

PICKERING DRAIN AND CAREY DRAIN EXTENSION CLEANOUT

THE MUNICIPALITY OF NORTH MIDDLESEX
TENDER for CONTRACT IO-21-2025



CLOSING DATE: November 19, 2025 @ 12:00 p.m. (noon)

BID FORM
PICKERING DRAIN AND CAREY DRAIN EXTENSION CLEANOUT
MUNICIPALITY OF NORTH MIDDLESEX

OWNER: The Municipality of North Middlesex
CONTRACT ADMINISTRATOR: R. Dobbin Engineering Inc.
LOCATION: Lots 28-30, Concession North Boundary in the Municipality of North Middlesex.

Bids will be received in sealed envelopes clearly marked **“Pickering Drain and Carey Drain Extension Cleanout”** at the Municipal office of:

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

Your bid must be received at the above specified location no later than:

Wednesday November 19, 2025
12:00 p.m. LOCAL TIME

Bid inquiries shall be submitted to Josh Warner, R. Dobbin Engineering Inc.:

Josh Warner, P. Eng.
R. Dobbin Engineering Inc.
4218 Oil Heritage Road
Petrolia, Ontario
josh@dobbineng.com
(519)-882-0032 ext. 204

Tender enquiries shall be accepted until November 14, 2025

SCHEDULE OF TENDER PRICES

TENDER PRICE

A. **Offer by:** _____

Name: _____

Address: _____

HST #: _____

Date: _____

To: The Municipality of North Middlesex

We, the undersigned, having examined the site of the Work, having carefully investigated the conditions pertaining to the Work and having secured all the information necessary to enable us to submit a bid, and having inspected all the Contract Documents and Drawings, hereby agree to enter into a Contract and perform all the Work in accordance with the Contract Documents and Drawings to the satisfaction of the Contract Administrator for the total bid price **INCLUDING HST** of:

_____ (\$ _____)

1. ADDENDA

We agree that we have received addenda ____ to ____ inclusive, and the bid price includes the provisions set out in such addenda.

TENDER TABLE

<u>Item Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost (\$)</u>	<u>Total (\$)</u>
Pre-Construction Meeting	1	LS		
Brushing and Tree Removal	1	LS		
Excavation of Carey Drain Extension and Placement of Material Adjacent Existing Pickering Drain (Station 0+134 to 0+286)	152	m		
Strip Topsoil on Proposed Channel Route and Place Adjacent Existing Channel (Station 0+286 to 0+593)	307	m		
Excavation of Open Channel and Placement of Material Adjacent Existing Channel (Station 0+286 to 0+593)	307	m		
Locate and Reconnect Existing Field Tile	1	each		
Rip Rap	100	t		
Restoration/Seeding c/w Straw Matting (2,700 sq.m for side slopes)	1	LS		
Silt Fence	1	LS		
Contingency	1	LS	\$ 2,370.00	\$ 2,370.00

Sub Total

HST (13%)

Total Tender Price

OFFERED ON BEHALF
OF THE CONTRACTOR

COMPANY NAME

SIGNATURE

CONTRACTOR'S SEAL
(See Note Below)

SIGNATURE

WITNESS (See Note Below)

COMPANY STREET ADDRESS

CITY, PROVINCE, POSTAL CODE

DATE OF OFFER

The Contractor agrees to complete substantially the work included in the contract barring delays regarding strikes and acts of God beyond our control, within _____ working days from the time of starting construction.

Note: Contractor to have the necessary signatures to bind the company. If a Contractor's seal is used there is no need for the offer to be witnessed. If no Contractor's seal is used, then a witness signature is needed.

CONDITIONS OF BID

1. The lowest or any bid will not necessarily be accepted by the Owner.
2. Contract Drawings 1 to 7 and the attached Specifications of Work for the Pickering Drain and Carey Drain Extension Cleanout are made part of this Contract Bid. The Contractor is to complete construction in accordance with the Drawings and the conditions indicated within this Bid Document.
3. A Form of Agreement is required to be signed and returned within 10 days of the award of contract.
4. TENDER DEPOSIT

The tender shall be accompanied by a tender deposit in the form of a certified cheque or a Bid Bond payable to the Owner (Municipality of North Middlesex) in the amount of 10% of the value of the tender price.

The Tenderers shall keep their tenders open for acceptance for 45 days after the closing date. Withdrawal during this period will result in forfeiture or enforcement of the tender deposit or Bid Bond.

Upon being notified that the tender has been accepted, the Contractor shall execute copies of the Agreement, supply bonds and insurance documents as specified, and start Work as specified.

Failure to execute the copies of the Agreement, or to supply bonds and insurance documents, within one week of the date of acceptance of the tender, will automatically mean the forfeiture or enforcement of the tender deposit. Tender deposits of unsuccessful Tenderers will be returned not later than two weeks following Tender close. The tender deposit of the successful Tenderer will be returned once the Contract Security is in place.

5. CONTRACT SECURITY

The bid deposit of the successful Tender shall be retained by the Municipality of North Middlesex until the contract is completed and a completion certificate is issued by the Engineer. The successful Contractor shall have the option of furnishing the Municipality of North Middlesex with a Performance Bond in the amount of one hundred percent (100%) of the total tender price (not including HST). The Performance Bond shall ensure completion of the work and maintenance of the work for a period of one year after the date of the completion certificate.

6. SCHEDULE

- a) The Contract is to be completed on or before – **November 30, 2026.**
- b) If the time limit above is not sufficient to permit completion by the Contractor working a normal number of hours, the Contractor shall make changes to permit the Work to be completed by the above date. Additional costs incurred shall be deemed to be included in the price bid for the Works.

7. EXAMINATION

- a) Upon receipt of Documents, verify that they are complete; notify the Contract Administrator should the Documents be incomplete.
- b) Each firm submitting a Tender shall carefully examine the Documents for discrepancies or omissions, and immediately notify the Consultant upon finding discrepancies or omissions, at least four (4) days prior to the date specified for closing.
- c) All firms submitting Tenders will acknowledge receipt of Addenda in the space provided in the Tender Form. If no Addenda are received, insert the word "None" in the space provided.

8. EXAMINATION OF SITE

- a) The Tenderers shall visit the site of the Work before submitting their Tender and shall by personal examination satisfy themselves as to the local conditions that may be encountered during construction of the Work. They shall make their own estimate of the facilities and difficulties that may be encountered and the nature of the subsurface materials and conditions.
- b) The Tenderer shall not claim at any time after submission of their Tender that there was any misunderstanding of the terms and conditions of the Contract relating to site conditions.

9. INSURANCE

- a) The successful Bidder will file with the Municipality within 10 calendar days of award of Contract, General Liability, Automobile and Property Damage Insurance coverage required by the Ontario Provincial Standard General Conditions.

10. WORKER'S SAFETY INSURANCE BOARD

- a) The successful Bidder will file with the Municipality within 10 calendar days of award of Contract, a current Certificate of good standing from the Worker's Safety Insurance Board (WSIB).

11. TIME CONSTRAINTS

- a) All Work shall be completed within the times outlined in The Municipality of North Middlesex noise by-law regulations.
- b) No weekend Work is permitted without prior approval by The Municipality of North Middlesex.

12. GUARANTEE PERIOD

- a) The Contractor shall guarantee the Material and Work shall for a period of twelve (12) months from the acceptance date remain in such condition as will meet the Contract Administrator's approval, and that they will make good in a permanent manner, satisfactory to the Contract Administrator, any imperfections due to materials or workmanship used in the construction and any damage caused by such imperfections. The decision of the Contract Administrator shall be final as to the nature and cause of such imperfections and the necessity for remedying them.

Should the Contractor fail to comply with the directions of the Contract Administrator, the Contract Administrator may, after giving the Contractor forty-eight (48) hours written notice, perform the necessary Work, and the cost may be deducted, or collected by the Owner as provided in the Contract.

- b) Notwithstanding the provision of the subsection (a) of this clause, the Contract Administrator may, in cases of danger or public safety, make such immediate arrangements for repairs as he/she sees fit, and the Contract Administrator will inform the Contractor of such action. The cost of such emergency Work shall be borne by the Contractor.
- c) If the Contract Administrator notifies the Contractor, in writing, of imperfections prior to the termination of the guarantee period, the Contractor shall make good the imperfections as required in subsection (a) above, notwithstanding that such Work of making good may commence after or extend beyond the end of the guarantee period.

