

**Corporation of the Town of Amherstburg**

**By-Law No. 1998 - 27**

**A by-law to provide for the repair and improvement of the Imeson - Meloche Drain in the Town of Amherstburg and for the borrowing on the credit of the sum of \$25,400.00 to complete the said works.**

**Whereas** the Council of the Corporation of the Township of Anderdon has received a petition for repair and improvement of the Imeson-Meloche Drain.

**And Whereas** the Council of the Township of Anderdon has procured a Report dated December 23rd, 1997 by Bruce D. Crozier Engineering Inc. for the repair and improvement of the Imeson-Meloche Drain, a copy of the said Report and Addendum dated March 17, 1998 are attached herewith as Schedule "A" to this By-law.

**And Whereas** the estimated total cost of the drainage works project is \$25,400.00.

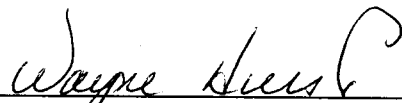
**And Whereas** Council is of the opinion that the repair and improvement of the drainage works is desirable.

**Now therefore the Council of the Corporation of the Town of Amherstburg, pursuant to Section 76 of The Drainage Act, 1990 hereby enacts as follows:**

1. **That** the Report of Bruce D. Crozier Engineering Inc. dated December 23, 1997, is hereby adopted and the drainage works therein shall be completed in accordance therewith.
2. **That** the Corporation of the Town of Amherstburg may borrow on the credit of the Town the sum of twenty-five thousand four hundred (\$25,400.00) dollars provided that such sum shall be reduced by the amount of grants and commuted payments with respect to lands and roads assessed, and may issue debentures to the Corporation to that amount payable within five (5) years from the date of such debentures with interest at a rate not higher than that charged by the Ontario Municipal Improvements Corporation at the date of sale of such debentures.
3. **That** for paying the sum of twenty-five thousand four hundred (\$25,400.00) dollars the amount charged against lands and for the covering the interest thereon for five (5) years at the rate of interest aforesaid, the following total special rates over and above all other rates shall be assessed, levied and collected (in the same manner and at the same time as other taxes are levied and collected) upon and from the undermentioned parcels of land and parts of parcels and roads, and one such part shall be assessed, levied and collected as aforesaid, in each year for five (5) years after the passing of this By-law during which the debentures have to run, provided that no greater amount shall be levied than is required after taking into account and crediting the amount of grants and commuted payment.


4. **That** pursuant to Subsection 3 of Section 61 of the Drainage Act, 1990, assessments under fifty (\$50.00) dollars shall be paid in the first year in which the assessment is imposed.
5. **That** the Schedule of Assessment is attached hereto.
6. **That** this By-law comes into force on the final passing thereof and may be cited as the Imeson-Meloche Drain By-Law.


**Read** a first and second time and provisionally adopted this 23rd day of March, 1998.

  
\_\_\_\_\_  
Mayor

  
\_\_\_\_\_  
Clerk

**Read** a third time and finally passed this 22nd day of June, 1998.

  
\_\_\_\_\_  
Mayor

  
\_\_\_\_\_  
Clerk

**DRAINAGE REPORT**  
**IMESON - MELOCHE DRAIN**  
**TOWNSHIP OF ANDERDON**

**BRUCE D. CROZIER ENGINEERING INC.**

**CONSULTING ENGINEERS**

**209 ERIE STREET SOUTH**

**LEAMINGTON, ONTARIO**

**N8H 3C1**

**PROJECT REFERENCE BC-96-114**

December 23, 1997

Mayor and Municipal Council  
Corporation of the Township of Anderdon  
3400 Middle Sideroad  
R. R. #4  
Amherstburg, Ontario  
N9V 2Y9

Mayor Tiefenbach and Councillors

**SUBJECT: Drainage Report  
Imeson - Meloche Drain  
Township of Anderdon  
Our Project Reference BC-96-114**

## 1.0 AUTHORIZATION

Pursuant to Section 78 of The Drainage Act, the Corporation of the Township of Anderdon accepted a request from Michal Pucovsky to repair and improve the Imeson - Meloche Drain. The Corporation of the Township of Anderdon, acting as the initiating municipality subsequently appointed the firm of Bruce D. Crozier Engineering Inc., to make an examination and to prepare a report under the provisions of "The Drainage Act, 1990".

As requested by Council, I have made a survey and examination of the Imeson - Meloche Drain, situated within Lots 11 and 12 of Concessions 5 and 6, Township of Anderdon, and I report thereon as follows.

## 2.0 PURPOSE OF REPORT

The intent of this report is to provide for the repair and improvement of the Imeson - Meloche Drain, being an existing municipal drain. The repair and improvement of the drain would be performed under Section 78 of The Drainage Act, in fulfilment of the Township's responsibility to maintain and repair the municipal drain under the provisions of "The Drainage Act, 1990".

