



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

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October 8, 2025

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

Gentlemen and Mesdames:

**Re: Robinson Drainage Works (2025)**

In accordance with your instructions, R. Dobbin Engineering has undertaken an examination with regards to improvements on the Robinson Drainage Works in the Municipality of North Middlesex.

Authorization under the Drainage Act

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

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

Existing Conditions

The Robinson Drainage Works outlets into the Kellestine Drain No.2 in Lot 15, Concession 19 East of Centre Road (EOCR). The tile drain heads easterly to approximately 125m east of the west limit of Lot 17, Concession 19 EOCR.

The last Engineer's Report on the Robinson Drainage Works is dated September 15, 1967. Under this report the tile drain was constructed. The drainage works consisted of 300mm, 250mm and 200mm field tile at 0.10% grade. The existing drainage works was exposed and shot and lacks sufficient cover as shown on the profile drawings.

### On-Site Meeting

A site meeting was held on May 22, 2025.

The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Joanne Sadler (Drainage Superintendent, Municipality of North Middlesex)
- Kristyn Wilson (Drainage Clerk, Municipality of North Middlesex)
- Glen Bullock (Municipality of North Middlesex)
- Robert Robinson
- Paul Mahon
- Jessica Bascher
- Robert Corenlis

The following is a brief summary of the meeting:

- There was discussion around assessments, the timeline for construction and access.
- There was a discussion regarding the existing location of the tile and that the existing is to be crushed and abandoned.
- The drain to be constructed with concrete tile and to be designed to the coefficient of 38mm/24 hours.
- No catchbasins or junction boxes to be installed along the drainage works.
- A recommendation was brought forth that if the open right of way ever gets constructed as a roadway that there is future specification for the installation of an HDPE pipe under the roadway.
- Abandon existing drain upstream of the east limit of Lot 16.

### Design

The proposed drain has been designed to accommodate a drainage coefficient of 38mm / 24 hours. Tile design criteria include a minimum tile depth of 760mm.

### Recommendations

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

1. The Robinson Drainage Works shall be replaced from the outlet on the property with Roll Number 042-020-135 to the west limit of the property with Roll Number 042-020-133.
2. The entirety of the existing 1967 Robinson Drainage Works shall be replaced and abandoned as part of this report.

### 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 \$107,440, including engineering of the report, attending the Meeting to Consider the Report, attending the Court of Revision, and an estimate for tendering, contract administration and inspection. Appearances before appeal bodies have not been included in the cost estimate.

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

### Assessment

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

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

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

A Schedule of Assessment for the lands and roads affected by the work and therefore liable for the cost thereof will be prepared as per the Drainage Act. Also, assessments may be made against any public utility or road authority, as per Section 26 of the

Drainage Act, for any increased cost for the removal or relocation of any of its facilities and plant that may be necessitated by the construction or maintenance of the drainage works.

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

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

1. The drainage works has been assessed with 50% of the estimated cost applied as a benefit assessment to the abutting property and the remainder applied as an outlet assessment to upstream lands and roads based on equivalent hectares.
2. The outlet works, which includes the silt fence, erosion protection and outlet pipe, has been assessed with 100% of the estimated cost applied as an outlet assessment to upstream lands and roads based on equivalent hectares.

All final costs included in the cost estimate of this report, except as identified above, shall be pro-rated based on the Schedule of Assessment. Any additional costs shall be assessed in a manner as determined by the Engineer in accordance with the Drainage Act.

#### Allowances

Under Section 29 of the Drainage Act, the Engineer in his 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 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 work site for construction and future maintenance shall be from New Ontario Road. The access shall be along the west property line for the property with Roll Number 042-020-135 and along the existing grassed access on the property with Roll Number 042-020-133. Access shall be restricted to a width of 6m.

The working area for the construction and future maintenance of the tile drain shall be restricted to a width of 25m along the length of the drainage works normally centred on the proposed tile drain.

#### Restrictions

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.

