

4218 Oil Heritage Road
Petrolia, Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233
www.dobbineng.com

March 20, 2024

The Mayor and Council
Municipality of North Middlesex
229 Parkhill Main Street
Parkhill, ON
N0M 2K0

Gentlemen and Mesdames:

Re: Mawson-Erskine Drain Branch “B”

In accordance with your instructions, R. Dobbin Engineering has undertaken an examination with regards to re-routing the Mawson-Erskine Drain Branch “B” on the property with Roll Number 000-050-081 as the property is planned for development.

Authorization under the Drainage Act

This Engineers Report that has been prepared under Section 78 of the Drainage Act as per a request from an affected Landowner.

Under Section 78 of the Drainage Act, Council may undertake and complete the maintenance or repair of any drainage works constructed under a bylaw passed under this Act or its predecessor. Section 78 is to be used where it is considered expedient to change the course of the drainage works, or to make a new outlet for the whole or any part of the drainage works, or to construct a tile drain under the bed of the whole or any part of the drainage works as ancillary thereto, or to construct, reconstruct or extend embankments, walls, dykes, dams, reservoirs, bridges, pumping stations, or other protective works as ancillary to the drainage works, or to otherwise improve, extend to an outlet or alter the drainage works or to cover the whole or any part of it, or to consolidate two or more drainage works, the Council whose duty it is to maintain and repair the drainage works or any part thereof may, without a petition required under Section 4 but on the report of an Engineer appointed by it, undertake and complete the drainage works as set forth in such report.

Existing Conditions

The Mawson-Erskine Drain consists of tile drains named “Main Drain”, “A”, “B” and “C” located in Lot 7 and 8, Concession 8 ECR and Lot 15, Concession 17.

The last Engineer's Report on the Mawson-Erskine Drain is dated March 25, 2016. Under this report the Main Drain, Branch "A" and Branch "B" were improved with Branch "B" being replaced to the north side of Ausable Drive.

On-Site Meeting

A site meeting was held on June 30th, 2023.

The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Joanne Sadler (Municipality of North Middlesex)
- Patti Mawson (Landowner)
- Rob and Holly Scott (Landowner)
- Amber McLean (Landowner)
- Jared Tweedle (County of Middlesex)
- Matt and Elena White (Landowner)
- Chris Mawson (Landowner)
- Jim Denys (Landowner)

The following is a brief summary of the meeting:

- General discussion of the Drainage Act and Landowners rights under the Drainage Act.
- Landowners were made aware that a request has been received to re-route Branch "B" of the Mawson-Erskine Drain in order to develop the property with Roll Number 000-050-081.
 - It was mentioned that because the drain is being re-routed due to a development, a large portion of the cost will be assessed to the developer but some of the costs will be assessed to the upstream watershed as it is replacing a 1969 drain. Upstream landowners will be assessed the amount that would have been assessed should the 1969 drain been replaced to an agricultural standard and in the same location.
 - Likely route is down Lieury Road and Ausable Drive. Side to be determined.
- As part of R. Dobbin Engineer's investigation and design they will ensure no negative impact on the surrounding lands. The existing low area through the property may serve as an overflow route under larger storm events. This will dictate the design standard for the proposed drain.
- We will need to investigate how the properties fronting on McGillvary Drive will be impacted by the development as their surface drainage may be getting cut off by the development. This may involve a branch drain along the rear of those lots.

No adverse soil conditions were noted at the site meeting.

Discussion

Following the site meeting and correspondence with the Developer's Engineer and the Municipality, it was determined that waters entering the property with Roll Number 000-050-081 from the north shall be addressed through lot grading controls rather than the Drainage Act.

An open channel along the roadways was investigated but it was determined that there is insufficient distance between the property and edge of road on Lieury Road to make this a feasible alternative.

At a council meeting in February of 2024, the Developer's Representative stated that costs associated with the drainage project would be borne by the developer. Although this may be the case through the subdivision agreement, R. Dobbin Engineering must assess lands in accordance with the Drainage Act. This will result in some assessments to upstream lands and road. However, if an agreement states payment terms outside of the drainage report, the ultimate invoicing of the drainage projects costs would be subject to that agreement. R. Dobbin Engineering recommends that any subdivision agreement addressing assessments under the Drainage Act be very specific as to which costs will be borne by the developer (i.e. utility assessment, road assessments, non-agricultural assessments, etc.).

Draft Report

A draft report, dated March 4, 2024 was sent to all the affected Landowners and a meeting was held on March 20, 2024 to go over the report and address any questions and concerns related to the draft report. The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Joanne Sadler (Municipality of North Middlesex)
- Jaden Hodgins (Municipality of North Middlesex)
- Kristyn Wilson (Municipality of North Middlesex)
- Jared Tweedle (County of Middlesex)
- Patti Mawson (Landowner)
- Duncan Simpson
- Mike Bucci (Developer's Engineer)

The following is a brief summary of the meeting:

- Landowners were generally satisfied with the proposed drainage improvements.
- Next Steps and particulars of the development were discussed.

Design

As there is not an overflow culvert at Lieury Road the proposed drain has not been designed to handle all storm events. The proposed tile drain has been designed to the 5-year storm event.

Recommendations

It is therefore recommended that the following work be carried out:

1. Branch "B" of the Mawson-Erskine Drain shall be re-routed around the property with Roll Number 000-050-081. The existing Branch "B" shall be abandoned between Lieury Road and Ausable Drive and shall no longer be maintained by the Municipality.
2. Future specifications shall be developed for the replacement of Branch "B" under Lieury Road.

