

February 3, 2026

The Mayor and Council  
The Town of Plympton-Wyoming  
546 Niagara Street  
Wyoming, Ontario  
N0N 1T0

Gentlemen and Mesdames:

**Re: Jackson Drain Improvements (2026)**

In accordance with your instructions, R. Dobbin Engineering has undertaken an examination with regards to improving the Jackson Drain in the Town of Plympton-Wyoming.

Authorization under the Drainage Act

This is an Engineer's Report that has been prepared under Section 78 of the Drainage Act. R. Dobbin Engineering Inc. was appointed by council on June 25<sup>th</sup>, 2025.

Section 78 of the Drainage Act states that, where, for the better use, maintenance or repair of any drainage works constructed under a bylaw passed under this Act, or of lands or roads, 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 Drainage

The Jackson Drain is an open channel that outlets into the Park Drain (Open Channel) in Lot 4, Concession 4 in the Town of Plympton Wyoming. The Jackson Drain continues easterly along the south side of London Line for approximately 1039m to a point in Lot 6, Concession 4.

Under an Engineer's Report dated September 13, 1961, the open channel was cleaned along the entire length of the drain and specifications provided for alterations to existing farm accesses.

### Drain Classification

The Jackson Drain is currently Rated a 'C' Drain according to the Department of Fisheries and Oceans (DFO) classification as presented by the Ontario Ministry of Agriculture, Food and Rural Affairs Agricultural Information Atlas.

### Approvals

The drain will require approval from the St. Clair Region Conservation Authority and the Department of Fisheries and Oceans. Construction cannot commence without necessary approvals.

### Site Meeting

A site meeting for this drain was held on July 31, 2024. The following were present:

- Josh Warner (R. Dobbin Engineering) Coordinator, Town of Plympton-Wyoming
- Ryan Tamming (Drainage Superintendent and Engineering)
- Mike Jackson (Landowner)
- Kelly Nickles (Landowner)
- Ron Vanderburgt (Landowner)

The following is a brief summary of the meeting:

- General discussion of the Drainage Act and Landowners rights under the Drainage Act.
- It was outlined that Landowners were looking for channel improvements and access culvert replacements.
- Landowners discussed that maintenance was carried out around 10 to 15 years ago.
- It was noted that Eastlink has a fibre line crossing the access to the residential properties.

### Existing Conditions

Below is a summary of the condition of the existing culverts:

<b>Culvert Number</b>	<b>Roll Number / Owner</b>	<b>Existing Culvert</b>	<b>Condition</b>	<b>Recommendation</b>
1	10-298 (M. Jackson)	1200mm dia. CSP. 8m Long	Bottom has separated from the rest of the Barrel.	Replace

<b>Culvert Number</b>	<b>Roll Number / Owner</b>	<b>Existing Culvert</b>	<b>Condition</b>	<b>Recommendation</b>
2	10-299 (M. Jackson)	1200mm dia. CSP. 8m Long	Bottom has separated from the rest of the Barrel.	Replace
3	10-300 (J. Jackson)	1200mm dia. CSP. 9m Long	Okay, but significantly above Grade Line.	Lower with Existing Materials and Specify for Future Replacement.
4*	10-300 (J. Jackson)	1200mm dia. CSP. 7m Long	Bottom has separated from the rest of the Barrel.	Replace
5	10-300-01 (W. Jackson)	1050mm dia. CSP. 8m Long	Rusting at Waterline. Difficult to see Bottom. Above Grade Line.	Replace and Combine with Upstream Culvert
	10-300-05 (K. Nickles)	900mm dia. CSP. 10m Long	Rusting at Waterline. Difficult to see Bottom. Above Grade Line.	Replace and Combine with Downstream Culvert
6*	10-301 (R. Vanderburgt)	1200mm dia. CSP. 11m Long	Okay	Specify for Future Replacement
7	10-301 (R. Vanderburgt)	1200mm dia. CSP. 6m Long	Bottom has separated from the rest of the Barrel	Replace
8	10-303 (R. Allison)	750mm dia. CSP. 11m Long	Holes in Bottom	Slip Line as minimal watershed upstream.

\* Denotes a secondary access culvert.

Draft Report dated December 8, 2025

A draft report, dated December 8, 2025 was sent to the entire watershed. A meeting was held on January 26, 2026. The following were present:

- Josh Warner (R. Dobbin Engineering)
- Ryan Tamming (Drainage Coordinator, Town of Plympton Wyoming)
- John Jackson (Landowner)
- John VanKlaveren (Council Representative, Town of Plympton Wyoming)
- Brian Jackson (Landowner)
- Ron Vanderburgt (Landowner)
- Ron Allison (Landowner)

The following is a brief summary of the meeting:

- General discussion of the Drainage Act and Landowners rights under the Drainage Act.
- Landowners of the property's with Roll Numbers 10-300-01 and 10-300 requested that their culverts have concrete block end walls instead of rip rap end walls. They stated that the owner of the property with Roll Number 10-300-05 would also like a concrete block end wall, but was not able to attend the meeting.
  - R. Dobbin Engineering followed up with this Landowner and confirmed the above.
- Landowners wished to have all the culverts completed prior to September 21, 2026.
- The draft report contained the replacement of Culvert #8. This Landowner requested that this culvert be investigated for lining considering the minimal upstream watershed.
  - It was determined that lining the culvert is a feasible alternative and has been included in this report.

### Design

The access culverts have been designed to provide outlet for a 1 in 5-year storm event.

### Recommendations

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

1. The Jackson Drain shall be improved with a bottom cleanout and resloping as required between Station 0+027 to 1+022
2. Future maintenance specifications, drawings and schedules shall be developed for the open channel portion of the Jackson Drain.
3. Culverts #1, 2, 4, 5, and 7 shall be replaced. Culvert #8 shall be slip lined. Culvert #3 shall be lowered in order to match the proposed grade line. Future specifications shall be developed for the replacement of the remainder of the culverts along the length of the drainage works.

### 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 \$228,720.00, including preparation of the report, attending the Meeting to Consider the Report, attending the Court of Revision and estimates for tendering, construction inspection, permitting and contract administration. 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 his 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. Items outside those identified in this report shall be assessed to the utility or road authority as per Section 26 of the Drainage Act plus a portion of the engineering (25% of the construction cost).

The cost of any fees for permits or approvals or any extra work required by any affected utility or road authority shall be assessed to that organization requiring the permit, approval, or extra work.

The proposed work has generally been assessed in the following manner, including all estimated fees, taxes and disbursements:

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. These items shall be tendered separately with the actual cost plus the net HST and a portion of the engineering (25% of the construction cost) being assessed to the owner of the utility or road. The special benefit assessments shall be calculated as outlined below:

London Line = Tender Amount for Traffic Control x 1.25 (For Engineering and Net HST)

Eastlink Telecom, Enbridge Gas and Town of Plympton Wyoming (Water) = Tender Amount to Locate and Work Around Utilities / 3 x 1.25 (For Engineering and Net HST)

2. The open channel improvements have been assessed with 20% applied as a benefit assessment to the abutting road authority, 40% applied as a benefit assessment to the abutting property and the remainder of the cost applied as an outlet assessment on upstream lands based on equivalent hectares.
3. All costs associated with Culvert #4 and Culvert #6 has been assessed as a special benefit assessment to the property as it is a secondary access and will not be eligible for grant.
4. The remaining culverts have been assessed based on the average cost to provide an access with an 8m top width (standard culvert). This standard culvert has been assessed with 55% of the cost applied as benefit assessment to the abutting property, 15% applied as a benefit assessment to the abutting road authority and the remainder of the cost applied as an outlet assessment on upstream lands and roads based on equivalent hectares.