#### Maintenance

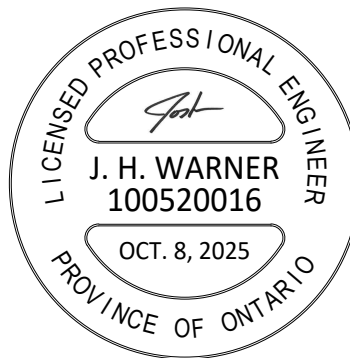
Upon completion of the work, the Robinson Drainage Works shall be repaired and maintained as per the specifications and drawings contained in this Engineer's Report. Maintenance and repair of the drain shall be assessed in the same proportions as contained in the Schedule of Assessment, less any special benefit assessments, as contained in this Engineer's Report unless otherwise altered under provisions of the Drainage Act.

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. This shall include the potentially replacement of the tile under the Unopened Right of Way. If this Right of Way is to be opened then the tile is to be replaced with a 450mm dia. HDPE pipe at the expense of the road authority.

Yours truly,



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



Robinson Drainage Works  
Municipality of North Middlesex  
October 8, 2025

**ALLOWANCES**

Allowances have been made as per Sections 29 & 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 (\$)
19	Lot 15	042-020-135	1050029 Ontario Inc	-	5,000	5,000
	Lot 16	042-020-134	1050029 Ontario Inc	-	3,640	3,640
	Lot 17	042-020-133	C. Robinson	-	1,170	1,170
TOTAL ALLOWANCES				\$0	\$9,810	\$9,810

**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
Locate and Crush Existing Tile	1	LS	2,500	2,500
Brushing and Tree Removal	1	LS	400	400
Remove Existing CSP Outlet Pipe	1	LS	500	500
Remove Existing Hickenbottom at Station 0+858	1	LS	150	150
Strip and Place Topsoil (Station 0+00 to 0+858) along tile Route	858	m	6	5,148
6m of 450mmø HDPE Pipe c/w Rodent Grate	1	LS	1,500	1,500
450mmø Concrete Tile	367	m	65	23,855
400mmø Concrete Tile	485	m	55	26,675
Reconnect Existing Tiles	30	ea	100	3,000
Rip Rap at Outlet	1	LS	2,500	2,500
Silt Fence	1	LS	200	200
Restoration	1	LS	800	800
Contingency				6,750
Sub Total				74,178
Allowances				9,810
Engineering				13,292
Exposing Existing Tile				1,530
Estimate for Tendering, Inspection and				6,500
Contract Administration				
ABCA Fee				450
<b>Total Estimate excluding HST</b>				<b>105,760</b>
Non-Recoverable HST (1.76%)				1,680
<b>Total Estimate</b>				<b>\$ 107,440</b>

**SCHEDULE OF ASSESSMENT**

Conc.	Lot or Part	Affected Hectares	Roll No.	Owner	Special Benefit	Benefit	Outlet	Total
Municipal Lands								
	Unopened Right of Way	0.58		Municipality of North Middlesex	-	2,854	2,366	5,220
					-	2,854	2,366	5,220
Agricultural Lands								
19	Lot 15	7.39	042-020-135	1050029 Ontario Inc	-	19,909	9,394	29,303
	Lot 16	9.83	042-020-134	1050029 Ontario Inc	-	26,957	21,200	48,157
	Lot 17	6.07	042-020-133	C. Robinson	-	-	24,760	24,760
					-	46,866	55,354	102,220
				Total Municipal Lands	5,220			
				Total Agricultural Lands	102,220			
				Total Assessment	\$107,440			



**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 (\$)
Municipal Lands								
	Unopened Right of Way	0.58		Municipality of North Middlesex	5,220			5,220
Agricultural Lands								
19	Lot 15	7.39	042-020-135	1050029 Ontario Inc	29,303	9,768	5,000	14,535
	Lot 16	9.83	042-020-134	1050029 Ontario Inc	48,157	16,052	3,640	28,465
	Lot 17	6.07	042-020-133	C. Robinson	24,760	8,253	1,170	15,337
					107,440	34,073	9,810	63,557

Robinson Drainage Works  
Municipality of North Middlesex  
October 8, 2025

## **SPECIFICATION OF WORK**

### **1. Location**

The proposed improvements to the Robinson Drainage Works are located in Lots 15 and 16, Concession 19 East of Centre Road in The Municipality of North Middlesex.

### **2. Scope of Work**

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

- Supply and installation of Concrete Tile from Station 0+000 to 0+858 complete with Outlet Works.