- d) To cover the rectification costs during the guarantee period, the Municipality shall retain 3% of the value of Work done. This holdback will be retained for a period of twelve (12) months from the acceptance date.

13. PAYMENT

- a) Monthly draws for Work completed will be paid as needed. Payment will be subject to the 3% maintenance holdback and a 10% statutory holdback in accordance with the Construction Act. Payment at the unit priced bid for each item shall be full compensation for all labour, equipment, and materials required to do the Work.

14. EXTRA WORK

- a) Extra Work shall be undertaken as described in subsection GC3.10.02 of the General Conditions.
- b) If applicable tender items are provided in other parts of the Contract, extra Work shall be performed using the appropriate unit prices from these parts.
- c) Extra Work shall be paid under the Contingency Allowance.

15. QUANTITY OVERUNS AND UNDERUNS

- a) Compensation for quantity over runs and under runs shall be as described in GC 8.01.02 of the General Conditions.

16. DAMAGE

- a) Any damage to existing infrastructure and neighboring properties shall be repaired by the Contractor to the satisfaction of the Contract Administrator and be at the Contractors expense.

17. Liquidated Damages

Where the working days exceeds those identified in the contract the Contractor shall be

responsible for the cost of the engineering inspection for the additional working days.

18. UTILITIES

- a) The Contractor shall secure locates at no extra cost to the Contract prior to any construction activities.

19. CONSTRUCTION LAYOUT

- a) The Contractor will be responsible for the layout of all lines and grades from the plans at no extra cost to the Contract. Control information will be provided to the successful Bidder by R. Dobbin Engineering Inc. in a digital format.
- b) All discrepancies are to be reported to the Contract Administrator prior to proceeding with the Work. The Contract Administrator will review the layout in the field prior to construction.

20. INCLEMENT WEATHER

- a) There will be no compensation for inclement weather other than consideration of an extension for lost time at the end of the Contract that will be at the discretion of the Contract Administrator.

21. SUBSTANTIAL PERFORMANCE

- a) The project will be considered substantially performed when all parts of the Contract are completed in accordance with the General Conditions of Contract – GC 1.05.

22. ONTARIO PROVINCIAL STANDARDS

- a) GENERAL CONDITIONS OF CONTRACT (OPSS.MUNI 100), November 2006 apply to this Contract.

- b) The Ontario Provincial Standard Specifications (OPSS) and Drawings (OPSD) apply to this contract. All required OPS Specifications can be downloaded at:

<http://www.ragsb.mto.gov.on.ca/techpubs/ops.nsf/OPSHomepage>

THE SUPPLEMENTAL SPECIFICATIONS APPLICABLE TO THIS PROJECT ARE AS FOLLOWS:

Operational Constraints

The following operational constraints form part of the Contract. No additional costs will be made for completing Work within the operational constraints. Payment for Work associated with the operational constraints shall be included in the applicable unit price item.

1. The Contractor is responsible to complete the Contract within the schedule specified.
2. Safe and reasonable access must be provided to local vehicle traffic and to pedestrian traffic. The Contractor shall ensure traffic regulatory signs and 911 signs are in place and secure at all times.
3. The Contractor is responsible for securing locates and providing coordination with all utilities and agencies. In addition, the Contractor shall protect from damage all buried and aerial utility lines during construction.
4. If required, the Contractor is responsible for obtaining a Permit to Take Water (PTTW) for dewatering purposes.
5. Geotechnical investigation has not been undertaken within the project limits.
6. All conditions from the Department of Fisheries and Oceans (DFO) and Ausable Bayfield Conservation's (ABCA) approvals shall be adhered to.

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	400	400
Brushing and Tree Removal	1	LS	400	400
Excavation of Carey Drain Extension and Placement of Material Adjacent Existing Pickering Drain (Station 0+134 to 0+286)	152	m	15	2,280
Strip Topsoil on Proposed Channel Route and Place Adjacent Existing Channel (Station 0+286 to 0+593)	307	m	15	4,605
Excavation of Open Channel and Placement of Material Adjacent Existing Channel (Station 0+286 to 0+593)	307	m	60	18,420
Locate and Reconnect Existing Field Tile	1	each	200	200
Rip Rap	100	t	110	11,000
Restoration/Seeding c/w Straw Matting (2,700 sq.m for side slopes)	1	LS	10,000	10,000
Silt Fence	1	LS	200	200
Contingency				<u>2,370</u>
	Sub Total			49,875

Pickering Drain (2025) and Carey Drain Extension Cleanout
Municipality of North Middlesex
August 4, 2025

SPECIFICATION OF WORK

1. Location

The work in this specification is located in Lot 28, 29 and 30, North Boundary in The Municipality of North Middlesex.

2. Scope of Work

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

- 152m of Open Channel Cleanout on the Carey Drain Extension
- 307m of rerouting the open channel on the Pickering Drain
- Future open channel maintenance
- Future culvert replacements

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

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. Utilities

The Contractor is responsible for organizing locates and exposing all the utilities along the length of the drainage works. The utilities shall be located prior to the installation of any tile. 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 Drainage Superintendent and Engineer.

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 (20% of the cost) shall be borne by that utility.

7. 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. The Traffic Plan must be approved by the Municipality and County 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 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.
- d) If work is being completed on a Road and or Road Allowance in North Middlesex, the Contractor is required to complete a Road Allowance Work Permit Application available on their website: <https://www.northmiddlesex.on.ca/media/591>. No fees are required.

8. 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, and the Municipality of North Middlesex shall be notified of the pre-construction meeting at least 48 hours prior.

9. Access and Working Area

Access to the work site for construction shall be from Mount Carmel Drive and along the east side of the property with Roll Number 000-070-028 and along the length of the drainage works. Access shall be restricted to a width of 6m. The working area shall be as identified on the detail plan and may extend a maximum of 4m onto the property with Roll Number 000-070-029 if required at the discretion of the Engineer.

Access for future culvert maintenance and channel repair on a single property shall be from the nearest road, within the properties in which the culvert and/or channel is being repaired or maintained and shall be at a location determined by the Drainage Superintendent. If maintenance is being done on multiple properties, access shall be gained from the nearest roadway and shall be along the length of the drainage works. The working area at each culvert shall extend 10 metres from the bank on both sides and for 10 metres along the channel on either side of the culvert.

The working side for future maintenance shall extend 15m past the bank on either side of the drain and shall be determined by the Drainage Superintendent.

10. 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.

11. Removals (Future)

Future culverts, and unsuitable excavated material shall be removed in their entirety and shall be disposed offsite at the expense of the Contractor.

12. Brushing and Tree Removal

For construction and future maintenance all brush, trees, woody vegetation, stumps etc. shall be removed within the channel cross-section and within the working area in order to facilitate construction as determined by the Drainage Superintendent or Engineer. For construction, the trees within the existing Pickering Drain, that is to be abandoned, shall remain in place and shall be removed by the Landowner.

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 discretion of the Drainage Superintendent or Engineer.

13. Strip and Place Topsoil

The topsoil shall be stripped along the proposed channel route. The topsoil shall be placed at the edge of the working allowance as outlined on the drawings in order to allow the Landowner to fill in the existing channel.

14. 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 as 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, the excavated material and topsoil shall be stockpiled along the abandoned portion of the Pickering Drain. The topsoil shall be stockpiled on the west side of the channel and the excavated material shall be stockpiled on the east. All material shall be stockpiled along the length of the drain to be abandoned, not in one location. The Landowner will utilize this material to fill in the channel outside of this Contract.

For future maintenance, excavated material is to be levelled on the side it is being excavated from. 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 out letting surface water to the channel. The excavated material shall be levelled to a maximum depth of 150mm outside of the bush and shall be left in a condition suitable for cultivation. This shall include the removal of any rocks larger then 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 Drainage Superintendent or Engineer. All high spots above grade shall be removed. The sediment shall be removed leaving a rounded bottom with the intent not to undercut the side slopes. All material unfit for placing on farmlands, as determined by the Drainage Superintendent, shall be disposed of offsite by the Contractor.