Unless otherwise noted above, 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.

If a Landowner intends to sell their property they shall disclose this project to any potential purchasers.

### Allowances

Under Section 29 of the Drainage Act, the Engineer in their report shall estimate and allow in money to the Owner 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 for the re-sloping that would increase the area occupied by the drain 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 (approximately \$20,000.00 per acre). Allowances for crop loss are based on \$2,000.00 per hectare for the first year and \$1,000.00 for the second year (\$3,000.00 per hectare total).

### Access and Working Area

Access to the drain shall be from London Line, using existing culverts and laneways, and then along the length of the drainage works. Access shall generally be restricted to a width of 6m.

The working area for construction of the open channel shall generally be done from the north (road) side with the excavated material being trucked off site. The working area shall be from the centreline of the road to the north top of bank.

For future maintenance the working area shall be restricted to a width of 10m from the top of bank where the work is taking place and 4m from the top of bank on the opposite side. Unless otherwise noted, the excavation shall generally be done from the field side, except across finished lawns. Across finished lawns the drain shall be cleaned from the road side with the excavated material being disposed offsite.

The working area at each culvert to be replaced, maintained, or repaired either under this report or in the future shall extend 10 metres on either side of the culvert within the same property or road.

### Restrictions

No trees and shrubs shall be planted nor shall permanent structures be erected within 10 metres 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. The special benefit assessments contained in the Schedule of Assessment will not be eligible for grant based on the current ADIP policies. These assessments represent improvements to secondary culverts and/or the increased costs for trucking of excavated material.

### Maintenance

The Jackson Drain culverts and open channel shall be maintained and repaired with the specifications and drawings contained in this Engineer's Report. The open channel portion of the Jackson shall be maintained in the same proportions as contained in the Schedule of Maintenance. For future maintenance, the excavated material shall generally be cast on the side it is being excavated from, except across finished lawns or where trees are on the field side do not provide a suitable area to the level the material. In these areas the excavated

material shall be trucked. The additional cost of trucking excavated material shall be assessed to the requesting landowner.

The access culverts shall be maintained and repaired with a culvert length required to provide an 8m top width, with the exception of the shared Culvert #5. With the culverts included in the specifications (including rip rap end walls for Culvert #1, 2, 6 and 7 and concrete block end walls for Culvert #3, 4, 5 and 8) they shall be assessed in the following manner:

<b>Culvert Number</b>	<b>Benefiting Lands</b>	<b>Road Authority</b>	<b>Upstream Properties Based on Equivalent Hectares as Contained in Schedule of Assessment</b>
<b>4,6</b>	100%		
<b>1,2,3,7,8</b>	55%	15%	30%
<b>5</b>	25% to 10-300-01 25% to 10-300-05	15%	35%

If any owner requests an additional length of culvert beyond that required to have an 8m top width or an asphalt travel surface the extra cost shall be borne by the Landowner making the request including the future maintenance and repair. The location of the 8m top width shall be determined by the Drainage Superintendent and shall generally be in the primary access location.

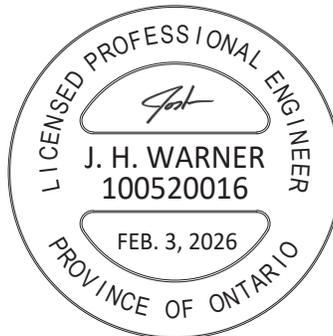
The additional costs as a result of a road or utility shall be assessed to the owner of the road or utility as per Section 26 of the Drainage Act.

A secondary access on a property shall be constructed, maintained and repaired with 100% of the cost assessed to the benefitting property.

Yours truly,



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



Jackson Drain  
 Town of Plympton-Wyoming  
 February 3, 2026

**ALLOWANCES**

Allowances have been made as per Sections 29 and 30 of the Drainage Act for right of way and damages to lands and crops.

Conc.	Lot or part	Roll No.	Owner	Section 29 (\$)	Section 30 (\$)	Total (\$)
4	Pt. E 1/2 Lot 5	10-300-01	W. Jackson	120	100	220
	Pt. W 1/2 Lot 6	10-300-05	K. Nickles	160	100	260
	Pt. W 1/2 Lot 6	10-303	R. Allison	40	100	140
	E 1/4 Lot 4	10-298	M. Jackson	310	100	410
	W 1/2 Lot 5	10-299	M. Jackson	770	100	870
	E 1/2 Lot 5	10-300	J. Jackson	640	200	840
	W 1/2 Lot 6	10-301	R. Vanderburgt	450	100	550
TOTAL ALLOWANCES				\$2,490	\$800	\$3,290

**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	200	200
Benchmark Loop	1	LS	100	100
Traffic Control	1	LS	3,000	3,000
Remove and Reinstall Fences, Signs and Mailboxes	1	LS	800	800
Locate and Work Around Utilities	1	LS	3,000	3,000
Silt Fence	4	Each	500	2,000
General Project Restoration/Seeding	1	LS	2,000	2,000
Provisional: Extend Tiles as a Result of Culvert Location	5	m	100	500
<b>Open Channel Excavation (Station 0+027 to 1+022)</b>				
Brushing and Tree Removal	1	LS	5,000	5,000
Open Channel Excavation (Bottom Cleanout Only) and Trucking	895	m	20	17,900
Open Channel Excavation (Bottom Cleanout and Resloping One Side) and Trucking	100	m	35	3,500
Reconnect Existing Tile Outlets	10	each	100	1,000
Side Slope Seeding and Matting	300	sq.m	5	1,500
Rip Rap as Required	30	tonne	110	3,300
<b>Culvert #1 (10-298, M. Jackson)</b>				
Remove and Dispose of Existing Culvert	1	LS	800	800
Supply & Install 1200mm dia. Sanitite c/w Bedding	15	m	800	12,000
Supply and install Granular 'B' Type II	80	tonne	35	2,800
Supply & install Granular 'A'	20	tonne	40	800
Supply and Install Rip Rap End Walls	25	tonne	110	2,750
<b>Culvert #2 (10-299, M. Jackson)</b>				
Remove and Dispose of Existing Culvert	1	LS	800	800
Supply & Install 1200mm dia. Sanitite c/w Bedding	15	m	800	12,000
Supply and install Granular 'B' Type II	80	tonne	35	2,800
Supply & install Granular 'A'	20	tonne	40	800
Supply and Install Rip Rap End Walls	25	tonne	110	2,750