### **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.

All excess material shall be disposed offsite at the expense of the Contractor.

### **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. 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.

## **8. Benchmarks**

The benchmarks are based on geodetic elevations. Elevations are available at the locations shown on the Plan and Profile drawing. Where these elevations are on existing structures to be replaced, they shall be transferred by the Contractor prior to the removal. R. Dobbin Engineering is to provide benchmarks along the length of the proposed tile during time of construction.

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

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

## **10. Access and Working Area**

Access to the work site for construction and future maintenance shall be from New Ontario Road. The access shall be along the west property line for the property with Roll Number 042-020-135 and along the existing grassed access on the property with Roll Number 042-020-133. Access shall be restricted to a width of 6m.

The working area for the construction and future maintenance of the tile drain shall be restricted to a width of 25m along the length of the drainage works normally centred on the proposed tile drain.

### **11. Removals**

The existing CSP outlet pipe and vertical PE pipe at Station 0+858 shall be removed in its entirety and shall be disposed offsite at the expense of the Contractor.

### **12. Locate and Abandon Existing Drain and Verify Elevations**

The existing tile drain shall be exposed at the discretion of the Drainage Superintendent or Engineer and Contractor in order to adequately determine the proposed alignment. The existing municipal drain shall be abandoned and crushed.

### **13. Brushing and Tree Removal**

All brush, trees, woody vegetation, stumps etc. shall be removed for a width of 15 metres along the tile drain. They shall be removed in their entirety including stumps.

A mechanical grinder attached to an excavator be used for the removal of brush and trees. Any brush and trees too large to grind shall be close cut. The Contractor shall stockpile the trees and brush in a single pile on the property in which they were removed or dispose of the trees and brush offsite. The Contractor is responsible for the burning of the trees and brush. The Contractor is responsible for obtaining all necessary permits for any disposal sites. Burning of the trees and brush is subject to local bylaws and guidelines of the Ministry of the Environment Conservation and Parks.

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

### **14. Strip and Place Topsoil**

The Contractor shall strip the topsoil for a width of 6m normally centered on the proposed drain between Stations 0+000 and 0+858. The topsoil shall be stockpiled at the edge of the working allowance for the duration of the tile installation. Once the tile is installed, the Contractor shall level the topsoil over the drain to their pre-construction condition.

### **15. Installation of Tile**

The Contractor shall supply, install, and backfill the specified sizes of tile and pipe to the depths and grades as shown on the drawings.

Concrete tile shall conform to ASTM C412, 2000D. Tile shall have a circular interior and exterior shape.

Where the concrete tile depth is greater than 2.5m the tile shall be bedded to the spring line with clear stone.

HDPE pipe shall be CSA Approved smooth wall gasketed pipe with bell and spigot joints (320 kPa).

It is intended that the tile be installed south of the existing 1967 tile.

The trenching and laying of the concrete tile shall be done by wheel machine. An excavator must be used in areas of soil instability, unless approved by the Engineer. All tile joints shall be wrapped with a minimum 300mm width of Mirafi P150 (or approved equal) filter fabric. The filter fabric shall be overlapped by 450mm at the top of the tile. The tile shall be laid in straight lines or on smooth gradual curves with a minimum radius or 25m.

Where approved by the Engineer (or specified) concrete tile may be laid in tighter curves by saw cutting joints. The maximum deflection of one concrete tile joint shall be 22 degrees. Turns of greater than 22 degrees shall require the use of manufactured bends (HDPE smooth wall).

Laser control shall be used to ensure proper grades. The grades calculated on the Profile are to the invert of the tile and pipe with allowances to be made by the Contractor for the wall thickness of the tile and pipe. The depths shown and figured are from ground level to the invert of the pipe along the line of the proposed drain. Should an error appear in the figured depth at any station or stations, the grade shall be made to correspond with that shown on the Profile without extra charge.

#### Wheel Machine

A wheel machine shall be used to excavate the trench to allow for a round bottom. Prior to backfilling, the tile shall be covered manually to a depth of approx. 100mm over the pipe to ensure that the tile and pipe are not displaced by large clumps of earth. The trench shall be backfilled with excavated material free of stones, broken tile or other deleterious material. All stones larger than 100mm in diameter evident immediately after construction shall be picked up by the Contractor and disposed offsite. The Landowners are responsible for stones after that. The material shall be left windrowed over the trench to allow for settlement.