15. Installation of Culverts (Future)

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 Contractor shall supply, install, and backfill aluminized corrugated steel pipe with a minimum wall thickness of 2.8mm for all access culverts. Corrugated Steel Pipe Arches and Road Culverts shall have a minimum wall thickness of 3.5mm. All corrugation profiles shall be of helical lock seam manufacture using 68 x 13mm corrugations for 1600mm dia. pipe and smaller and 125 x 25mm corrugations for 1800mm dia. pipe and larger. Pipe with 125 x 25mm corrugations shall be used if 68 x 13mm corrugations are not available.

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 Drainage Superintendent or Engineer. 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 may have concrete block or rip rap end walls. The access culverts shall be assessed, as per the report, to provide an 8m access width. 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 ¾" 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 may 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 Engineer or Drainage Superintendent, in the vicinity of the proposed culverts in order to provide a suitable finished surface.

Road Culverts:

Where there is asphalt, the asphalt shall be sawcut and milled for a thickness of 45mm and 0.30m past the joint. The milled surface shall be tack coated as per OPSS.

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 ¾" 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 pipe shall be backfilled above the clear stone with OPS Granular “A”.

Asphalt Road: The asphalt shall be HL4 and HL3 at depths to match the existing thickness with a minimum thickness of 50mm for each.

Gravel Road: The top 200mm shall be OPS Granular “M”, produced from 100% crushed dolomite, and shall be mechanically compacted to 100% modified standard proctor density.

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 (Mirafi P150 or approved equal) shall then be placed with any joints overlapped a minimum 600mm. 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 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.

The future culvert replacements shall be to the following sizes, at a minimum, and may be replaced with an equivalent sized arch, round pipe or box culvert at the discretion of the Drainage Superintendent. Approved equivalents must have an equal end area or greater.

Culvert Number	Roll Number / Owner	Existing Culvert	Replacement Culvert
	000-070-028 (Jerry McCann Holding Ltd.)	1200mm dia. CSP	To Be Removed by Owner. No longer required due to reroute.
1	000-070-029 (J C Rutten Farms Inc.)	1000mm dia. CSP	1400mm dia. CSP
2	000-070-029 (J C Rutten Farms Inc.)	1000mm dia. CSP	1400mm dia. CSP
3	000-050-001 (K. Knip)	900mm dia. HDPE	1400mm dia. CSP
4	Mount Carmel Drive	900mm dia. HDPE	1800mm dia. CSP

Bold Culverts Represents those proposed to be replaced or removed under this report

16. Seeding/Restoration

All areas disturbed by construction shall be restored to their pre-construction state.

All grass areas disturbed by construction, shall be restored with 50mm of screened topsoil and hydro seeded. The side slopes of the open channel shall be restored with double straw matting and hydroseed. The timing of the seeding shall be approved by the Drainage Superintendent or Engineer.

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.

17. Rip Rap

Erosion protection made up of rip rap and filter fabric shall be installed in the locations outlined on the detailed plan and as determined by the Drainage Superintendent or Engineer at the time of construction.

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.

18. Subsurface Drainage

All existing subsurface drains encountered during construction shall be reconnected to the open channel unless otherwise noted on the drawings or as directed by the Drainage Superintendent.

A suitable length of equivalent sized PE agricultural tubing shall be used to connect the drain to the open channel and tile drain. Manufactured fittings shall connect the PE tile to the existing drain and to the concrete tile. 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.

19. 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.

A light duty silt fencing 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.

Josh Warner

From: OP Habitat (DFO/MPO) <DFO.OPHabitat.MPO@dfo-mpo.gc.ca>
Sent: Wednesday, July 9, 2025 11:25 AM
To: Josh Warner
Subject: RE: 25-HCAA-01280 Pickering Drain

Unclassified - Non-Classifié



Fisheries and Oceans Canada
Ontario and Prairie Region
Fish and Fish Habitat Protection Program
867 Lakeshore Rd.
Burlington, ON
L7S 1A1

Pêches et Océans Canada
Région de l'Ontario et des Prairies
Programme de protection du poisson et de son habitat
867 chemin Lakeshore
Burlington, ON
L7S 1A1

Dear Josh Warner:

Subject: Drain Cleanout and Extension, Carey Drain, Class C, Pickering Drain, Class F, North Middlesex (25-HCAA-01280) – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on June 23, 2025. We understand that you propose to:

- Conduct a bottom cleanout to the depths and grade as per the engineers report for 152m of the Carey Drain; and
- Abandon a section of the Pickering Drain and realign approx. 307m of the drain to a new 9m wide corridor; and
- Place riprap at the new entry points connecting the drains; and
- Conduct works during dry conditions.

Our review considered the following information:

- Request for Review form and associated documents.

Your proposal has been reviewed to determine whether it is likely to result in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*;
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*; and,
- the introduction of aquatic species into regions or bodies of water frequented by fish where they are not indigenous, which is prohibited under section 10 of the *Aquatic Invasive Species Regulations*.

The aforementioned impacts are prohibited unless authorized under their respective legislation and regulations.

To avoid and mitigate the potential for prohibited effects to fish and fish habitat (as listed above), we recommend implementing the measures listed below:

- Carry out the project in accordance with [timing windows](#);
- Conduct in-water undertakings and activities during periods of low or no flow conditions
- Limit impacts on riparian vegetation to those approved for the work, undertaking or activity
- Immediately stabilize shoreline or banks disturbed by any activity associated with the project, preferably through re-vegetation with native species suitable for the site
- Install effective erosion and sediment control measures, including sediment traps and rock check dams in areas where excavation is required
- Avoid introducing sediments (e.g., silts, clays and sand) in the water
- Do not deposit any deleterious substances in the watercourse
- Develop and implement a response plan to avoid a spill of deleterious substances
- Capture fish trapped within an isolated or enclosed area and relocate them to the same watercourse or water body;
 - Dewater gradually to reduce the potential for stranding fish;
- Develop and implement an erosion and sediment control plan for all phases of the project;
 - Regularly observe the watercourse or water body for signs of suspended sediment during all phases of the project and take corrective action when and where required;
 - Operate machinery on land during all phases of the project; and,
- Develop a plan to prevent deleterious substances from entering a watercourse or water body.
- Aquatic invasive species are introduced and spread through transporting water, sands and sediments and using contaminated construction equipment. To prevent the spread of aquatic invasive species during construction in aquatic environments:
 - Ensure all equipment arrives on site clean and free of invasive species;
 - Clean, drain and dry any equipment used in the water; and,
 - Never move organisms or water from one body of water to another.

Provided that you incorporate these measures into your plans, the Program is of the view that your proposal is not likely to result in the contravention of the above mentioned prohibitions and requirements.

Should your plans change or if you have omitted some information in your proposal, further review by the Program may be required. Consult our website ([Projects near water \(dfo-mpo.gc.ca\)](http://Projects.near.water(dfo-mpo.gc.ca))) or consult with a qualified environmental consultant to determine if further review may be necessary. It remains your responsibility to remain in compliance with the *Fisheries Act*, the *Species at Risk Act* and the *Aquatic Invasive Species Regulations*.

It is also your *Duty to Notify* DFO if you have caused, or are about to cause, the death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to DFO.OPHabitat.MPO@dfo-mpo.gc.ca or 1-855-852-8320.

We recommend that you notify this office at least 10 days before starting your project and that a copy of this letter be kept on site while the work is in progress. Send your notification to the DFO 10 day notification mailbox: DFO.OP.10DayNotification-Notification10Jours.OP.MPO@dfo-mpo.gc.ca. It remains your

responsibility to meet all other federal, territorial, provincial and municipal requirements that apply to your proposal.