<u>Item Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost (\$)</u>	<u>Total (\$)</u>
<b>Culvert #3 (10-300, J. Jackson)</b>				
Remove Existing Culvert and Concrete Blocks, Salvage Materials and Reinstall at Grade Line	1	LS	2,500	2,500
Supply and install Clear Stone Bedding to Spring Line	20	tonne	45	900
Supply and install additional Granular 'B' Type II	20	tonne	35	700
Supply & install additional Granular 'A'	10	tonne	40	400
Supply & install Additional Concrete Blocks for End Walls	6	each	170	1,020
Supply & Install Rip Rap Adjacent the Block End Walls	10	tonne	110	1,100
<b>Culvert #4 (10-300, J. Jackson)</b>				
Remove and Dispose of Existing Culvert	1	LS	800	800
Supply & Install 1200mm dia. Sanitite c/w Bedding	10	m	800	8,000
Supply and install Granular 'B' Type II	70	tonne	35	2,450
Supply & install Granular 'A'	20	tonne	40	800
Supply and Install Concrete Block End Walls	38	tonne	170	6,460
Supply & Install Rip Rap Adjacent the Block End Walls	10	tonne	110	1,100
<b>Culvert #5 (10-300-01, W. Jackson &amp; 10-300-05, K. Nickles)</b>				
Remove and Dispose of One and Remove and Salvage for Landowner Other Existing Culverts	1	LS	1,600	1,600
Supply & Install 1050mm dia. Sanitite c/w Bedding	26	m	700	18,200
Supply and install Granular 'B' Type II	140	tonne	35	4,900
Supply & install Granular 'A'	40	tonne	40	1,600
Place Native Material	1	LS	1,500	1,500
Supply and Install Concrete Block End Walls	38	tonne	170	6,460
Supply & Install Rip Rap Adjacent the Block End Walls	10	tonne	110	1,100
Connect Existing Tile from South to Proposed Pipe	1	LS	500	500
Supply and Install Catch Basin	1	LS	1,500	1,500
<b>Culvert #7 (10-301, R. Vanderburgt)</b>				
Remove and Dispose of Existing Culvert	1	LS	800	800
Supply & Install 900mm dia. HDPE c/w Bedding	15	m	650	9,750
Supply and install Granular 'B' Type II	80	tonne	35	2,800
Supply & install Granular 'A'	20	tonne	40	800
Supply and Install Rip Rap End Walls	25	tonne	110	2,750
<b>Culvert #8 (10-303, R. Allison)</b>				
Slip Line Existing Culvert with 525mm dia. HDPE Pipe	11	m	450	4,950
Grout Between Existing and Proposed Pipes	1	LS	2,000	2,000
Contingency				8,290
	Sub Total			177,830
	Allowances			3,290
	Engineering			27,840
	Future Culvert Design			1,800
	Estimate for Tendering, Inspection and Contract Administration			13,500
	SCRCA Fee			570
	<b>Total Estimate excluding HST</b>			<b>224,830</b>
	Non-Recoverable HST (1.76%)			3,890
	<b>Total Estimate</b>			<b>\$ 228,720</b>

**SCHEDULE OF ASSESSMENT**

Conc.	Lot or Part	Affected Hecatares	Roll No.	Owner	Special Benefit (\$)	Benefit (\$)	Outlet (\$)	Total (\$)
<b>Utilities</b>								
	Gas Utility			Enbridge Gas	1,310	-	-	1,310
	Water Utility			Town of Plympton-Wyoming	1,310	-	-	1,310
	Telecom Utility			Eastlink	1,310	-	-	1,310
	Total Utilities				3,930	-	-	3,930
<b>Municipal Lands</b>								
	London Line	1.92		County of Lambton	1,110	34,279	8,857	44,246
	Total Municipal Lands				1,110	34,279	8,857	44,246
<b>Non-Agricultural Lands</b>								
4	Pt. E 1/2 Lot 5	0.52	10-300-01	W. Jackson	144	15,298	1,127	16,569
	Pt. W 1/2 Lot 6	0.60	10-300-05	K. Nickles	192	15,583	1,342	17,117
	Pt. W 1/2 Lot 6	0.40	10-303	R. Allison	45	6,992	2,105	9,142
	Total Non-Agricultural Lands				381	37,873	4,574	42,828
<b>Agricultural Lands (Eligible for Available Grants)</b>								
4	E 1/4 Lot 4	3.47	10-298	M. Jackson	375	15,480	269	16,124
	W 1/2 Lot 5	6.07	10-299	M. Jackson	927	18,754	3,679	23,360
	E 1/2 Lot 5	5.55	10-300	J. Jackson	27,197	9,367	5,310	41,874
	W 1/2 Lot 6	17.80	10-301	R. Vanderburgt	2,340	16,458	36,771	55,569
	E 1/2 Lot 6	0.20	10-304	J. Jackson		-	789	789
	Total Agricultural Lands				30,839	60,059	46,818	137,716
	Total Utilities				3,930			
	Total Municipal Lands				44,246			
	Total Non-Agricultural Lands				42,828			
	Total Agricultural Lands				137,716			
	Total Area	36.53						
	Total Assessment				\$228,720			

**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 (\$)
<b>Utilities</b>								
	Gas Utility			Enbridge Gas	1,310			1,310
	Water Utility			Town of Plympton-Wyoming	1,310			1,310
	Telecom Utility			Eastlink	1,310			1,310
<b>Municipal Lands</b>								
	London Line	1.92		County of Lambton	44,246			44,246
<b>Non-Agricultural Lands</b>								
4	Pt. E 1/2 Lot 5	0.52	10-300-01	W. Jackson	16,569		220	16,349
	Pt. W 1/2 Lot 6	0.60	10-300-05	K. Nickles	17,117		260	16,857
	Pt. W 1/2 Lot 6	0.40	10-303	R. Allison	9,142		140	9,002
<b>Agricultural Lands (Eligible for Available Grants)</b>								
4	E 1/4 Lot 4	3.47	10-298	M. Jackson	16,124	5,250	410	10,464
	W 1/2 Lot 5	6.07	10-299	M. Jackson	23,360	7,478	870	15,012
	E 1/2 Lot 5	5.55	10-300	J. Jackson	41,874	4,892	840	36,142
	W 1/2 Lot 6	17.80	10-301	R. Vanderburgt	55,569	17,743	550	37,276
	E 1/2 Lot 6	0.20	10-304	J. Jackson	789	263		526
Total Agricultural Lands					228,720	35,626	3,290	189,804

**SCHEDULE OF MAINTENANCE**

To Maintain the Open Channel Portion of the Jackson Drain from Station 0+000 to 1+039

Conc.	Lot or Part	Affected Hecatares	Roll No.	Owner	Benefit (\$)	Outlet (\$)	Total (\$)
<b>Municipal Lands</b>							
	London Line	1.92		County of Lambton	150	59	209
Total Municipal Lands					150	59	209
<b>Non-Agricultural Lands</b>							
4	Pt. E 1/2 Lot 5	0.52	10-300-01	W. Jackson	18	7	25
	Pt. W 1/2 Lot 6	0.60	10-300-05	K. Nickles	25	9	34
	Pt. W 1/2 Lot 6	0.40	10-303	R. Allison	12	14	26
Total Non-Agricultural Lands					55	30	85
<b>Agricultural Lands (Eligible for Available Grants)</b>							
4	E 1/4 Lot 4	3.47	10-298	M. Jackson	60	6	66
	W 1/2 Lot 5	6.07	10-299	M. Jackson	119	32	151
	E 1/2 Lot 5	5.55	10-300	J. Jackson	98	50	148
	W 1/2 Lot 6	17.80	10-301	R. Vanderburgt	69	267	336
	E 1/2 Lot 6	0.20	10-304	J. Jackson	-	5	5
Total Agricultural Lands					346	360	706
Total Municipal Lands					209		
Total Non-Agricultural Lands					85		
Total Area					706		
Total Assessment					\$1,000		

Jackson Drain  
Town of Plympton-Wyoming  
February 3, 2026

## SPECIFICATION OF WORK

### 1. Location

The location of the proposed and future work outlined in this specification is in Concession 4 along the north limits of Lots 4, 5 & 6 in the Town of Plympton-Wyoming.

### 2. Scope of Work

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

- Open Channel Improvements
- Culvert Replacements
- Supply and Installation of a catch basin structure at Culvert #5
- Slip Lining of Culvert #8

### 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 Contract Administrator who may vary these specifications as to minor details but in no way decrease the proposed capacity of the drain.

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.

The quantities are estimates only. The actual quantities shall be determined at the time of construction by the Contract Administrator and shall be paid at the established unit prices.

Any equivalents shall be approved in writing by the Contract Administrator prior to ordering.