This report further provides a schedule of assessment which divides the cost of the recommended work to all of the those lands using the drain as an outlet or to those lands benefiting from the existence of the drain.

## 3.0 SITE MEETING

A meeting with the affected landowners and others was conducted on October 8, 1996. In attendance at that meeting were Lou Zarlenga, P.Eng., Dan Crump Drainage Superintendent for Anderdon Township, Tony DiCiocco representing the Essex Region Conservation Authority, Henry Mialkowski, Don Regnier and Michal Pucovsky. The Engineer explained the reasons for having the site meeting and further explained the applicable sections of the Drainage Act relating to this project. The Engineer also indicated that should anyone have any questions after the site meeting he could be contacted at his office.

Mr. Pucovsky asked if the proposed report would have new assessments to all lands. He further indicated that a culvert pipe crossing under the road just upstream of the drain is plugged.

Don Regnier indicated the outlet portion of the drain is showing signs of erosion and asked if anything could be done to control the erosion. He further indicated the immediate outlet portion of the drain is totally situated on his lands. Mr. Regnier further explained he was in the process of severing a residential lot from his agricultural lands.

Henry Mialkowski indicated the drain separates approximately 3 - 4 acres of his land from the main land parcel and that an old access bridge situated within the drain is in poor condition. He further indicated that if the bridge had to be replaced it should be moved approximately 90 metres upstream. Mr. Mialkowski further asked if there was any excess material excavated from the drain that he could take the material.

The engineer indicated that the report would specify the excavated material to be cast and spread upon farm lands adjacent to the drain, however, if any person wished to take this material they could do so if they supplied the trucking. He further indicated that after the drain was excavated to grade the Township Road Superintendent would then look into cleaning the existing pipe crossing the 6th Concession Road.

The engineer further inquired if there had been any changes to the drainage area since the time of the last drainage report and the reply from those present was that no physical changes had occurred.

#### **4.0 BACKGROUND**

Upon reviewing the Township files for the Imeson - Meloche Drain I find the following.

The Imeson - Meloche drainage works was initially constructed in 1917 as an Award Drain under a report dated November 2, 1917 and prepared by J. J. Newman, C.E.

In 1944 the previously constructed Award Drain was established as a Municipal Drain under a report dated October 19, 1944 and prepared by C.G.R. Armstrong, P.Eng. This report provided for cleaning of the open drain, being approximately 1495 metres in length. Also allowances were provided to be paid to private landowners for the value of three existing farm bridges and for the value of the existing Award Drain.

In 1961 the upper portion of the Imeson - Meloche Drain was improved under a drainage report dated January 13, 1961 and prepared by C.G.R. Armstrong, P.Eng. This report provided for moving approximately 410 metres of the drain, situated along the 6th Concession Road, off the road allowance and onto the adjacent privately owned agricultural lands. This report also provided for cleaning of approximately 200 metres of the existing open drain situated westerly and downstream of the 6th Concession Road.

In 1975 a drainage report was prepared for the Imeson - Meloche Drain by M. Armstrong, P.Eng. and dated October 3, 1975. This report was adopted by Township Council, however the work was not carried out due to a number of disputes and appeals concerning the proposed work and assessment of costs. This report provided for cleaning the upstream portion of the drain, being approximately 410 metres in length, and situated adjacent to the 6th Concession Road. This report also provided for the installation of a 450 mm diameter drain tile in the bottom of the existing open drain and the partial filling of the open drain over the proposed tile for a distance of approximately 490 metres downstream of the 6th Concession Road. The remaining lower portion of the Imeson - Meloche Drain being approximately 1970 metres in length was also recommended to be cleaned. In addition the 1975 report provided for the replacement of an existing 450 mm diameter farm access bridge, situated on lands then owned by E. Mialkowski, with a new 1200 mm diameter corrugated steel pipe culvert. The cost of this recommended culvert was \$650.00 of which approximately \$440.00 was assessed to the bridge owner and the remaining cost of the bridge was assessed to the affected upstream lands.

#### **5.0 CURRENT DRAINAGE REPORT**

The current report for the upper portion of the Imeson - Meloche Drain, situated between Stations 0+000 to Station 0+610 is the above noted January 13, 1961 drainage report prepared by C.G.R. Armstrong, P.Eng. The current report for the lower portion of the Imeson - Meloche Drain, situated between Stations 0+610 to Station 1+495 is the above noted October 19, 1944 drainage report prepared by C.G.R. Armstrong, P.Eng.