If you have any questions with the content of this letter, please contact Lucas Coletti at Lucas.Coletti@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,

Lucas Coletti
Biologist | Biologiste
Fisheries and Oceans Canada | Pêches et Océans Canada
Fish and Fish Habitat Protection Program | Programme de Protection du Poisson et de Son Habitat
M: (905)-317-1541
Email/Courriel: Lucas.Coletti@dfo-mpo.gc.ca

From: Josh Warner <josh@dobbineng.com>
Sent: Monday, June 23, 2025 1:39 PM
To: OP Habitat (DFO/MPO) <DFO.OPHabitat.MPO@dfo-mpo.gc.ca>
Subject: 25-HCAA-01280 Pickering Drain

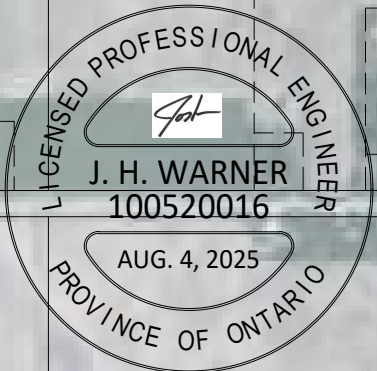
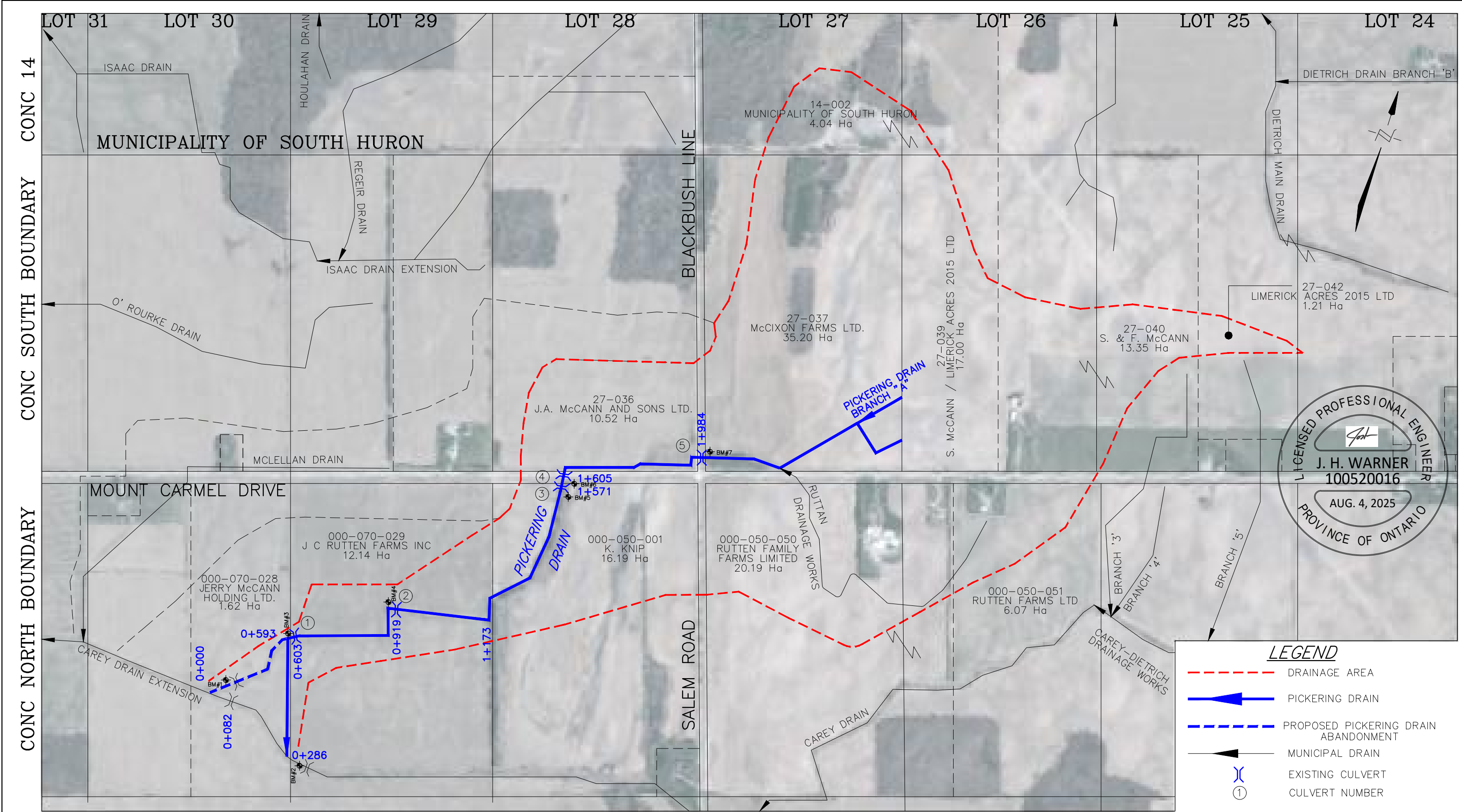
Hi,

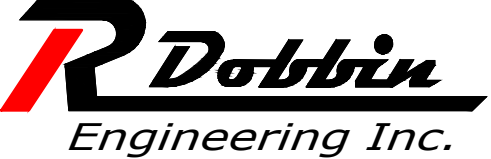
Please see attached Pickering Drain for your review. It is 152m of cleanout in the Carey Drain Extension and 307m of channel realignment on the Pickering Drain.

Thanks,

Josh Warner, P. Eng
R. Dobbin Engineering Inc.
4218 Oil Heritage Rd., Petrolia, ON N0N 1R0
Ph: 519.882.0032 ext. 204
E-mail: josh@dobbineng.com







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

DRAWING NAME:
Pickering Drain Plan

PROJECT No.
2024-1686

APPROVED J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	AUG. 4, 2025	CS
DRAWN C. SAUNDERS	SCALE 1:10,000 0 80 160 240m			

MUNICIPALITY of NORTH MIDDLESEX

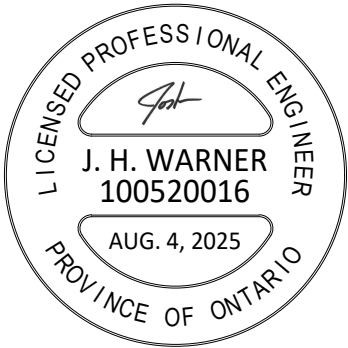
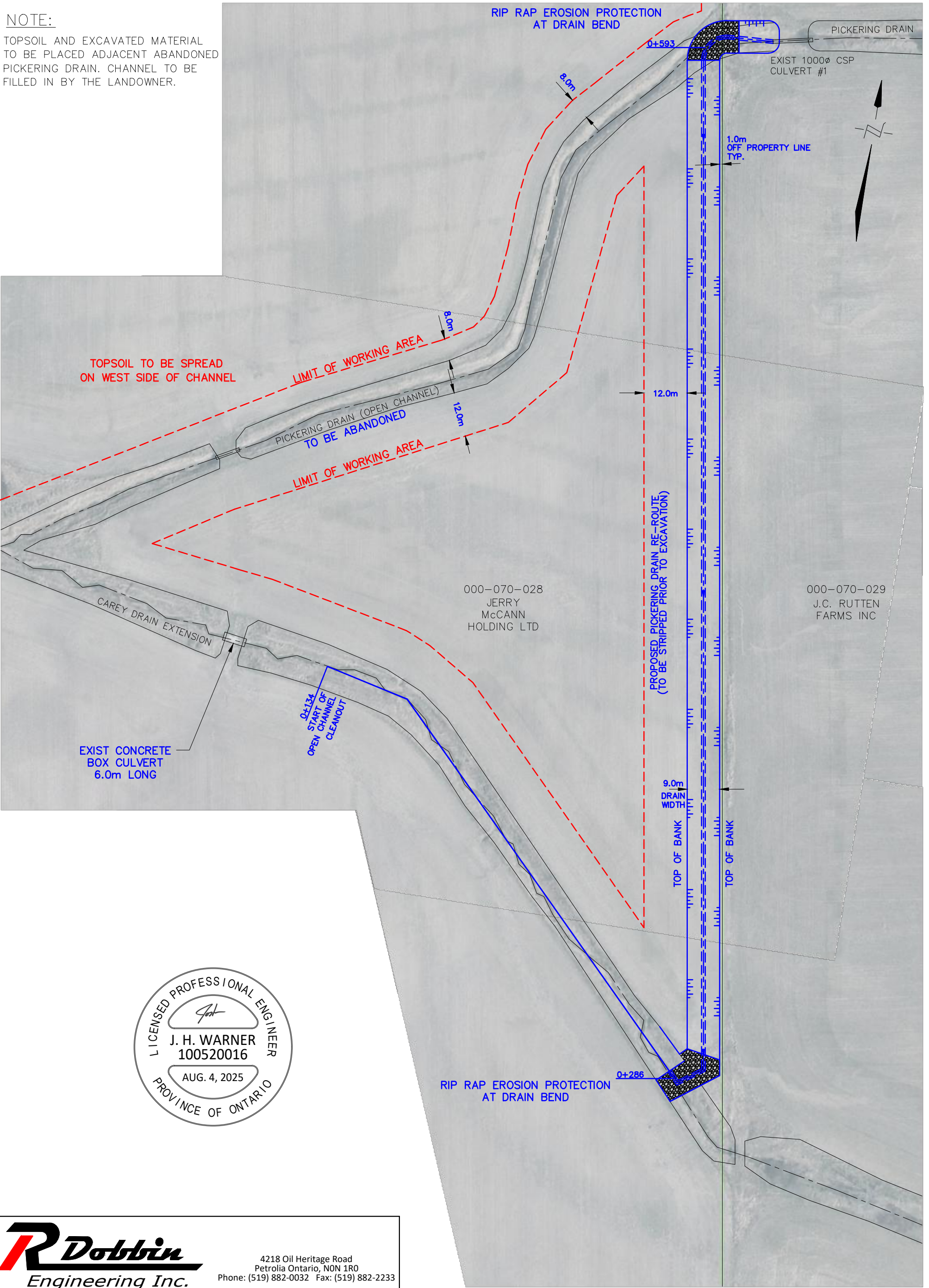
PICKERING DRAIN PLAN