Estimate of Cost

It is recommended that the work be carried out in accordance with the accompanying Specification of Work and Profile that forms part of this Report. There has been prepared an Estimate of Cost in the amount of \$164,380, including engineering of the report, attending the Meeting to Consider the Report, attending the Court of Revision, and an estimate for tendering, contract administration and inspection. Appearances before appeal bodies have not been included in the cost estimate.

A plan has been prepared showing the location of the work and the approximate drainage area. A profile is included showing the depths and grades of the proposed work.

Assessment

As per Section 21 of the Drainage Act, the Engineer in their Report shall assess for benefit and outlet for each parcel of land and road liable for assessment. Lands, roads, buildings, utilities, or other structures that are increased in value or are more easily maintained as a result of the construction, improvement, maintenance, or repair of a drainage works may be assessed for benefit. (Section 22)

Lands and roads that use a drainage works as an outlet, or for which, when the drainage works is constructed or improved, an improved outlet is provided either directly or indirectly through the medium of any other drainage works or of a swale, ravine, creek, or watercourse may be assessed for outlet. The assessment for outlet shall be based on the volume and rate of flow of the water artificially caused to flow into the drainage works from the lands and roads liable for such assessments. (Section 23)

The Engineer may assess for special benefit any lands for which special benefits have been provided by the drainage works. (Section 24)

A Schedule of Assessment for the lands and roads affected by the work and therefore liable for the cost thereof will be prepared as per the Drainage Act. Also, assessments may be made against any public utility or road authority, as per Section 26 of the Drainage Act, for any increased cost for the removal or relocation of any of its facilities and plant that may be necessitated by the construction or maintenance of the drainage works.

The cost of any approvals, permits or any extra work, beyond that specified in this Report that is required by any utility, government ministry or organization (federal or provincial), or road authority shall be assessed to that organization requiring the permit, approval, or extra work.

The estimated cost of the drainage works has been assessed in the following manner:

1. As per Section 26 of the Drainage Act, the roads and utilities have been assessed the increased cost of the drainage works caused by the existence of the works of the public utility or road. The road crossings, with the exception of the extra cost to locate and work around utilities, has been assessed with 100% of the estimated cost assessed as a special benefit assessment to the road authority. The utilities have been assessed 100% of the estimated cost to work around that utility and the daylighting and surveying costs as a special benefit assessment to that utility.
2. The theoretical cost to replace the 1969 drain on the property with Roll Number 000-050-081 to the agricultural standard has been assessed 50% of the cost applied as a benefit assessment and the remainder applied as outlet assessment to the upstream lands and roads based on equivalent hectares.
3. The remaining cost of the drainage works has been assessed to the property with Roll Number 000-050-081 as a special benefit assessment.

All final costs included in the cost estimate of this report shall be pro-rated based on the Schedule of Assessment. Any additional costs shall be assessed in a manner as determined by the Engineer.

Allowances

Under Section 29 of the Drainage Act, the Engineer in his Report shall estimate and allow in money to the Landowner of any land that it is necessary to use for the construction or improvement of a drainage works or for the disposal of material removed from drainage works. This shall be considered an allowance for right-of-way.

Under Section 30 of the Drainage Act, the Engineer shall determine the amount to be paid to persons entitled thereto for damage, if any, to ornamental trees, lawns, fences, land and crops occasioned by the disposal of material removed from a drainage works. This shall be considered an allowance for damages.

Allowances have been made, where appropriate, as per Section 29 of the Drainage Act for right-of-way and as per Section 30 of the Drainage Act for damages to lands and crops. Allowances for right of way are based on a land value of \$50,000.00 per hectare. Allowances for crop loss are based on \$2,000.00 per hectare for the first year, \$1,000.00 for the second year (\$3,000.00 per hectare total).

Access and Working Area

Access to the work site for construction and future maintenance shall be from Ausable Drive and Lieury Road along the length of the drainage works.

The working area for the construction and future maintenance of the proposed tile drain shall be restricted to a width of 15m along the length of the drainage works normally centred on the proposed tile drain.

Restrictions

No trees and shrubs shall be planted nor shall permanent structures be erected within 10m of either side of the proposed drain without prior written permission of Council.

Attention is also drawn to Sections 80 and 82 of the Drainage Act, which refer to the removal of obstructions in a drain and damage caused to a drain.

Agricultural Grant

If available, it is recommended that application for subsidy be made for eligible agricultural properties. Any assessments against non-agricultural properties are shown separately in the Schedule of Assessment.

R. Dobbin Engineering Inc. believes that the only assessment that would be eligible for the agricultural grant would be the property with Roll Number 000-050-090 as per 2.2.c of the Agricultural Drainage Infrastructure Program (ADIP).

Maintenance

Upon completion of the work, the drainage works shall be repaired and maintained as per the applicable Schedule of Maintenance unless otherwise altered under provisions of the Drainage Act.

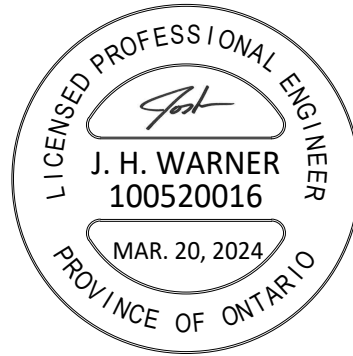
The drainage works shall be maintained as per the specifications and grades as shown on the drawings contained in this Engineers Report.

The additional costs as a result of a road or utility shall be assessed to the owner of the road or utility as per Section 26 of the Drainage Act.