#### **6.0 SURVEY**

I commenced my survey of the Imeson - Meloche Drain at Station 0+000 being the upper end of the drain and further situated along the east side of the 6th Concession Road and approximately 20 metres south of the limit between the south half and the north half of Lot 11, Concession 6. I then continued northerly upon privately owned lands following the downstream course of the Imeson - Meloche Drain to Station 0+405 where the drain turns to the west and crosses under the 6th Concession Road. I then proceeded westerly following the course of the drain downstream upon privately owned lands to Station 0+919 where the drain turns north. I then continued northerly to Station 0+989 where the drain turns west. From Station 0+989 I then proceeded westerly and southerly following the course of the drain downstream to Station 1+495 being the outlet of the Imeson - Meloche Drain into the Canard River.

## 7.0 EXISTING SITE CONDITIONS

As a result of my site survey and examination of the existing Imeson - Meloche Drain I have found the following.

- 1) Considerable amounts of sediment have accumulated within the bottom of the drain to the extent that the proper flow of water within the drain is not provided.
- 2) Considerable amounts of brush and trees have been allowed to grow within the drain, particularly from approximately Station 0+870 to Station 1+495, to the extent that the proper flow of water within the drain is further restricted.
- 3) An existing 300 mm diameter corrugated steel pipe crosses under the 6th Concession Road and enters the Imeson - Meloche Drain near Station 0+000. Due to the accumulated sediment within the bottom of the drain a proper outlet is not provided for this pipe.
- 4) An existing 750 mm diameter corrugated steel pipe access culvert, situated within the drain at Station 0+153, provides access to the Joseph Vsetula property from the 6th Concession Road. This culvert has rock headwalls at both ends of the pipe and is in good condition.
- 5) An existing 750 mm diameter corrugated steel pipe access culvert, situated within the drain at Station 0+228, provides access to the Gregory and Sherri Shaw property from the 6th Concession Road. The headwalls for this culvert are comprised of stacked pieces of broken concrete. This pipe is not at the proper grade and requires lowering to provide proper drainage to the upstream lands.
- 6) An existing 750 mm diameter corrugated steel pipe access culvert, situated within the drain at Station 0+377, provides access to the Beatrice Kulke property from the 6th Concession Road. The south headwall for this culvert is constructed with rock while the north headwall is comprised of stacked pieces of broken concrete. This access culvert is in good condition.
- 7) An existing road culvert crossing under the 6th Concession Road at Station 0+413 consists of a poured in place concrete culvert with a 1.530 metre wide opening and is in good condition.
- 8) The remains of a farm culvert are situated within the drain at Station 1+360 upon the Henry and Christine Mialkowski property. In the past this culvert provided access to the south portion of the farm separated by the drain. The culvert consists of 450 mm diameter concrete crocks which are out of horizontal and vertical alignment and some of the pipes are broken. The top of the pipes are exposed with most of the backfill material having been washed away and the drain has cut a new channel around the north side of the culvert. As a result this culvert is presently not used and is providing an obstruction in the drain to the proper flow of water. The existing culvert is also undersized and should be replaced with an adequately sized pipe.
- 9) The portion of the drain situated on the Donald and Frances Regnier property, between Station 1+388 and Station 1+495, is located within a bush area. This portion of the drain is considerably overgrown with trees and has developed a meandering alignment to the extent that the proper flow of water within the drain is not provided.

## 8.0 RECOMMENDATIONS

In order to correct the above noted deficiencies in the drain I would recommend that the following work be performed.

- 1) Any brush situated within the sideslopes of the drain from Station 0+000 to Station 1+495 be cut and disposed of.
- 2) The accumulated sediment within the bottom of the drain from Station 0+000 to Station 1+495 be excavated and disposed of upon adjacent farm lands.
- 3) Any excavated portions of the drain sideslopes be seeded with a grass seed mixture to promote erosion control of the sideslopes.

- 4) The existing 750 mm diameter corrugated steel pipe access culvert providing access to the Gregory and Sherri Shaw property, be excavated, cleaned and replaced to a proper grade including rebuilding of the existing concrete rubble headwalls.
- 5) The existing concrete crock farm bridge situated at Station 1+360 upon the lands owned by Henry and Christine Mialkowski, be removed and a new 1000 mm diameter corrugated steel pipe culvert including sloped quarried rock headwalls be provided at Station 1+270 for this property.

I would further recommend that all of the above recommended work be performed in accordance to this report, the accompanying plan and profile and the attached specifications and that this work be performed under the provisions of "The Drainage Act, 1990."

**9.0 DRAWING AND SPECIFICATION**

Attached to this report is drawing No. BC-96-114, Sheets 1 and 2 which consists of a plan showing the location of the proposed work and the lands affected by the work, together with the profile and details of the recommended work. Specifications are included in this report which show the dimensions, grades, disposal of material, working areas for construction and future maintenance, and other particulars of the recommended work.

**10.0 WORKING AREAS AND ACCESS**

The areas available to the Contractor to be used for the purpose of constructing the recommended works of this particular report and for future maintenance as provided for under Section 63 of "The Drainage Act, 1990," are described within the specifications forming part of this report.