1

OF 7

Last Updated: August 4, 2025

NOTE:
TOPSOIL AND EXCAVATED MATERIAL
TO BE PLACED ADJACENT ABANDONED
PICKERING DRAIN. CHANNEL TO BE
FILLED IN BY THE LANDOWNER.



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

DRAWING NAME:
Pickering Drain Detail Plan

PROJECT No.
2024-1686

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	AUG. 4, 2025	CS
B. VAN RUITENBURG	SCALE: 1:1000 0 50 100 150m			
DRAWN				
C. SAUNDERS				

MUNICIPALITY of NORTH MIDDLESEX
PICKERING DRAIN
DETAIL PLAN

2
OF 7

GENERAL NOTES

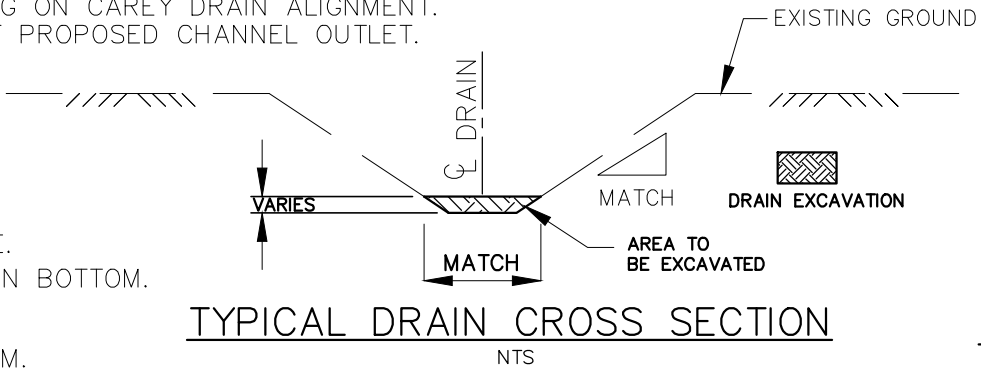
1. BENCHMARK No.1 ELEV. 212.89

TOP OF SOUTH END OF EXISTING 1200Ø CSP CROSSING ON EXISTING PICKERING DRAIN +/- 60.0m FROM OUTLET.
- BENCHMARK No.2 ELEV. 214.03

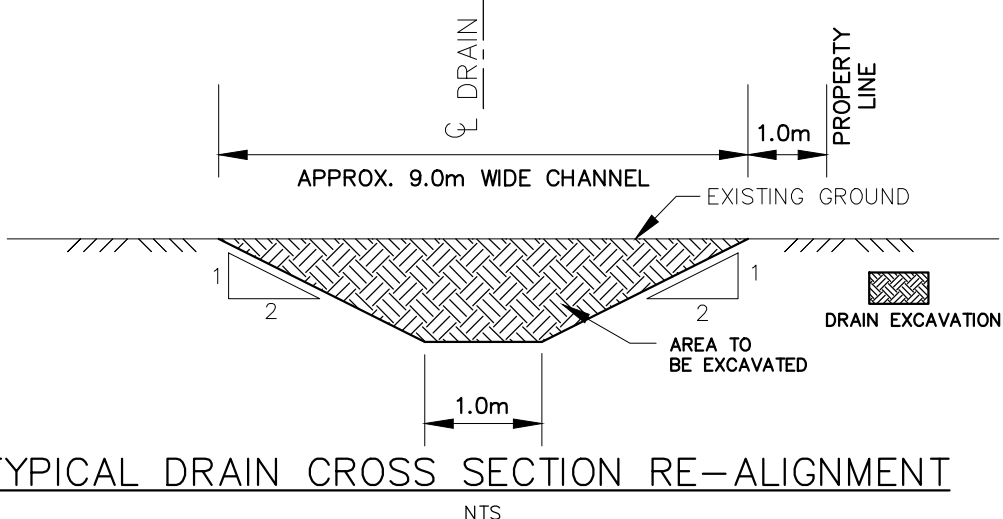
TOP OF WEST END OF EXISTING 1500Ø CSP CROSSING ON CAREY DRAIN ALIGNMENT. EAST OF PROPOSED CHANNEL OUTLET.
- BENCHMARK No.3 ELEV. 213.24

TOP OF WEST END OF EXISTING 1000Ø CSP CROSSING ON PICKERING DRAIN ALIGNMENT. AT ST. 0+603
2. UPPER NUMBERS ARE DEPTH FROM GROUND TO BOTTOM OF PROPOSED DRAIN RE-ROUTE. AND FROM TOP OF NORTH BANK TO PROPOSED DRAIN BOTTOM.

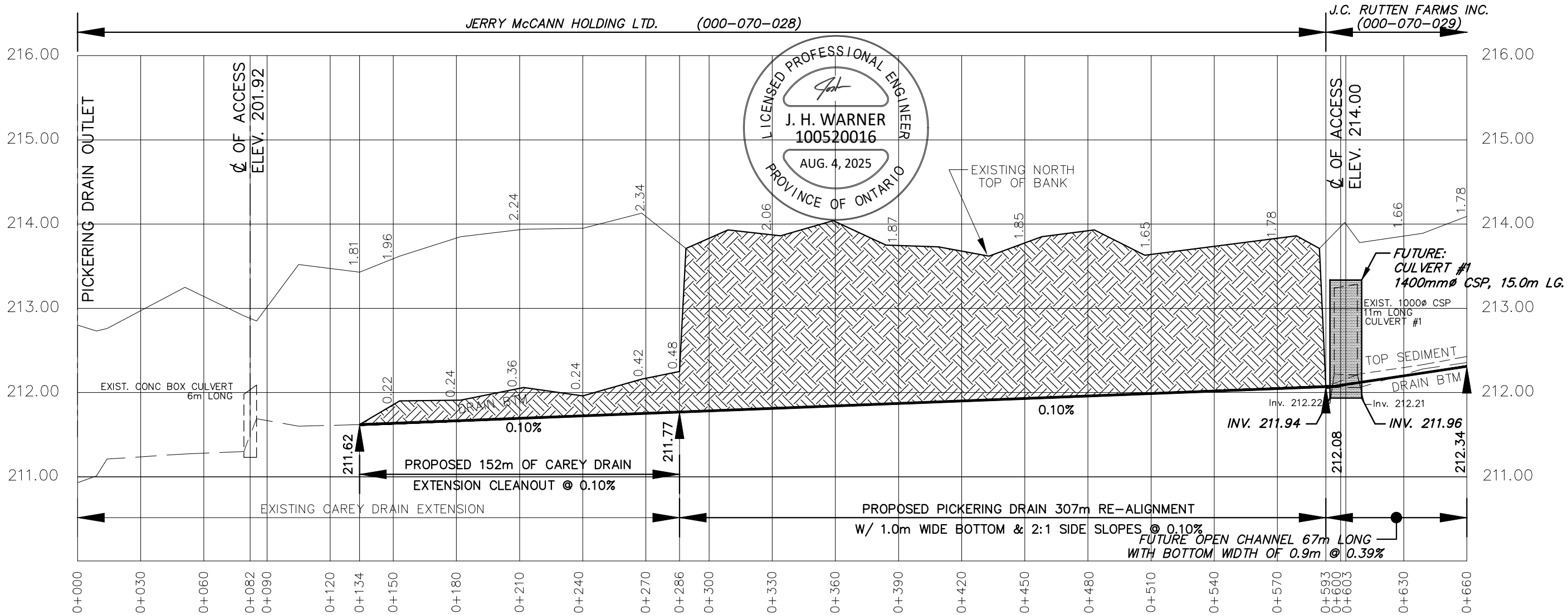
2. LOWER NUMBERS ARE DEPTH FROM EXISTING DRAIN BOTTOM TO PROPOSED DRAIN BOTTOM.