#### Excavator

When concrete tile is installed with an excavator, the tile must be installed as per the manufacturer's recommendations **complete with bedding to the spring line**. The bedding, except where the depth of the tile is greater than 2.5m, shall be included in the Contractors unit price for this item if being completed by excavator. Prior to backfilling,

the tile shall be covered manually to a depth of approx. 100mm over the pipe to ensure that the tile and pipe are not displaced by large clumps of earth. The trench shall be backfilled with excavated material free of stones, broken tile or other deleterious material. All stones larger than 100mm in diameter evident immediately after construction shall be picked up by the Contractor and disposed offsite. The Landowners are responsible for stones after that. The material shall be left windrowed over the trench to allow for settlement.

If the land level must be lowered in order to carry out trenching operations, then it is up to the Contractor to determine if it is necessary and include any extra cost involved. They shall first strip the topsoil to its full depth and stockpile it along one side of the working width and then grade the area to allow the trenching to be carried out. All excavated material shall be windrowed on the side opposite the trench that the topsoil is stockpiled. After trenching and backfilling operations are complete, the topsoil shall be spread to its original depth.

All areas disturbed by construction, except the material windrowed over the trench, shall be left in a condition suitable for cultivation.

The Contractor shall not operate any trenching or backfill equipment, delivery trucks or equipment, pickup trucks or other vehicles along or over the trench during or after construction. The Contractor shall be responsible for any damage caused by any equipment or vehicles operated over the trench. If the Contractor must cross the trench, he will do so in one area.

The Landowners are also warned to minimize farm equipment crossing over the trench or along the length of the trench for 1 year after construction in order to protect the tile.

## **16. Outlet Works**

The outlet works for the drain shall consist of HDPE smooth wall pipe as shown on the profile (320 kPa) with a manufactured rodent rotating grate. It shall be installed at the outlet to the open channel.

Erosion protection made up of rip rap and filter fabric shall be installed on the channel side slope from the bottom of the channel to the top of the bank and for a distance of 1m on either side of the outlet. Rip rap shall be made up of 150mm to 300mm quarry stone or approved equal. The area to receive the rip rap shall first be graded to allow the placement of the rip rap to a depth of 400mm below finished grade. After grading, a layer of filter fabric (Mirafi P150 or approved equal) is to be placed with any joints overlapped a minimum of 600mm. Rip rap shall then be placed with the smaller pieces placed in the gaps and voids to give it a uniform appearance.

## **17. Road Crossings (Future, if required)**

Located at station 0+373 is an unopened right of way. There is no current plan for development or construction. For future construction, within the Right of Way 320 kPa 450mm dia. High Density Polyethylene Pipe (smooth wall with bell and spigot) shall be installed. The pipe shall be bedded with  $\frac{3}{4}$ " clear stone bedding and backfilled at the discretion of the road authority.

## **18. Seeding/Restoration**

All areas disturbed by construction shall be returned to their pre-construction state. The road right of way and all other previous grassed areas where disturbed by construction, shall be topped with 50mm of screened topsoil and grass seed following the completion of construction.

