. Deschamps & Cydney L.	\$957.00	\$0.00	\$0.00	\$957.00
73	Kevin. J. Racine	\$957.00	\$0.00	\$0.00	\$957.00
74	James & Judy Lennon	\$750.00	\$0.00	\$0.00	\$750.00
75	Town of Amherstburg	\$552.00	\$0.00	\$0.00	\$552.00
76	Town of Amherstburg	\$454.00	\$0.00	\$0.00	\$454.00
77	Bud J. Nagtegaal & Charity Conrad	\$862.00	\$0.00	\$0.00	\$862.00
78	Lawrence J. Bachmeier	\$862.00	\$0.00	\$0.00	\$862.00
79	David J. & Mary-Alice Beneteau,	\$862.00	\$0.00	\$0.00	\$862.00
80	Coulson Design Build	\$862.00	\$0.00	\$0.00	\$862.00
81	William & Julie Ellis	\$862.00	\$0.00	\$0.00	\$862.00

Parcel No.	Owner	Section 31 Value	Section 30 Damages	Section 29 Land	Total Allowances
82	Peter J. & Barbara Lojewski	\$355.00	\$0.00	\$0.00	\$355.00
83	Roger G. & Wendy L. Frenette	\$513.00	\$0.00	\$0.00	\$513.00
84	Brett W. & Shannon D. Coulson	\$237.00	\$0.00	\$0.00	\$237.00
85	Kathryn E McNamara & Mark J. Liedke	\$237.00	\$0.00	\$0.00	\$237.00
86	Janice E. & Kenneth R. Grice	\$316.00	\$0.00	\$0.00	\$316.00
87	James G. Kennedy	\$118.00	\$0.00	\$0.00	\$118.00
88	Michael B. & Judith A. McHale	\$237.00	\$0.00	\$0.00	\$237.00
89	Colton M. Bradt & Chelsea N. Hill	\$79.00	\$0.00	\$0.00	\$79.00
90	Charles & Lindsay MacDougall	\$434.00	\$0.00	\$0.00	\$434.00
91	Bradley B. & Caroline B. Coghlin	\$237.00	\$0.00	\$0.00	\$237.00
92	Kenneth Robson	\$237.00	\$0.00	\$0.00	\$237.00
93	Hildegard Franz & Cameron Ellis	\$276.00	\$0.00	\$0.00	\$276.00
94	Maegan A. Stephens	\$316.00	\$0.00	\$0.00	\$316.00
95	Maegan A. Stephens	\$118.00	\$0.00	\$0.00	\$118.00
96	Brent M. Charlebois	\$118.00	\$0.00	\$0.00	\$118.00
97	Maurice & Margaret A. Nagtegaal	\$237.00	\$0.00	\$0.00	\$237.00
98	Paul & Bree Tole	\$434.00	\$0.00	\$0.00	\$434.00
99	James N. & Tanya L. Sinasac	\$237.00	\$0.00	\$0.00	\$237.00
100	James N. & Tanya L. Sinasac	\$355.00	\$0.00	\$0.00	\$355.00
TOTAL ALLOWANCES		\$25,000.00	\$0.00	\$0.00	\$25,000.00

"SCHEDULE B-2"
SCHEDULE OF ALLOWANCES (LAKEWOOD DRIVE DRAIN No. 3)
LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME
TOWN OF AMHERSTBURG

Parcel No.	Owner	Section 30 Damages	Section 29 Land	Total Allowances
43	Marlene Kemski	\$0.00	\$1,350.00	\$1,350.00
44	Marlene Kemski	\$0.00	\$1,000.00	\$1,000.00
45	Ryan & Susan Bondy	\$0.00	\$3,450.00	\$3,450.00
TOTAL ALLOWANCES		\$0.00	\$5,800.00	\$5,800.00

"SCHEDULE C-1"
SCHEDULE OF ASSESSMENT (BAR POINT PUMP UPGRADES)
LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME
TOWN OF AMHERSTBURG

MUNICIPAL LANDS:

Description	Area Affected		Owner	Special			Total
	(Acres)	(Ha.)		Benefit	Benefit	Outlet	
Elmstead Lane	0.79	0.32	Town of Amherstburg	\$0.00	\$0.00	\$5,669.00	\$5,669.00
Essex Boulevard	1.26	0.51	Town of Amherstburg	\$0.00	\$0.00	\$7,224.00	\$7,224.00
Tilford Lane	0.77	0.31	Town of Amherstburg	\$0.00	\$0.00	\$5,492.00	\$5,492.00
Victoria Lane	0.30	0.12	Town of Amherstburg	\$0.00	\$0.00	\$2,126.00	\$2,126.00
Claremont Lane	0.79	0.32	Town of Amherstburg	\$0.00	\$0.00	\$5,669.00	\$5,669.00
Ridgewood Lane	1.52	0.62	Town of Amherstburg	\$0.00	\$3,828.00	\$6,593.00	\$10,421.00
McLeod Avenue	5.05	2.04	Town of Amherstburg	\$0.00	\$14,853.00	\$19,278.00	\$34,131.00
Lakewood Drive	1.17	0.47	Town of Amherstburg	\$0.00	\$20,143.00	\$11,106.00	\$31,249.00
Lakewood Boulevard	2.66	1.08 *	Town of Amherstburg	\$0.00	\$1,042.00	\$1,149.00	\$2,191.00
Total on Municipal Lands.....				\$0.00	\$39,866.00	\$64,306.00	\$104,172.00

PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:

Parcel No.	Con.	Area Affected		Owner	Special			Total
		(Acres)	(Ha.)		Benefit	Benefit	Outlet	

LAKEWOOD DRIVE AREA SERVED BY THE BAR POINT PUMP

2	Marsh	0.96	0.39	Ronald, Jason, Kyle Belward	\$0.00	\$1,542.00	\$1,700.00	\$3,242.00
3	Marsh	1.43	0.58	Anthony R. Smith & Nasra Smith	\$0.00	\$1,762.00	\$1,943.00	\$3,705.00
4	Marsh	1.98	0.80	Stuart & Eugenia Smith	\$0.00	\$1,949.00	\$2,148.00	\$4,097.00
5	Marsh	19.46	7.88 *	Essex Region Conservation Authority	\$0.00	\$7,601.00	\$8,380.00	\$15,981.00
6	Marsh	0.09	0.04	Jeffery D. & Donna E. Topliffe	\$0.00	\$463.00	\$255.00	\$718.00
7	Marsh	0.13	0.05 *	Garry Fortune	\$0.00	\$289.00	\$160.00	\$449.00
8	Marsh	0.13	0.05	Garry Fortune	\$0.00	\$579.00	\$319.00	\$898.00
9	Marsh	0.13	0.05 *	Sherry A. Kemski	\$0.00	\$289.00	\$160.00	\$449.00
10	Marsh	0.07	0.03 *	Marlene Kemski	\$0.00	\$174.00	\$96.00	\$270.00
11	Marsh	0.14	0.06	Marlene Kemski	\$0.00	\$695.00	\$383.00	\$1,078.00
12	Marsh	0.14	0.06	Frank M. & Simone Y. Seres	\$0.00	\$695.00	\$383.00	\$1,078.00
13	Marsh	0.14	0.06	Peter J. Courtney & Brenda J. Turgeon	\$0.00	\$695.00	\$383.00	\$1,078.00
14	Marsh	0.15	0.06	Allan R & Cynthia S. Mickle	\$0.00	\$695.00	\$383.00	\$1,078.00
15	Marsh	0.15	0.06	Debra L. Balkwill	\$0.00	\$695.00	\$383.00	\$1,078.00
16	Marsh	0.08	0.03	James K. Baker & Rosalie M. Lemire	\$0.00	\$347.00	\$191.00	\$538.00
17	Marsh	0.10	0.04 *	Erwin R. & Carol A. Pare	\$0.00	\$232.00	\$128.00	\$360.00
18	Marsh	0.26	0.11	Erwin R. & Carol A. Pare	\$0.00	\$1,273.00	\$702.00	\$1,975.00
19	Marsh	0.16	0.06	Michelle S. & Darrin J. Lewis	\$0.00	\$695.00	\$383.00	\$1,078.00

Parcel No.	Con.	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
20	Marsh	0.08	0.03	Solace Farms Inc.	\$0.00	\$347.00	\$191.00	\$538.00
21	Marsh	0.17	0.07	Daniel & Jennifer Accetta	\$0.00	\$810.00	\$447.00	\$1,257.00
22	Marsh	0.25	0.10	Bradley S. & Sherri L. Nelson	\$0.00	\$1,158.00	\$638.00	\$1,796.00
23	Marsh	0.08	0.03	Barry Riddell	\$0.00	\$347.00	\$191.00	\$538.00
24	Marsh	0.20	0.08	Leon K. & Nella Bieszk	\$0.00	\$926.00	\$510.00	\$1,436.00
25	Marsh	0.18	0.07	Stella D. & Bruce A. Milkins	\$0.00	\$810.00	\$447.00	\$1,257.00
26	Marsh	0.19	0.08	Francesco & Gina Storino	\$0.00	\$926.00	\$510.00	\$1,436.00
27	Marsh	0.20	0.08	Erhard M. & Jennifer Brauss	\$0.00	\$926.00	\$510.00	\$1,436.00
28	Marsh	1.18	0.48	John H. W. & Kristi L. Farmer	\$0.00	\$3,380.00	\$1,863.00	\$5,243.00
29	Marsh	0.33	0.13	Daniel & Mary Lou Valteau	\$0.00	\$1,505.00	\$829.00	\$2,334.00
30	Marsh	0.16	0.06	Adrian & Joanne Harte	\$0.00	\$695.00	\$383.00	\$1,078.00
31	Marsh	0.48	0.19	Rhys E. Robb & Susan A. Dranski	\$0.00	\$2,199.00	\$1,212.00	\$3,411.00
32	Marsh	0.24	0.10	Melissa M. Beaudoin-Lloyd	\$0.00	\$1,158.00	\$638.00	\$1,796.00
33	Marsh	0.24	0.10	Jesse & Vanessa E. DiGiovanni	\$0.00	\$1,158.00	\$638.00	\$1,796.00
34	Marsh	0.24	0.10	Jason & Stefanie L. Kamrock	\$0.00	\$1,158.00	\$638.00	\$1,796.00
35	Marsh	0.24	0.10	Lance S. Huver & Kirsty L. Collins	\$0.00	\$1,158.00	\$638.00	\$1,796.00
36	Marsh	0.16	0.06 *	Erwin R. L. & Carol A. Pare	\$0.00	\$347.00	\$191.00	\$538.00
37	Marsh	0.16	0.06 *	Erwin R. L. & Carol A. Pare	\$0.00	\$347.00	\$191.00	\$538.00
38	Marsh	0.32	0.13	Jaremy & Sheri Mayville	\$0.00	\$1,505.00	\$829.00	\$2,334.00
39	Marsh	0.32	0.13	Brian & Debbie Balkwill	\$0.00	\$1,505.00	\$829.00	\$2,334.00
40	Marsh	0.16	0.06	Gabriella S. Monteleone	\$0.00	\$695.00	\$383.00	\$1,078.00
41	Marsh	0.64	0.26	Pennie L. Mitchell	\$0.00	\$2,709.00	\$1,493.00	\$4,202.00
42	Marsh	0.32	0.13	Marlene Kemski	\$0.00	\$1,505.00	\$829.00	\$2,334.00
43	Marsh	0.32	0.13 *	Marlene Kemski	\$0.00	\$752.00	\$415.00	\$1,167.00
44	Marsh	0.24	0.10 *	Marlene Kemski	\$0.00	\$579.00	\$319.00	\$898.00
45	Marsh	0.83	0.34	Ryan & Susan Bondy	\$0.00	\$3,017.00	\$1,663.00	\$4,680.00
<u>ORIGINAL LANDS SERVED BY THE BAR POINT PUMP</u>								
46	Marsh	0.35	0.14	James A. & Mary S. Ferrar	\$0.00	\$0.00	\$893.00	\$893.00
47	Marsh	0.22	0.09	Paul D. Kelly	\$0.00	\$0.00	\$574.00	\$574.00
48	Marsh	0.09	0.04	Suzanne, Patricia, Mara & Richard Ignatius & Linda Belkin	\$0.00	\$0.00	\$255.00	\$255.00
49	Marsh	0.25	0.10	Cheryl M. Watson & Sima B. Sprackman	\$0.00	\$0.00	\$638.00	\$638.00
50	Marsh	0.17	0.07	Christopher M. Chumko & Jacqueline E. Mickle	\$0.00	\$0.00	\$447.00	\$447.00
51	Marsh	0.32	0.13	Stefan & Mirosława Starczewski	\$0.00	\$0.00	\$829.00	\$829.00
52	Marsh	0.37	0.15	Charles Leonard, Mary Wheeler & Joan Lentine	\$0.00	\$0.00	\$957.00	\$957.00
53	Marsh	0.34	0.14	John H. W. & Kristi L. Farmer	\$0.00	\$0.00	\$893.00	\$893.00
54	Marsh	0.20	0.08	Maureen O'Shea	\$0.00	\$0.00	\$510.00	\$510.00

Parcel No.	Con.	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
55	Marsh	0.32	0.13	Craig A. & Mary J. Wheeler	\$0.00	\$0.00	\$829.00	\$829.00
56	Marsh	0.32	0.13	Jay Garner	\$0.00	\$0.00	\$829.00	\$829.00
57	Marsh	0.18	0.07 *	John D. Garner	\$0.00	\$0.00	\$223.00	\$223.00
58	Marsh	0.22	0.09	Kary M. & Shannon D. Coulson	\$0.00	\$0.00	\$574.00	\$574.00
59	Marsh	0.30	0.12	Thomas G. & Valerie Wilson	\$0.00	\$0.00	\$766.00	\$766.00
60	Marsh	0.26	0.11	Jody F. Gagnon	\$0.00	\$0.00	\$702.00	\$702.00
61	Marsh	0.15	0.06	Patricia L. Laframboise	\$0.00	\$0.00	\$383.00	\$383.00
62	Marsh	0.38	0.15	Lawrence N. & Patricia L. Laframboise	\$0.00	\$0.00	\$957.00	\$957.00
63	Marsh	0.34	0.14	Rebecca L. Wigle	\$0.00	\$0.00	\$893.00	\$893.00
64	Marsh	0.18	0.07	Gordon R. Hoyt & Robin Skov	\$0.00	\$0.00	\$447.00	\$447.00
66	Marsh	0.33	0.13	Richard I. Gilmour & Barbara G. Senior	\$0.00	\$0.00	\$829.00	\$829.00
67	Marsh	0.69	0.28	Mathew M. DUBY & Emily R. Vandenham	\$0.00	\$0.00	\$1,548.00	\$1,548.00
68	Marsh	0.69	0.28	Patrick H. & Annette M. Pettypiece	\$0.00	\$0.00	\$1,548.00	\$1,548.00
69	Marsh	0.33	0.13	Denis Larocque	\$0.00	\$0.00	\$829.00	\$829.00
70	Marsh	0.22	0.09	Gordon R. Crawford	\$0.00	\$0.00	\$574.00	\$574.00
71	Marsh	0.59	0.24	Ronald S. & Lorraine E. Rousseau	\$0.00	\$0.00	\$1,429.00	\$1,429.00
72	Marsh	0.69	0.28	Leonard T. Pare	\$0.00	\$0.00	\$1,548.00	\$1,548.00
73	Marsh	0.69	0.28	Daniel E. Deschamps & Cydney L. Walker	\$0.00	\$0.00	\$1,548.00	\$1,548.00
74	Marsh	0.48	0.19	Kevin. J. Racine	\$0.00	\$0.00	\$1,212.00	\$1,212.00
75	Marsh	0.35	0.14	James & Judy Lennon	\$0.00	\$0.00	\$893.00	\$893.00
76	Marsh	0.56	0.23 *	Town of Amherstburg	\$0.00	\$0.00	\$734.00	\$734.00
77	Marsh	0.56	0.23	Town of Amherstburg	\$0.00	\$0.00	\$1,394.00	\$1,394.00
78	Marsh	0.56	0.23	Bud J. Nagtegaal & Charity Conrad	\$0.00	\$0.00	\$1,394.00	\$1,394.00
79	Marsh	0.56	0.23	Lawrence J. Bachmeier	\$0.00	\$0.00	\$1,394.00	\$1,394.00
80	Marsh	0.56	0.23	David J. & Mary-Alice Beneteau, Amberley & Kerry Foote	\$0.00	\$0.00	\$1,394.00	\$1,394.00
81	Marsh	0.56	0.23	Coulson Design Build	\$0.00	\$0.00	\$1,394.00	\$1,394.00
82	Marsh	0.22	0.09	William & Julie Ellis	\$0.00	\$0.00	\$574.00	\$574.00
83	Marsh	0.33	0.13	Peter J. & Barbara Lojewski	\$0.00	\$0.00	\$829.00	\$829.00
84	Marsh	0.15	0.06	Roger G. & Wendy L. Frenette	\$0.00	\$0.00	\$383.00	\$383.00
85	Marsh	0.14	0.06	Brett W. & Shannon D. Coulson	\$0.00	\$0.00	\$383.00	\$383.00
86	Marsh	0.20	0.08	Kathryn E McNamara & Mark J. Liedke	\$0.00	\$0.00	\$510.00	\$510.00
87	Marsh	0.07	0.03	Janice E. & Kenneth R. Grice	\$0.00	\$0.00	\$191.00	\$191.00
88	Marsh	0.14	0.06	James G. Kennedy	\$0.00	\$0.00	\$383.00	\$383.00
89	Marsh	0.06	0.02	Michael B. & Judith A. McHale	\$0.00	\$0.00	\$128.00	\$128.00

Parcel No.	Con.	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
90	Marsh	0.27	0.11	Colton M. Bradt & Chelsea N. Hill	\$0.00	\$0.00	\$702.00	\$702.00
91	Marsh	0.14	0.06	Charles & Lindsay MacDougall	\$0.00	\$0.00	\$383.00	\$383.00
92	Marsh	0.14	0.06	Bradley B. & Caroline B. Coghlin	\$0.00	\$0.00	\$383.00	\$383.00
93	Marsh	0.17	0.07	Kenneth Robson	\$0.00	\$0.00	\$447.00	\$447.00
94	Marsh	0.19	0.08	Hildegard Franz & Cameron Ellis	\$0.00	\$0.00	\$510.00	\$510.00
95	Marsh	0.07	0.03	Maegan A. Stephens	\$0.00	\$0.00	\$191.00	\$191.00
96	Marsh	0.07	0.03	Maegan A. Stephens	\$0.00	\$0.00	\$191.00	\$191.00
97	Marsh	0.15	0.06	Brent M. Charlebois	\$0.00	\$0.00	\$383.00	\$383.00
98	Marsh	0.28	0.11	Maurice & Margaret A. Nagtegaal	\$0.00	\$0.00	\$702.00	\$702.00
99	Marsh	0.14	0.06	Paul & Bree Tole	\$0.00	\$0.00	\$383.00	\$383.00
100	Marsh	0.22	0.09	James N. & Tanya L. Sinasac	\$0.00	\$0.00	\$574.00	\$574.00

Total on Privately-Owned - Non-Agricultural Lands..... \$0.00 \$52,292.00 \$76,396.00 \$128,688.00

PRIVATELY-OWNED - AGRICULTURAL LANDS (GRANTABLE)

LAKWOOD DRIVE AREA SERVED BY THE BAR POINT PUMP

1	Marsh	15.89	6.43 *	George H. & Ruth A. Vandenbrink	\$0.00	\$6,202.00	\$6,838.00	\$13,040.00
Total on Privately-Owned - Agricultural Lands (Grantable).....					\$0.00	\$6,202.00	\$6,838.00	\$13,040.00

TOTAL ASSESSMENT **\$0.00 \$98,360.00 \$147,540.00 \$245,900.00**

(Acres) (Ha.)