**11.0 PROPOSED WORK**

In general the proposed work would involve the excavation of accumulated sediment from the entire length of the open drain. Trimming of drain sideslopes in some areas would also be required in order to meet the minimum sideslope requirement of 1½ units horizontal to 1 unit vertical. The excavated material would be cast and levelled upon either side of the drain as specified in the report.

The recommended work further includes the removal of any brush or trees found to be growing within the drain or within any areas to be used for the disposal of excavated material. If, however, any mature trees are situated within the drain bank and within 1 metre of the top of bank, the land owner may request these mature trees to remain and shall contact the Township Drainage Superintendent in this regard.

The recommended work would also provide for lowering of the existing access culvert to the Shaw lands and a new farm bridge would be constructed on the Mialkowski lands.

**12.0 ALLOWANCES FOR LAND TAKEN AND DAMAGES**

In accordance with the provisions of "The Drainage Act, 1990," allowances are provided to be paid to those landowners from which land is required to be used for the construction of a new drain or for the establishment of an easement for the construction and future maintenance of a drain or for land required to dispose of excavated material or for land required to obtain access to a Municipal Drainage System.

Therefore I find that each of the following owners is entitled to and should receive the following amounts as compensation for the value of land taken in order to repair and improve the drain namely:

- 1. Orval and Florence McGuire, Owners  
Pt Lt 12, Concession 5, Roll No. 11-03400

Station 0+415 to 1+174

Land being approximately 749 metres long and 0.3 metres wide, approximately 0.022 hectares (0.06 acres) to trim existing north bank.

\$ 240.00

**TOTAL FOR LAND TAKEN**

**\$ 240.00**

=====

I have provided for this in my estimate as is provided for under sub-section (a) of Section 29 of "The Drainage Act, 1990."

I further find that each of the following owners is entitled to and should receive the following amounts as compensation for damages to lands and crops, if any, namely:

1. Amherst Quarries Limited, Owner  
Pt Lt 11, Concession 6, Roll No. 11-00100  
  
Station 0+000 to 0+020  
Land being approximately 20 metres long and 12.2 metres wide,  
approximately 0.024 hectares (0.06 acres) for disposal, access and working room. \$ 30.00
  2. Joseph Vsetula, Owner  
Pt Lt 11, Concession 6, Roll No. 11-03900  
  
Station 0+020 to 0+197 and Station 0+243 to 0+325  
Land being approximately 259 metres long and 12.2 metres wide,  
approximately 0.316 hectares (0.78 acres) for disposal, access and working room. \$ 390.00
  3. Orval and Florence McGuire, Owners  
Pt Lt 12, Concession 5, Roll No. 11-03400  
  
Station 0+425 to 1+174  
Land being approximately 749 metres long and 12.2 metres wide,  
approximately 0.914 hectares (2.26 acres) for disposal, access and working room. \$1,130.00
  4. Henry and Christine Mialkowski, Owners  
Pt Lt 12, Concession 5, Roll No. 11-01200  
  
Station 1+174 to 1+388  
Land being approximately 214 metres long and 12.2 metres wide,  
approximately 0.261 hectares (0.65 acres) for disposal, access and working room. \$ 325.00
  5. Donald and Frances Regnier, Owners  
Pt Lt 11, Concession 5, Roll No. 11-00700  
  
Station 1+388 to 1+495  
Land being approximately 107 metres long and 12.2 metres wide,  
approximately 0.131 hectares (0.32 acres) for disposal, access and working room. \$ 160.00
- =====  
**TOTAL FOR DAMAGES** **\$2,035.00**  
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I have provided for this in my estimate as is provided for under sub-section (b) of Section 29 of "The Drainage Act, 1990."

### 13.0 ESTIMATE OF COST

My estimate of the total cost of this work, including all incidental expenses, is the sum of Twenty Eight Thousand, Six Hundred dollars ( \$ 28,600.00 ) made up as follows:

#### CONSTRUCTION

1. Removal and disposal of brush along both drain banks and at disposal areas as required.
  - a) Station 0+000 to 0+919, generally consisting of light brushing and intermittent trees, being approximately 0.300 hectares (0.75 acres).



- b) Station 0+919 to 1+495, generally consisting of medium to heavy brushing consisting of undergrowth and large trees, being approximately 0.230 hectares (0.60 acres).

Complete at Lump Sum \$ 2,400.00

- 2. Excavation from sideslopes and bottom of drain including casting and spreading or hauling and disposal of the excavated material as specified, and cleaning through culverts.

- a) Station 0+000 to 0+405, generally being situated along the east side of the 6th Concession Road and consisting of approximately 280 cubic metres of excavation.

- b) Station 0+405 to 1+495, generally being situated on privately owned farm lands situated west of the 6th Concession Road and consisting of approximately 1,020 cubic metres of excavation.