TYPICAL DRAIN CROSS SECTION



TYPICAL DRAIN CROSS SECTION RE-ALIGNMENT



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

DRAWING NAME:
Carey Drain Extension and Pickering Drain Profile 1

PROJECT No.
2024-1686

APPROVED
J. WARNER

CHECKED
B. VAN RUITENBURG

DRAWN
C. SAUNDERS

NO.	REVISIONS	DATE	BY
1	FINAL REPORT	AUG. 4, 2025	CS

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

MUNICIPALITY of NORTH MIDDLESEX

PICKERING DRAIN AND CAREY DRAIN EXTENSION

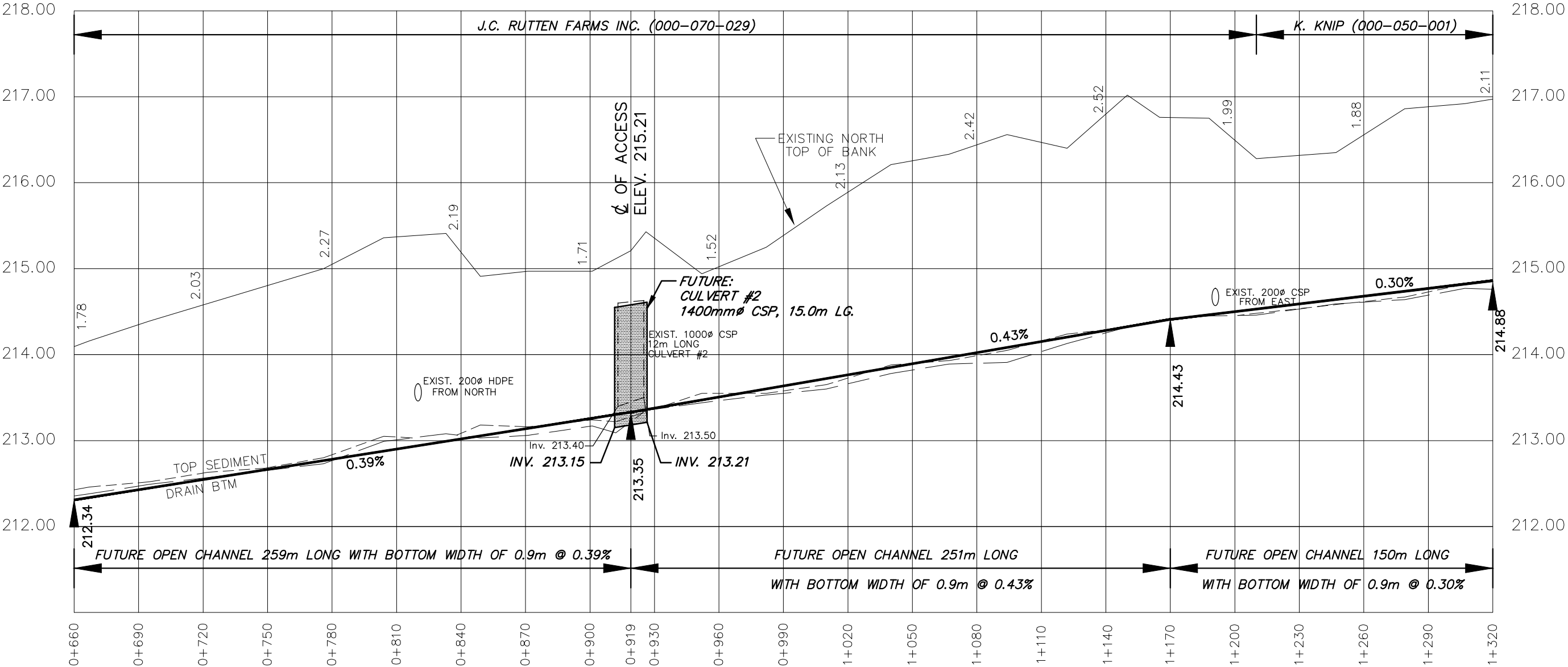
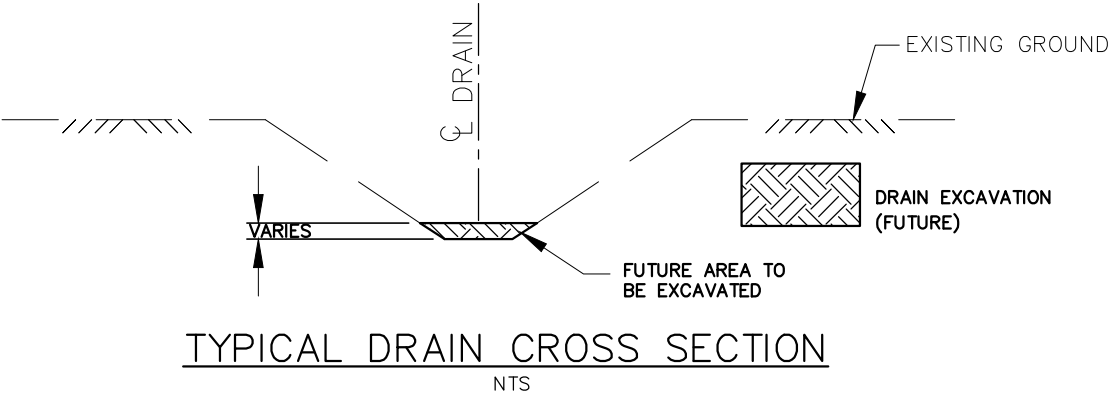
PROFILE

3

OF 7

GENERAL NOTES

- 1. BENCHMARK No.4 ELEV. 214.60
TOP OF WEST END OF EXISTING 1000Ø CSP
ON THE PICKERING DRAIN.
AT ST. 0+919
- 2. UPPER NUMBERS ARE DEPTH FROM
TOP OF NORTH BANK TO PROPOSED DRAIN BOTTOM.



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

DRAWING NAME:
Pickering Drain Profile 2

PROJECT No.
2024-1686

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	AUG. 4, 2025	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