Yours truly,



Josh Warner, P. Eng.
R. Dobbin Engineering Inc.



Mawson-Erskine Drain Branch “B”
Municipality of North Middlesex
March 20, 2024

SPECIFICATION OF WORK

1. Location

The proposed improvements to the Mawson-Erskine Drain Branch “B” are located in Lot 15, Concession 17 in The Municipality of North Middlesex.

2. Scope of Work

The work included in this specification includes, but is not limited to, the following:

- Future road pipe replacements.
- Supply and installation of HDPE Pipe.
- Supply and installation of catch basins structures.

3. General

Each tenderer must inspect the site prior to submitting their tender and satisfy themselves by personal examination as to the local conditions that may be encountered during this project. The Contractor shall make allowance in their tender for any difficulties which they may encounter. Quantities or any information supplied by the Engineer is not guaranteed and is for reference only.

All work and materials shall be to the satisfaction of the Drainage Superintendent who may vary these specifications as to minor details but in no way decrease the proposed capacity of the drain.

The Contractor shall be responsible for the notification of all utilities prior to the start of construction.

Measurement for Payment Clauses have not been included in these specifications and will be part of the Construction document. If the Construction document has not identified Measurement for Payment Clauses, the Contractor must notify the Municipality of North Middlesex and request clarification 2 days prior to pricing the project.

4. Plans and Specifications

This Specification of Work shall take precedence over all plans and general conditions pertaining to the Contract. The Contractor shall provide all labour, equipment, and supervision necessary to complete the work as shown in the Plans and described in these

specifications. Any work not described in these specifications shall be completed according to the Ontario Provincial Standard Specifications and Standard Drawings.

5. Health and Safety

The Contractor at all times shall be responsible for health and safety on the worksite including ensuring that all employees wear suitable personal protective equipment including safety boots and hard hats.

When applicable the Contractor shall be responsible for traffic control as per the Ontario Traffic Manual Book 7 – Temporary Conditions (latest revision).

The Contractor shall be responsible to ensure that all procedures are followed under the Occupational Health and Safety Act to ensure that work sites are safe and that accidents are prevented. In the event of a serious or recurring problem, a notice of non-compliance will be issued. The Contractor will be responsible for reacting immediately to any deficiency and correcting any potential health and safety risk. Continuous disregard for any requirement of the Occupational Health and Safety Act could be cause for the issuance of a stop work order or even termination of the Contract.

The Contractor shall also ensure that only competent workers are employed onsite and that appropriate training and certification is supplied to all employees.

6. Pre-Construction Meeting

There is a requirement for a pre-construction meeting to be held prior to any construction taking place. The meeting shall be scheduled by the Contractor. The Landowners, Engineer, Developer's Engineer and the Municipality of North-Middlesex shall be notified of the pre-construction meeting at least 48 hours prior.

7. Benchmarks

The benchmarks are based on geodetic elevations. Elevations are available at the locations shown on the Plan and Profile drawings. Where these elevations are on existing structures to be replaced, they shall be transferred by the Contractor prior to the removal.

The Contractor is required to complete a benchmark loop prior to construction to verify the benchmarks. If discrepancies exist the Contractor must notify the Drainage Superintendent and Engineer prior to completing any work.

8. Traffic Control

Access and driveways to private properties shall not be obstructed longer than the minimum time necessary for the work and shall be reinstated as soon as possible all to the satisfaction of the Engineer. The contractor shall schedule any obstruction of existing

driveways with the owners at least two full working days in advance. Roads must be kept open to local traffic and all obstructions and diversions of traffic must be approved by the Engineer or Drainage Superintendent and Roads Superintendent at least two (2) full working days in advance.

- a) The Contractor shall supply, erect and maintain all detour signs and special signs necessary for detours to divert traffic from the area under construction as directed by the Road Superintendent or Engineer. All this work shall be at the Contractor's expense.
- b) The Contractor shall be responsible for supplying, erecting and maintaining all signs, supports, barricades, flashers, cones, etc. in the construction area and at the boundaries of the work as part of the above detours, all to the satisfaction of the Engineer or Drainage Superintendent. All this work shall be done by the Contractor at their own expense.
- c) The Contractor shall not be allowed to proceed with construction activities unless proper signage and flagmen are present. Flagging procedures, signage and detours shall conform to the recommendations of Book 7, Temporary Conditions, Ontario Traffic Manual, issued by the Ministry of Transportation. Conformance shall be enforced by the Ministry of Labour Inspector.

9. Access and Working Area

Access to the work site for construction and future maintenance shall be from Ausable Drive and Lieury Road along the length of the drainage works.

The working area for the construction and future maintenance of the proposed tile drain shall be restricted to a width of 15m along the length of the drainage works normally centred on the proposed tile drain.

10. Removals

The existing culverts, catch basins, leads, etc. where specified, shall be removed in their entirety.

11. Brushing and Tree Removal

All brush, trees, woody vegetation, stumps etc. shall be removed for a width of 10 metres along the tile drain. They shall be removed in their entirety including stumps.

A mechanical grinder attached to an excavator be used for the removal of brush and trees. Any brush and trees too large to grind shall be close cut. The Contractor shall stockpile the trees and brush in a single pile on the property in which they were removed or dispose

of the trees and brush offsite. The Contractor is responsible for the burning of the trees and brush. The Contractor is responsible for obtaining all necessary permits for any disposal sites. Burning of the trees and brush is subject to local bylaws and guidelines of the Ministry of the Environment Conservation and Parks.