Complete at Lump Sum \$ 5,310.00

- 3. Supply and place seeding and mulching to all excavated portions of the drain slopes, from Station 0+000 to 1+495 and consisting of approximately 3900 square metres.

Complete at Lump Sum \$ 1,700.00

- 4. Lower existing 750 mm diameter C.S.P. access culvert 7.3 metres long for Gregory and Sherri Shaw, situated at Station 0+228 including removing and salvaging and replacing portions of the stacked concrete headwalls, removing and cleaning the existing pipe and replacing same to proper grade.

Complete at Lump Sum \$ 300.00

- 5. Remove and dispose existing 450 mm diameter farm bridge 5.0 metres long for Henry and Christine Mialkowski, situated at Station 1+360. Supply and install a new replacement farm bridge at Station 1+270 consisting of 1000 mm (40") diameter corrugated steel pipe 10.35 metres (34 feet) long, with 2.0 mm thick walls, 68 mm x 13 mm corrugations, with Granular "B" bedding to pipe springline, native clay backfill, 150 mm of Granular "A" surface topping and sloped quarried rock and filter fabric erosion protection at pipe ends.

Complete at Lump Sum \$ 2,990.00

SUB-TOTAL FOR CONSTRUCTION =====  
\$ 12,700.00

G.S.T. PAYABLE (7% approximate) 890.00

**TOTAL FOR CONSTRUCTION (including G.S.T.)** =====  
**\$ 13,590.00**  
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**INCIDENTALS**

Survey, report, plans, estimates and specifications.	\$ 5,400.00
Assistants and expenses, typing report and preparing drawings.	\$ 3,300.00
O.M.B. Fee	\$ 125.00
Estimated cost of Tender Advertisement and Tender Documents (if required).	\$ 1,000.00
Preparing Progress Payment Certificates and Final Inspection of Construction.	\$ 600.00
Restaking Drain (if required).	\$ 500.00
Contingency Allowance (if required).	\$ 1,000.00
	=====
<b>TOTAL FOR INCIDENTALS</b>	<b>\$ 11,925.00</b>
G.S.T. ON INCIDENTALS (7% approximate)	\$ 810.00
TOTAL ALLOWANCE FOR LAND TAKEN (brought forward)	\$ 240.00
TOTAL ALLOWANCE FOR DAMAGES (brought forward)	\$ 2,035.00
TOTAL FOR CONSTRUCTION (brought forward)	\$ 13,590.00
	=====
<b>TOTAL ESTIMATE</b>	<b>\$ 28,600.00</b>
	=====

**14.0 ASSESSMENT**

I would recommend that the cost of this work be assessed against the lands and road affected in accordance with the accompanying Schedule of Assessment.

- I have determined the estimated cost to lower the existing access culvert for Gregory and Sherri Shaw to be \$320.00 (including G.S.T.) for construction which I have assessed as a Special Benefit in the proportion of 50 percent to the Shaw lands and 50 percent to the affected upstream lands.

I have determined the estimated cost to remove and reconstruct the farm bridge for Henry and Christine Mialkowski to be \$3,200.00 (including G.S.T.) for construction. I have further determined that in order to replace the currently existing 5.0 metre long 450 mm diameter culvert the estimated cost would be \$1,160.00 (including G.S.T.) and 50% of this amount (\$580.00) would be assessable to the affected upstream lands. Therefore I have assessed the value of \$580.00 as a Special Benefit to the affected upstream lands and the balance of \$2,620.00 to the Mialkowski lands as a Special Benefit.

**15.0 MAINTENANCE**


I would further recommend that this drainage work be kept up and maintained at the expense of the lands and road herein assessed for its construction and in the proportions herein contained excluding any amounts assessed as Special Benefit or until otherwise determined under the provisions of "The Drainage Act, 1990."

## 16.0 GRANTS

In accordance with the provisions of Sections 85, 86 and 87 of "The Drainage Act, 1990," a grant possibly in the amount of 33 $\frac{1}{3}$ % of the assessment eligible for a grant, may be made in respect of the assessment made in this report, upon privately owned lands used for agricultural purposes. I would further recommend that an application be made by the Township upon completion of this project, to the Ministry of Agriculture and Food in accordance with Section 88 of "The Drainage Act, 1990," for this grant.

All of which is respectfully submitted.

**BRUCE D. CROZIER ENGINEERING INC.**  
**CONSULTING ENGINEERS**  
**209 ERIE STREET SOUTH**  
**LEAMINGTON, ONTARIO**  
**N8H 3C1**

  
Lou Zarlenga, P.Eng.



SPECIAL PROVISIONSIMESON - MELOCHE DRAINTOWNSHIP OF ANDERDONPROJECT REFERENCE BC-96-1141.0 EXCAVATION

The drain shall follow in general the course of the present drain and shall be of the form, size, depth, etc. as shown on the accompanying plan and profile.