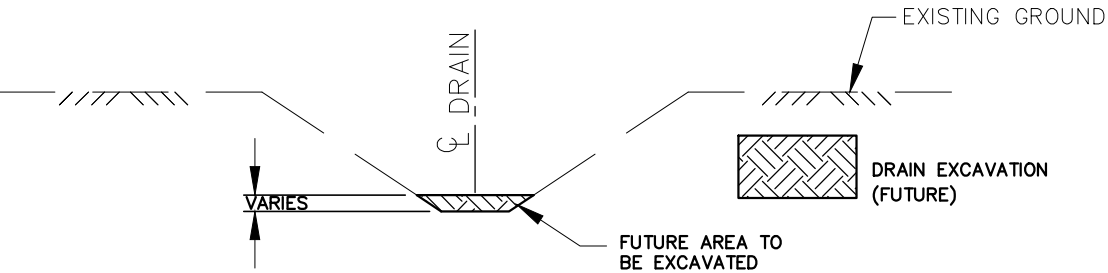
SCALE: 1:2,000
0 20 40 60m

MUNICIPALITY of NORTH MIDDLESEX
PICKERING DRAIN
PROFILE

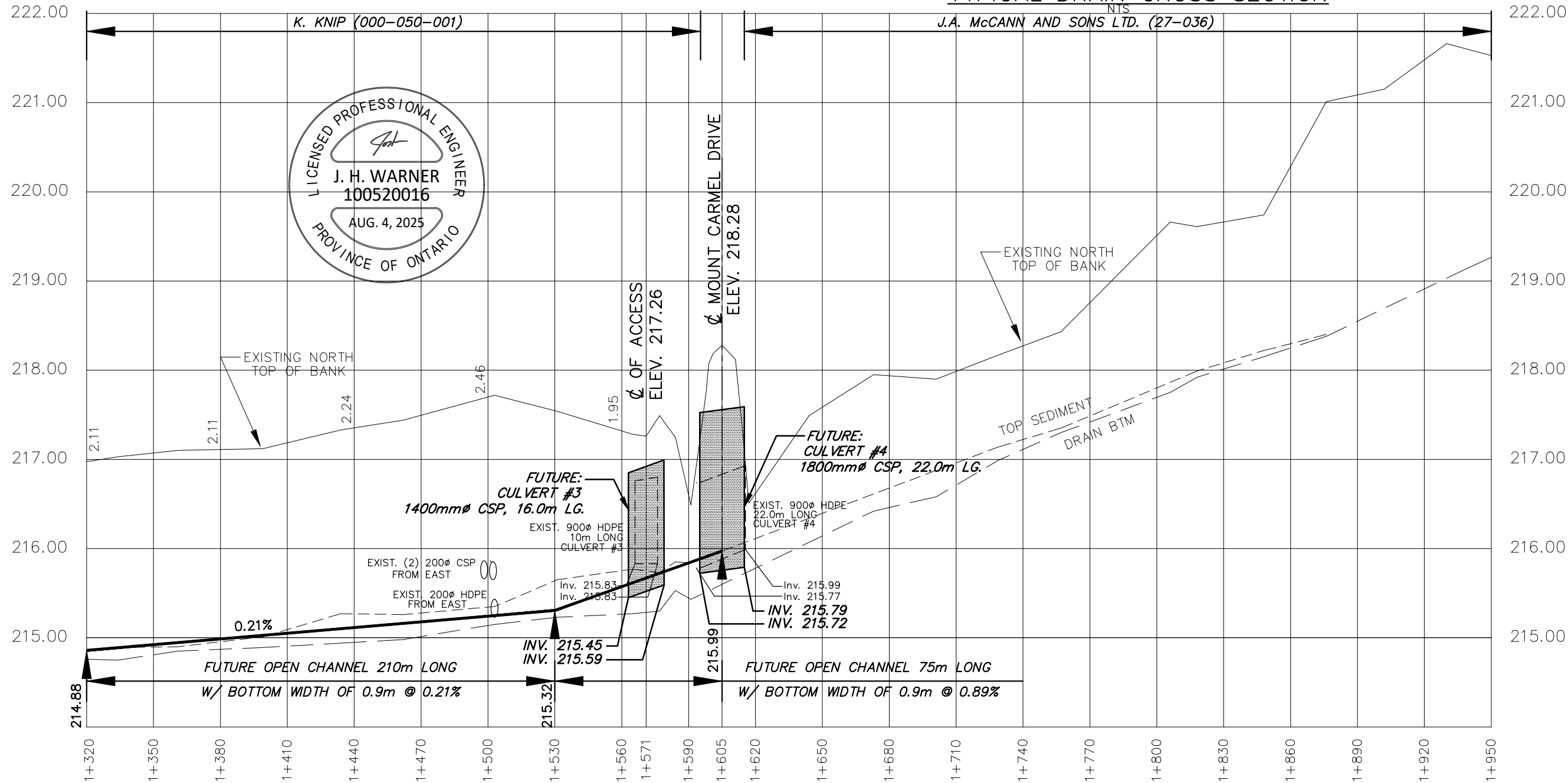
GENERAL NOTES

1. BENCHMARK No.5 ELEV. 216.76
TOP OF SOUTH END OF EXISTING 900Ø HDPE
ON THE PICKERING DRAIN CROSSING
AT ST. 1+571

BENCHMARK No.6 ELEV. 216.74
TOP OF SOUTH END OF EXISTING 900Ø HDPE
ON THE PICKERING DRAIN CROSSING
MOUNT CARMEL ROAD AT ST. 1+605
2. UPPER NUMBERS ARE DEPTH FROM
TOP OF NORTH BANK TO PROPOSED DRAIN BOTTOM.



TYPICAL DRAIN CROSS SECTION



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

DRAWING NAME:
Pickering Drain Profile 3

PROJECT No.
2024-1686

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	AUG. 4, 2025	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

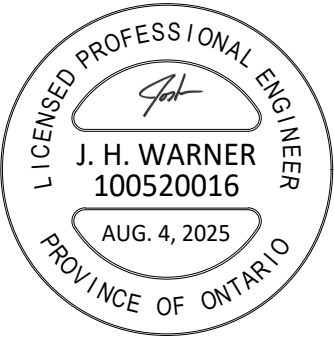
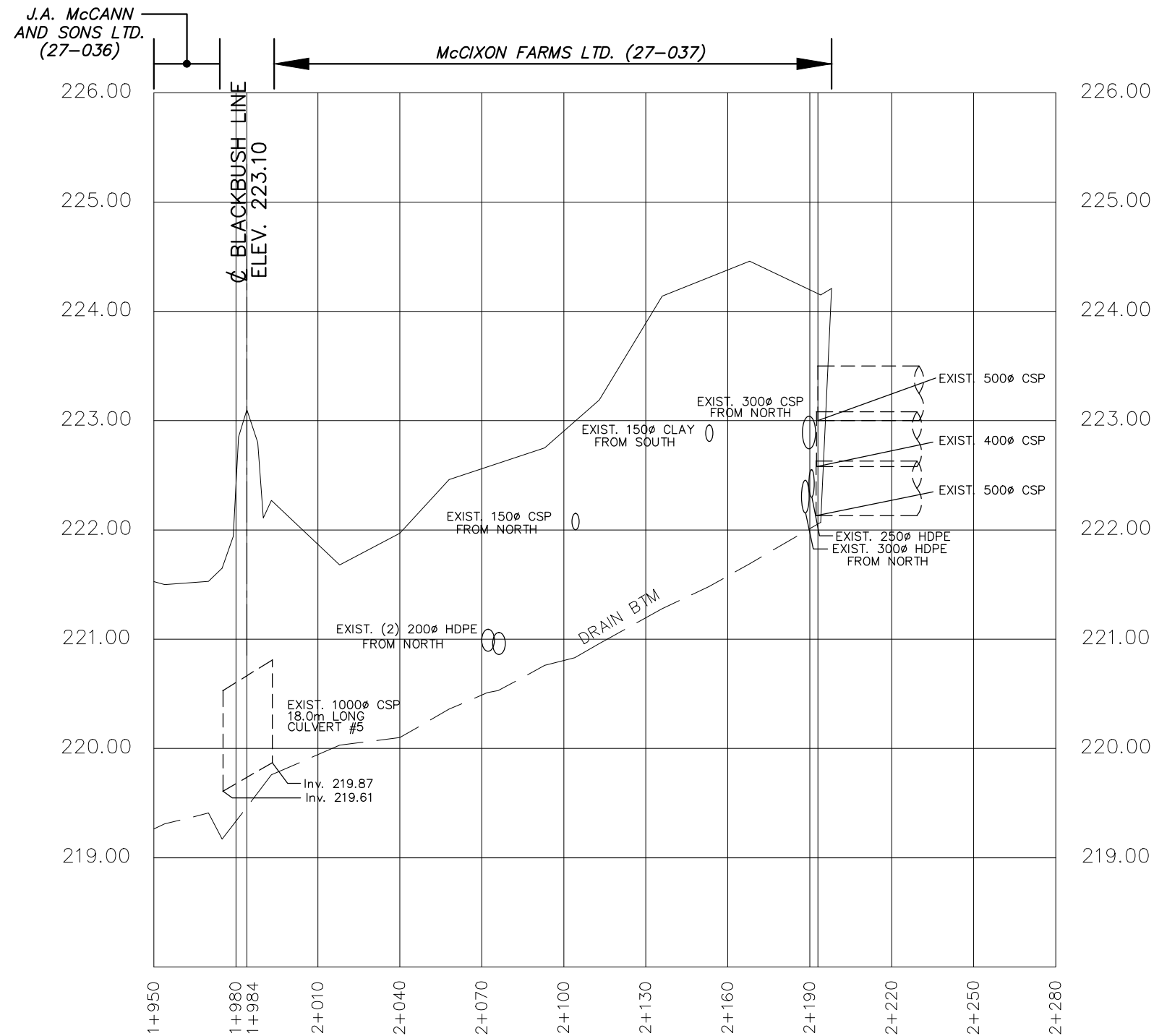
SCALE: 1:2,000
0 20 40 60m