## **19. Environmental Considerations**

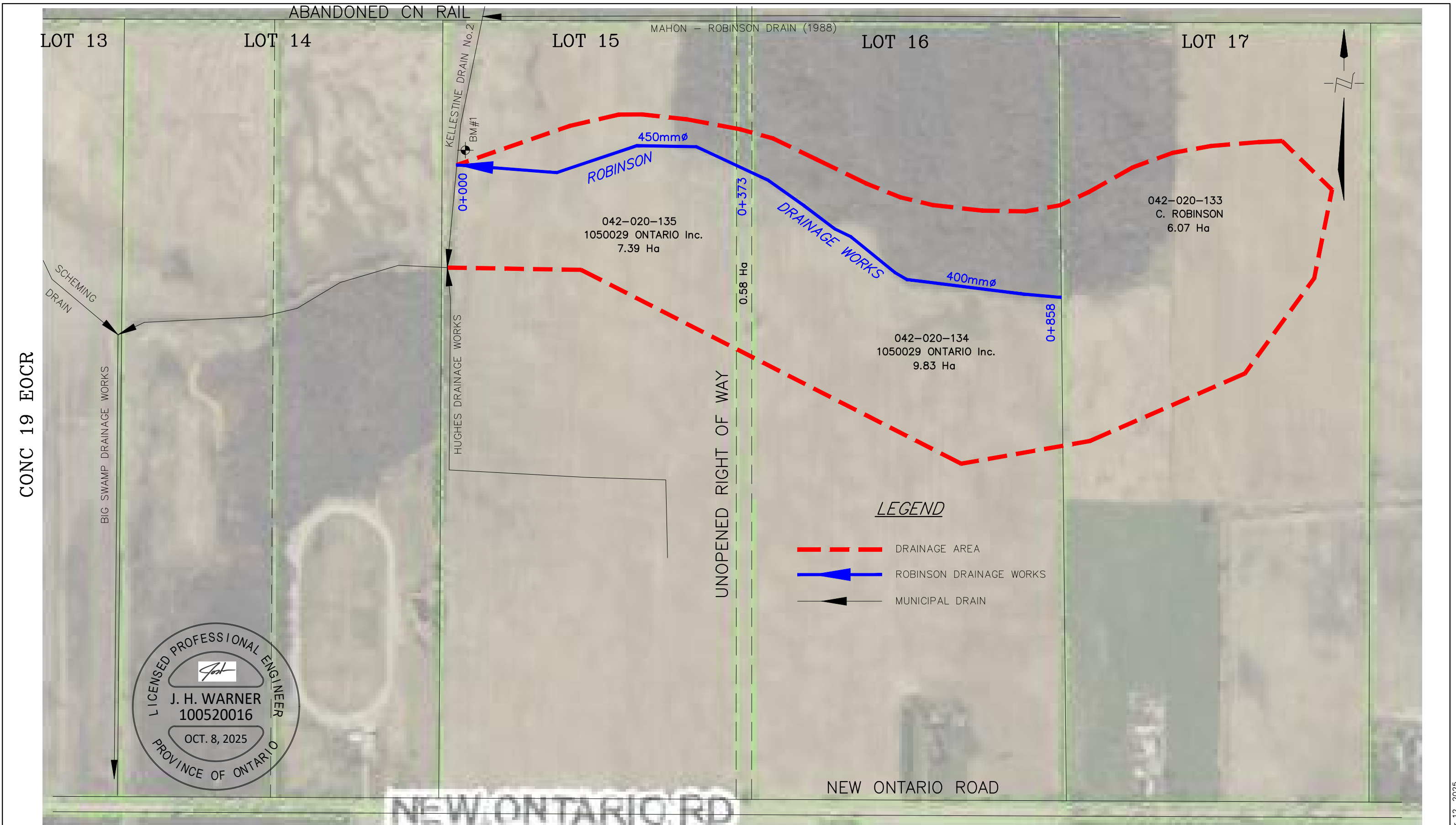
The Contractor shall take care to adhere to the following considerations.

- 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.



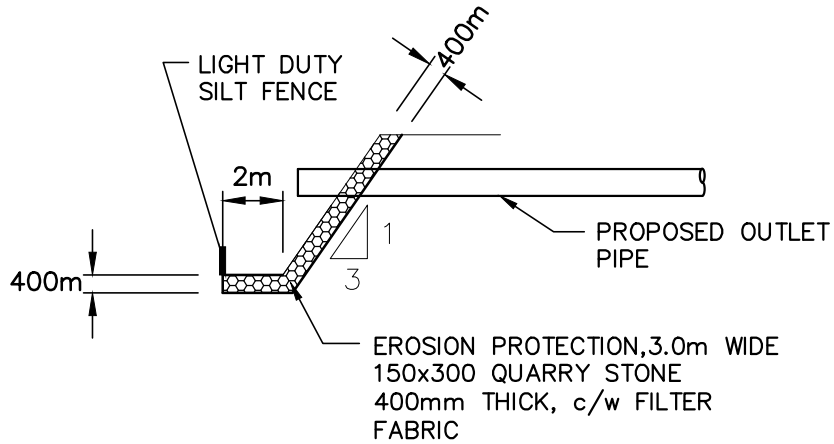
A light duty silt fencing shall be installed down-gradient of the work for the duration of construction.