When completed the drain shall have a uniform bottom and in no case shall such bottom project above the grade line as shown on the accompanying drawing and as determined from the bench mark. The drain shall have sideslopes of 1½ metres horizontal to 1 metre vertical and the bottom width of the drain shall be 0.90 metres.

2.0 BRUSHING AND GRUBBING

The Contractor shall cut and dispose of the brush from station 0+000 to station 1+495 in accordance with General Specification Item No. 5.0, page GS-1, and as amended herein.

Native trees situated within 1.0 metres of the top of drain bank may be left standing if the landowner contacts the Township Drainage Superintendent and arranges for same prior to the start of construction. The Drainage Superintendent shall decide if it is feasible to allow any trees situated within the drain banks to remain.

3.0 SEEDING

The Contractor shall place seeding and mulching to all excavated portions of the sideslopes in accordance with General Specification Item No. 17.0, page GS-4.

4.0 LOCATION OF THE DRAIN

The location of the drain shall follow the course of the present watercourse.

5.0 DISPOSAL OF MATERIAL

The Contractor shall dispose of excavated material as follows: Where the material is specified to be disposed of the Contractor shall load and haul the surplus excavated material to a location to be determined by him and at his expense. Where excavated material is specified to be cast and spread the Contractor shall cast and spread the excavated material in accordance with the General Specifications or as amended below.

- |                                  |   |
|----------------------------------|---|
| Station 0+000 to Station 0+405 - | The excavated material shall be cast and spread onto the east side of the drain to a depth of 100 mm (4").  |
| Station 0+405 to Station 0+919 - | The excavated material shall be cast and spread onto the south side of the drain to a depth of 100 mm (4"). |
| Station 0+919 to Station 0+989 - | The excavated material shall be cast and spread onto the west side of the drain to a depth of 100 mm (4").  |
| Station 0+989 to Station 1+495 - | The excavated material shall be cast and spread onto the south side of the drain to a depth of 100 mm (4"). |

6.0 WORKING AREA

For the purpose of constructing this drain and for future maintenance as provided for under Section 63 of "The Drainage Act, 1990," the Contractor shall be allowed to use the working area described below and for which the current private landowners have received an allowance for damages to construct the drain.

- |                                  |   |
|----------------------------------|---|
| Station 0+000 to Station 0+405 - | The entire width of the 6th Concession Road allowance.  |
| Station 0+000 to Station 0+153 - | An area measuring 12.2 metres (40 feet) wide and adjacent to the east top of the drain shall be used. |
| Station 0+243 to Station 0+375 - | An area measuring 12.2 metres (40 feet) wide and adjacent to the east top of the drain shall be used. |

- Station 0+405 to Station 0+919 - An area measuring 12.2 metres (40 feet) wide and adjacent to the south top of the drain shall be used.
- Station 0+919 to Station 0+989 - An area measuring 12.2 metres (40 feet) wide and adjacent to the west top of the drain shall be used.
- Station 0+989 to Station 1+495 - An area measuring 12.2 metres (40 feet) wide and adjacent to the south top of the drain shall be used.

## 7.0 STAKES

Stakes have been placed along the course of the drain, at 25 metre intervals between Station 0+000 to Station 0+450 and at 50 metres intervals between Station 0+450 to Station 1+495 on the bank of the drain, numbered consecutively 0+000, 0+025, 0+050 etc. The depths to which the drain is to be dug, as shown on the profile, are measured in metres from the surface of the ground beside the stakes. The contractor will be held responsible during the progress of the work for the preservation of all stakes, bench marks and survey markers which fall within the limits of the work. The cost of replacing any bench mark or survey marker defaced or destroyed by the Contractor as a result of his work will be deducted from any money due the Contractor.

## 8.0 CULVERT WORK

At Station 0+228 the Contractor shall lower to proper grade the existing 750 mm diameter C.S.P. culvert. The Contractor shall carefully remove and salvage portions of the existing stacked concrete headwalls in order to remove the existing pipe. The Contractor shall carefully excavate and remove the existing pipe, clean same and install the pipe to proper grade. The Contractor may utilize the existing bedding and backfill material to backfill the trench, however, the Contractor shall provide new Granular "A" bedding to 6" above the top of the pipe and shall compact the bedding and backfill to 100% Standard Proctor Density. The Contractor shall rebuild the stacked concrete headwalls utilizing the salvaged material.

At Station 1+360 the Contractor shall remove and dispose of the existing 5.0 metre long 450 mm diameter concrete crocks. The Contractor shall supply and install new 1000 mm diameter spiral corrugated steel pipe as per the tender item description 10.35 metres long and shall install same including sloped quarried rock erosion control in accordance to General Specifications Item No. 11.0 on Page GS-2 and as amended as follows. The Contractor shall utilize Granular "B" bedding to the springline (middle) of the pipe and shall backfill the remainder of the trench with compacted select native clay material with the exception of the top 150 mm depth. The top 150 mm depth of the surface of the farm bridge shall be compacted Granular "A" material.