Certain trees may be left in place at the direction of the Drainage Superintendent.

12. Installation of Tile

All work shall conform to OPSS 401 and OPSS 410. The pipe sizes and grade shall be as per the drawings.

The storm main shall be HDPE smooth wall pipe (320 kPa) or PVC DR35 with bell and spigot joints and leads shall be PVC DR28 with bell and spigot joints.

The pipe shall be bedded with clear stone from 150mm below the invert to 300mm above the top of the pipe. Under the roadways and for a distance of 600mm on either side the pipe shall be backfilled with OPS granular “A” from the top of the bedding to the bottom of the asphalt. The asphalt shall be HL3 and HL4 and shall match the existing thicknesses. Under all other areas, the trench may be backfilled with excavated material above the bedding. All material shall be compacted to 98% S.P.M.D.D.

Excess excavated material shall be placed on the property with Roll Number 000-050-081.

The leads to the individual lots shall have an end cap and a 2”x4” above grade to denote their locations.

13. Catch Basins

Structure	Station	Type (mm)	Inlet Elev. (m)	Outlet Pipe Elev. (m)	Inlet Pipe Elev. (m)
CB #1 (FUTURE)	0+020	600x600	To Be Lowered From 234.20 to 234.00	233.10 (S) 250	233.19 (E) 300
CB #2	0+055	600x600	234.86	233.47 (W) 300	233.49 (E) / 233.60 (N) 300 / 200
CB #3	0+092	600x600	235.27	233.78 (W) 300	233.80 (E) / 233.95 (N) 300 / 200
CB #4	0+170	600x600	235.91	234.44 (W) 300	234.46 (E) 300

CB #5	0+240	600x600	237.15	235.03 (S) 300	235.05 (N) / 235.35 (W) 300 / 200
CB #6	0+281	600x600	237.15	235.38 (S) 300	235.40 (N) / 235.82 (W) 300 / 200
CB #7	0+308	600x600	237.28	235.61 (S) 300	235.63 (N) 300
CB #8	0+328	600x600	237.25	235.77 (S) 300	235.78 (E) / 235.80 (N) 236.12 (W) 300 / 300/ 200
CB #9 (FUTURE)	0+345	600x600	237.45	236.00 (W) 300	
CB #10	1+024	600x600	237.73	235.98 (S) 300	236.25 (N) 200

The unit price shall include supply and installation of precast concrete catch basins per OPSD-705.010 complete with precast adjustment units, and frame and grates per OPSD-400.02.

The catch basins shall be made with the top sections separate from the base sections in order to allow riser sections to be installed or removed as necessary (i.e. the base section shall not extend for more than 150mm above the top of the highest opening in the base section). The wall thickness of all structures shall be 115mm and each shall have a 300mm sump.

The catch basins shall be set at the final elevations as directed by the Drainage Superintendent. The catch basins shall be set on a layer of clear stone. The clear stone shall be extended up to the spring line of the inlet and outlet pipe connections.

The tile at the connection to the catch basins shall be concreted on both the inside and outside prior to backfilling. Any pipe or tile shall not protrude more than 50mm inside the wall.

As part of this item the Contractor shall grade the area in the vicinity of the basin to ensure proper drainage. Rip rap shall be installed around the basins. The rip rap shall be 150mmx300mm c/w filter fabric. The area to receive the rip rap shall first be graded to allow the placement of the rip rap to a depth of 400mm below finished grade. After grading, a layer of filter fabric (Mirafi P150 or approved equal) is to be placed with any joints overlapped a minimum of 600mm. Rip rap shall then be placed with the smaller pieces placed in the gaps and voids to give it a uniform appearance.

The catch basin elevations may be raised to match the grading of the developed lots. All such work shall be completed at the discretion of the Drainage Superintendent and all costs shall be borne by the owner of the property with Roll Number 000-050-081.

14. Seeding/Restoration

All areas disturbed by construction shall be returned to their pre-construction state. The road right of way and all other previous grassed areas where disturbed by construction, shall be topped with 100mm of screened topsoil and hydroseeded immediately following construction in accordance with the seed mixture, fertilizer and application rate as shown below.

Seed mixture, fertilizer and application rates are as follows:

- Canada Wild Rye (*Elymus Canadensis*), Virginia Wild Rye (*Elymus virginicus*), or Indian grass (*Sorghastrum nutans*)
- Fertilizer (300 kg/ha.) consisting of 8-32-16.
- Hydraulic mulch (2,999 kg/ha.) type "B" and water (52,700 litres/ha.) in accordance with OPSS 572 (hydroseed).

The above seed mixture shall apply unless otherwise approved by the Drainage Superintendent or Engineer.

15. Environmental Considerations

The Contractor shall take care to adhere to the following considerations.

- Operate machinery in a manner that minimizes disturbance to the banks of the watercourse.
- Erosion and sediment control measures must be installed prior to construction to prevent sediment from entering the water body.
- Material shall not be in areas regulated by the Conservation Authority or Ministry of Natural Resources.
- All granular and erosion control materials shall be stockpiled a minimum of 3.0m from the top of the bank or excavation. Material shall not be placed in surface water runs or open inlets that enter the channel.
- All activities, including maintenance procedures, shall be controlled to prevent the entry of petroleum products, debris, rubble, concrete, or other deleterious substances into the water. Vehicle and equipment refuelling and maintenance shall be conducted away from the channel, any surface water runs, or open inlets. All waste materials shall be stockpiled well back from the top of the bank and all surface water runs and open inlets that enter the drain.
- When possible, all construction within the open channel shall be carried out during periods of low flow or in dry conditions.