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.

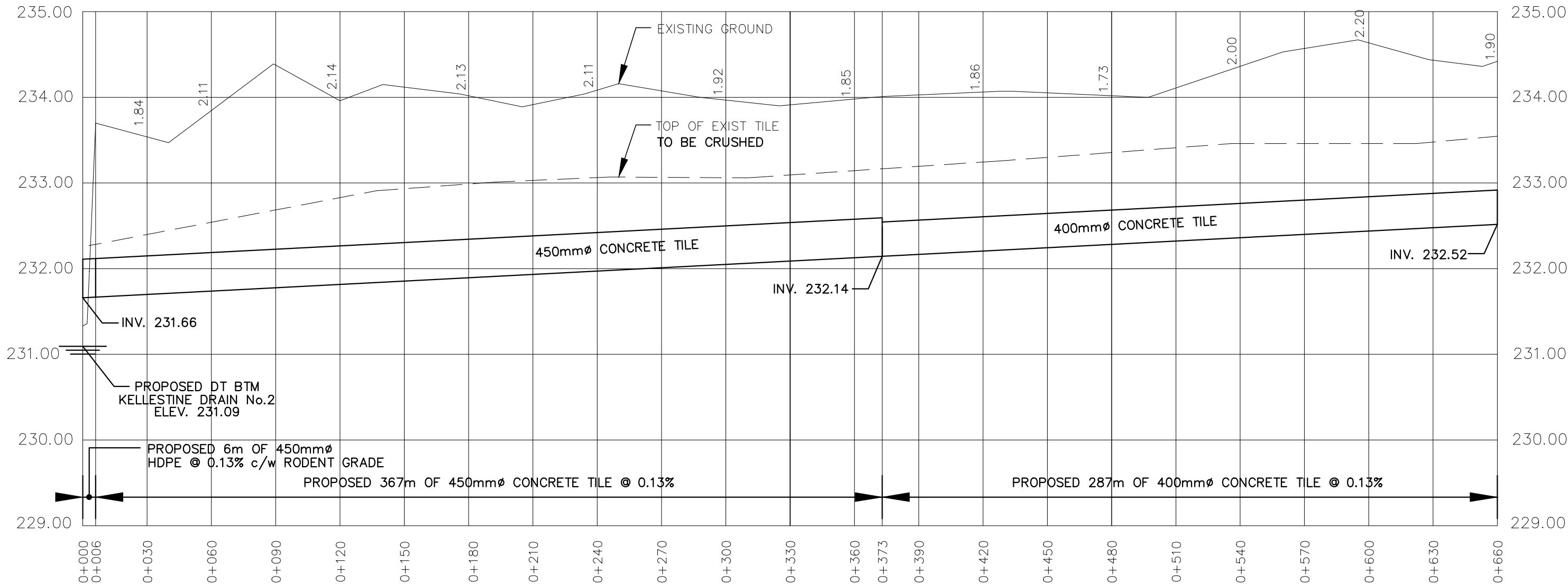


GENERAL NOTES

1. BENCHMARK No.1 ELEV. 232.33  
TOP OF EXISTING 300mmØ HDPE OUTLET  
ROBINSON DRAINAGE WORKS AT OPEN CHANNEL  
STATION 0+000
2. NUMBERS ARE DEPTH FROM EXISTING GROUND  
TO THE INVERT OF THE PROPOSED TILE.