SCHEDULE OF ASSESSMENT  
 IMESON - MELOCHE DRAIN  
 TOWNSHIP OF ANDERDON  
 PROJECT REFERENCE BC-96-114

Dec. 23, 1997

Entry No.	or Plan	Lot	Roll No.	Hectares Owned	Name of Owner	Hectares Affected	Value of Benefit	Value of Outlet	Special Benefit	Total	
1	6	PT LT 11	11-00100	40.246	AMHERST QUARRIES LIMITED	2.206	\$568.44	\$476.23	\$64.78	\$1,109.45	
2	6	PT LT 11	11-03800	0.223	MALDEN QUARRIES LIMITED	0.223	86.32	143.34	19.64	249.30	
3	6	PT LT 11	11-03900	19.915	JOSEPH VSETULA	2.108	543.19	433.19	50.74	1,027.12	
4	6	PT LT 11	11-03950	0.320	GREGORY & SHERRI SHAW	0.320	247.37	197.28	167.91	612.56	
5	6	PT LT 12	11-04000	10.194	BEATRICE KULKE	2.428	625.65	461.15	20.01	1,106.81	
6	6	PT LT 12	11-04100	9.712	ORVAL McGUIRE	1.619	208.72	307.50	13.34	529.56	
7	6	PT LT 12	B-27/96	0.405	ORVAL McGUIRE	0.405	156.67	230.77	10.01	397.45	
8	6	PT LT 12	11-04200	12.141	GIUSEPPE & ANGELA DESANTIS	1.619	208.72	307.50	13.34	529.56	
9	6	PT LT 12	11-04300	10.117	MARK McGUIRE	0.450	57.98	85.47	3.71	147.16	
10	5	PT LT 11	11-03600	1.170	MICHAL & ANA PUCOVSKY	1.170	452.23	757.73	28.92	1,238.88	
11	5	PT LT 11	11-00200	18.794	FRANCESC & KAREN IOVINO	0.449	29.12	64.31	3.70	97.13	
12	5	PT LT 11	11-03500	10.117	ORVAL McGUIRE	8.094	521.54	1,159.27	66.69	1,747.50	
13	5	PT LT 11	11-00700	19.146	DONALD & FRANCES REGNIER	11.052	948.26	1,582.93	91.07	2,622.26	
14	5	PT LT 11	B-24/96	0.279	DONALD & FRANCES REGNIER	0.279	107.97	119.88	6.90	234.75	
15	5	PT LT 12	11-03400	10.117	ORVAL & FLORENCE McGUIRE	10.117	2,606.95	1,659.02	83.36	4,349.33	
16	5	PT LT 12	11-03200	9.903	ANGELO & MARIA IACOBELLI	9.903	850.34	1,521.14	81.60	2,453.08	
17	5	PT LT 12	11-03300	0.210	DAVID JONCAS	0.210	54.11	119.66	5.30	179.07	
18	5	PT LT 12	11-01200	20.226	HENRY & CHRISTINE MIALKOWSKI	4.047	1,042.83	537.63	2,620.00	4,200.46	
TOTAL ON LANDS							\$9,316.41	\$10,164.00	\$3,351.02	\$22,831.43	
6TH CONCESSION ROAD						TOWNSHIP OF ANDERDON	2.085	\$3,223.59	\$2,376.00	\$168.98	\$5,768.57
TOTAL ON ROADS							\$3,223.59	\$2,376.00	\$168.98	\$5,768.57	
TOTAL ASSESSMENT							\$12,540.00	\$12,540.00	\$3,520.00	\$28,600.00	

\* INDICATES LANDS USED FOR AGRICULTURAL PURPOSES

Benefit \$257/hectare.  
 Outlet rate \$168/hectare.  
 residential 4 X  
 roads 6 X

DAN - Severance B/24/96 - copy of report.  
 Helfrich Sod Farm - not assessed.  
 McGuire = 0.3 metres.



GENERAL SPECIFICATIONSIMESON - MELOCHE DRAINTOWNSHIP OF ANDERDONPROJECT REFERENCE BC-96-114**1.0 EXAMINATION OF SITE, PLANS AND SPECIFICATIONS**

Each tenderer must visit the site and review the plans and specifications before submitting his tender and must satisfy himself as to the extent of the work and local conditions to be met during the construction period. He is not to claim at any time after submission of his tender that there was any misunderstanding of the terms and conditions of the contract relating to site conditions. The quantities shown as indicated on the drawings or in the report are estimates only and are for the sole purpose of indicating to the Tenderers the general magnitude of the work. The tenderer is responsible for checking quantities for accuracy prior to submitting his tender.