- The Contractor shall conduct regular inspections and maintain erosion and sediment control measures and structures during the course of construction.
- The Contractor shall repair erosion and sediment control measures and structures if damage occurs.
- The Contractor shall remove non-biodegradable erosion and sediment control materials once site is stabilized.
- Remove all construction materials from site upon project completion.

Mawson-Erskine Drain Branch "B"
Municipality of North Middlesex
March 20, 2024

ALLOWANCES

Allowances have been made as per Sections 31 of the Drainage Act for Incorporation of the Drain Enclosure

Conc.	Lot or part	Roll No.	Owner	Section 29 (\$)	Section 30 (\$)	Total (\$)
17	Pt. Lot 15	000-050-081	D. & P. Mawson	-	1,060	1,060
TOTAL ALLOWANCES				\$0	\$1,060	\$1,060

Estimate of Cost

<u>Item Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost (\$)</u>	<u>Total (\$)</u>
Pre-Construction Meeting	1	LS	800	800
Brushing and Tree Removal	1	LS	800	800
Locate and Work Around Utilities	1	LS	1,500	1,500
Traffic Control	1	LS	1,500	1,500
Rip Rap at Basins	40	tonne	150	6,000
Co-Ordination of Hydro Pole Holds as Required	1	LS	1,200	1,200
Remove Existing CB and Lead near Station 0+330	1	LS	800	800
300mmø HDPE Pipe c/w Bedding and Backfill	352	m	150	52,800
300mmø HDPE Bends	3	ea	200	600
Catch Basins (600mm x 600mm)	8	ea	3,800	30,400
Lower CB #1 and replace Lid	1	LS	1,000	1,000
Connect Existing Tile to CB #8	1	LS	800	800
200mmø PVC Leads c/w caps at ends	20	m	120	2,400
Restoration	1	LS	10,000	10,000
Contingency				<u>11,200</u>
				Sub Total \$121,800
				Allowances \$1,060
				Engineering \$22,200
				Daylighting and Surveying Utilities \$4,500
				Estimate for Tendering, Contract Administration and Inspection \$11,500
				ABCA Fee \$500
				Sub Total <u>\$161,560</u>
				Non-Recoverable HST (1.76%) \$2,820
				Total Estimate <u>\$164,380</u>

SCHEDULE OF ASSESSMENT

Conc.	Lot or Part	Affected Hecatares	Roll No.	Owner	Special Benefit	Benefit	Outlet	Total
Public Lands								
	Ausable Drive	0.36		Municipality of North Middlesex	1,100	-	1,278	2,378
	Lieury Road	0.50		Municipality of North Middlesex	1,100	-	1,776	2,876
	McGillivray Drive	0.00		County of Middlesex	-	-	-	-
					2,200	-	3,054	5,254
Non-Agricultural Lands								
16	Pt. Lot 16	0.26	000-050-087	M. White & E. Sokolova-White	-	-	513	513
	Pt. Lot 16	0.25	000-050-086	P. White	-	-	493	493
	Pt. Lot 16	0.25	000-050-085	C. & M. Rodert	-	-	493	493
	Pt. Lot 16	0.27	000-050-084	A. & J. Cantin	-	-	533	533
	Pt. Lot 16	0.27	000-050-083	A. Cantin	-	-	533	533
	Pt. Lot 16	0.25	000-050-090-01	A. & H. Scott	-	-	493	493
17	Pt. Lot 15	0.00	000-050-080	N. Hosking	-	-	-	-
	Pt. Lot 15	0.00	000-050-081-06	J. Hendrickson & D. Masse	-	-	-	-
	Pt. Lot 15	0.00	000-050-081-04	A. Mclean & M. Sorton	-	-	-	-
	Pt. Lot 15	0.00	000-050-081-02	C. Mawson & R. Beattie	-	-	-	-
					-	-	3,058	3,058

Conc.	Lot or Part	Affected Hectares	Roll No.	Owner	Special Benefit	Benefit	Outlet	Total
Agricultural Lands								
8	Lot 7	0.00	000-050-029	Denys Farms Inc	-	-	-	-
ECR	Lot 8	0.00	000-050-030	J. Denys	-	-	-	-
	Lot 9	0.00	000-050-031	D. & P. Mawson	-	-	-	-
16	Lot 16	0.50	000-050-090	Denys Farms Inc	-	-	592	592
17	Pt. Lot 15	0.00	000-050-079	Denys Farms Inc	-	-	-	-
	Pt. Lot 15	2.90	000-050-081	D. & P. Mawson	137,020	10,056	-	147,076
					137,020	10,056	592	147,668
Utilities								
	Water Utility			OCWA (North Middlesex)	5,025	-	-	5,025
	Telecom Utility			Bell Telecom	1,675	-	-	1,675
	Hydro Utility			Hydro One	1,700	-	-	1,700
					8,400	-	-	8,400
Total - Public Lands					5,254			
Total - Non-Agricultural Lands					3,058			
Total Agricultural Lands					147,668			
Total - Utilities					8,400			
Total Assessment					\$164,380			

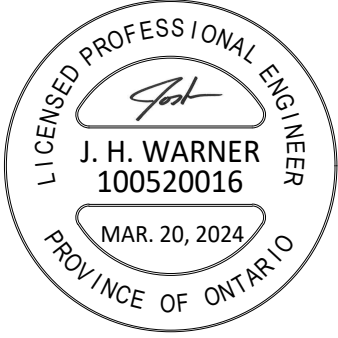
Estimated Net Assessment
Net assessment subject to OMAFRA ADIP Policy and actual construction costs.