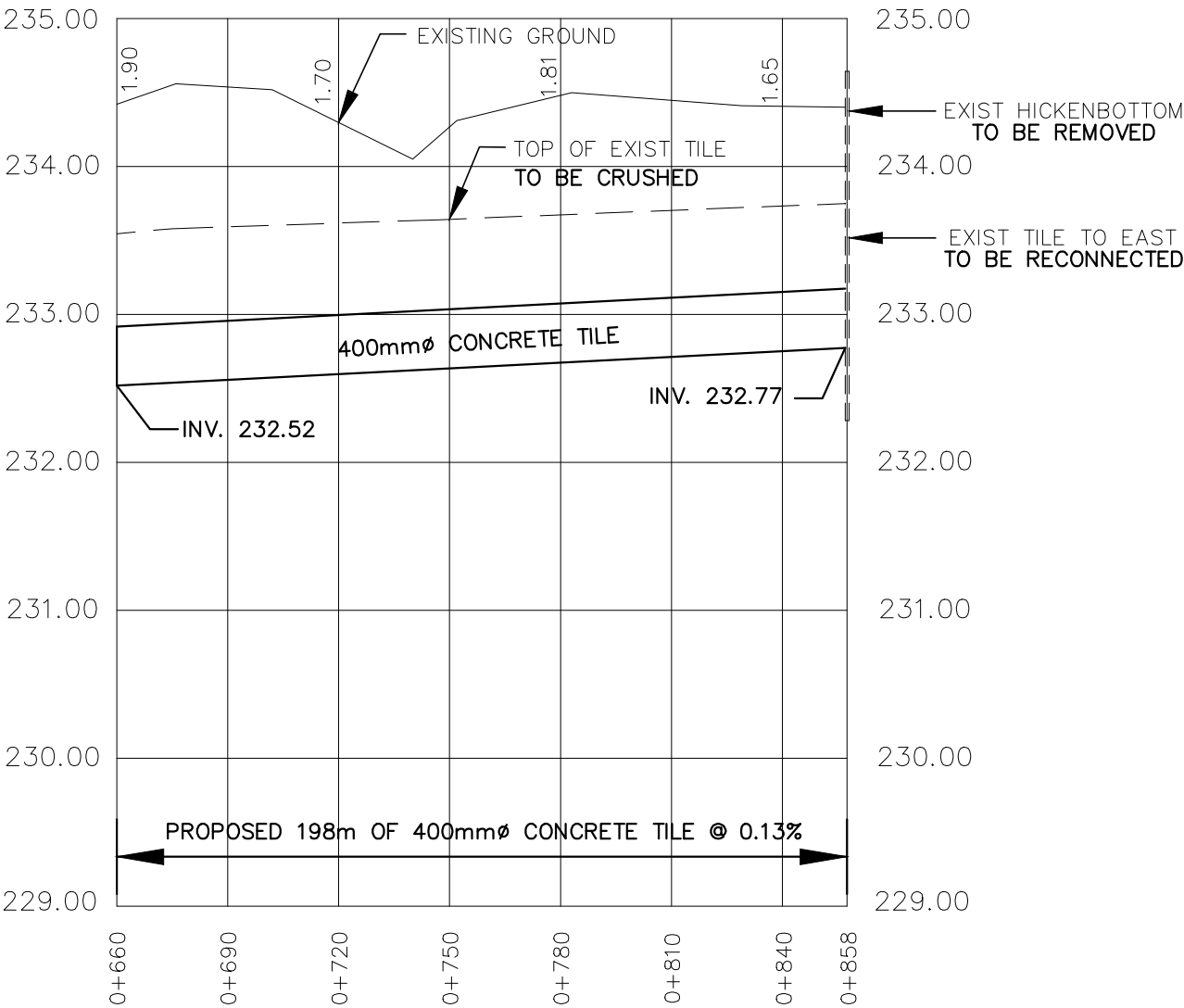


OUTLET DETAIL  
NTS



GENERAL NOTES

1. BENCHMARK No.2 ELEV. TBD  
R. DOBBIN ENGINEERING TO PROVIDE  
BENCHMARKS ALONG THE PROPOSED TILE  
AT TIME OF CONSTRUCTION.
2. NUMBERS ARE DEPTH FROM EXISTING GROUND  
TO THE INVERT OF THE PROPOSED TILE.



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

DRAWING NAME: Robinson Drainage Works Profile 2  
PROJECT No. 2025-1749

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	OCT. 8, 2025	CS
B. VAN RUITENBURG				
DRAWN	SCALE: 1:2,000			
C. SAUNDERS	0 20 40 60m			

MUNICIPALITY of NORTH MIDDLESEX  
ROBINSON DRAINAGE WORKS  
PROFILE