MUNICIPALITY of NORTH MIDDLESEX
PICKERING DRAIN
PROFILE

5
OF 7

GENERAL NOTES

1. BENCHMARK No.7 ELEV. 220.53
TOP OF EAST END OF EXISTING 1000Ø CSP
ON THE PICKERING DRAIN CROSSING
BLACKBUSH LINE AT ST. 1+984



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

DRAWING NAME:
Pickering Drain Profile 4

PROJECT No.
2024-1686

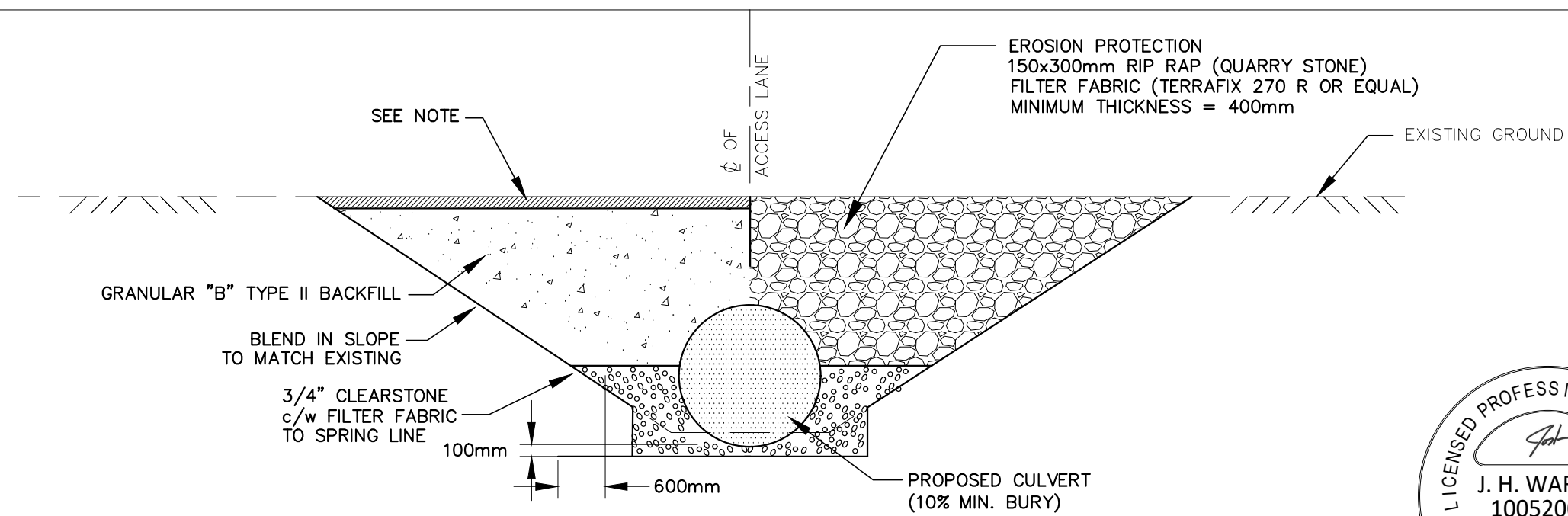
APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	AUG. 4, 2025	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

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

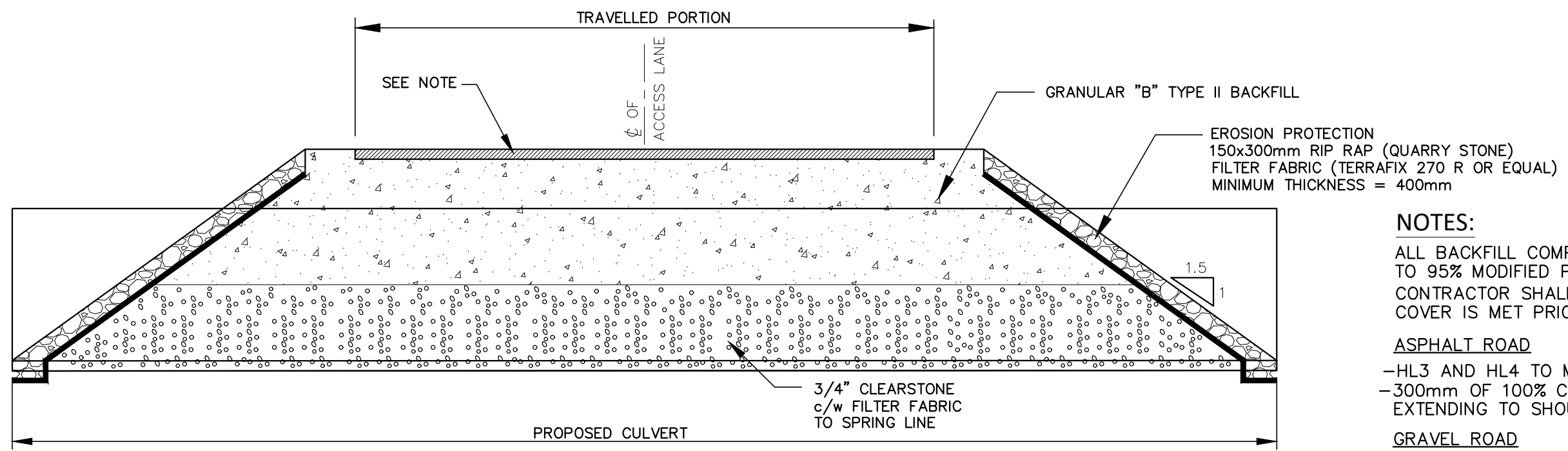
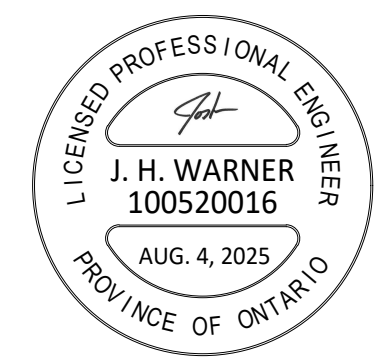
MUNICIPALITY of NORTH MIDDLESEX
PICKERING DRAIN
PROFILE

6
OF 7

Last Updated: August 4, 2025

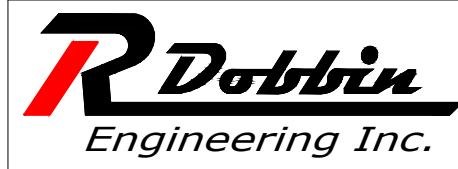


PROPOSED PIPE END SECTION



PROPOSED CROSS-SECTION

- NOTES:**
- ALL BACKFILL COMPACTED TO 95% MODIFIED PROCTOR DENSITY
 - CONTRACTOR SHALL ENSURE MINIMUM COVER IS MET PRIOR TO CROSSING
 - ASPHALT ROAD
 - HL3 AND HL4 TO MATCH EXISTING THICKNESS
 - 300mm OF 100% CRUSHED GRAN "A" EXTENDING TO SHOULDER
 - GRAVEL ROAD
 - 200mm OF OPS GRANULAR "M" (CRUSHED DOLOMITE SOURCE) TO MATCH EXISTING ROAD WIDTH
 - ACCESS CULVERT
 - 150mm OF 100% CRUSHED GRANULAR "A"



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

APPROVED J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	AUG. 4, 2025	CS
DRAWN C. SAUNDERS	SCALE 1: 75			
	0 2m			

MUNICIPALITY of NORTH MIDDLESEX
PICKERING DRAIN
TYPICAL CULVERT DETAIL