80.36 32.55

* INDICATES A REDUCED ASSESSMENT FOR UNDEVELOPED AREAS

"SCHEDULE C-2"
SCHEDULE OF ASSESSMENT (LAKEWOOD DRIVE DRAIN No. 3)
LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME
TOWN OF AMHERSTBURG

MUNICIPAL LANDS:

Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
	(Acres)	(Ha.)					
Ridgewood Lane	0.97	0.39	Town of Amherstburg	\$0.00	\$6,120.00	\$8,480.00	\$14,600.00
McLeod Avenue	4.30	1.74	Town of Amherstburg	\$0.00	\$11,126.00	\$33,597.00	\$44,723.00
Lakewood Drive	1.17	0.47	Town of Amherstburg	\$128,920.00	\$61,406.00	\$22,709.00	\$213,035.00
Lakewood Boulevard (u	2.66	1.08 *	Town of Amherstburg	\$0.00	\$610.00	\$2,348.00	\$2,958.00
Total on Municipal Lands.....				\$128,920.00	\$79,262.00	\$67,134.00	\$275,316.00

PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:

Parcel No.	Con.	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
2	Marsh	0.96	0.39	Ronald, Jason, Kyle Belward	\$0.00	\$226.00	\$3,477.00	\$3,703.00
3	Marsh	1.43	0.58	Anthony R. Smith & Nasra Smith	\$0.00	\$258.00	\$3,973.00	\$4,231.00
4	Marsh	1.98	0.80	Stuart & Eugenia Smith	\$0.00	\$285.00	\$4,392.00	\$4,677.00
5	Marsh	19.46	7.88 *	Essex Region Conservation Authority	\$0.00	\$1,113.00	\$17,135.00	\$18,248.00
6	Marsh	0.09	0.04	Jeffery D. & Donna E. Topliffe	\$0.00	\$1,360.00	\$522.00	\$1,882.00
7	Marsh	0.13	0.05 *	Garry Fortune	\$0.00	\$1,476.00	\$326.00	\$1,802.00
8	Marsh	0.13	0.05	Garry Fortune	\$0.00	\$1,645.00	\$652.00	\$2,297.00
9	Marsh	0.13	0.05 *	Sherry A. Kemski	\$0.00	\$1,476.00	\$326.00	\$1,802.00
10	Marsh	0.07	0.03 *	Marlene Kemski	\$0.00	\$755.00	\$196.00	\$951.00
11	Marsh	0.14	0.06	Marlene Kemski	\$0.00	\$1,713.00	\$783.00	\$2,496.00
12	Marsh	0.14	0.06	Frank M. & Simone Y. Seres	\$0.00	\$1,713.00	\$783.00	\$2,496.00
13	Marsh	0.14	0.06	Peter J. Courtney & Brenda J. Turgeon	\$0.00	\$1,713.00	\$783.00	\$2,496.00
14	Marsh	0.15	0.06	Allan R & Cynthia S. Mickle	\$0.00	\$1,713.00	\$783.00	\$2,496.00
15	Marsh	0.15	0.06	Debra L. Balkwill	\$0.00	\$1,713.00	\$783.00	\$2,496.00
16	Marsh	0.08	0.03	James K. Baker & Rosalie M. Lemire	\$0.00	\$856.00	\$391.00	\$1,247.00
17	Marsh	0.10	0.04 *	Erwin R. & Carol A. Pare	\$0.00	\$1,006.00	\$261.00	\$1,267.00
18	Marsh	0.26	0.11	Erwin R. & Carol A. Pare	\$0.00	\$2,923.00	\$1,435.00	\$4,358.00
19	Marsh	0.16	0.06	Michelle S. & Darrin J. Lewis	\$0.00	\$1,713.00	\$783.00	\$2,496.00
20	Marsh	0.08	0.03	Solace Farms Inc.	\$0.00	\$856.00	\$391.00	\$1,247.00
21	Marsh	0.17	0.07	Daniel & Jennifer Accetta	\$0.00	\$1,781.00	\$913.00	\$2,694.00
22	Marsh	0.25	0.10	Bradley S. & Sherri L. Nelson	\$0.00	\$1,331.00	\$1,305.00	\$2,636.00
23	Marsh	0.08	0.03	Barry Riddell	\$0.00	\$2,054.00	\$391.00	\$2,445.00
24	Marsh	0.20	0.08	Leon K. & Nella Bieszk	\$0.00	\$2,066.00	\$1,044.00	\$3,110.00
25	Marsh	0.18	0.07	Stella D. & Bruce A. Milkins	\$0.00	\$1,781.00	\$913.00	\$2,694.00
26	Marsh	0.19	0.08	Francesco & Gina Storino	\$0.00	\$1,957.00	\$1,044.00	\$3,001.00
27	Marsh	0.20	0.08	Erhard M. & Jennifer Brauss	\$0.00	\$1,957.00	\$1,044.00	\$3,001.00
28	Marsh	1.18	0.48	John H. W. & Kristi L. Farmer	\$0.00	\$5,887.00	\$3,810.00	\$9,697.00

Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment	
	(Acres)	(Ha.)						
29	Marsh	0.33	0.13	Daniel & Mary Lou Valleau	\$0.00	\$1,747.00	\$1,696.00	\$3,443.00
30	Marsh	0.16	0.06	Adrian & Joanne Harte	\$0.00	\$856.00	\$783.00	\$1,639.00
31	Marsh	0.48	0.19	Rhys E. Robb & Susan A. Dranski	\$0.00	\$2,603.00	\$2,479.00	\$5,082.00
32	Marsh	0.24	0.10	Melissa M. Beaudoin-Lloyd	\$0.00	\$1,319.00	\$1,305.00	\$2,624.00
33	Marsh	0.24	0.10	Jesse & Vanessa E. DiGiovanni	\$0.00	\$1,319.00	\$1,305.00	\$2,624.00
34	Marsh	0.24	0.10	Jason & Stefanie L. Kamrock	\$0.00	\$1,319.00	\$1,305.00	\$2,624.00
35	Marsh	0.24	0.10	Lance S. Huver & Kirsty L. Collins	\$0.00	\$1,319.00	\$1,305.00	\$2,624.00
36	Marsh	0.16	0.06 *	Erwin R. L. & Carol A. Pare	\$0.00	\$755.00	\$391.00	\$1,146.00
37	Marsh	0.16	0.06 *	Erwin R. L. & Carol A. Pare	\$0.00	\$755.00	\$391.00	\$1,146.00
38	Marsh	0.32	0.13	Jaremy & Sheri Mayville	\$0.00	\$1,747.00	\$1,696.00	\$3,443.00
39	Marsh	0.32	0.13	Brian & Debbie Balkwill	\$0.00	\$1,747.00	\$1,696.00	\$3,443.00
40	Marsh	0.16	0.06 *	Gabriella S. Monteleone	\$0.00	\$856.00	\$783.00	\$1,639.00
41	Marsh	0.64	0.26	Pennie L. Mitchell	\$0.00	\$3,405.00	\$3,053.00	\$6,458.00
42	Marsh	0.32	0.13	Marlene Kemski	\$0.00	\$1,747.00	\$1,696.00	\$3,443.00
43	Marsh	0.32	0.13	Marlene Kemski	\$0.00	\$1,526.00	\$848.00	\$2,374.00
44	Marsh	0.24	0.10	Marlene Kemski	\$0.00	\$1,149.00	\$652.00	\$1,801.00
45	Marsh	0.83	0.34	Ryan & Susan Bondy	\$0.00	\$4,149.00	\$3,401.00	\$7,550.00
Total on Privately-Owned - Non-Agricultural Lands.....					\$0.00	\$71,645.00	\$73,424.00	\$145,069.00

PRIVATELY-OWNED - AGRICULTURAL LANDS (GRANTABLE)

Parcel No.	Con.	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
1	Marsh	15.89	6.43 *	George H. & Ruth A. Vandenbrink	\$0.00	\$3,633.00	\$13,982.00	\$17,615.00
Total on Privately-Owned - Agricultural Lands (Grantable).....					\$0.00	\$3,633.00	\$13,982.00	\$17,615.00

SECTION 26 (NON PRO-RATABLE)

Roll No.	Con.	Owner	Special Benefit	Benefit	Outlet	Total Assessment
Ridgewood Lane		Town of Amherstburg Road Authority	\$21,048.00	\$0.00	\$0.00	\$21,048.00
McLeod Avenue		Town of Amherstburg Road Authority	\$20,273.00	\$0.00	\$0.00	\$20,273.00
Lakewood Drive		Town of Amherstburg Road Authority	\$205,414.00	\$0.00	\$0.00	\$205,414.00
Lakewood Drive		Town of Amherstburg Public Works	\$52,591.00	\$0.00	\$0.00	\$52,591.00
Public Utility		Enbridge Gas Inc.	\$15,026.00	\$0.00	\$0.00	\$15,026.00
Public Utility		Cogeco	\$1,193.00	\$0.00	\$0.00	\$1,193.00
Public Utility		Hydro One Networks Inc.	\$7,155.00	\$0.00	\$0.00	\$7,155.00
Total Section 26 (Non Pro-ratable).....			\$322,700.00	\$0.00	\$0.00	\$322,700.00

TOTAL ASSESSMENT			\$451,620.00	\$154,540.00	\$154,540.00	\$760,700.00
	(Acres)	(Ha.)				
	58.62	23.72				

* INDICATES A REDUCED ASSESSMENT FOR UNDEVELOPED AREAS

"SCHEDULE D"
DETAILS OF SPECIAL BENEFIT (LAKEWOOD DRIVE DRAIN No. 3)
LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME
TOWN OF AMHERSTBURG

SPECIAL BENEFIT ASSESSMENT
(PRO-RATABLE)

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
Lakewood Drive	Town of Amherstburg Road Authority	Increased cost to pipe installation due to presence of the road (25%)	\$48,250.00	\$9,240.00	\$57,490.00
		Increased cost to maintenance hole installation due to presence of the road (25%)	\$6,900.00	\$1,321.00	\$8,221.00
		Supply, installation and/or replacement of eight (8) new off-line catch basins (50%)	\$18,250.00	\$3,495.00	\$21,745.00
		Re-connection of eighteen (18) existing off-line catch basins to the new drain, including restoration work (50%)	\$32,250.00	\$6,176.00	\$38,426.00
		Replace existing catch basin between Mun. No. 103 & Mun. No. 106 including new leader pipe connection to new drain (50%)	\$2,550.00	\$488.00	\$3,038.00
Total Special Benefit - Lakewood Drive			\$108,200.00	\$20,720.00	\$128,920.00
TOTAL SPECIAL BENEFIT ASSESSMENT (PRO-RATABLE)			\$108,200.00	\$20,720.00	\$128,920.00

SPECIAL BENEFIT ASSESSMENT
(SECTION 26 NON PRO-RATABLE)

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
Ridgewood Lane	Town of Amherstburg Road Authority	Costs associated with the infilling of east side ditch along Ridgewood Lane (100%).	\$700.00	\$135.00	\$835.00
		Brushing and bottom cleanout of east side ditch including trucking of excavated materials (100%)	\$4,000.00	\$770.00	\$4,770.00
		Traffic Control (25%)	\$2,500.00	\$481.00	\$2,981.00
		Supply and installation of CB15 and 5 m long 300 mm dia. Lead and connection to new drain (100%)	\$3,600.00	\$693.00	\$4,293.00
		Costs associated with the supply & installation of DICB16 including leader pipe and SEP (100%)	\$4,800.00	\$924.00	\$5,724.00
		Costs associated capping and filling the existing pipe crossing at intersection of Ridgewood Lane & Lakewood Drive with grout and for connecting the EXHM to the new drain (50%)	\$2,050.00	\$395.00	\$2,445.00
Total Special Benefit - Ridgewood Lane			\$17,650.00	\$3,398.00	\$21,048.00

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
McLeod Avenue	Town of Amherstburg Road Authority	Costs associated with the infilling of the ditch along McLeod Avenue (100%).	\$5,700.00	\$1,097.00	\$6,797.00
		Supply and installation of DICB13 and 6 m long 300 mm dia. Lead c/w rodent gate (100%)	\$3,500.00	\$674.00	\$4,174.00
		Costs associated with the removal and disposal existing CSP near Sta. 0+795 and the supply & installation of CB14 including leader pipe across road (100%)	\$7,100.00	\$1,367.00	\$8,467.00
		Flush and clean existing 300 mm dia. road culvert cross McLeod Avenue (100%)	\$700.00	\$135.00	\$835.00
		Total Special Benefit - McLeod Avenue	\$17,000.00	\$3,273.00	\$20,273.00
Lakewood Drive	Town of Amherstburg Road Authority	Costs associated with the infilling of the ditch along Lakewood Drive (100%).	\$700.00	\$135.00	\$835.00
		Costs associated capping and filling the existing pipe crossing at intersection of Ridgewood Lane & Lakewood Drive with grout and for connecting the EXHM to the new drain (50%)	\$2,050.00	\$395.00	\$2,445.00
		Supply & installation of asphalt (100%)	\$99,000.00	\$19,060.00	\$118,060.00
		Section 29 allowances provided for situating the drain on private property (100%)	\$5,800.00	\$1,117.00	\$6,917.00
		Traffic Control (75%)	\$7,500.00	\$1,444.00	\$8,944.00
		Excess soils management	\$57,200.00	\$11,013.00	\$68,213.00
Total Special Benefit - Lakewood Drive	\$172,250.00	\$33,164.00	\$205,414.00		
Lakewood Drive	Town of Amherstburg Public Works	Coordination with the Town of Amherstburg for locates of water services and deflections (approx. 26), as well as the lowering of watermains (two locations) (100%)	\$33,000.00	\$6,354.00	\$39,354.00
		Coordination with the Town of Amherstburg for locates of sanitary services and lowerings (approx. 16) (100%)	\$11,100.00	\$2,137.00	\$13,237.00
		Total Special Benefit - Lakewood Drive	\$44,100.00	\$8,491.00	\$52,591.00
Public Utility	Enbridge Gas Inc.	Coordination with G-Tel for locates of gas lines (approx. 15) (100%)	\$12,600.00	\$2,426.00	\$15,026.00
Public Utility	Cogeco Inc.	Coordination with G-Tel for locates of Cogeco cables and additional cost to work around crossings (100%)	\$1,000.00	\$193.00	\$1,193.00
Public Utility	Hydro One Networks Inc.	Coordination with G-Tel & Hydro-One and partial support of approx. 5 hydro poles/guys wires (approx. 2) (100%)	\$6,000.00	\$1,155.00	\$7,155.00
TOTAL SPECIAL BENEFIT ASSESSMENT (SECTION 26 NON PRO-RATABLE)			\$270,600.00	\$52,100.00	\$322,700.00
OVERALL TOTAL SPECIAL BENEFIT ASSESSMENT					\$451,620.00

“SCHEDULE F”
DRAINAGE REPORT FOR THE
LAKWOOD DRIVE DRAIN NO. 3 & PUMPING SCHEME
IN THE TOWN OF AMHERSTBURG

SPECIAL PROVISIONS - GENERAL

1.0 GENERAL SPECIFICATIONS

The General Specifications attached hereto is part of “Schedule F.” It also forms part of this specification and is to be read with it, but where there is a difference between the requirements of the General Specifications and those of the Special Provisions which follow, the Special Provisions will take precedence.