**The culverts to be replaced under this report shall be completed prior to September 21, 2026.**

#### **4. 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.

The Contractor shall be responsible for traffic control as per the Ontario Traffic Manual Book 7 – Temporary Conditions (latest revision) when working on public road allowances. A copy of a traffic control plan shall be submitted to the Engineer, Drainage Superintendent and kept on site at all times. The Contractor shall maintain suitable barricades, warning lights, and temporary traffic notices, at his expense, in their proper position to protect the public both day and night. Flagmen are the responsibility of the Contractor when working on the road allowance and when entering or exiting a worksite onto a roadway.

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 noncompliance 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.

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

The Contractor shall submit their traffic control plan within 10 working days of notice of award. Road closures will not be permitted on this project without the approval of the Town of Plympton-Wyoming.

#### **5. Workplace Safety and Insurance Board**

The Contractor hereby certifies that all employees and officers working on the project are covered by benefits provided by the Contractor. The WSIB Clearance Certificate must be furnished prior to the execution of the Contract and updated every 90 days.

#### **6. Utilities**

The Contractor is responsible for organizing locates and exposing all the utilities along the length of the drainage works. If any utilities interfere with the proposed drainage works in a manner not shown on the accompanying Estimate of Cost or profile the Contractor shall notify the Contract Administrator.

The Contractor is responsible for coordinating the replacement of additional utilities with the utility company if they interfere with the proposed drain. All costs for the utility to replace their

services will be outside of this report and shall be borne by the utility as per Section 26 of the Drainage Act.

All additional costs to work around and organize replacement of the utilities not included in the estimate shall be tracked separately and the cost plus a portion of the engineering (25% of the cost) shall be borne by that utility.

Utilities have not been located as part of the Engineering Design process.

## **7. Pre-Construction Meeting**

There is a requirement for a pre-construction meeting to be held prior to any construction taking place. The meeting will be scheduled by the Contractor. Contact information will be provided to the Contractor by the Engineer. The affected Landowners, Engineer, County of Lambton and the Town of Plympton-Wyoming shall be invited. The Contractor shall notify all parties at least one week prior to wanting to hold a pre-construction meeting.

## **8. Benchmarks**

The benchmarks are based on geodetic elevations. Elevations are available at the locations outlined in this report. 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.

## **9. 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 and accesses with the owners at least two full working days in advance. The Traffic Plan must be approved by the Town and County of Lambton prior to the commencement of any road closures.

- 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 Contract Administrator. 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 Contract Administrator. 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.

## 10. Access and Working Area

Access to the drain shall be from London Line, using existing culverts and laneways, and then along the length of the drainage works. Access shall generally be restricted to a width of 6m.

The working area for construction of the open channel shall generally be done from the north (road) side with the excavated material being trucked off site. The working area shall be from the centreline of the road to the north top of bank.

For future maintenance the working area shall be restricted to a width of 10m from the top of bank where the work is taking place and 4m from the top of bank on the opposite side. Unless otherwise noted, the excavation shall generally be done from the field side, except across finished lawns. Across finished lawns the drain shall be cleaned from the road side with the excavated material being disposed offsite.

The working area at each culvert to be replaced, maintained, or repaired either under this report or in the future shall extend 10 metres on either side of the culvert within the same property or road.

## 11. Removals

The culverts and any native backfill material, when required, shall be removed in their entirety. Culvert #3 shall be removed and salvaged for re-installation. The culvert, backfill and the concrete rubble shall be disposed offsite at the expense of the Contractor. Any broken concrete or rip rap (concrete bags) from the existing structures shall be disposed offsite at the expense of the Contractor unless determined re-usable by the Drainage Superintendent or Engineer. **The existing culvert at #3497 London Line shall be removed by the Contractor in order to be salvaged by the Landowner. The Contractor shall place the culvert to the south of the channel for the Landowner.**

The Contractor shall work around the existing fences and signs if they are able to. If the existing fences and signs are required to be removed, they shall be removed and re-installed in the same location with the existing materials. All work in connection with fences and signs shall be carried out in a careful manner so they are replaced in as good a condition as the existing materials permit.

## 12. Brushing and Tree Removal

For construction and future maintenance all brush, stumps, trees, woody vegetation, etc. within the working area and the cross section of the drain, as determined by the Contract Administrator, shall be removed.

A mechanical grinder attached to an excavator shall 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 Contract Administrator. Trees may be limbed and piled for firewood, instead of burned, at the request of a Landowner.

### **13. Excavation of Open Channel**

For construction and future maintenance, the open channel shall be excavated and maintained to the depths and grades as per the profile and drawings contained in this Engineers Report. The channel shall be excavated to the proper depth using a laser or similar approved device with a labourer onsite to ensure correctness of grade and to confirm location of tile ends.

For construction, all excavated material shall be trucked offsite at the expense of the Contractor.

For future maintenance, the excavated material shall generally be cast on the side it is being excavated from, except across finished lawns or where trees are on the field side do not provide a suitable area to the level the material. In these areas the excavated material shall be trucked. Excavated material shall be cast at least 1.5 metres clear of the bank. Excavated material shall not be placed in low runs or swales outletting surface water to the channel. The excavated material shall be levelled to a maximum depth of 150mm and left in a condition suitable for cultivation. This shall include the removal of any rocks larger than 10cm in diameter and any debris/wood that could damage or plug farm equipment. Leveling shall occur when the material is dry enough to do so as determined by the Contract Administrator. All high spots above grade shall be removed. The sediment shall be removed leaving a rounded bottom with the intent not to undercut the existing side slopes. All material unfit for placing on farmlands, as determined by the Contract Administrator, shall be disposed of offsite at the expense of the Contractor.

The Contractor shall excavate a stable slope where determined by the Drainage Superintendent or Engineer. The bank slope shall be determined by the Drainage Superintendent or Engineer and shall not be flatter than a 2:1.

### **14. Installation of Culverts**

The Contractor is required to notify the Landowner forty-eight (48) hours prior to the removal of a culvert.

The minimum cover is not always adequate during construction and it is the Contractors responsibility to provide additional cover to avoid damage to the pipe.

The high-density polyethylene (HDPE) smooth wall pipe (320 kPa) shall be CSA Approved with bell and spigot joints.

Sanitite Pipe shall be SaniTite HP with 320kPa and bell and spigot joints or approved equivalent. The exposed ends of the SaniTite culverts shall be wrapped in filter cloth to prevent UV damage.

The culverts designated to be replaced in the future under this report shall be examined after any cleanout of the open channel as to its condition. If it is found to be in disrepair (i.e. there are holes corroded in the bottom or sides) it shall be replaced as per these specifications.

The culverts shall be installed generally in the same location or as approved by the Contract Administrator. The culverts shall be installed with the invert 10% (minimum 150mm) below the original channel bottom elevation unless otherwise shown in order to achieve the minimum cover.

All culverts shall have rip rap end walls except the reinstalled Culvert #3. The access culverts shall be assessed, as per the report, to provide an 8m access width (except Culvert #5). If an owner requests a longer culvert than that required to achieve an 8m top width, please refer to the report. All culvert lengths are based on utilizing rip rap end walls.

The pipes that shall be extended upstream or downstream of the proposed culvert shall be done with non-perforated HDPE agricultural tubing with a manufactured coupling, elbow and rodent grate.