Conc.	Lot or Part	Affected Hectares	Roll No.	Owner	Total Assessment (\$)	Estimated Grant (\$)	Allowances (\$)	Estimated Net Assessment (\$)
Public Lands								
	Ausable Drive	0.36		Municipality of North Middlesex	2,378			2,378
	Lieury Road	0.50		Municipality of North Middlesex	2,876			2,876
	McGillivray Drive	0.00		County of Middlesex	-			-
Non-Agricultural Lands								
16	Pt. Lot 16	0.26	000-050-087	M. White & E. Sokolova-White	513			513
	Pt. Lot 16	0.25	000-050-086	P. White	493			493
	Pt. Lot 16	0.25	000-050-085	C. & M. Rodert	493			493
	Pt. Lot 16	0.27	000-050-084	A. & J. Cantin	533			533
	Pt. Lot 16	0.27	000-050-083	A. Cantin	533			533
	Pt. Lot 16	0.25	000-050-090-01	A. & H. Scott	493			493
17	Pt. Lot 15	0.00	000-050-080	N. Hosking	-			-
	Pt. Lot 15	0.00	000-050-081-06	J. Hendrickson & D. Masse	-			-
	Pt. Lot 15	0.00	000-050-081-04	A. Mclean & M. Sorton	-			-
	Pt. Lot 15	0.00	000-050-081-02	C. Mawson & R. Beattie	-			-
Agricultural Lands								
8	Lot 7	0.00	000-050-029	Denys Farms Inc	-			-
ECR	Lot 8	0.00	000-050-030	J. Denys	-			-
	Lot 9	0.00	000-050-031	D. & P. Mawson	-			-
16	Lot 16	0.50	000-050-090	Denys Farms Inc	592	197		395
17	Pt. Lot 15	0.00	000-050-079	Denys Farms Inc	-			-
	Pt. Lot 15	2.90	000-050-081	D. & P. Mawson	147,076		1,060	146,016
Utilities								
	Water Utility			OCWA (North Middlesex)	5,025			5,025
	Telecom Utility			Bell Telecom	1,675			1,675
	Hydro Utility			Hydro One	1,700			1,700
					164,380	197	1,060	163,123

SCHEDULE OF MAINTENANCE
To Maintain the Mawson-Erskine Drain Branch "B"

Conc.	Lot or Part	Affected Hectares	Roll No.	Owner	Benefit	Outlet	Total
Public Lands							
	Ausable Drive	0.36		Municipality of North Middlesex	899	387	1,286
	Lieury Road	0.50		Municipality of North Middlesex	601	903	1,504
					1,500	1,290	2,790
Non-Agricultural Lands							
16	Pt. Lot 16	0.26	000-050-087	M. White & E. Sokolova-White	-	274	274
	Pt. Lot 16	0.25	000-050-086	P. White	-	263	263
	Pt. Lot 16	0.25	000-050-085	C. & M. Rodert	-	263	263
	Pt. Lot 16	0.27	000-050-084	A. & J. Cantin	-	284	284
	Pt. Lot 16	0.27	000-050-083	A. Cantin	-	284	284
	Pt. Lot 16	0.25	000-050-090-01	A. & H. Scott	-	263	263
17	Future Lot 1*	0.36	TBD	D. & P. Mawson	238	137	375
	Future Lot 2*	0.41	TBD	D. & P. Mawson	238	177	415
	Future Lot 3*	0.46	TBD	D. & P. Mawson	238	224	462
	Future Lot 4*	0.31	TBD	D. & P. Mawson	495	203	698
	Future Lot 5*	0.30	TBD	D. & P. Mawson	257	316	573
	Future Lot 6*	0.30	TBD	D. & P. Mawson	161	316	477
	Future Lot 7*	0.30	TBD	D. & P. Mawson	-	316	316
	Pt. Lot 15	0.35	000-050-081-06	J. Hendrickson & D. Masse	-	133	133
	Pt. Lot 15	0.34	000-050-081-04	A. Mclean & M. Sorton	-	130	130
	Pt. Lot 15	0.39	000-050-081-02	C. Mawson & R. Beattie	-	149	149
					1,627	3,732	5,359

Conc.	Lot or Part	Affected Hecatares	Roll No.	Owner	Benefit	Outlet	Total
<u>Agricultural Lands</u>							
8 ECR	Lot 9	3.40	000-050-031	D. & P. Mawson	1,477	-	1,477
16	Lot 16	0.50	000-050-090	Denys Farms Inc	-	269	269
17	Pt. Lot 15	0.46	000-050-081	D. & P. Mawson	-	105	105
* Future Lot Assessments for Maintenance shall be to Roll Number 50-081 until such time that Future Lots 1-7 are created					1,477	374	1,851
Total - Public Lands					2,790		
Total - Non-Agricultural Lands					5,359		
Total Agricultural Lands					<u>1,851</u>		
Total Assessment					\$10,000		