2.0 DESCRIPTION OF WORK

The work to be carried out under this Contract includes, but is not limited to, the supply of all **labour, equipment and materials** to complete the following items:

Bar Point Pump Upgrades

- Dismantle and salvage existing electrical components prior to carefully removing pump assembly and motor, removing and disposing of pumphouse and steel support framing off site. Extreme care shall be taken not to damage the pump, motor, pump well and discharge pipe. Work to also include returning the existing pump, motor, starter and relay controls including level sensor switch to the Town of Amherstburg Public Works Yard (512 Sandwich St. South). The Contractor shall arrange for Hydro One to temporarily disconnect the power feed to the pump station and to later reconnect once the new electrical works are completed and the Electrical safety Authority inspection is completed. Any Hydro One costs where applicable to be paid by Contractor.
- Temporary pumping with the use of portable pumps for dewatering throughout the construction period as required.
- Supply and installation of a new 1800 mm wide x 350 mm high anti-vortex cruciform above pump well base consisting of A-36 steel angle (150 mm x 150 mm x 12 mm thickness) to support A-36 steel flat bar vertical cross members (254 mm high x 6 mm thickness) welded together and anchored to concrete sump floor. Works shall include the supply and installation of a 2130 mm diameter level concrete base poured in place, minimum 200 mm thickness 40 MPa concrete.
- Supply and installation of ten (10) 450 mm diameter concrete support piers, a minimum 1.2 metres in length, poured in place consisting of 40 MPa concrete within sonotube. Work to include auger drilling excavation for each pier.
- Supply and installation of Granular “A’ base, minimum 200 mm thickness compacted to surround pump well and concrete piers and fully extending below and beyond new pumphouse steel base frame including approach ramp (2 m x 2 m) on the north side at the pumphouse door. Work to include all required excavation, removal and re-use of excavated materials for site grading, topsoil placement, fine grade and seed all disturbed areas around pumphouse.
- Supply and installation of A-36 steel angle iron base frame for pumphouse floor (as per Specifications) to be anchored to concrete piers, complete with supply and installation of 9.5 mm thickness steel (diamond plate tread) decking welded to base frame.
- Supply and installation of two (2) new vertical anti-rotation vanes consisting of 5.75 m long A-36 steel rectangular tube (300 mm x 50 mm x 6 mm thickness) welded to both steel base frame and anti-vortex cruciform.

- Supply and installation of 305 mm diameter, 5.5 m long vertical stilling column consisting of galvanized Schedule 40 pipe complete with bottom plate, seepage holes and collar plate to be fastened to pump floor decking and to be strapped to anti-rotation vane with 19 mm wide SS band straps.
- Supply and construction of a new 3.86 m x 3.86 m wood framed pump house building to be fastened to pump floor frame complete with new corrugated metal wall and roof siding and salvaged door from existing pumphouse.
- Re-install salvaged main disconnect, meter socket, meter c/w enclosure/ indoor cabinet, red/green pump status exterior lights, splitter box, fused switch, transformer, load centre panel, light switch and receptacles including two (2) new circuits for new relay controls and pump lube solenoid.
- Supply and installation of all low voltage wiring and galvanized steel electrical conduits as per specifications including ESA inspection.
- Supply and installation of combination circuit breaker and reduced voltage soft starter c/w Nema 3R enclosure (Eaton Cutler- Hammer Class ECS95S2DAG-S811+N6N3S or approved equal), 50 Hp rating.
- Supply and installation of ball float switch system including two SS304 ball floats (Square 'D' 9049), two SS rods (4.57 m and 2.28 m length) and two switches (Schneider Pumptrol Square 'D' 9036GG, or approved equal), for both pump on/off and highwater alarm.
- Supply and installation of heat trace system for stilling column including controller (Thermon TCM2 or approved equal), MIQ heat trace cable, cold lead, junction box and ambient sensing probe (RTD-500-3). The work shall also include supply and installation of 22 gauge stainless steel skirt 1.5 m height wrapped and secured around heat trace cable and stilling column.
- Supply and installation of two (2) new wall mounted LED light fixtures, minimum 6000 lumens without motion sensor.
- Supply and installation of a new 40 Hp, 575 V, 900 RPM, 3 phase electric vertical hollow shaft motor (Nidec Motors or approved equal) complete with axial flow single stage propeller pump assembly (Lo-Lift Pump Company Model #2017 or approved equal), including oil lube solenoid dripper valve, one gallon reservoir tank and grease line connection to suction bowl bushing, minimum capacity of 8,000 USGPM at 12 feet TDH.
- Supply and installation of a new 610 mm diameter dresser Style 38 coupling to pump discharge elbow to outlet pipe.
- Pump setup and commissioning.

Lakewood Drive Drain No. 3

- Supply and install high density polyethylene pipe (HDPE) smooth interior wall (Boss 2000, 320 kPa or approved equivalent) with bell & spigot joining system. For every third pipe length, one pipe shall be perforated HDPE pipe complete with filter sock. This work is to include clear stone pipe bedding from minimum 150 mm below pipe up to the pipe springline, Granular 'A' backfill up to underside of surface material. This work is to also include connection of existing lateral storm drains where encountered.
 - Sta. 0+234.5 to Sta. 0+244.5 - Supply and install 10 m of 525 mm diameter HDPE pipe.
 - Sta. 0+244.5 to Sta. 0+269 - Supply and install 24.5 m of 525 mm diameter HDPE pipe.
 - Sta. 0+269 to Sta. 0+401.5 - Supply and install 132.5 m of 525 mm diameter HDPE pipe.
 - Sta. 0+401.5 to Sta. 0+530.5 - Supply and install 129 m of 450 mm diameter HDPE pipe.
 - Sta. 0+530.5 to Sta. 0+599.5 - Supply and install 69 m of 375 mm diameter HDPE pipe.
 - Sta. 0+599.5 to Sta. 0+682.5 - Supply and install 83 m of 375 mm diameter HDPE pipe.
 - Sta. 0+682.5 to Sta. 0+689 - Supply and install 6.5 m of 375 mm diameter HDPE pipe.
 - Ridgewood Lane Ditch Overflow Outlet – Supply and install 11.5 m of 375 mm diameter HDPE pipe.
- Supply and installation of a poured in-place concrete headwall around the 375 mm diameter emergency overflow pipe outlet at Station 1+000 (3.6 m wide x 0.9 m in high x 0.15 m thickness) complete with 15M steel reinforcement bars placed around pipe insert. This work includes the supply and installation of a 381 mm (15”) diameter galvanized flat back C-10 slide gate complete with appurtenances as manufactured by Waterman (or approved equal) mounted on the headwall over the outlet of the pipe. Supply and install rodent gate inside of pipe immediately upstream of slide gate. Work also includes excavation of the ditch immediately downstream of the headwall to provide minimum 0.10 m of clearance between ditch bottom and slide gate, as well as the supply and installation of stone erosion protection of the banks (1 m wide) of the ditch, 300 mm thickness (approximately 5 m²).
- Supply and install high density polyethylene pipe (HDPE) smooth interior wall (Boss 2000, 320 kPa or approved equivalent) with bell & spigot joining system. For every third pipe length, one pipe shall be perforated HDPE pipe complete with filter sock. This work is to include Granular 'B' pipe bedding from minimum 150 mm below pipe up to the pipe springline, and native material backfill up to surface material. Top surface to be minimum 50 mm thickness layer of top soil, fine graded and seeded. This work is to also include connection of existing tile drains encountered during trenching, additional labour and materials required in locating, supporting, redirecting, and/or working around existing utilities.
 - Sta. 0+689 to Sta. 0+776 - Supply and install 87 m of 375 mm diameter HDPE pipe.
 - Sta. 0+776 to Sta. 0+795 - Supply and install 19 m of 375 mm diameter HDPE pipe.
- Supply and installation of two (2) new 1500 mm diameter pre-cast concrete maintenance holes (denoted MH5 & MH6) with minimum 300 mm sump complete with cast iron frame and grate (OPSD 401.010). Work also to include the connection and grouting of all inlet pipes.
- Supply and installation of four (4) new 1200 mm diameter pre-cast concrete maintenance holes (denoted MH7, MH8, MH9 & MH10) with minimum 300 mm sump, complete with cast iron frame and grate (OPSD 401.010). Work also to include the connection and grouting of all inlet pipes.

- Supply and installation of two (2) new 600 mm x 600 mm pre-cast concrete catch basins (denoted CB11 & CB12) with minimum 300 mm sump, complete with cast iron frame and grate (OPSD 401.010). Work also to include the connection and grouting of all inlet pipes.
- Supply and installation of eight (8) new 600 mm x 600 mm pre-cast concrete catch basins off-line of main drain with maximum depth of 1.2 m, complete with minimum 300 mm sump, cast iron frame and grate (OPSD 400.02), and 200 mm diameter leader pipe. This work to include grouting of all inlet pipes and connection of leader pipe to main drain.
- Replace existing round catch basin near property line between Mun. No. 103 and Mun. No. 106 with a new 600 mm x 600 mm pre-cast concrete catch basin off-line of main drain, complete with minimum 300 mm sump, cast iron frame and grate (OPSD 400.02), and 200 mm diameter leader pipe. This work includes connection of all existing pipes and grouting of all inlet pipes and connection of leader pipe to main drain with pre-fabricated tee.
- Re-connect eighteen (18) existing catch basins to new drain with new 200 mm diameter HDPE pipe and pre-fabricated tee. Work includes restoration of asphalt.
- Temporary Silt Control Measures During Construction
- Fill portion of Ridgewood Lane ditch (approximately 25 m³) south of Lakewood Drive including trucking and compaction of material in 300 mm lifts. Prior to infilling, remove all vegetation and organic debris from the existing roadside ditch slopes. Work includes supply and placement of top soil (50 mm minimum thickness), fine graded and seeded.
- Fill portion of Ridgewood Lane ditch (approximately 25 m³) north of Lakewood Drive including trucking and compaction of material in 300 mm lifts. Prior to infilling, remove all vegetation and organic debris from the existing roadside ditch slopes. Work includes supply and placement of top soil (50 mm minimum thickness), fine graded and seeded.
- Fill existing McLeod Avenue ditch (approximately 175 m³) south of Lakewood Drive including trucking and compaction of material in 300 mm lifts. Prior to infilling, remove all vegetation and organic debris from the existing roadside ditch slopes. Work includes supply and placement of top soil (50 mm minimum thickness), fine graded and seeded. Work also includes supply & installation of sloping stone end treatment approximately 20 m² of riprap (300 mm minimum thickness) including new filter fabric underlay over south end of infilling.
- Remove and dispose of existing corrugated steel pipe road crossing at Station 0+795. Supply and installation of a new 600 mm x 600 mm pre-cast concrete catch basins (denoted CB14) with minimum 300 mm sump, complete with cast iron frame and grate (OPSD 401.010). Work includes the supply and installation of 16 m long, 250 mm diameter leader pipe across Lakewood Drive and connection and grouting of all inlet pipes.
- Supply and installation of a new 600 mm x 600 mm pre-cast concrete ditch inlet catch basin off-line of drain (DICB16), complete with minimum 300 mm sump, sloped 2:1 heavy duty galvanized steel grate, 7 m long, 300 mm diameter leader pipe, and restoration of lands with top soil (50 mm minimum thickness), fine graded and seeded. Work to include the supply and installation of approx. 5 m² (300 mm minimum thickness) of stone erosion protection (SEP) including new filter fabric underlay around inlet. Work also to include connection to drain and grouting of all inlet pipes.

- Supply and installation of a new 600 mm x 600 mm pre-cast concrete catch basin (denoted CB13) with minimum 300 mm sump, complete with cast iron frame and grate (OPSD 401.010). Work includes the connection and grouting of all inlet pipes. Work also includes the supply and installation of 6 m long, 300 mm diameter leader pipe complete with rodent gate, backfill of existing ditch as shown on the plan herein, and restoration of land with topsoil (minimum 50 mm thickness), fine graded and seeded. Work to include the supply and installation of approx. 8 m² (300 mm minimum thickness) of stone erosion protection (SEP) including new filter fabric underlay around inlet.
- Supply and installation of a new 600 mm x 600 mm pre-cast concrete catch basin (CB15), complete with minimum 300 mm sump, cast iron frame and grate (OPSD 400.01), 5 m long, 300 mm diameter leader pipe connected to new drain with pre-fabricated tee, and restoration of asphalt surface. Work also to include connection of existing drain pipe and grouting of all inlet pipes.
- Brushing and bottom cleanout of Ridgewood Lane east side ditch from McLeod Avenue to DICB16, totalling approximately 226 m of ditch and approximately 50 m³ of excavated material to be trucked and disposed of off-site.
- Flush and clean existing 300 mm diameter culvert under McLeod Avenue in line with Ridgewood Lane east side ditch.
- Fill existing 300 mm diameter and 400 mm diameter pipe crossing Lakewood Drive near Station 0+272. Work includes supply and installation of a new 300 mm diameter leader pipe from the existing maintenance hole to the new 525 mm diameter drain with pre-fabricated tee at Station 0+263 (approx.), and backfill with full Granular 'A.
- Supply and place hot mix asphalt (80 mm HL4 base course - two lifts & 40 mm HL3 surface course - one lift) to reconstruct Lakewood Drive and Ridgewood Lane where disturbed by new drain construction.
- Excess soils management – Trucking of excess soils off-site approximately 715 m³
- Traffic control as per OTM Book 7
- Utility work(s), as follows:
 - Co-ordination with Town of Amherstburg to field locate existing water utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor. The installation of the drainage works crosses approximately 26 existing water services and two (2) water main crossings that will require relocation under the drain pipe. Insulation to be provided by the Contractor where cover over water services is less than 1.2 m deep.
 - Co-ordination with Town of Amherstburg to field locate existing sanitary sewer utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor. The installation of the drainage works crosses approximately 21 existing sanitary private drain connection services of which two (2) will require relocation (Mun No. 119 & Mun. No. 178) under the drain pipe.

- Co-ordination with G-Tel to field locate existing underground Enbridge utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor. The installation of the drainage works crosses approximately 18 existing gas connection services. The Contractor shall coordinate with Enbridge for providing sand bedding support of utility pipes where crossed under by new drain at the expense of the operating utility. Costs shall include third party inspection provided by Enbridge.
- Co-ordination with G-Tel to field locate existing underground Hydro One utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor. Approximately 2 hydro poles shall require temporary partial support at the expense of the operating utility. Costs shall include any inspection or supervision provided by Hydro One.
- Co-ordination with G-Tel to field locate existing underground Cogeco utilities. Utility relocation works where required as a result of the drainage works (including civil works and reconnection of the facility) are at the expense of the operating utility as per Section 26 of the Drainage Act. This excludes repair costs of existing utility if damaged by Contractor.

3.0 ACCESS TO THE WORK

Access to the drain shall be municipal road right-of-ways including Ridgewood Lane, Lakewood Drive, and McLeod Avenue. Access to the pump works shall be from the Essex Boulevard road right-of-way. The Contractor shall make his/her own arrangements for any additional access for his/her convenience. All road areas and grass lawn areas disturbed shall be restored to original conditions at the Contractor's expense.

4.0 WORKING AREA

Bar Point Pump

For the upgrades to the Bar Point pump at the south end of Essex Boulevard, the working corridor shall be within the respective road allowance.

Lakewood Drive Drain No. 3

For the construction of the Lakewood Drive Drain No. 3 and associated ditch cleaning and infilling along Lakewood Drive, Ridgewood Lane and McLeod Avenue, the working corridor shall be within the respective road allowances. Where the centerline of the new drain is on private property to be located at a 1.5 m distance away from the Lakewood Drive road allowance, from Station 0+689 to Station 0+795, the working corridor shall extend a width of 4.5 metres beyond the road allowance.

For the installation of new catch basins on private property to be located 1 m beyond the Lakewood Drive road allowance both north and south sides, the working corridor shall be a 2 m x 2 m area centered with each catch basin. A location for equipment, staging, and temporary placement of excavating materials is to be arranged by the Contractor. One lane of Lakewood Drive shall remain open during the construction period and traffic control (found in General Specifications) maintained at all times. Any damages to lands and/or roads from the Contractor's work within the working area shall be rectified to pre-existing conditions.

5.0 PUMP BUILDING REMOVALS (SALVAGING PUMP, MOTOR & ELECTRICAL)

Prior to any removals for the Bar Point pump station that are associated with dismantling the building, the Contractor shall provide advance notice to Hydro One Networks for arranging the temporary disconnect of the existing power supply to the pump station. The items for removal and disposal off site include the wood framed pump shed and steel base frame within the exception of the entrance door that may be salvaged for re-use. Prior to doing so, most of the electrical panel boxes and accessories are to be carefully removed for salvage and re-use, unless otherwise specified within the specifications.

For the existing pump, motor, starter and level control, these components shall be returned to the Town of Amherstburg via delivery to the Public Works Yard, or as otherwise instructed by Town staff.

6.0 ANTI VORTEX CRUCIFORM & CONCRETE BASE FOR PUMPWELL FLOOR

The Contractor shall dewater the pumpwell and thoroughly remove all sediment accumulated within the pumpwell sump. A minimum 200 mm thickness of 40 MPa concrete shall be poured in place to establish a concrete sump floor. The Contractor shall supply and install a new 1800 mm wide x 350 mm high anti-vortex cruciform consisting of A-36 steel angle (150 mm x 150 mm x 12 mm) in two (2) lengths each 900 mm long and one (1) length 1800 mm long each welded together to form an “x” shape and centred directly below the pump. The cruciform shall be fastened to the pumpwell floor using 12 mm diameter galvanized lag bolts, 100 mm length to be placed at a maximum 500 mm spacing. The cruciform shall have a vertical height of 350 mm consisting of two (2) lengths each 900 mm long x 254 mm high x 12 mm thickness steel plate and one (1) length 1800 mm long x 254 mm high x 12 mm thickness steel plate each welded to the steel angle base members. The Contractor shall pre-assemble and install the anti-vortex cruciform inside the pump chamber prior to installing the pump. All steel surfaces shall be applied with a rust inhibitor black enamel paint, a minimum of two coats.

7.0 NEW PUMPHOUSE BASE FRAME & SUPPORTS

The Contractor shall construct ten (10) 450 mm diameter concrete pier supports that extend a minimum depth of 1.2 m below the existing ground surface for which the steel base frame shall be mounted to as outlined on the drawings. The top of the concrete piers to be set level and to same elevation as the top of the existing CSP pumpwell. The excavation for the piers shall be completed by drill auger method. The poured in place concrete shall be contained inside a sonotube form having a minimum compressive strength of 40 MPa. The Contractor to provide a minimum 72 hours curing time prior to mounting the base frame.

Following construction of concrete piers, the Contractor shall excavate the area around the existing pump well and extending out to the concrete pier supports perimeter followed by supply and placement of a 200 mm thickness of Granular ‘A’ base compacted to fully encompass area of steel base frame including a 2 m x 2 m entrance ramp area on south side for new pump shed doorway. The work shall also include top soil placement around stone base, fine graded and seeded and disposal of excess excavated materials.