#### **Access Culverts:**

The bottom of the excavation shall be excavated to a minimum of 100mm below the proposed invert. When the pipe has been installed to the proper grade and depth, the excavation shall be backfilled with  $\frac{3}{4}$ " clear stone and wrapped in filter fabric from the bottom of the excavation to the spring line of the pipe, this shall be considered the bedding. Care shall be taken to ensure that the backfill on either side of the culvert does not differ by more than 300mm so that the pipe is not displaced. The access culverts shall be backfilled from the spring line or bottom to within 150mm of finished grade with granular "B" Type II. The top 150mm shall be backfilled with OPS granular "A" material to finished grade. If asphalt is proposed, the asphalt shall be HL4 and shall match the existing thickness. In these cases, the granular "A" shall occupy 150mm below the proposed asphalt. Excavated material shall be utilized to build up the adjacent access laneways to blend with the required cover height. Granular "A" shall be utilized, at the discretion of the Contract Administrator, in the vicinity of the proposed culverts in order to provide a suitable finished surface. Native material shall be used as backfill between the two driveways on Culvert #5.

If rip rap end walls are used, they shall consist of 150mm x 300mm quarry stone or approved equal. The area to receive the rip rap shall be graded to a depth of 400mm below finished grade. Filter fabric (Terrafix 270 R or approved equal) shall then be placed with any joints overlapped a minimum 600mm. Select native material may be used adjacent the rip rap. The quarry stone shall then be placed with the smaller pieces placed in the gaps and voids to give it a uniform appearance.

If concrete block end walls are used, they shall consist of concrete blocks with dimensions of approx. 600mm x 600mm x 1200mm, 600mm x 600mm x 2400mm or 300mm x 600mm x 1200mm as required. 600mm x 600mm x 2400mm concrete blocks will be paid at twice the unit price established per block, all others will be at a unit of 1. The top of the culvert shall govern block elevation. The correct block shall be set with the top of the block equal to the top of the culvert. 2400mm wide concrete blocks shall be used as the top block on arch and larger round pipes in order to span between the culvert top and the supporting block. The blocks shall be set at each end of the culvert so that each row of blocks will be offset approx. 100mm from the row below. The bottom row shall consist of one block placed parallel to the culvert. The blocks shall be imbedded a minimum of 300mm into each bank and shall extend into the drain bottom to match the pipe invert or below. Erosion protection shall be placed on the banks next to the end walls. The erosion protection shall consist of 150mm x 300mm quarry stone over filter fabric (Terrafix 270R or approved equal). It shall extend 500mm upstream or downstream and from top of bank to top of bank at each end wall.

The culverts included in the profile are based on Culverts #1, 2, 6 and 7 having rip rap end walls and #3, 4, 5 and 8 having concrete block end walls. For construction under this report the end walls shall be as outlined in the tender table and estimate.

The blocks shall be placed over a layer of filter fabric (Terrafix 270R or approved equal). The culvert shall be backfilled in conjunction with the placement of the blocks. The gaps between the culvert and the blocks shall be filled with concrete cinder blocks/bricks and mortar to give the end wall a finished appearance.

### **15. Culvert #8 Slip Lining**

Culvert #8 shall be slip lined with a 525mm dia. HDPE pipe with the HDPE pipe as close to the bottom of the pipe as possible. The gap between the existing and proposed pipe shall be grouted.

The grout shall contain 25kg of type 10 Portland Cement per cubic metre. Portland cement shall conform to the requirements of CSA CAN3-A5M. The gradation shall conform to Table 1 of CSA Standard. The slump of unshrinkable fill shall be between 150mm and 200mm. The maximum 28 days compression strength shall not exceed 0.40 MPa, as measured in accordance with CAN-A23.2-9C. At no time will water be added to the concrete on site. Concrete which is unworkable or that is too stiff to produce a satisfactory product is to be discarded.

### **16. Catch Basin at Culvert #5**

A catch basin shall be installed between the two driveways on Culvert #5. The catch basin shall be installed with a vertical 300mm dia. HDPE pipe, Inserta 'Tee' connection and cast-iron grate.

### **17. Culvert Maintenance**

The Contractor shall be responsible for maintenance of the access culverts for a period of one year after their installation. This will include repairing any settlement areas on the travel surface with Granular "A" and/or asphalt, topsoil and seed.

## **18. Subsurface Drainage**

All existing subsurface drains encountered during construction of the open channel or tile drain shall be reconnected or extended to the tile drain or open channel unless otherwise noted on the drawings or as directed by the Contract Administrator.

A suitable length of equivalent sized PE agricultural tubing shall be used to connect the drain to the open channel. Manufactured fittings shall connect the PE tile to the existing drain. The connections shall be carefully backfilled to ensure there is adequate support under the pipe and large clumps of clay do not displace the tile.

Tile outlets larger than 150mm in diameter, or as determined by the Contract Administrator at the time of construction, require erosion protection and rodent grates. The erosion protection made up of rip rap and filter fabric shall be installed on the embankment slope from 0.3m above the tile outlet to the channel bottom. The erosion protection shall be 1.0m wide.

The pipe from the south at Culvert #5 shall be connected to the proposed pipe with an insert tee connection.

## **19. Rip Rap**

Erosion protection made up of rip rap and filter fabric shall be installed in the locations determined by the Contract Administrator. Generally, the rip rap shall be installed where the toe is eroding at bends and at tile outlets 150mm diameter or greater.

All rip rap shall consist of 150mm x 300mm quarry stone or approved equal. The area to receive the rip rap shall be graded to a depth of 400mm below finished grade. After grading, a layer of filter fabric (Terrafix 270 R 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.

## **20. Seeding/Restoration**

All side slopes disturbed by construction shall be restored with double straw matting and seed. The double straw matting shall be installed according to the manufacturer's specifications. The straw matting and seed shall be installed no longer than 2 days after the disturbance of the side slope in that area.

All other areas disturbed by construction shall be restored to their pre-construction condition, which may include topsoil and seed. 50mm of screened topsoil and seed shall be installed at all disturbed areas within the road allowances.