CONC. 17

CONC. 16

LOT 15

CONC. 8
EAST OF CENTRE ROAD

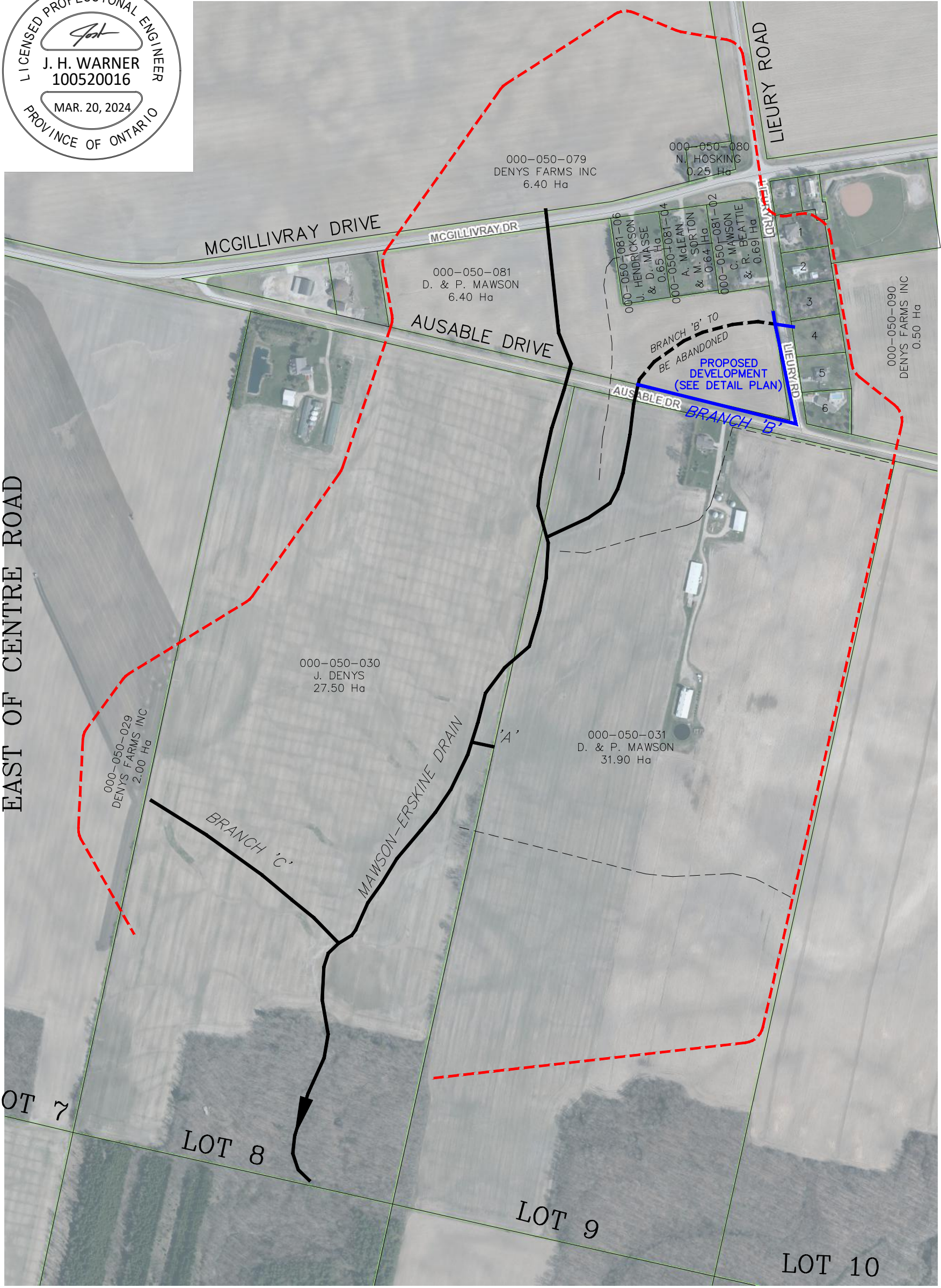
LOT 7

LOT 8

LOT 9

LOT 10

LOT 16

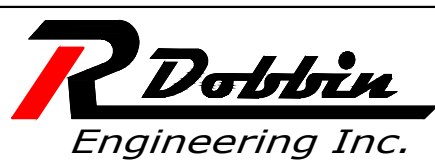


OWNER INDEX NUMBER

- 1. 000-50-087 M. WHITE & E. SOKOLOVA-WHITE 0.26 Ha
- 2. 000-50-086 P. WHITE 0.25 Ha
- 3. 000-50-085 C. & M. RODERT 0.25 Ha
- 4. 000-50-084 A. & J. CANTIN 0.27 Ha
- 5. 000-50-083 A. & J. CANTIN 0.27 Ha
- 6. 000-50-090-01 A. & H. SCOTT 0.25 Ha

LEGEND

- MAWSON-ERSKINE DRAIN BRANCH "B" RE-ROUTING
- MUNICIPAL DRAIN
- DRAINAGE AREA



4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Mawson-Erskine Drain Plan

PROJECT No.
2023-1547

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	DRAFT REPORT	MAR. 20, 2024	CS
B. VAN RUITENBURG				
DRAWN	SCALE: 1:5000			
C. SAUNDERS	0 50 100 150m			

MUNICIPALITY of NORTH MIDDLESEX
MAWSON - ERSKINE DRAIN
PLAN

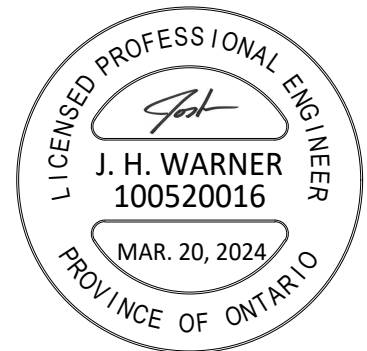
1
OF 3

Last Updated: February 29, 2024



LEGEND

- MAWSON - ERSKINE DRAIN BRANCH 'B' RE ROUTE
- - - MAWSON - ERSKINE DRAIN BRANCH 'B' EXISTING
- - - - - PROPOSED RESIDENTIAL LOT LINE