The Contractor shall supply and install a shop fabricated steel base frame consisting of two A-36 steel angles (150 mm x 150 mm x 12 mm) being welded together to form a 150 mm x 150 mm C channel for the base frame’s perimeter including all the associated steel angle internal cross support and bracing members as shown on the drawings. As part of the shop fabrication, the outside of the C channel frame shall have a continuous A-36 steel angle (100 mm x 100 mm x 10 mm) welded to it. The top of the base frame shall include A-36 steel plate deck (diamond pattern) to be fastened to it, a minimum 9.5 mm thickness and including two (2) removable loose deck plates on each side of pump floor opening. The full assembled base frame shall be mounted to each of the concrete support piers using 19 mm x 205 mm galvanized steel lag bolts, with two (2) bolts for each middle pier and three (3) bolts for corner piers.

All steel surfaces shall be applied with a rust inhibitor black enamel paint, a minimum of two coats.

8.0 ANTI-ROTATION VANES

The Contractor shall supply and install two (2) anti-rotation vanes consisting of 5.75 m long, 300 mm x 50 mm rectangular A-36 steel tubing to stand vertically inside pump well with each end aligned and welded to the mid brace on base frame and to anti-vortex cruciform as shown on the drawings. The vanes shall be placed within a maximum 100 mm from the pump well. All steel surfaces shall be applied with a rust inhibitor black enamel paint, a minimum of two coats

9.0 STILLING COLUMN

The Contractor shall supply and install a 5.5 m long, 305 mm outside diameter galvanized steel pipe (Schedule 40) vertically and securely attached to the anti-rotation vane using 19 mm stainless steel banding straps

complete with a steel base plate collar (355mm x 355mm x 6mm) welded to stilling column and to pump floor. The bottom of the stilling column shall be fitted with a galvanized steel base plate complete with 25 mm diameter drain hole in centre, and within the lower 300 mm length portion of the pipe, the drilling of a minimum of nine (9) 12 mm diameter seepage holes to be evenly spaced around the pipe perimeter.

10.0 PUMP SHED

The Contractor shall construct a new 3.86 m x 3.86 m wood framed pump shed as shown on the drawings. It shall be complete with 68 mm x 12 mm, 28 gauge, corrugated metal siding to be used for exterior walls and roof (Vicwest Pre-painted one side galvanized WeatherXL series or approved equal) with exterior walls painted dark green and the roof and fascia painted white. The interior walls shall include a 19 mm thick SPF plywood backing of sufficient coverage for mounting all electrical panels, boxes and lighting. The pump shed to be secured to the steel base frame using zinc plated Grade 5 hex bolts and washers placed at a maximum 1219 mm spacing continuously around the building perimeter. The existing door from the old pump house shall be salvaged and new building framed to suit using same locking mechanism.

11.0 INSTALLATION OF SALVAGED ELECTRICAL COMPONENTS

As outlined on the drawings, the Contractor shall reinstall the salvaged electrical inside the new pump shed and to be arranged similar to existing pump shed with all boxes mounted to plywood backing. The salvaged electrical includes the 100A main disconnect, hydro meter complete with socket, exterior enclosure and interior cabinet, 100A splitter box, 30A fusible switch, 3kVA distribution transformer, 100A load centre panel, pump status exterior lights, light switch and receptacles. New conduit and wiring shall be provided to reconnect in accordance with minimum wire and conduit sizes specified on the electrical power plan drawings. The panel boxes on the interior wall shall be arranged such that a minimum 1 m clearance is provided from the pump base plate and motor.

12.0 COMBINATION CIRCUIT BREAKER & SOFT START

The Contractor shall supply and install a solid state starter of size, type and rating as indicated on the drawings and specifications herein to be housed within a NEMA 3R enclosure with components as follows:

- Fully solid state control for soft start and soft stop of pumps.
- Integral fully rated bypass contactor selectable soft start or bypass mode
- Digital interface module mounted on door with control, monitoring and programming functions
- Motor overload protection in each phase, manually reset from outside of enclosure
- Hand-off-auto selector switch with auxiliary contact for remote indication
- One N.O. contact for time delay relay, one N.C. contact for fault indication relay and one N.O. contact for pump running indication relay
- Combination soft start with circuit breaker - Eaton, Cutler Hammer soft starter enclosure class ECS95S2DAG-S811+N66N3S, 50Hp rating including option C400T12D-K complete with internal 24VDC power supply.

13.0 PUMP LEVEL CONTROL & HIGHWATER ALARM FLOAT SWITCHES

The Contractor shall supply a new 'Square D' ball float level system to be complete with two float switches (Schneider Electric 9036GG or approved equal) and mounting bracket, stainless steel rods and 175 mm diameter ball floats (Schneider 9049 or approved equal). The floats system shall be fitted and arranged inside the 300 mm diameter steel stilling tube, as shown of the drawings, and the levels set for both control of the pump start and stop operation as well as highwater alarm.

The recommended levels for pump operation to be set as follows:

- Pump "START" at elevation 174.45 m
- Pump "STOP" at elevation 172.50 m
- Highwater alarm at elevation 175.00 m

The pump start/stop and highwater alarm float switches shall be connected to 120V power supply from the load centre panel (Circuit #4) with Float switch No. 1 activating the pump start/stop which shall also be provided with time delay relay, normally open and timed to close contact with adjustable timer ranging from 0 to 10 minutes. The float switch shall be wired to both the existing “green” status light to be mounted on the pump shed’s exterior wall and the 120V “green” panel light on the pump starter panel indicating pump running.

Float switch No. 2 being the highwater alarm switch shall be wired to the pump fault indicator relay normally closed contact to activate the existing “red” status light to be mounted on the pump shed’s exterior wall and the 120V “red” panel light on the pump starter panel for indicating either highwater level, pump non-start or a pump fault.

14.0 HEAT TRACE FOR STILLING COLUMN

The Contractor shall supply and install the heat trace system for the stilling column with connection to the 120V power supply from the load centre panel (Circuit #3). The heat trace system comprised of heat trace controller (Thermon Type TCM2-1-SSR30A/2R-120-1-1P2-0-1-P/2 or approved equal) complete with single pole solid state relay, ground fault protection within Nema 4X fiberglass enclosure and ambient sensing thermostat RTD-500-3. The heat trace system shall be connected to 120V power supply from the load centre panel (Circuit # 3).

The heat trace cable shall be Thermon Type MIQ insulated cable B/MIQ-20E1H-I5/28/378/120/16/12/6 or approved equal) complete with cold lead and MIQ junction box model MIQ-PJBRP-TB-4 wall mounted. The heater cable of 8.5 m (28 feet) shall be arranged as shown on the drawings with a 4s trace ratio spacing covering 1.5 m height of column above the pump stop water level and enclosed with a 22 gauge stainless steel sheet wrapped entirely around pipe perimeter and secured with stainless steel banding straps.

15.0 PUMP SHED INDOOR LIGHTING & RECEPTACLES

The Contractor shall supply and install two (2) wall mounted light fixtures to be arranged in the locations specified on the drawings and to be connected to the 120V power supply from the load centre panel (Circuit #1). Each light shall be LED wall mounted and toggle switch operated without the use of a motion sensor and providing a minimum 6000 lumens of brightness from each light. The existing light switch may be salvaged or otherwise the Contractor may choose to replace at their own expense. The two existing receptacles shall be connected to 120V power supply from the load centre panel (Circuit # 2).

16.0 NEW BAR POINT PUMP & MOTOR

The new pump and motor shall consist of a vertical hollow shaft single stage propeller pump capable of discharging 505 L/sec (8,000 USGPM) of water against a total dynamic head of 3.6 m (12 feet) at a pump speed of 880 rpm. The approved pump model shall be the Lo-Lift Pump Company No. 2017 with 610 mm diameter plain end discharge or approved equal.

The pump shall be driven by a 40 Hp, 575V, 3 phase, 60Hz direct drive electric motor modified for a rated speed of 900 RPM complete with non-reverse ratchet stop as per US Motors (Nidec Motor Corporation) or approved equal.

The pump shall be an oil lubricated design with provision of a 1gallon oil reservoir tank to be fitted with a 120V operated solenoid and needle valve for line shaft bearing and upper discharge bowl bearing lubrication. The lube solenoid shall be wired in series with the pump start/stop float switch such that the needle valve will open when the switch is activated without the time delay. The pump start shall be delayed to permit pre-lubrication with an adjustable setting ranging from 0 to 10 minutes. A minimum of 5 minutes start delay is recommended. The lube solenoid shall be connected to 120V power supply from the load centre panel (Circuit # 6).

The pump shall also be provided with grease line to the suction bowl bushing to permit manual lubrication using grease gun.

The 600 mm diameter pump discharge shall be joined to the existing 600 mm diameter discharge pipe using a Style 38 dresser coupling.

The pump shall be installed as per the manufacturer's recommendations and to the satisfaction of the Engineer and Drainage Superintendent. Commissioning and testing by the pump supplier shall also be required.

SPECIAL PROVISIONS – OPEN DITCH WORK

17.0 BRUSHING (RIDGEWOOD LANE - EAST DITCH)

Brushing shall be carried out on the existing roadside ditch on the east side of Ridgewood Lane north of Lakewood Drive where required and as specified herein. **All** brush located within the drain side slopes shall be cut parallel to the side slopes, as close to the ground as practicable. Small branches and limbs are to be disposed of by the Contractor along with the other brush. Tree stumps, where removed to facilitate the drain excavation and reshaping of the drain banks, may be burned by the Contractor where permitted; otherwise, they shall be disposed of, off the site. The Contractor shall make every effort to preserve mature trees which are beyond the drain side slopes, and the working corridors. If requested to do so by the Drainage Superintendent, the Contractor shall preserve certain mature trees within the designated working corridors (see Section 4.0). All brush, other obstructions and deleterious materials that interfere with the ditch cleanout, as encountered along the course of the ditch are to be removed from the drain by the Contractor and shall be disposed of by the Contractor off the site.

18.0 DITCH CLEANING (RIDGEWOOD LANE - EAST DITCH)

18.1. Excavation of Existing Road Ditch

In all cases, the Contractor shall use the benchmarks to establish the proposed grade. However, for convenience, the drawings provide the approximate depth from the surface of the ground and from the existing drain bottom to the proposed grades. **THE CONTRACTOR SHALL NOT EXCAVATE DEEPER THAN THE GRADELINES SHOWN ON THE DRAWINGS.** Should over-excavation of the drain bank occur, the Contractor will **not** be permitted to repair with native material packed into place by the excavator and reshaped. Should over-excavation occur, the Contractor will be required to have a bank repair detail engineered by a Professional Engineer (hired by the Contractor), to ensure long term stability of the bank is maintained. Such repairs shall be subject to approval by the Engineer and will be at no extra cost to the item. All excavated material shall be handled as specified in Section 18.2. All excavation work shall be done in such a manner as to not harm any vegetation or trees, not identified in this report or by the Drainage Superintendent for clearing.

The bottom of ditch shall be excavated at the gradeline, as shown on the profile, which gradeline is governed by the benchmarks. The profile shows, for the convenience of the Contractor and others, the approximate depth of cut from both the existing drain bottom and from the easterly top of bank to the design bottom of the ditch, at the 50 metre intervals. Benchmarks, which have been established along the course of the drain, shall govern the final elevation of the drain. The locations and elevations of the benchmarks are shown on the drawings. The bottom of the ditch shall be a minimum 0.60 wide and the side slopes for the excavated cut below the existing bottom be no steeper than 1:1 (Horizontal to Vertical) with minimal disturbance to the upper drain bank side slopes above the bottom cleanout.

18.2. Trucking of Excavated Materials

Unless otherwise stated, all material excavated from the ditch cleanout abutting the east side of Ridgewood Lane shall be hauled and disposed of off-site at an approved location. Where the excavated soils are free of debris, the Contractor may elect to use as fill material within the existing portions of east ditch to be enclosed on Ridgewood Lane and McLeod Avenue south of Lakewood Drive intersection.

19.0 STONE EROSION PROTECTION (SEP)

The Contractor shall supply and install the required quantities of graded stone rip-rap erosion protection materials where specified. All stone to be used for erosion protection shall be 125 - 250 mm clear **quarried rock** or OPSS 1001 placed over a non-woven filter fabric Terrafix 270R or approved equivalent. The minimum thickness requirement of the erosion stone layer is 300 mm with no portion of the filter fabric to be exposed.

SPECIAL PROVISIONS – COVERED DRAIN

20.0 DRAINAGE PIPE CONSTRUCTION

20.1. Setting Out

The Engineer shall provide the Contractor in writing with benchmarks and points of reference. From these benchmarks and points of reference, the contractor will do his own setting out. The setting out by the Contractor shall include but shall not be limited to the preparation of grade sheets, the installation of centerline stakes, grade stakes, offsets, and sight rails.

If, during the setting out, the contractor finds an error in the benchmarks or points of reference provided by the Engineer or is uncertain as to the interpretation of the information provided or the work intended, he shall notify the Engineer immediately for additional verification or clarification before proceeding with construction.

The Contractor shall be responsible for the true and proper setting out of the works and for the correctness of the position, levels, dimensions and alignment of all parts of the work.

The Contractor shall be responsible to ensure that the alignment selected results in a minimum depth of cover of 600 mm over the top of the drainage pipe to be installed within the roadway.

If, at any time during the progress of the works, an error shall appear or arise in the position, levels, dimensions or alignment of any part of the works, the Contractor shall, at his own expense, rectify such error to the satisfaction of the Engineer, unless such error is based on incorrect data supplied in writing by the Engineer.

20.2. Alignment

The drainage pipe for the Lakewood Drive Drain shall be laid on the alignment as described on the drawings attached herein. The Contractor shall tie-in the existing storm drains at associated catch basins as the work progresses upstream with lead pipe connections as specified. After the existing catch basin pipe leads have been removed, they shall be disposed of off-site at an approved disposal location. Existing storm drain pipes and associated catch basins that run along both north and south sides of Lakewood Drive shall be maintained and be reconnected to the new drainage works as specified herein.

20.3. Profile

The drainage pipe shall be laid so that its invert shall be at the gradeline shown on the profile, which gradeline is governed by the benchmarks. The profile shows, for the convenience of the Contractors and others, the approximate depth of cut from the surface of the ground at 50 metre intervals, to the final invert of the drainage pipe in metres and decimals of a metre. Benchmarks, which have been established along the course of the drain, shall govern the final elevation of the drain. The locations and elevations of the benchmarks are shown on the drawings.

A variation in grade may be tolerated where the actual capacity of the drain exceeds the required capacity. The as-constructed invert of the drainage pipe shall not deviate from the specified gradeline more than 10% of the internal diameter of the drainage pipe. These deviations are allowable, provided they are gradual over a distance of not less than 10 m. No reverse grade shall be allowed.

20.4. Location of New Drain

The new drain shall be installed as shown on the Drawings attached hereto.

20.5. Drainage Pipe Materials

20.5.1. H.D.P.E. Pipe

Tile Drain (Sta. 0+234.5 to Sta. 0+401.5) *New 525 mm (21") diameter solid (non-perforated) corrugated High Density Polyethylene (H.D.P.E.) smooth wall interior (Armtec Boss 2000 or approved equivalent) unless otherwise specified conforming to the following specifications: ASTM @3350, CSA B182.8-02 and OPSS 1840. The pipe is to provide a minimum pipe stiffness of 320 kPa.*

Tile Drain (Sta. 0+401.5 to Sta. 0+530.5) *New 450 mm (18") diameter solid (non-perforated) corrugated High Density Polyethylene (H.D.P.E.) smooth wall interior (Armtec Boss 2000 or approved equivalent) unless otherwise specified conforming to the following specifications: ASTM @3350, CSA B182.8-02 and OPSS 1840. The pipe is to provide a minimum pipe stiffness of 320 kPa.*

Tile Drain (Sta. 0+530.5 to Sta. 0+795) *New 375 mm (15") diameter solid (non-perforated) corrugated High Density Polyethylene (H.D.P.E.) smooth wall interior (Armtec Boss 2000 or approved equivalent) unless otherwise specified conforming to the following specifications: ASTM @3350, CSA B182.8-02 and OPSS 1840. The pipe is to provide a minimum pipe stiffness of 320 kPa.*

Joined using (soil tight) "gasketed bell & spigot" Ultra Stab joining system (as manufactured by Armtec Limited or approved equal), supplied by the pipe manufacturer and conforming to ASTM D3350, CSA 182.8-02 and OPSS 1840.

Drain within Roadways & Driveways

Pipe Bedding Under Pipe 20-25 mm clear stone conforming to OPSS Division 10.

Backfill up to Pipe Springline 20-25 mm clear stone conforming to OPSS Division 10.

Backfill Up to Underside of Road subsurface Granular 'A' conforming to OPSS Division 10.

Roadway Subsurface Granular 'A' conforming to OPSS Division 10.

Roadway Surface Premium HL3 and HL4 hot mix asphalt surface.

Drain Beyond Roadways & Driveways

Pipe Bedding Under Pipe Granular 'B' conforming to OPSS Division 10. Alternatively, Granular 'A' conforming to OPSS Division 10.

Backfill up to Pipe Springline Granular 'B' conforming to OPSS Division 10. Alternatively, Granular 'A' conforming to OPSS Division 10.

Native Backfill Up to Existing Conditions Dry native material free of topsoil, organic matter, broken concrete, steel, wood and deleterious substances.

20.6. Excavating the Trench

Construction of the trench shall normally start at the outlet and proceed upstream and be by excavator. A trench box shall be used to support side walls of trench where the drainage pipe is laid and not moved until the pipe bedding and backfill are placed.

Minimum width of trench, measured at the top of the drainage pipe, shall be equal to the outside diameter of the drainage pipe plus approximately half of the outside pipe diameter on both sides of the pipe, to permit proper granular material bedding placement and compaction of the granular materials where specified around the drainage pipe.

Where the trench excavation falls within the existing roadway and it is confined with the use of a trench box, clear stone bedding for the pipe has been specified in place of granular materials where it cannot be properly compacted. The confined trench limits the amount of granular backfill materials required for backfill above the pipe bedding and avoids disturbance to and interference with existing buried utilities adjacent thereto.