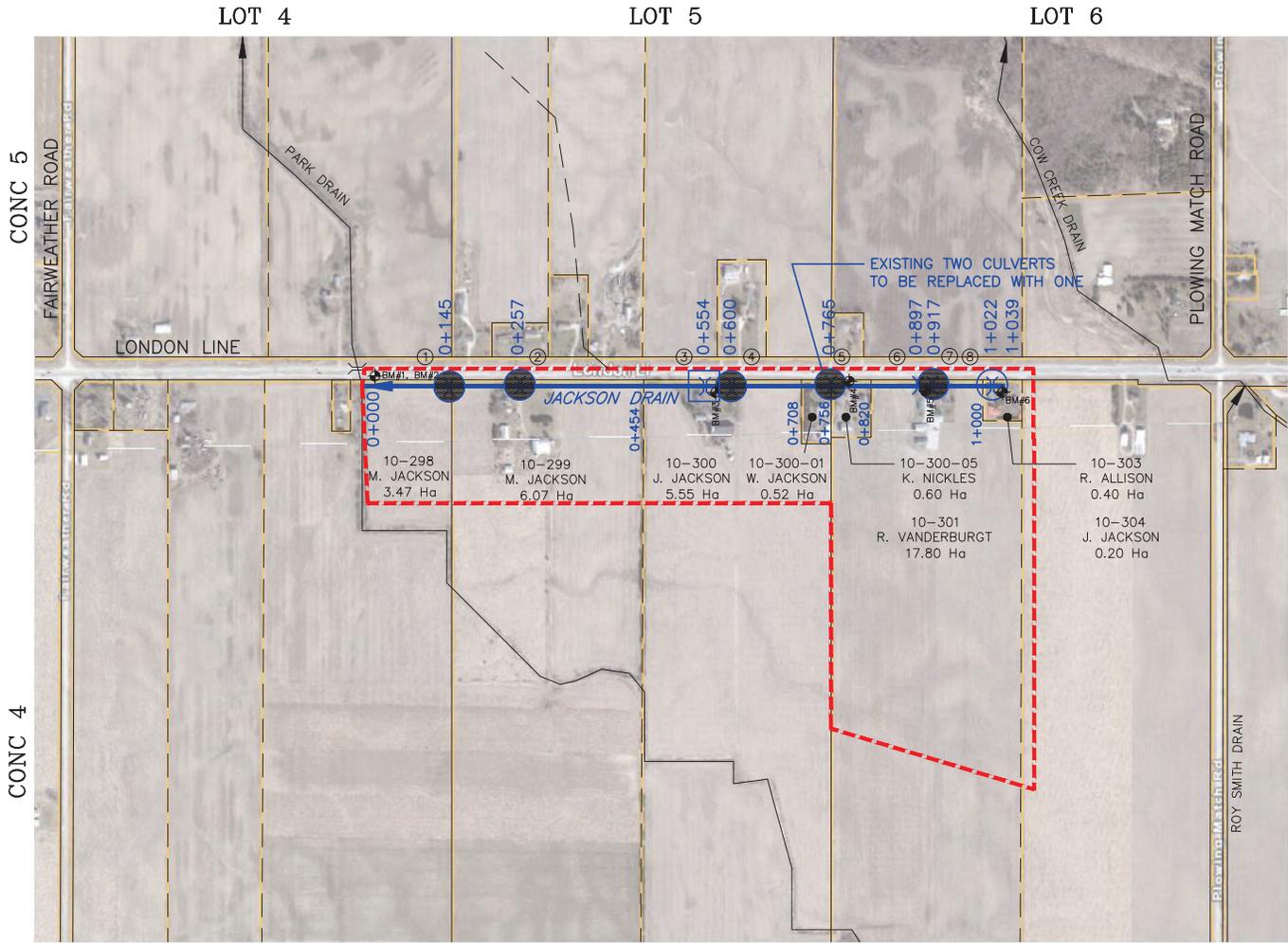
## **21. Environmental Considerations**

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 placed 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.

Light duty silt fences shall be installed down-gradient of the work for the duration of construction.

The light duty silt fencing shall be supplied and installed in accordance with OPSS 577 and OPSD 219.110. The light duty silt fencing shall be removed once construction is complete.



**LEGEND**

- DRAINAGE AREA
- JACKSON DRAIN
- MUNICIPAL DRAIN
- EXISTING CULVERT
- CULVERT NUMBER
- EXISTING CULVERT TO BE REPLACED
- EXISTING CULVERT TO BE LOWERED
- EXISTING CULVERT TO BE LINED



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

DRAWING NAME:  
Jackson Drain Plan

PROJECT No.  
2025-1755

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 3, 2026	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

SCALE: 1:7500

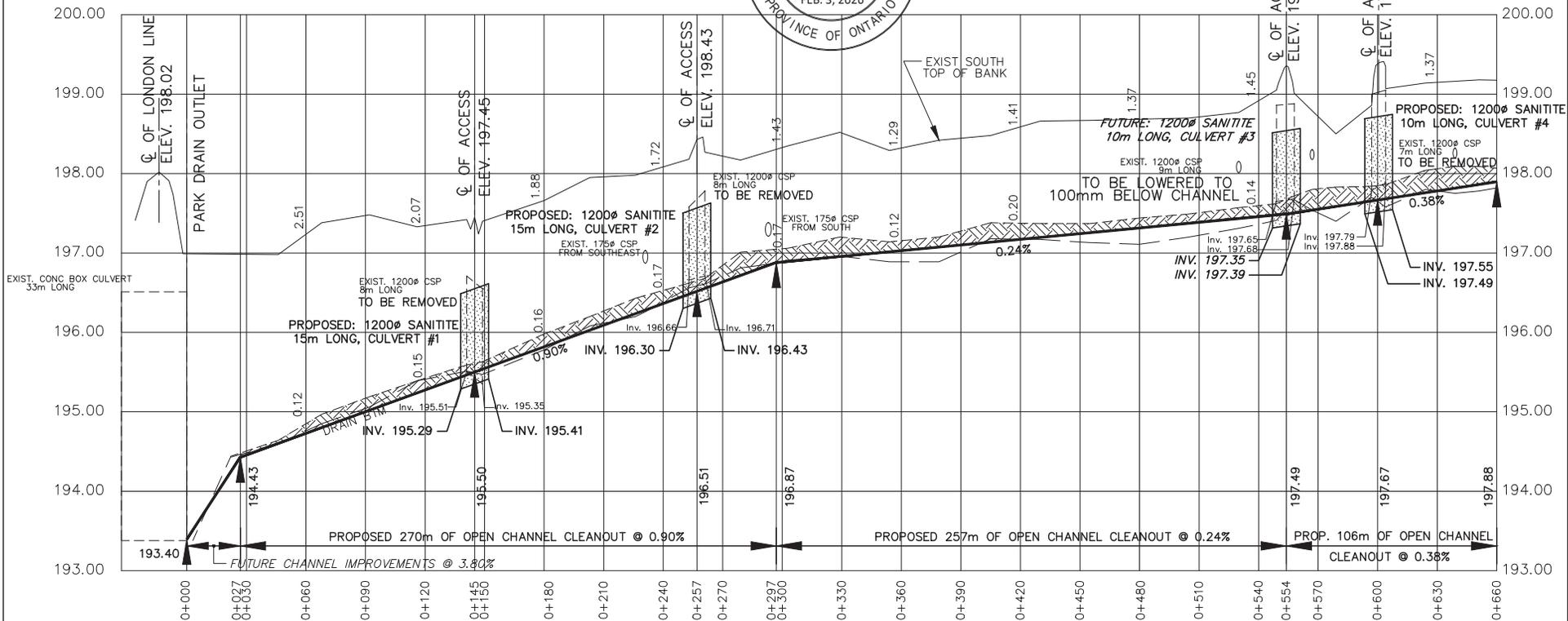
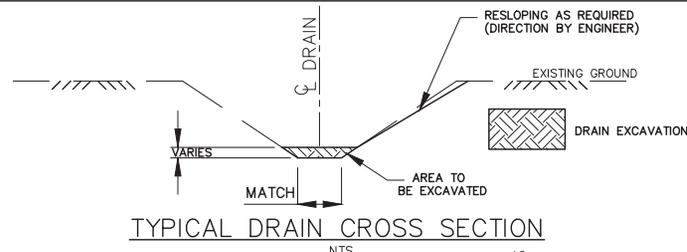
0 100 200 300m

**TOWN of PLYMPTON - WYOMING**  
**JACKSON DRAIN**  
**PLAN**

**GENERAL NOTES**

1. BENCHMARK No. 1 ELEV. 196.42  
TOP OF SOUTHEAST CORNER OF CONCRETE CULVERT CROSSING LONDON LINE ON PARK DRAIN.
- BENCHMARK No. 2 ELEV. 197.21  
TOP OF NORTH WEST CORNER OF CONCRETE CHAMBER SOUTH SIDE OF LONDON LINE JUST EAST OF PARK DRAIN CROSSING.
- BENCHMARK No. 3 ELEV. 199.04  
TOP OF CONCRETE JUNCTION BOX AT CULVERT #3, STATION 0+554

2. UPPER NUMBERS ARE DEPTH FROM EXISTING TOP OF BANK TO PROPOSED GRADE LINE.
3. LOWER NUMBERS ARE DEPTH OF EXCAVATION



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

DRAWING NAME:  
Jackson Drain Profile 1

PROJECT No.  
2025-1755

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 3, 2026	CS
B. VAN RUITENBURG				
DRAWN				
K. VANDERSLAGT				