4218 Oil Heritage Road
 Petrolia Ontario, N0N 1R0
 Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
 Mawson Erskine Drain Detail Plan

PROJECT No.
 2023-1547

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED C. SAUNDERS	1	FINAL REPORT	MAR. 20, 2024	CS
DRAWN B. VAN RUITENBURG				

SCALE 1: 1000

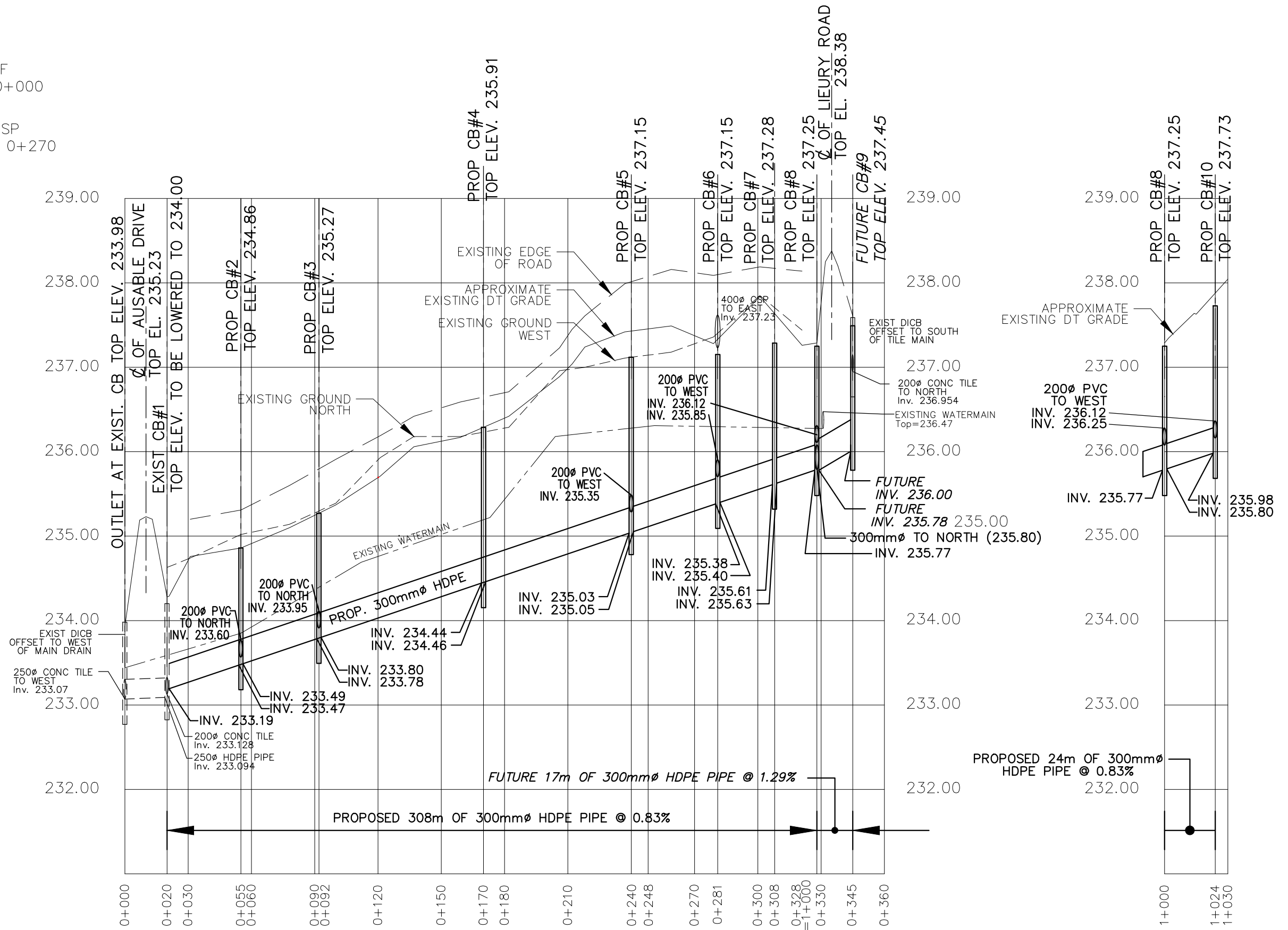
MUNICIPALITY of NORTH MIDDLESEX
MAWSON - ERSKINE DRAIN
DETAIL PLAN

2
OF 3

Last Updated: February 29, 2024

GENERAL NOTES

- BENCHMARK No.1 ELEV. 235.456
NAIL IN HYDRO POLE SOUTH SIDE OF
AUSABLE DRIVE WEST OF STATION 0+000
BENCHMARK No.2 ELEV. 237.622
TOP OF WEST END EXISTING 400 ϕ CSP
CROSSING LEURY ROAD AT STATION 0+270
- UPPER NUMBERS ARE DEPTH FROM
GROUND TO INVERT OF HDPE PIPE



4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Mawson-Erskine Drain "B" Profile

PROJECT No.
2023-1512

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	MAR. 20, 2024	CS
DRAWN C. SAUNDERS				

SCALE: 1:2,000
0 20 40 60m

MUNICIPALITY of NORTH MIDDLESEX
MAWSON - ERSKINE DRAIN "B"
PROFILE

3
OF 3