The bottom of the trench shall be cut to a minimum of 150 mm below the gradeline to allow for the stone bedding materials. Any additional excavated material not required for backfilling purposes shall be disposed of off-site.

20.7. Laying Drainage Pipe (Within Roadway)

The Contractor shall supply and install clear stone material for bedding, placed to a depth of 150 mm below the design invert of the pipe and shaped to receive the pipe. After pipe placement, clear stone shall backfill shall be placed to an elevation equal to the spring line of the pipe. Above the spring line of the pipe, Granular 'A' backfill material shall be placed and compacted to the underside of the roadway surface material.

Laying of the drainage pipe shall normally begin at the lower end of the drain and progress upstream. All soil or debris in the drainage pipe shall be removed before installation. All drainage pipes shall be free from clinging wet or frozen material that would hinder the laying of the drainage pipe on grade.

Before work is suspended for the day, all drainage pipe laid in trenches shall be blinded and any open ends closed. Care must be taken in handling plastic drain pipe in cold weather to avoid causing damage. Plastic drain pipe shall be held in position on planned grade immediately after installation by careful placement of backfill material.

20.8. Laying Drainage Pipe (Outside of Roadway)

The Contractor shall supply and install Granular 'B' material for bedding, placed to a depth of 150 mm below the design invert of the pipe and shaped to receive the pipe. After pipe placement, Granular 'B' backfill shall be placed and compacted to the spring line of the pipe throughout its entire length. Above the springline of the pipe, native material shall be placed and compacted to the underside of the topsoil layer. Laying of the drainage pipe shall normally begin at the lower end of the drain and progress upstream.

All soil or debris in the drainage pipe shall be removed before installation. All drainage pipes shall be free from clinging wet or frozen material that would hinder the laying of the drainage pipe on grade. Before work is suspended for the day, all drainage pipe laid in trenches shall be blinded and any open ends closed. Care must be taken in handling plastic drain pipe in cold weather to avoid causing damage. Plastic drain pipe shall be held in position on planned grade immediately after installation by careful placement of backfill material.

20.9. Connections

Existing drains shall be inspected by the Drainage Superintendent and if found to be in working order, they shall be connected to the new system. Drains carrying sewage or farmstead wastes shall not be connected to the drainage system. Plastic tubing connections to rigid drainage pipe shall be made with the use of manufactured plastic adapters. Directional changes in plastic tubing may be made without the use of fittings provided that the centre line radius of the bend is not less than five times the tubing diameter. Manufactured "T", "Y", or elbow fittings shall be used for connections at the junction of two drains. All connections shall be carried out by the Contractor as part of his work. The cost of connections shall be an expense of the drain.

20.10. Driveway/Laneway Restoration

The Contractor shall restore the driveway and laneway approaches as shown on the attached drawings. The driveway and laneway top width at each location shall match the existing drivable top width. The work shall include excavation, grading and compaction of the Granular "A" (crushed limestone) material, and salvage & re-laying of interlocking brick driveways where disturbed.

21.0 PRECAST CONCRETE MAINTENANCE HOLES

OPSS Form 407 and OPSD 701.010 shall apply and govern except as extended or amended herein. The Contractor shall supply and install precast concrete maintenance holes complete with frames, covers, ladder rungs and adjustment rings. All maintenance holes shall be installed with precast flat cap and shall be supplied with a minimum of one (1) to a maximum of three (3) adjustment units each 50 mm in height as per OPSD 704.010 installed on top of the structure so that future adjustments can be made. The flat top maintenance holes shall be supplied cast iron round frame and cover as per OPSD 401.010.

Maintenance holes shall be placed on 300 mm compacted Granular 'A' material and shall be backfilled around with approved granular materials in maximum 300 mm lifts to 98% standard proctor density. All maintenance holes shall come equipped with a minimum 300 mm deep sump unless noted otherwise. Structures that are identified to be replaced shall be removed and disposed of by the Contractor.

22.0 PRECAST CONCRETE CATCH BASINS

The Contractor shall arrange for the supply and installation of concrete catch basins at the locations and elevations as shown on the Drawings attached herein. The Contractor shall install all precast structures plumb and true to line and grade. Precast bases shall be set to the specified grade, shall be level, and shall have uniform overall contact with the underlying soil. Precast concrete catch basins shall conform to the requirements of OPSD 705.01 & OPSD 705.03. The floor elevation shall be at least 300 mm below the invert of the outlet pipe in the wall of the catch basins. Off-line catch basins shall be supplied and installed complete with 200 mm diameter high density polyethylene (HDPE) catch basin lead pipes connected to the new drain with standard pre-manufactured tees.

Ditch inlet catch basins shall be 600 mm x 1200 mm in dimension, as per OPSD 705.04 Type 'A'. Sloped top shall be 2H:1V complete with honeycomb galvanized steel grating as per OPSD 403.010 Type B including fastener tabs to secure to the catch basin. All catch basins installed shall meet the dimensions and locations outlined in the drawings. The Contractor shall supply and place an apron of stone erosion protection around every ditch inlet catch basin according to Section 7.0, as shown on the plans herein.

Pipe placed in the walls for inlet and outlet connections shall extend through the wall a sufficient distance to allow for connections. The pipes shall be trimmed flush with the inside wall and shall be securely sealed into place using grout. All catch basins shall be supplied with a minimum of one (1) to a maximum of three (3) adjustment units each 50 mm in height as per OPSD 704.010 installed on top of the structure so that future adjustments can be made. The 600 mm x 600 mm flat top catch basins shall be supplied cast iron square frame and cover as per OPSD 400.010. Structures that are identified to be replaced shall be removed and disposed of by the Contractor.

23.0 BACKWATER GATE ARRANGEMENT, CULVERT & CONCRETE HEADWALL

A backwater gate will be used to prevent water from Lake Erie from entering the drainage scheme, but also allow for an emergency overflow should the pump fail. The backwater gate shall consist of a 375 mm diameter Waterman Model C-10 slide gate or approved equal. The slide gate shall be fastened in proper alignment with the 375 mm diameter high density polyethylene (HDPE) overflow pipe in accordance with manufacturer's recommendations. The concrete headwall shall be constructed to minimum dimensions of 3600 mm wide x 900 mm high x 150 mm thickness complete with 15M reinforcing steel bars to be placed around pipe insert in accordance with OPSD 804.03.

24.0 DITCH INFILLING, RESTORATION AND SEEDING

The Contractor will be required to infill sections of roadside ditch along Ridgewood Lane, Lakewood Drive, and McLeod Avenue. The works include clearing and grubbing of brush and vegetation, filling in of the existing ditches with clean clay fill and re-grading areas to direct flows to either a catch basin or ditch as shown on the plans herein. Prior to the infilling of the ditches, the Contractor shall remove all vegetation, organic debris and topsoil from the existing ditches. The native materials used to fill the drain shall be placed in maximum 250 mm loose lifts and compacted to 95% of the maximum standard proctor density or better.

The work includes restoration of the roadside ditch along Ridgewood Lane including any additional reshaping and reseeded following the bottom cleanout. In addition, the Contractor will be required to restore any area of the grassed road shoulder or road disturbed by his operations, as directed by the Drainage Superintendent and he will be required to clean up all debris resulting from his construction operations.

The disturbed grassed areas resulting from the new drainage works shall be seeded as specified herein. The existing ground surface to be seeded shall be loosened to a depth of 25 mm and shall be rendered uniformly loose for that 25 mm depth. The surface area over the backfilled trench shall be finely graded to match the original grade. The surface shall be predominantly fine and free from weeds and other unwanted vegetation. All other loose surface litter shall be removed and disposed of.

Grass seed shall be Canada No. 1 lawn seed mixture meeting the requirements of a Sun/Shade mixture as supplied by OSC Turf or approved equal, as follows:

<i>Creeping Red Fescue</i>	45%
<i>Annual Ryegrass</i>	30%
<i>Perennial Ryegrass</i>	15%
<i>Kentucky Bluegrass</i>	10%

Bags shall bear the label of the supplier indicating the content by species, grade and mass. Other grass seed mixtures will be considered with approval of Engineer and Drainage Superintendent. Seed shall be applied at a rate of 250 kg per 10,000 m².

Fertilizer shall be 8-32-16 applied at 350 kg per 10,000 m². It shall be in granular form, dry, free from lumps and in bags bearing the label of the manufacturer, indicating mass and analysis.

The seeding shall be deemed "Completed by the Contractor" when the seed has established in all areas to the satisfaction of the Engineer. Re-seeding and/or other methods required to establish the grass will be given consideration in order to achieve the end result and the costs shall be incidental to the works.

GENERAL SPECIFICATIONS

1.0 AGREEMENT AND GENERAL CONDITIONS

The part of the Specifications headed "Special Provisions" which is attached hereto forms part of this Specification and is to be read with it. Where there is any difference between the requirements of this General Specification and those of the Special Provisions, the Special Provisions shall govern.

Where the word "Drainage Superintendent" is used in this specification, it shall mean the person or persons appointed by the Council of the Municipality having jurisdiction to superintend the work.

Tenders will be received and contracts awarded only in the form of a lump sum contract for the completion of the whole work or of specified sections thereof. The Tenderer agrees to enter into a formal contract with the Municipality upon acceptance of the tender. The General Conditions of the contract and Form of Agreement shall be those of the Stipulated Price Contract CCDC2-Engineers, 1994 or the most recent revision of this document.

2.0 EXAMINATION OF SITE, PLANS AND SPECIFICATIONS

Each tenderer must visit the site and review the plans and specifications before submitting his/her tender and must satisfy himself/herself as to the extent of the work and local conditions to be met during the construction. Claims made at any time after submission of his/her tender that there was any misunderstanding of the terms and conditions of the contract relating to site conditions, will not be allowed. The Contractor will be at liberty, before bidding to examine any data in the possession of the Municipality or of the Engineer.

The quantities shown or indicated on the drawings or in the report are estimates only and are for the sole purpose of indicating to the tenderers the general magnitude of the work. The tenderer is responsible for checking the quantities for accuracy prior to submitting his/her tender.

3.0 MAINTENANCE PERIOD

The successful Tenderer shall guarantee the work for a period of one (1) year from the date of acceptance thereof from deficiencies that, in the opinion of the Engineer, were caused by faulty workmanship or materials.

The successful Tenderer shall, at his/her own expense, make good and repair deficiencies and every part thereof, all to the satisfaction of the Engineer. Should the successful Tenderer for any cause, fail to do so, then the Municipality may do so and employ such other person or persons as the Engineer may deem proper to make such repairs or do such work, and the whole costs, charges and expense so incurred may be deducted from any amount due to the Tenderer or may be collected otherwise by the Municipality from the Tenderer.

4.0 GENERAL CO-ORDINATION

The Contractor shall be responsible for the coordination between the working forces of other organizations and utility companies in connection with this work. The Contractor shall have no cause of action against the Municipality or the Engineer for delays based on the allegation that the site of the work was not made available to him by the Municipality or the Engineer by reason of the acts, omissions, misfeasance or non-feasance of other organizations or utility companies engaged in other work.

5.0 RESPONSIBILITY FOR DAMAGES TO UTILITIES

The Contractor shall note that overhead and underground utilities such as hydro, gas, telephone and water are not necessarily shown on the drawings. It is the Contractor's responsibility to contact utility companies for information regarding utilities, to exercise the necessary care in construction operations and to take other precautions to safeguard the utilities from damage. All work on or adjacent to any utility, pipeline, railway, etc., is to be carried out in accordance with the requirements of the utility, pipeline, railway, or other, as the case may be, and its specifications for such work are to be followed as if they were part of this specification. The Contractor will be liable for any damage to utilities.

6.0 CONTRACTOR'S LIABILITY

The Contractor, his/her agents and all workmen or persons under his/her control including sub-contractors, shall use due care that no person or property is injured and that no rights are infringed in the prosecution of the work. The Contractor shall be solely responsible for all damages, by whomsoever claimable, in respect to any injury to persons or property of whatever description and in respect of any infringement of any right, privilege or easement whatever, occasioned in the carrying on of the work, or by any neglect on the Contractor's part.

The Contractor, shall indemnify and hold harmless the Municipality and the Engineer, their agents and employees from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of or attributable to the Contractor's performance of the contract.

7.0 PROPERTY BARS AND SURVEY MONUMENTS

The Contractor shall be responsible for marking and protecting all property bars and survey monuments during construction. All missing, disturbed or damaged property bars and survey monuments shall be replaced at the Contractor's expense, by an Ontario Land Surveyor.

8.0 MAINTENANCE OF FLOW

The Contractor shall, at his/her own cost and expense, permanently provide for and maintain the flow of all drains, ditches and water courses that may be encountered during the progress of the work.

9.0 ONTARIO PROVINCIAL STANDARDS

Ontario Provincial Standard Specifications (OPSS) and Ontario Provincial Standard Drawings (OPSD) shall apply and govern at all times unless otherwise amended or extended in these Specifications or on the Drawing. Access to the electronic version of the Ontario Provincial Standards is available online through the MTO website, free of charge to all users. To access the electronic standards on the Web go to <http://www.mto.gov.on.ca/english/transrd/>. Under the title Technical Manuals is a link to the Ontario Provincial Standards. Users require Adobe Acrobat to view all pdf files.

10.0 APPROVALS, PERMITS AND NOTICES

The construction of the works and all operations connected therewith are subject to the approval, inspection, by-laws and regulations of all Municipal, Provincial, Federal and other authorities having jurisdiction in respect to any matters embraced in this Contract. The Contractor shall obtain all approvals and permits and notify the affected authorities when carrying out work in the vicinity of any public utility, power, underground cables, railways, etc.

11.0 SUBLETTING

The Contractor shall keep the work under his/her personal control, and shall not assign, transfer, or sublet any portion without first obtaining the written consent of the Municipality.

12.0 TIME OF COMPLETION

The Contractor shall complete all work on or before the date fixed at the time of tendering. The Contractor will be held liable for any damages or expenses occasioned by his/her failure to complete the work on time and for any expenses of inspection, superintending, re-tendering or re-surveying, due to their neglect or failure to carry out the work in a timely manner.

13.0 TRAFFIC CONTROL

The Contractor will be required to control vehicular and pedestrian traffic along roads at all times and shall, at his/her own expense, provide for placing and maintaining such barricades, signs, flags, lights and flag persons as may be required to ensure public safety. The Contractor will be solely responsible for controlling traffic and shall appoint a representative to maintain the signs and warning lights at night, on weekends and holidays and at all other times that work is not in progress. All traffic control during construction shall be strictly in accordance with the **Occupational Health and Safety Act** and the current version of the **Ontario Traffic Manuals**. Access to the electronic version of the **Ontario Traffic Manual** is available online through the MTO website, free of charge to all users. To access the electronic standards on the Web go to

<http://www.mto.gov.on.ca/english/transrd/>, click on "Library Catalogue," under the "Title," enter "Ontario Traffic Manual" as the search. Open the applicable "Manual(s)" by choosing the "Access Key," once open look for the "Attachment," click the pdf file. Users require Adobe Acrobat to view all pdf files.

Contractors are reminded of the requirements of the Occupational Health and Safety Act pertaining to Traffic Protection Plans for workers and Traffic Control Plan for Public Safety.

14.0 SITE CLEANUP AND RESTORATION

As part of the work and upon completion, the Contractor shall remove and dispose of, off-site any loose timber, logs, stumps, large stones, rubber tires, cinder blocks or other debris from the drain bottom and from the side slopes. Where the construction works cross a lawn, the Contractor shall take extreme care to avoid damaging the lawn, shrubs and trees encountered. Upon completion of the work, the Contractor shall completely restore the area by the placement and fine grading of topsoil and seeding or sodding the area as specified by the Engineer or Drainage Superintendent.

15.0 UTILITY RELOCATION WORKS

In accordance with Section 26 of the Drainage Act, if utilities are encountered during the installation of the drainage works that conflict with the placement of the new culvert, the operating utility company shall relocate the utility at their own costs. The Contractor however will be responsible to co-ordinate these required relocations (if any) and their co-ordination work shall be considered incidental to the drainage works.

16.0 FINAL INSPECTION

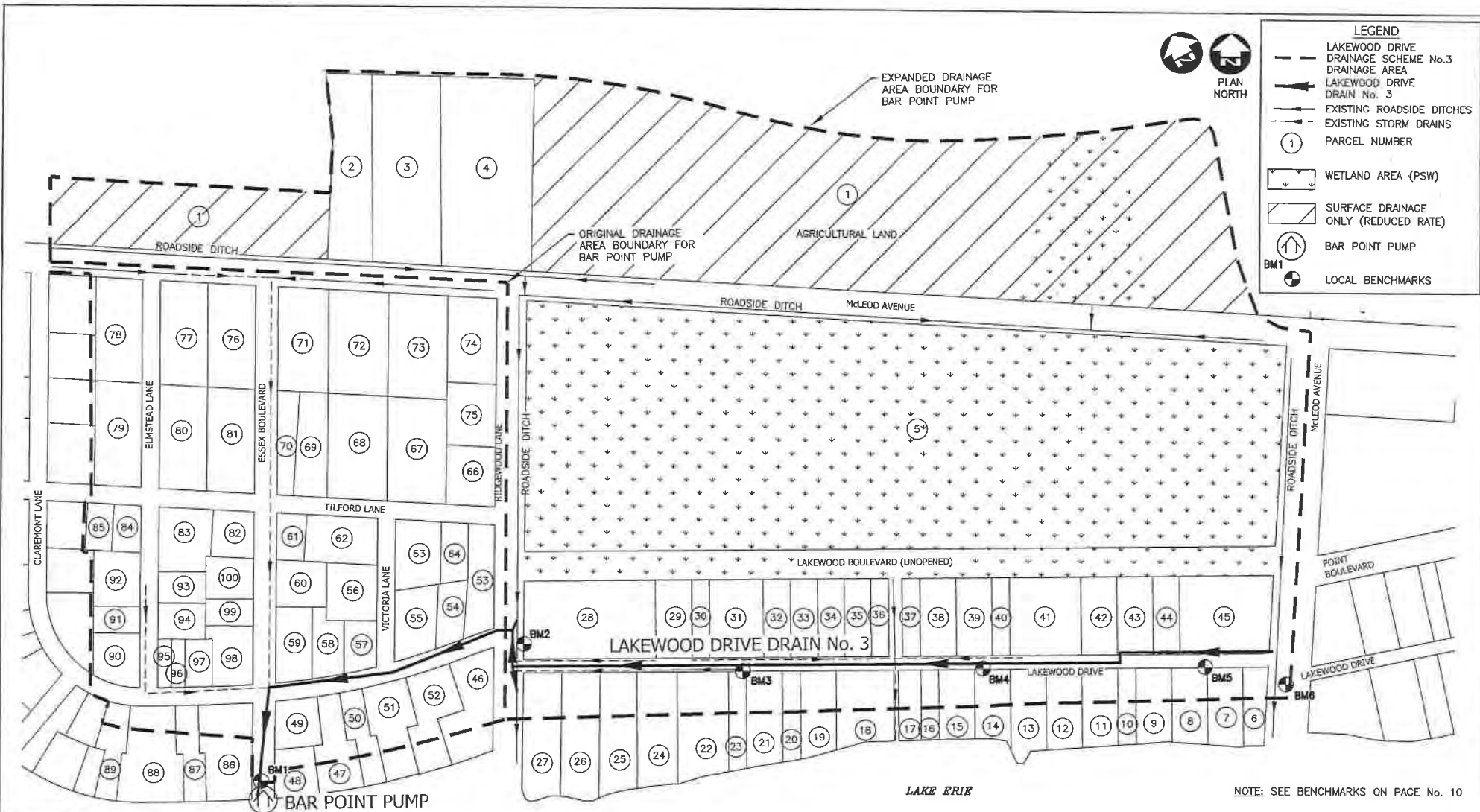
All work shall be carried out to the satisfaction of the Drainage Superintendent for the Municipality, in compliance with the specifications, drawings and the Drainage Act. Upon completion of the project, the work will be inspected by the Engineer and the Drainage Superintendent. Any deficiencies noted during the final inspection shall be immediately rectified by the Contractor.