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

**TOWN of PLYMPTON - WYOMING**  
**JACKSON DRAIN**  
**PROFILE**

**GENERAL NOTES**

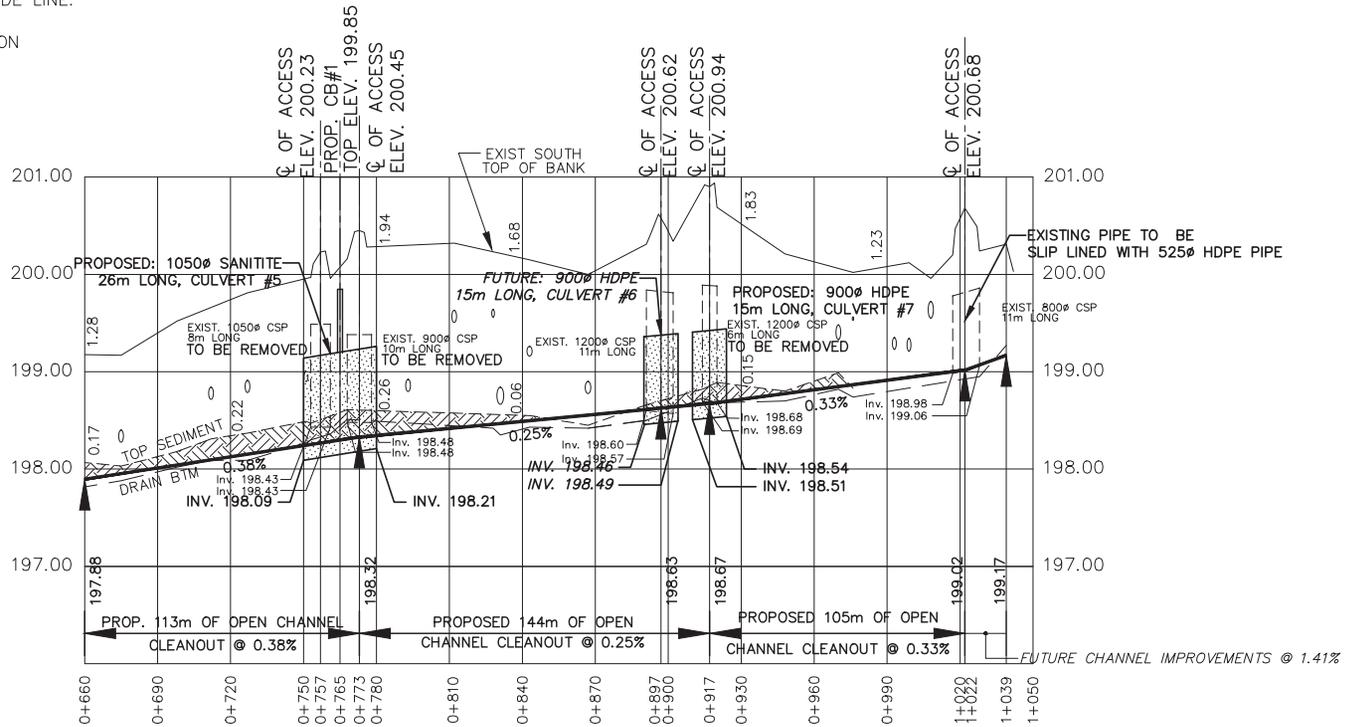
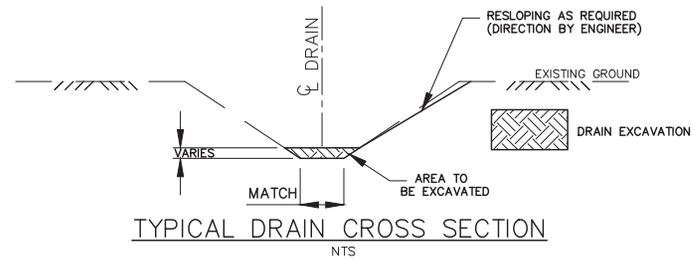
1. BENCHMARK No. 4 ELEV. 200.124  
TOP OF NORTHEAST CORNER OF CONCRETE HEADWALL FOR CULVERT AT STATION 0+773.

BENCHMARK No. 5 ELEV. 199.81  
TOP OF EAST END OF EXISTING 1200mm  $\phi$  CSP STATION 0+897

BENCHMARK No. 6 ELEV. 200.666  
TOP OF NORTHEAST CORNER OF CONCRETE HEADWALL FOR AT STATION 1+022.

2. UPPER NUMBERS ARE DEPTH FROM EXISTING TOP OF BANK TO PROPOSED GRADE LINE.

3. LOWER NUMBERS ARE DEPTH OF EXCAVATION



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

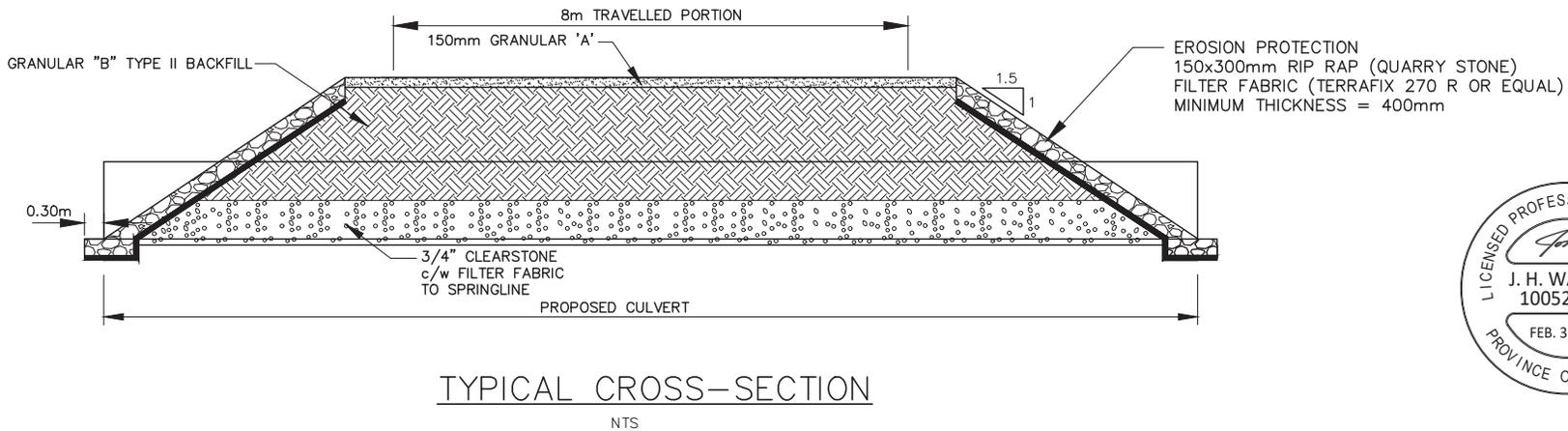
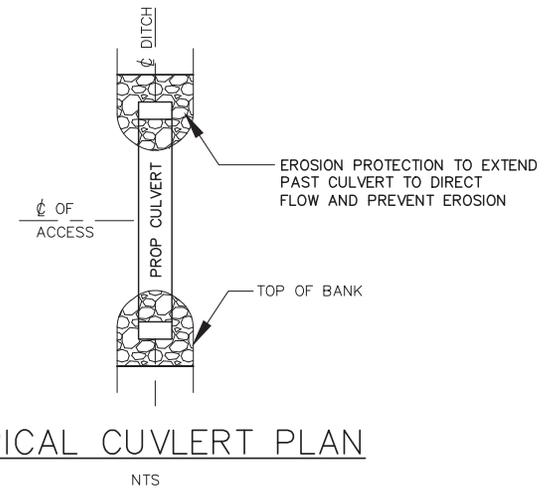
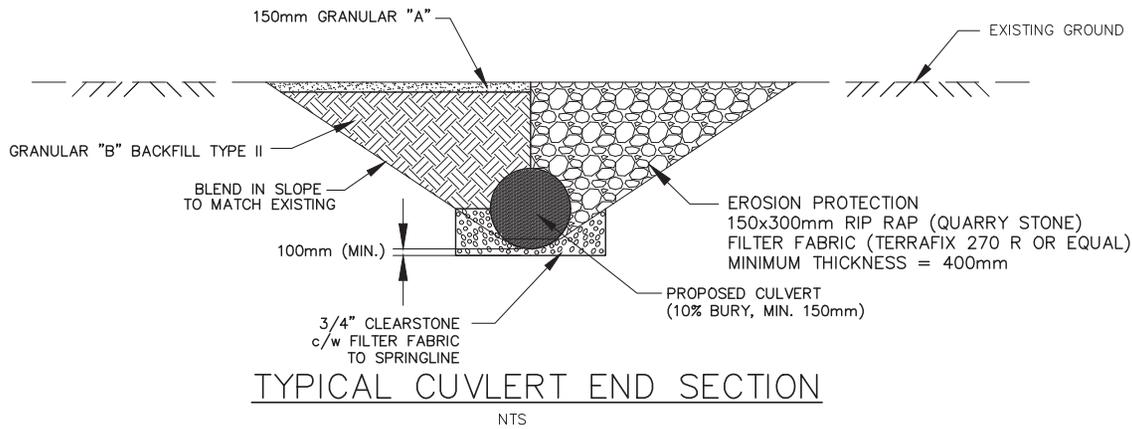
DRAWING NAME:  
Jackson Drain Profile 2