Final inspection will be made by the Engineer within 20 days after the Drainage Superintendent has received notice in writing from the Contractor that the work is completed, or as soon thereafter as weather conditions permit.

17.0 FISHERIES CONCERNS

Standard practices to be followed to minimize disruption to fish habitat include embedment of the culvert a minimum 10% below grade, constructing the work 'in the dry' and cutting only trees necessary to do the work (no clear-cutting). No in-water work is to occur during the timing window unless otherwise approved by the appropriate authorities.

Jun 30, 2023 - 11:36am c:\pwworking\directory\projects\2020\331ra\lma05486\202190-03-DRN-COM.dwg



OVERALL PLAN
SCALE=1:2,500

NOTE: SEE BENCHMARKS ON PAGE No. 10



Conditions of Use
Verify elevations and/or dimensions on drawing prior to use
Report any discrepancies to Dillon Consulting Limited
Do not scale dimensions from drawing
Do not modify drawing, re-use it or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited

No.	ISSUED FOR	DATE	BY
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO
1	CLIENT REVIEW	20 APR 23	TRO

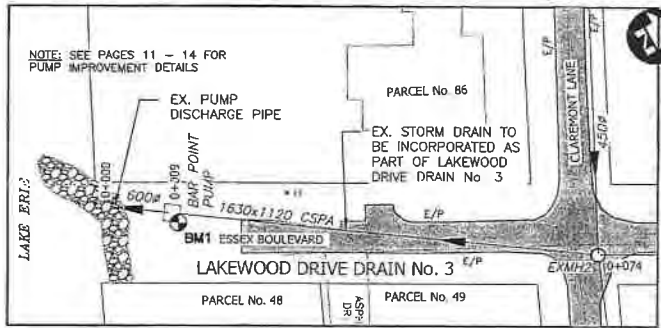
DESIGN	REVIEWED BY
TRO	MDH
DRAWN	CHECKED BY
OEM	LRO
DATE	June 27, 2023
SCALE	AS SHOWN

	PROJECT NO	20-2190
	DRAWING SCALES BASED ON A 11" X 17" SHEET	

"SCHEDULE G"	
Drainage Report for the LAKWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME Town of Amherstburg	
SHEET TITLE	OVERALL PLAN
PAGE NO.	1 of 14

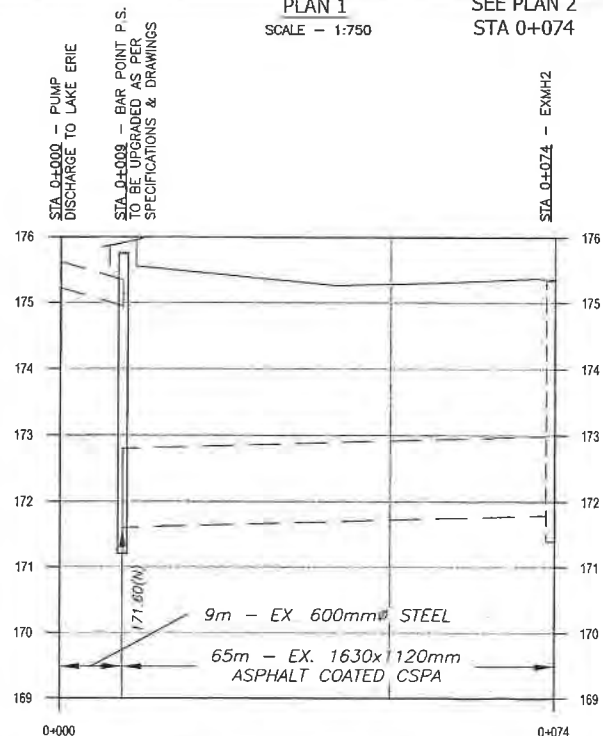
Jun 30, 2023 - 12:39pm C:\pwworking\director\projects\2023\2190\Amherst\2023185-03-DRN-025.dwg

LEGEND	
	PROPOSED DRAIN
	EXISTING DRAINS
	NEW MAINTENANCE HOLE
	EX. MAINTENANCE HOLE
	NEW/REPLACE CATCH BASIN
	EXISTING CATCH BASIN
	EX. SANITARY SEWER
	EX. WATERMAIN
	EX. GASLINE
	EX. COMMUNICATIONS UTILITY
	LOCAL BENCHMARKS



PLAN 1
SCALE - 1:750
SEE PLAN 2
STA 0+074

- NOTES:**
1. DRAINAGE INFRASTRUCTURE BETWEEN STA. 0+000 AND STA. 0+234.5 TO BE INCORPORATED UNDER DRAINAGE WORKS
 2. FOR ELEVATION CONTROL, REFER TO SITE BENCHMARKS ON PAGE 10



PROFILE 1 STA 0+000 TO STA 0+074
SCALE - HORZ.=1:750
VERT.=1:75

SEE PROFILE 2



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

No.	ISSUED FOR	DATE	BY
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO
1	CLIENT REVIEW	20 APR 23	TRO

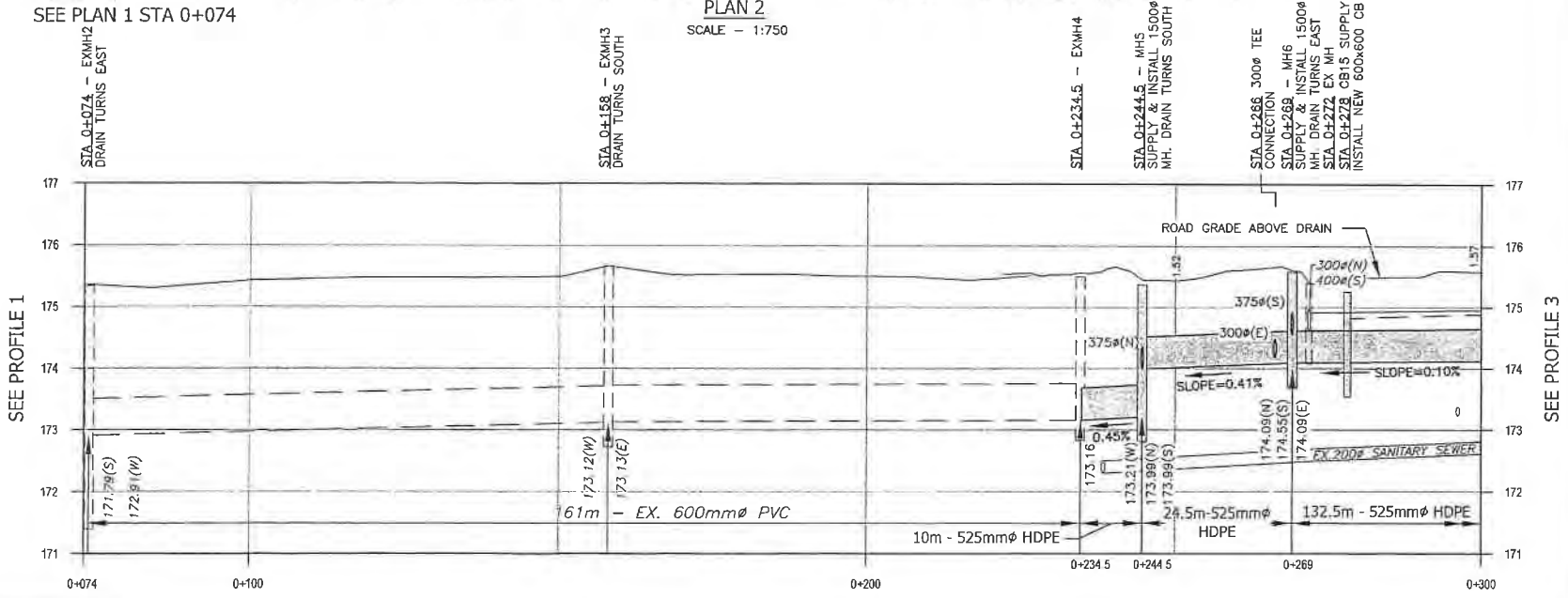
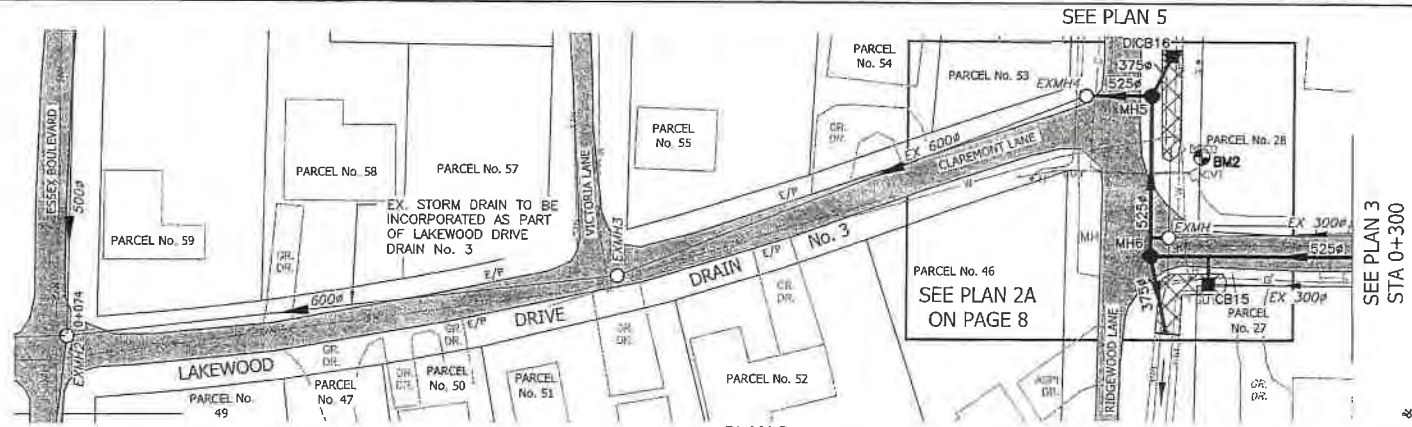
DESIGN	REVIEWED BY
TRO	MDH
DRAWN	CHECKED BY
OEM	LRO
DATE	June 27, 2023
SCALE	AS SHOWN

PROJECT NO. 20-2190
DRAWING SCALES BASED ON A 11" X 17" SHEET

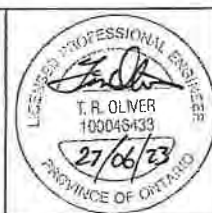
'SCHEDULE G'

Drainage Report for the LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME Town of Amherstburg	
SHEET TITLE	PLAN & PROFILE 1
PAGE NO.	3 of 14

Jun 30, 2023 - 12:37pm C:\pwworking\director\proj\lake_2020\33\res\memo\0548\32010-03-DRN-05.dwg



PROFILE 2 STA 0+074 TO STA 0+300
SCALE - HORZ.=1:750
VERT.=1:75



Conditions of Use
Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.
Do not scale dimensions from drawing.
Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

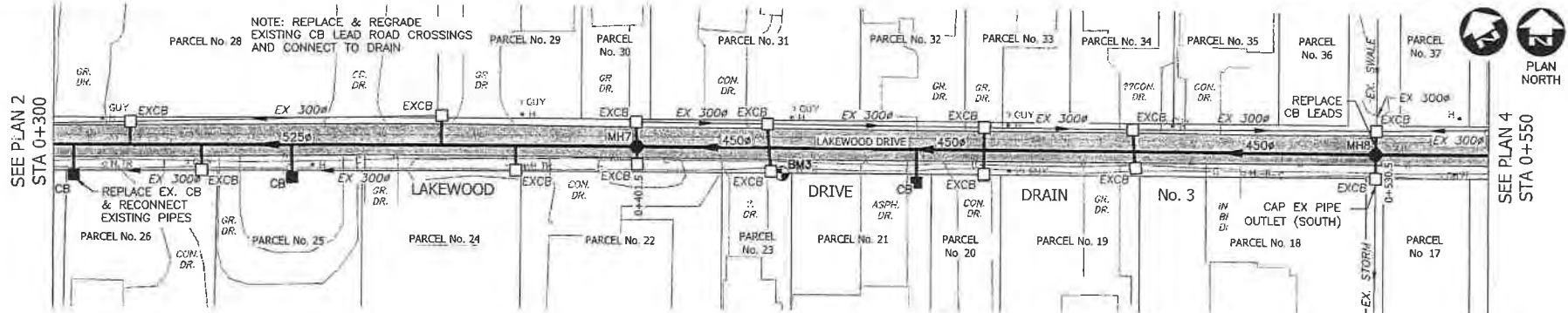
DESIGN	TRO	REVIEWED BY	MDH
DRAWN	OEM	CHECKED BY	LRO
DATE	June 27, 2023	SCALE	AS SHOWN
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO
1	CLIENT REVIEW	20 APR 23	TRO
No	ISSUED FOR	DATE	BY

DILLON CONSULTING

PROJECT NO: 20-2190
DRAWING SCALES BASED ON A 11" X 17" SHEET

'SCHEDULE G'
Drainage Report for the
LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME
Town of Amherburg
PLAN & PROFILE 2
PAGE NO: 4 of 14

Jun 30, 2023 - 12:46pm C:\vw\working_directory\proj\4614_2020\331a\dwg\05-4614_2021\00-03-DIN-05.dwg



SEE PLAN 2 STA 0+300

SEE PLAN 4 STA 0+550

PLAN 3 SCALE - 1:750

STA_0+304 NEW CB (SOUTH)

STA_0+314 EX CB (NORTH)

STA_0+326 EX CB (SOUTH)

STA_0+341 NEW CB (SOUTH)

STA_0+362 EX CB (NORTH)

STA_0+380 EX CB (SOUTH)

STA_0+401.5 MH7 SUPPLY & INSTALL NEW 1200# MH & EX 300# EX CB (NORTH & SOUTH)

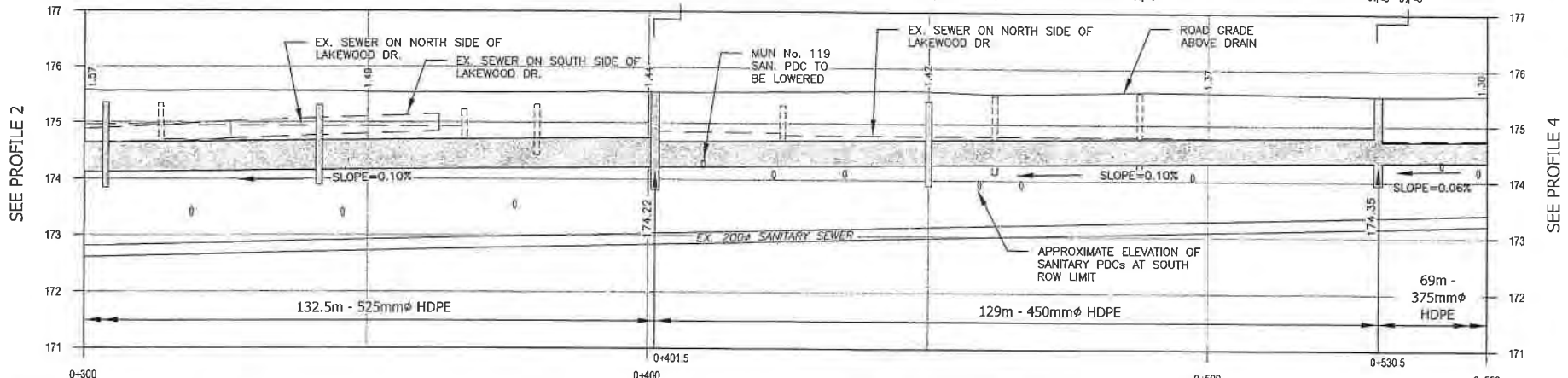
STA_0+424 EX CB (NORTH & SOUTH)

STA_0+450 NEW CB (SOUTH)

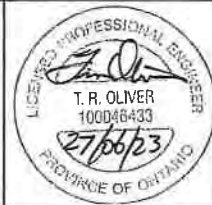
STA_0+462 EX CB (NORTH & SOUTH)

STA_0+488 EX CB (NORTH & SOUTH)

STA_0+530.5 MH8 SUPPLY & INSTALL NEW 1200# MH & EX 300# EX CB (NORTH & SOUTH)



PROFILE 3 STA 0+300 TO STA 0+550
SCALE - HORZ.=1:750
VERT.=1:75



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

No	ISSUED FOR	DATE	BY
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO
1	CLIENT REVIEW	20 APR 23	TRO

DESIGN	REVIEWED BY
TRO	MDH
DRAWN	CHECKED BY
OEM	LRO
DATE	June 27, 2023
SCALE	AS SHOWN

DILLON CONSULTING

PROJECT NO. 20-2190

(DRAWING SCALES BASED ON A 11" X 17" SHEET)

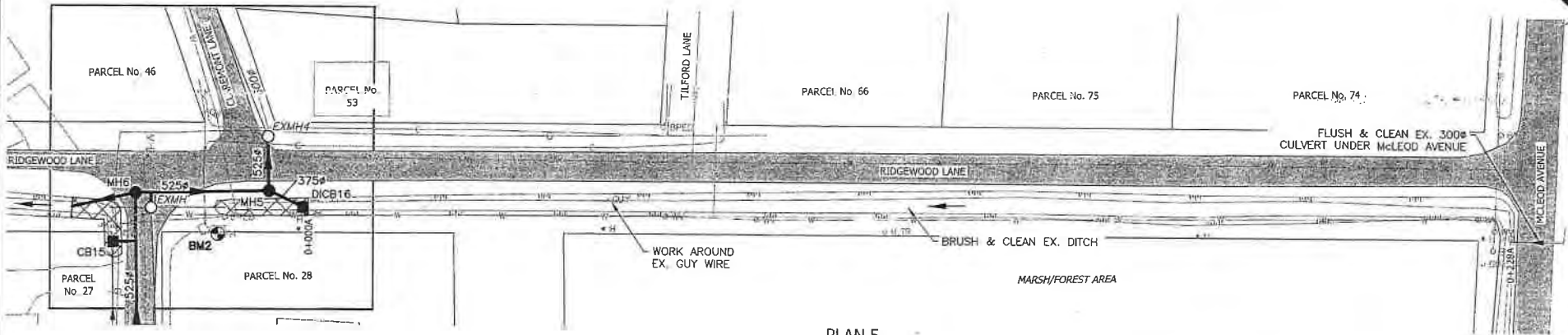
'SCHEDULE G'

Drainage Report for the LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME
Town of Amherstburg

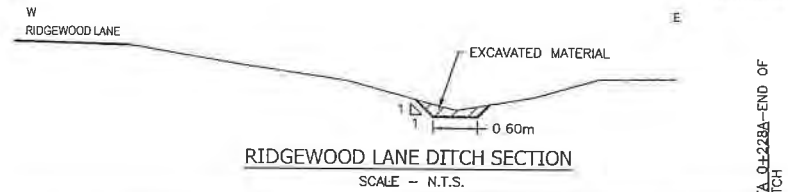
SHEET TITLE: PLAN & PROFILE 3

PAGE NO.: 5 of 14

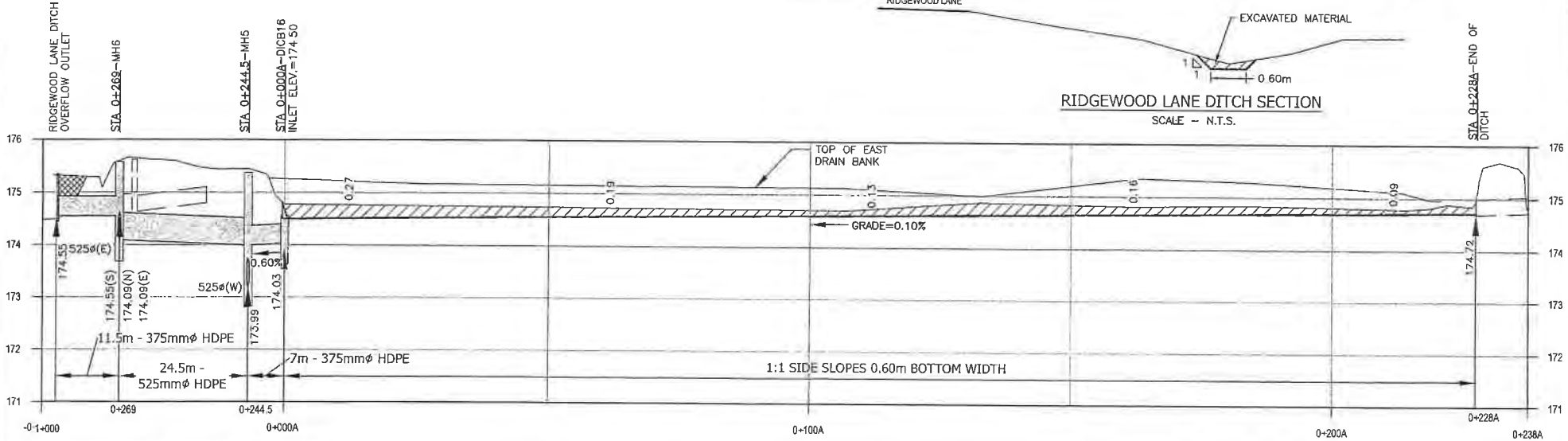
SEE PLAN 2A
ON PAGE 8



PLAN 5
SCALE - 1:750



RIDGEWOOD LANE DITCH SECTION
SCALE - N.T.S.



PROFILE 5 RIDGEWOOD LANE DITCH

SCALE - HORZ.=1:750
VERT.=1:75



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use
Report any discrepancies to Dillon Consulting Limited
Do not scale dimensions from drawing
Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

No.	ISSUED FOR	DATE	BY
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO
1	CLIENT REVIEW	20 APR 23	TRO

DESIGN	REVIEWED BY
TRO	MDH
DRAWN	CHECKED BY
OEM	LRO
DATE	June 27, 2023
SCALE	AS SHOWN

PROJECT NO. 20-2190
DRAWING SCALES BASED ON A 11" X 17" SHEET

'SCHEDULE G'	
Drainage Report for the LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME Town of Amherstburg	
PROJECT TITLE	PLAN & PROFILE 5
PAGE NO.	7 of 14

Jun 30, 2023 - 12:54pm C:\gm\working\director\projects_2020\3310\plan\202186-03-001-RES.dwg

TABLE 1 - STRUCTURE DETAILS

STRUCTURE No.	STATION (m)	SIZE (mm)	RIM ELEVATION (m)	OFFSET FROM ROAD EP (m)	INVERT ELEVATION (m)	
					INLETS	OUTLETS
MH5	0+244.5	1500ø	175.37	1.8	N. INV 173.99 (375ø)	W. INV 173.21 (525ø)
					W. INV 173.99 (525ø)	
MH6	0+269	1500ø	175.57	N/A	E. INV 174.09 (525ø)	N. INV 174.09 (525ø)
						S. INV 174.55 (375ø)
MH7	0+401.5	1200ø	175.56	1.9	E. INV 174.22 (450ø)	W. INV 174.22 (525ø)
					N. INV 174.45 (200ø)	
MH8	0+530.5	1200ø	175.53	1.9	E. INV 174.35 (375ø)	W. INV 174.35 (450ø)
					N. INV 174.35 (200ø)	
MH9	0+599.5	1200ø	175.61	1.7	E. INV 174.39 (375ø)	W. INV 174.39 (375ø)
					N. INV 174.39 (200ø)	
MH10	0+682.5	1200ø	175.58	1.5	N. INV 174.44 (375ø)	W. INV 174.44 (375ø)
CB11	0+689	600x600	175.40	8.1	E. INV 174.45 (375ø)	S. INV 174.45 (375ø)
CB12	0+776	600x600	175.25	8.6	E. INV 174.51 (375ø)	W. INV 174.51 (375ø)
CB13	0+795	600x600	175.20	10.8	N. INV 174.52 (300ø)	W. INV 174.52 (375ø)
					S. INV 174.52 (250ø)	
CB14	0+795	600x600	175.46	4.6	E. INV 175.00 (150ø)	N. INV 174.53 (250ø)
					E. INV 174.90 (150ø)	
CB15	0+278	600x600	175.25	2.6	E. INV 174.49 (300ø)	N. INV 174.26 (300ø)
DICB16	0+000A	600x1200 TYPE 'B'	174.50	4.7		S. INV 174.03 (375ø)

TABLE 2 - OFFSET CATCH BASIN DETAILS

STATION	SIZE (mm)	LOCATION	TOP ELEV. (m)	INV. (m) HDPE LEAD PIPE ø CB
0+304	600x600	SOUTH SIDE	175.30	174.30 (200mmø)
0+341	600x600	SOUTH SIDE	175.30	174.34 (200mmø)
0+450	600x600	SOUTH SIDE	175.40	174.45 (200mmø)
0+599.5	600x600	NORTH SIDE	175.45	174.55 (200mmø)
0+657	600x600	SOUTH SIDE	175.45	174.58 (200mmø)
0+658	600x600	NORTH SIDE	175.50	174.58 (200mmø)
0+712	600x600	SOUTH SIDE	175.25	174.62 (200mmø)
0+765	600x600	SOUTH SIDE	175.30	174.65 (200mmø)

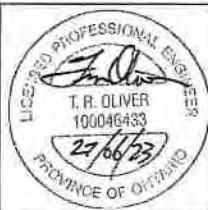
NOTES:

- CBs AS PER OPSD 705.010 WITH MINIMUM 300mm SUMP AND HEAVY DUTY GALVANIZED GRATING
- CATCH BASIN LEADER PIPES TO BE 200ø HDPE BOSS 2000 (OR APPROVED EQUAL) UNLESS OTHERWISE NOTED
- DICB TO HAVE 2:1 SLOPED GRATES
- DICB AS PER OPSD 705.030 & 705.040 TYPE 'B'
- MHs AS PER OPSD 701.010 WITH 300mm SUMP AND FLAT CAP TOPS AS PER OPSD 701.030. FRAME & GRATE AS PER OPSD 401.010 TYPE B
- OFFSET CB RIM ELEVATIONS TO MATCH EXISTING GRADE
- OFFSET CBs TO BE 1m OFFSET OF PROPERTY LINE OUTSIDE OF LAKEWOOD DRIVE RIGHT-OF-WAY
- TRENCH BOX TO BE USED DURING PIPE INSTALLATION EXCEPT WHERE UTILITY CROSSINGS PREVENT ITS USE, OTHER MEANS OF TRENCH SUPPORT WILL BE REQUIRED.

NOTES:

- OFFSET FROM ROAD EP (m) MEASUREMENT IS FROM RIDGEWOOD LANE EAST EDGE OF PAVEMENT
- OFFSET FROM ROAD EP (m) MEASUREMENT IS FROM LAKEWOOD DRIVE SOUTH EDGE OF PAVEMENT
- SEE TIE-IN DIMENSIONS ON PLAN 2A (PAGE 8) FOR STRUCTURE LOCATION

Jun 30, 2023 11:31am C:\pwworking\dillon\projects\2020\3350\46464\202106-03-DRN-COIL.dwg



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use
Report any discrepancies to Dillon Consulting Limited

Do not scale dimensions from drawing

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited

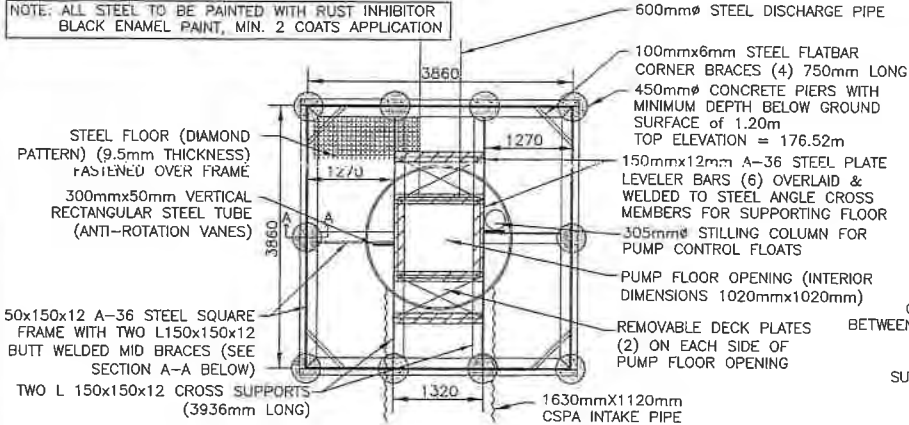
No.	ISSUED FOR	DATE	BY
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO
1	CLIENT REVIEW	20 APR 23	TRO

DESIGN	REVIEWED BY
TRO	MDH
DRAWN	CHECKED BY
OEM	LRO
DATE	June 27, 2023
SCALE	AS SHOWN

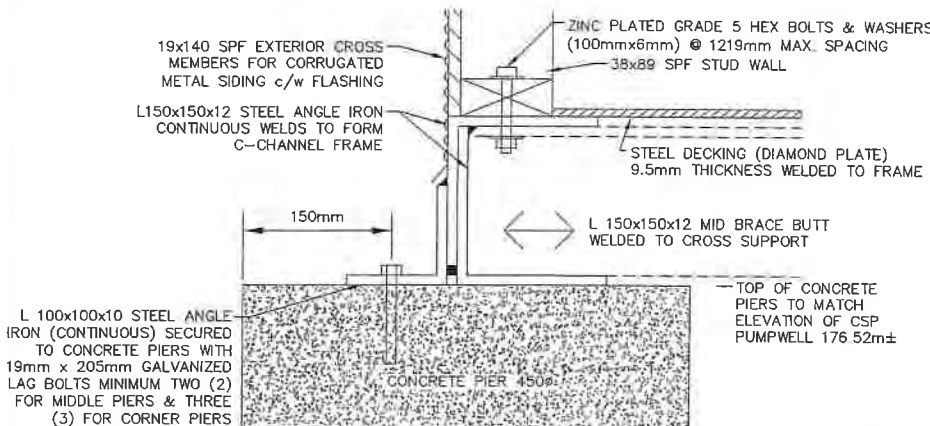
PROJECT NO. 20-2190
DRAWING SCALES BASED ON A 11"X 17" SHEET

'SCHEDULE G'	
Drainage Report for the LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME Town of Amherstburg	
SHEET TITLE	STRUCTURE DETAILS
PAGE NO	9 of 14

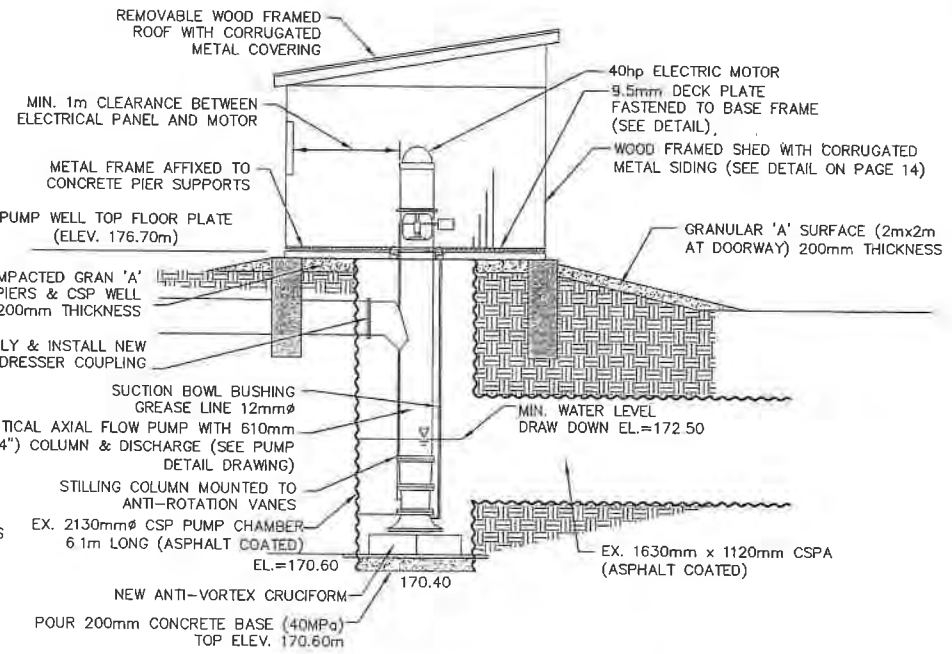
NOTE: ALL STEEL TO BE PAINTED WITH RUST INHIBITOR BLACK ENAMEL PAINT, MIN. 2 COATS APPLICATION



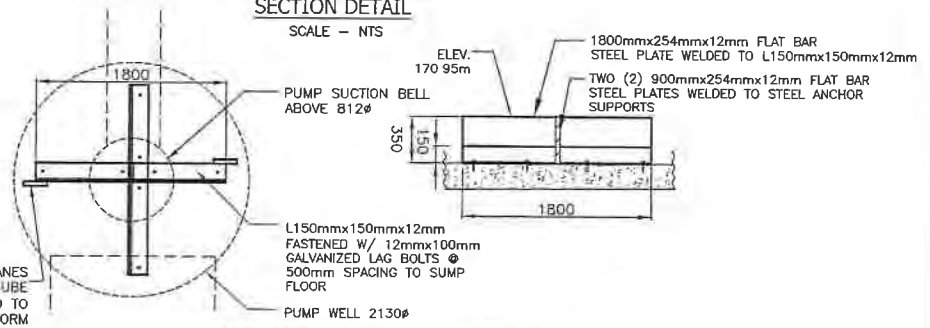
PUMP FLOOR FRAMING DETAIL
SCALE - NTS



PUMP BUILDING FOUNDATION DETAIL - SECTION A-A
SCALE - NTS



PUMP LONGITUDINAL SECTION DETAIL
SCALE - NTS



ANTI-VORTEX CRUCIFORM DETAIL
SCALE - NTS



Conditions of Use
Verify elevations and/or dimensions on drawing prior to use
Report any discrepancies to Dillon Consulting Limited
Do not scale dimensions from drawing
Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited

No	ISSUED FOR	DATE	BY
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO
1	CLIENT REVIEW	20 APR 23	TRO