PROJECT No.  
2025-1755

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	FEB. 3, 2026	CS
DRAWN K. VANDERSLAGT	SCALE: 1:2,000			
	0 20 40 60m			

**TOWN of PLYMPTON - WYOMING**  
**JACKSON DRAIN**  
**PROFILE**

**3**  
**OF 5**



NOTE:  
ALL GRANULARS COMPACTED  
TO 98% MODIFIED PROCTOR DENSITY



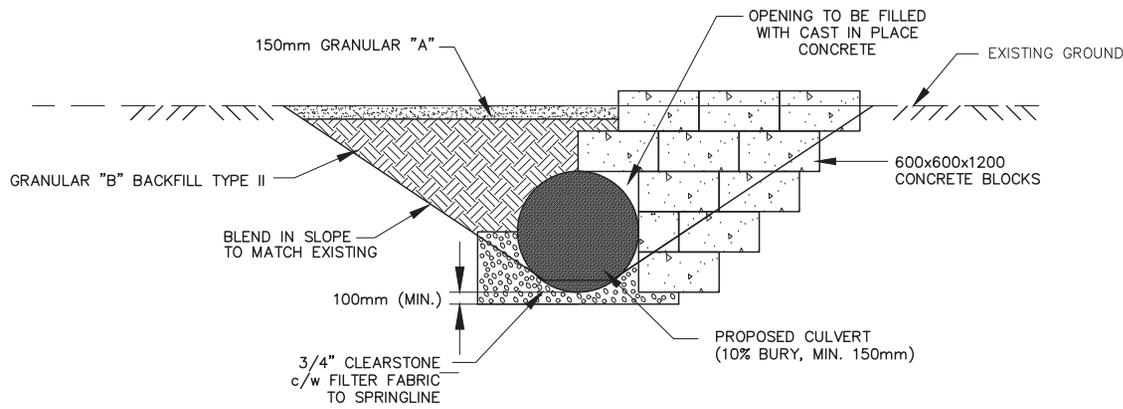
4218 Oil Heritage Road  
Petrolia Ontario, N0N 1R0  
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME: Jackson Drain Typical Rip Rap Endwall Culvert Detail  
PROJECT No. 2025-1755

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	FEB. 3, 2026	CS
DRAWN C. SAUNDERS	SCALE 1:75			

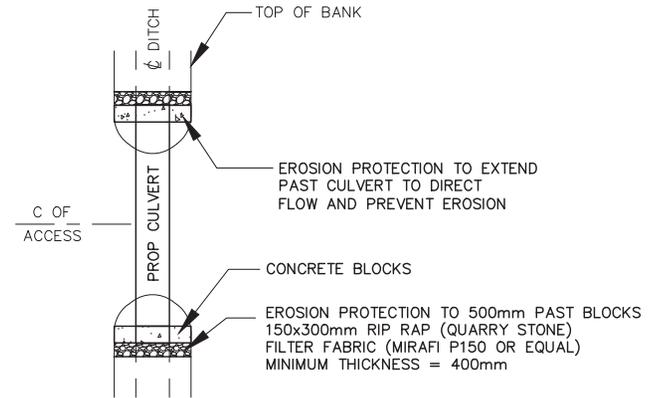
**TOWN of PLYMPTON-WYOMING**  
JACKSON DRAIN  
TYPICAL RIP RAP CULVERT DETAIL

4  
OF 5



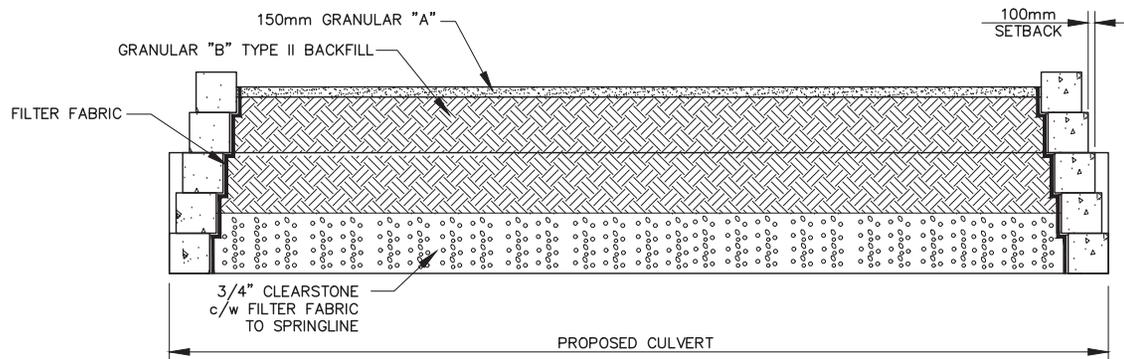
TYPICAL PIPE END SECTION

NTS



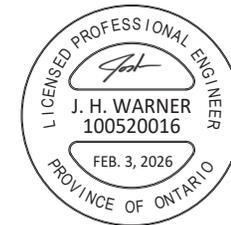
TYPICAL CULVERT PLAN

NTS



TYPICAL CROSS-SECTION

NTS



NOTE:  
ALL GRANULARS COMPACTED  
TO 98% MODIFIED PROCTOR DENSITY

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 3, 2026	JW
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

SCALE 1: 75

0 2m

TOWN of PLYMPTON-WYOMING  
JACKSON DRAIN  
TYPICAL BLOCK ENDWALL CULVERT DETAIL

5  
OF 5



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

DRAWING NAME: Jackson Drain Typical Block Endwall Culvert Detail  
PROJECT No. 2025-1755