DESIGN	REVIEWED BY
TRO	MDH
DRAWN	CHECKED BY
OEM	LRO
DATE	June 27, 2023
SCALE	AS SHOWN

DILLON CONSULTING
PROJECT NO. 20-2190
DRAWING SCALES BASED ON A 11" X 17" SHEET

'SCHEDULE G'	
Drainage Report for the LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME Town of Amherstburg	
PUMP DETAILS 1	
PAGE NO.	11 of 14

Jun 30, 2023 - 11:42am C:\w\working_director\projects\2020\3\lro\lro\mtd\46433\2023190-03-DRN-COIN.dwg



MUN. No. 150

TOWN OF AMHERSTBURG
TO ARRANGE FOR HYDRO
ONE NETWORKS TO TRIM
OVERHANGING BRANCHES

EXISTING FENCE LINE

NEW PUMP HOUSE
RECONSTRUCT 3.86mX3.86m SHED

EXISTING PUMP SHED
BAR POINT PUMP TO
BE REPLACED

EXISTING 9m LONG
600mmØ STEEL
DISCHARGE PIPE
TO REMAIN

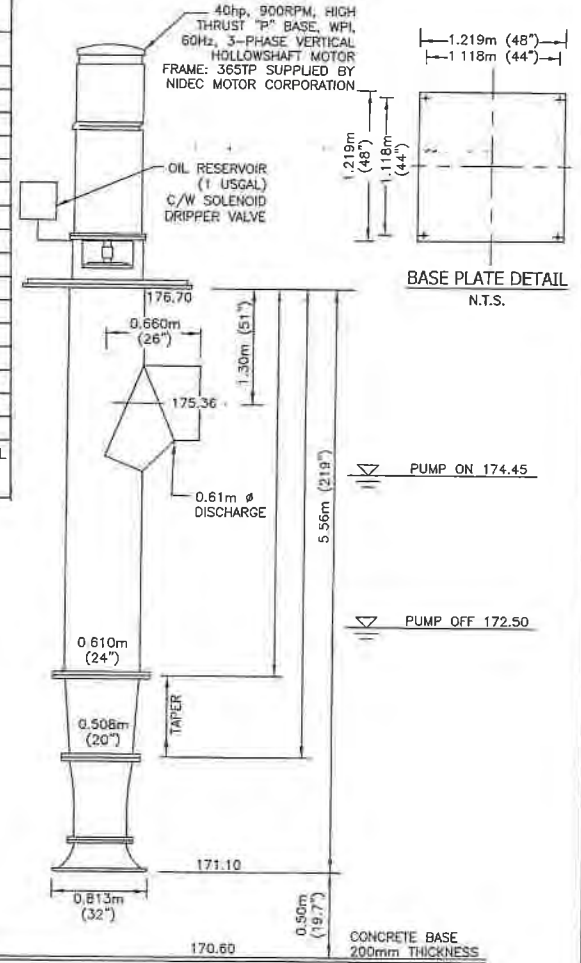
RECONNECT UNDERGROUND
HYDRO SERVICE TO NEW PUMP
BUILDING AS PER HYDRO ONE
NETWORKS REQUIREMENTS

MUN. No. 145

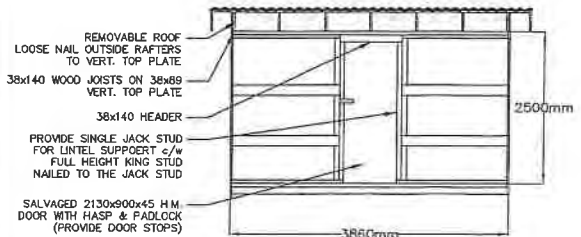
LAKE ERIE

PUMP HOUSE SITE PLAN
N.T.S.

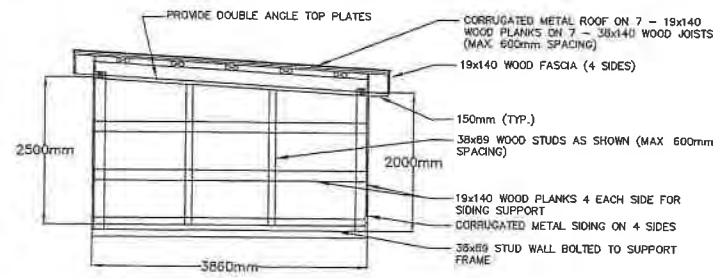
TABLE 1 - PUMP DESIGN INFORMATION	
DESCRIPTION	PUMP SPECIFICATIONS
PUMP MANUFACTURER	LO-LIFT
PUMP MODEL NO	#2017
DISCHARGE SIZE	0.610m (24")
COLUMN SIZE	0.610m (24")
PUMP BOWL SIZE	0.508m (20")
COLUMN & DISCHARGE PIPE THICKNESS	---
MIN. CAPACITY (USGPM)@3.66m (12') TDH	8000
RPM	900
ØHP	32
PROPELLER PITCH NO.	0.80P
DISCHARGE & SUCTION BOWL MATERIAL	CAST IRON CL-30
PROPELLER MATERIAL	BRONZE
BUSHINGS & BEARINGS MATERIAL	BRONZE
LINE SHAFT MATERIAL	C-1045 STEEL
SHAFT BEARING MATERIAL	BRONZE
BOWL SHAFT MATERIAL	416 STAINLESS STEEL
LUBRICATION	OIL LUBE INCL. STAINLESS STEEL GREASE LINE TO SUCTION BOWL BEARING



PUMP DETAIL
N.T.S.



PUMPHOUSE NORTH ELEVATION
N.T.S.



PUMPHOUSE WEST ELEVATION
N.T.S.

PROVIDE 19mm PLYWOOD BACKER BOARD FOR ELECTRICAL PANEL BOXES & CONTROLS



Conditions of Use
Verify elevations and/or dimensions on drawing prior to use
Report any discrepancies to Dillon Consulting Limited
Do not scale dimensions from drawing
Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited

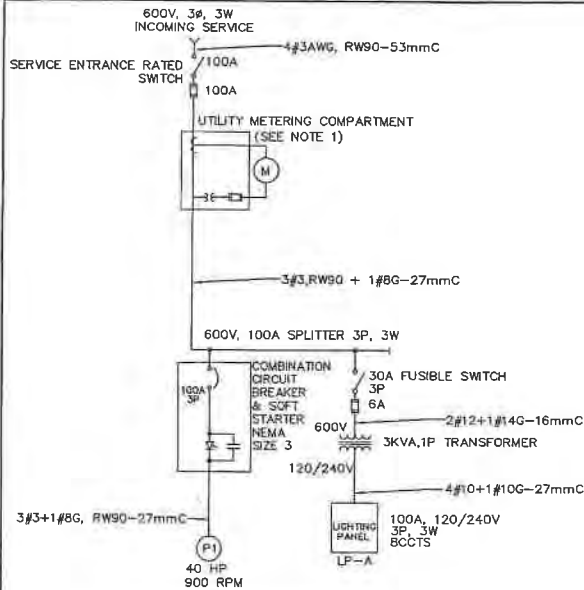
No.	ISSUED FOR	DATE	BY
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO
1	CLIENT REVIEW	20 APR 23	TRO

DESIGN	TRO	REVIEWED BY	MDH
DRAWN	OEM	CHECKED BY	LRO
DATE	June 27, 2023		
SCALE	AS SHOWN		

DILLON CONSULTING INC.
PROJECT NO. 20-2190
DRAWING SCALED BASED ON A 11" X 17" SHEET

'SCHEDULE G'	
Drainage Report for the LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME Town of Amherstburg	
SHEET TITLE	PUMP DETAILS 2
PAGE NO	12 of 14

Jun 30, 2023 11:45am C:\p\working\directors\projects\2020\3\lro\mmd\0488\202190-03-DRN-COIN.dwg



ONE LINE DIAGRAM

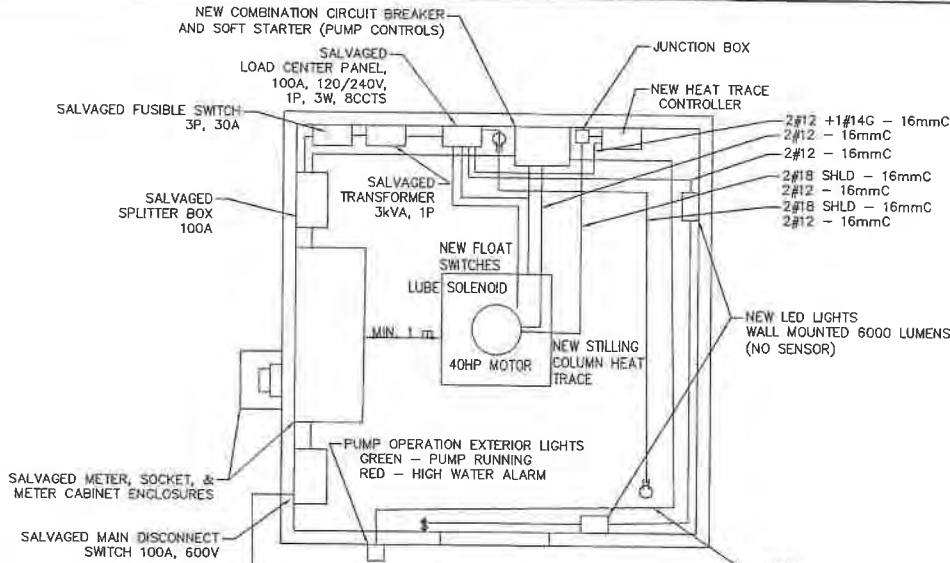
SCALE - NTS

NOTES:

- COORDINATE METERING REQUIREMENTS WITH HYDRO ONE
- RATING OF SOFT STARTERS TO BE CONFIRMED BASED ON FINAL PUMP FULL LOAD PRIOR TO ORDERING.

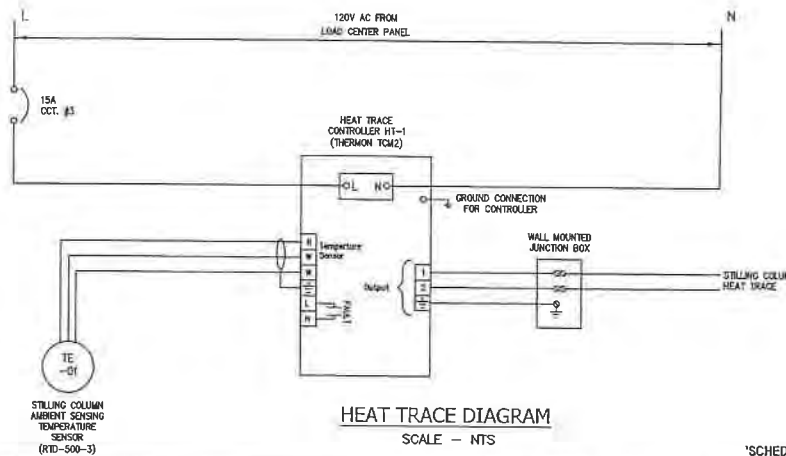
LOAD CENTER PANEL 100A, 120/240V, 1PH, 3W 8 CCTS.				
LOAD	DESCRIPTION	15A	15A	LOAD
INDOOR LIGHTING		1	2	RECEPTACLES
HEAT TRACE		3	4	FLOAT SWITCHES
EXTERIOR LIGHTS/CONTROLS		5	6	LUBE SOLENOID
SPARE		7	8	SPARE

* ALL LIGHTING AND RECEPTACLE SWITCHES TO BE CLEARLY LABELED.



PUMPHOUSE PLAN - POWER

SCALE - NTS



HEAT TRACE DIAGRAM

SCALE - NTS

GEN. NOTES AND SPECIFICATIONS

- WIRE AND CABLE**
 - POWER WIRES SHALL BE STRANDED COPPER WITH 600V INSULATION TYPE RW90, T90 NYLON (#12 AWG MINIMUM).
 - CONTROL WIRES SHALL BE STRANDED COPPER WITH 600V INSULATION TYPE T90 NYLON (#14 AWG MINIMUM).
 - INSTRUMENTATION WIRES SHALL BE TWISTED PAIR(S) STRANDED COPPER WITH 300V INSULATION, INDIVIDUAL SHIELDS, OVERALL SHIELD, THINNEST DRAIN WIRE AND PVC JACKET (#18 AWG MINIMUM).
- BOXES AND ENCLOSURES**
 - ALL EEMAC 12 INDOORS AND EEMAC 4X SS OUTDOORS
 - PULL BOXES AND JUNCTION BOXES SHALL BE CODE GAUGE SHEET STEEL OF WELDED CONSTRUCTION WITH SCREW-ON COVER.
- CONDUIT AND FITTINGS**
 - ALL CONDUIT SHALL BE RIGID HOT DIPPED GALVANIZED STEEL, WITH TAPERED THREADS UNLESS OTHERWISE NOTED.
 - CONDUIT FITTINGS SHALL BE CAST FERROUS OR FERROUS ALLOY CADMIUM PLATED. COVERS SHALL BE OIL-RESISTANT SYNTHETIC GASKETS.
 - CONDUIT AND ALL FITTINGS SHALL BE THREADED FIVE FULL TURNS - RUNNING THREADS NOT PERMITTED.
 - FLEXIBLE CONDUIT FOR FINAL CONNECTIONS TO EQUIPMENT OR MOTORS SHALL BE SAEALITE PVC-COVERED WITH SEPARATE GROUND WIRE.
- DISCONNECT SWITCHES (SALVAGED)**
 - HEAVY-DUTY INDUSTRIAL TYPE, QUICK-MAKE, QUICK-BREAK WITH PROVISION FOR 3 PADLOCKS. EATON 100A, 600V
- FUSES**
 - FOR FEEDERS, USE EEMAC 1, CLASS R, HRC, BUSSMANN FUSETRON FR8 OR APPROVED EQUAL.
 - FOR MOTOR STARTERS, USE NON-RENEWABLE HIGH INTERRUPTING (100,000 AMPS MIN.) DUAL-ELEMENT BUSSMANN FUSETRON OR AS REQUIRED BY MANUFACTURER
- DISTRIBUTION TRANSFORMER (SALVAGED)**
 - WESTINGHOUSE 3KVA, DRY TYPE, TOTALLY ENCLOSED, 600V PRIMARY, 120/240V SECONDARY, 1-PHASE, 3-WIRE, 60 HZ.
- LIGHTING PANEL (SALVAGED)**
 - 100A MAINS, 120/240V, 1-PHASE, 3-WIRE, 60HZ, BOLT-ON BRANCH BREAKERS (MINIMUM 10,000A INTERRUPTING RATING SYMMETRICAL), SURFACE MOUNTED WITH TRIM AND HINGED LOCKING DOOR - NEMA 1, WITH DRIP SHIELD.
 - SQUARE 'D' TYPE NOOB
- REDUCED VOLTAGE SOFT STARTERS**
 - SOLID STATE STARTER OF SIZE, TYPE AND RATING AS INDICATED IN NEMA 3R ENCLOSURE WITH COMPONENTS AS FOLLOWS:
 - FULLY SOLID STATE CONTROL FOR SOFT START AND SOFT STOP OF PUMPS
 - INTEGRAL FULLY RATED BYPASS CONTACTOR SELECTABLE SOFT-START OR BYPASS MODE
 - DIGITAL INTERFACE MODULE MOUNTED ON DOOR WITH CONTROL, MONITORING AND PROGRAMMING FUNCTIONS
 - MOTOR OVERLOAD PROTECTION IN EACH PHASE, MANUALLY RESET BUTTON FROM OUTSIDE OF ENCLOSURE
 - HAND-OFF-AUTO SELECTOR SWITCH WITH AUXILIARY CONTACT FOR REMOTE INDICATION
 - ONE N.O. CONTACT FOR TIME DELAY RELAY, ONE N.C. CONTACT FOR FAULT INDICATION (RED PILOT LIGHT) AND ONE N.O. CONTACT FOR RUNNING INDICATION (GREEN PILOT LIGHT).
 - COMBINATION SOFT START WITH CIRCUIT BREAKER
 - APPROVED MANUFACTURERS: EATON, CUTLER-HAMMER OR APPROVED EQUAL. SOFT STARTER ENCLOSURE CLASS ECSS552AD-381-HBRUNSS, INCL. OPTION CAG0120-K C/W INTERNAL 24VDC POWER SUPPLY.
- HEAT TRACE**
 - HEAT TRACE CONTROLLER SHALL BE THERMION TYPE TCM2 WITH SINGLE POLE SOLID STATE RELAY, GROUND FAULT PROTECTION, 120V, 1Ø NEMA 4X FIRE-RESISTANT ENCLOSURE.
 - THERMION CAT# TCM2-1-SSR30A/2Ø-120-1-1P2-Ø-1-P/2 OR APPROVED EQUAL, C/W AMBIENT SENSING RTD-500-3
 - HEAT TRACE CABLE SHALL BE THERMION TYPE MIO MINERAL INSULATED CABLE B/MIO-2ØEH-15/2Ø/37Ø/12Ø/15/12/Ø OR APPROVED EQUAL.
 - MIO JUNCTION BOX MODEL MIO-PBRP-TB-4 WALL MOUNTED
- LUBE SOLENOID**
 - 120V SOLENOID VALVE C/W INTEGRAL SIGHT FEED (NORMALLY CLOSED VALVE) CONNET ACROSS DRIVE LINE OR START SWITCH.
 - GRAVITY FLOW C/W KNURLED ADJUSTMENT, 1/8" COPPER TUBING

'SCHEDULE G'



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing. Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

NO.	ISSUED FOR	DATE	BY	SCALE
2	FINAL REPORT SUBMISSION	27 JUN 23	TRO	
1	CLIENT REVIEW	20 APR 23	TRO	

DESIGN	REVIEWED BY	PROJECT NO.	SHEET TITLE
TRO	MDH	20-2190	Drainage Report for the LAKEWOOD DRIVE DRAIN No. 3 & PUMPING SCHEME Town of Amherstburg
DRAWN	CHECKED BY		
OEM	CSD		
DATE			
June 27, 2023			
SCALE			
AS SHOWN			
DRAWING SCALES BASED ON A 11" X 17" SHEET		PAGE NO 13 of 14	