**2.0 SUPPLY OF MATERIALS**

The Contractor shall supply all labour, equipment and materials necessary for the proper completion of the project.

**3.0 PROFILE**

The excavation of the drain must be at least to the depth intended by the grade line as shown on the profile, which grade line is governed by the bench marks. The profile shows, for the convenience of the Contractors and others, the approximate depth of cut from the surface of the ground at the points where the numbered stakes are set to the final invert of the channel and also the approximate depth of cut from the bottom of the existing channel to the final invert of the channel. Bench marks which have been established along the course of the drain, shall govern the final elevation of the drain. The location and elevation of the bench marks are shown on the profile.

**4.0 ALIGNMENT**

The alignment of the drain throughout shall be to the full satisfaction of the Commissioner in charge. The whole of the work shall be done in a neat, thorough and workmanlike manner to the full satisfaction of the Commissioner in charge. The bottom widths and side slopes of the various sections of the finished drain are to be true to line and grade as shown on the profile. When completed the drain shall have a uniform and even bottom and in no case shall such bottom project above the grade line as shown on the accompanying drawing, and as determined from the bench mark.

**5.0 BRUSHING AND GRUBBING**

Where there is any brush or rubbish in the course of the drain, including both side slopes of the drain, or where the earth is to be spread or on that strip of land between where the earth is to be spread and the edge of the drain, all such brush or rubbish shall be grubbed out and close cut and the whole to be burned or otherwise satisfactorily disposed of by the Contractor.

**6.0 SPREADING EXCAVATED EARTH**

The excavated material to be cast onto the adjoining land shall be well and evenly spread over a sufficient area so that no portion of the excavated earth is more than 100 mm in depth or as otherwise specified and kept at least 1.2 metres clear from the finished edge of the drain, care being taken not to fill up any existing tiles, ditches, furrows or drains with the excavated material. The excavated material to be spread upon the lands shall be free from rocks, boulders, stumps, rubble, rubbish or other similar material and other materials if encountered, shall be hauled away by the Contractor and disposed of at a site to be obtained by him at his expense.

Where the drain crosses any lawn, garden, orchard or driveway, etc. the excavated material for the full width of the above mentioned areas, shall be hauled away by the Contractor and disposed of upon the adjacent lands and spread as previously specified.

**7.0 FENCING**

Where it is necessary to take down any fence in order to proceed with the work, the same shall be done by the Contractor across or along that portion of the work where such fence is. The Contractor will be required to exercise extreme care in the removal of any fence so as to cause a minimum of damage to the same. The Contractor will be required to replace any fence that is taken down in order to proceed with the work and the fence shall be replaced in a neat and workmanlike manner. The Contractor will not be required to procure any

new materials for rebuilding the fence provided he has used reasonable care in the removing and replacing of the same. Where any fence is removed by the Contractor and the Owner thereof deems it advisable and procures new material for replacing the fence so removed, the Contractor shall replace the fence using the new materials and the materials from the present fence shall remain the property of the Owner. The Contractor is not to leave any fences open when he is not at work in the immediate vicinity.

#### 8.0 LOCATION OF STRUCTURES AND UTILITIES

The Contractor shall satisfy himself as to the exact location, nature and extent of any existing structure, utility or other object which he may encounter during the course of the work. The Contractor shall indemnify and save harmless, the Township and the Engineer for any damages which he may cause or sustain during the progress of the work. He shall not hold the Township or the Engineer liable for any legal action arising out of any claims brought about by such damage caused by him.

#### 9.0 ACCESS BRIDGES

The Contractor shall satisfactorily clean through all existing access bridges to the grade line as shown on the accompanying drawing.

#### 10.0 BAGGED CONCRETE HEADWALLS FOR CULVERTS

Where specified and after the Contractor has set in place the new pipe, he shall completely backfill the same and install new concrete jute bag headwalls at the locations indicated on the drawing. When constructing the concrete jute bag headwalls, the Contractor shall place the bags so that the completed headwall will have a slope inward from the bottom of the pipe to the top of the finished headwall, the slope of the headwall shall be one unit horizontal to five units vertical. The Contractor shall completely backfill in behind the new concrete jute bag headwalls with granular material, Granular "B" per O.P.S.S. 1010 and the granular material shall be compacted in place with a standard proctor density of 100%. The placing of the jute bag headwalls and the backfilling shall be performed in lifts simultaneously. The granular backfill shall be placed and compacted in lifts not to exceed 300 mm (12 inches) in thickness.

The concrete jute bag headwalls shall be constructed by filling jute bags with concrete. All concrete used to fill the jute bags shall have a minimum compressive strength of 20.7 MPa in 28 days and shall be provided and placed only as a wet mix, under no circumstance, shall the concrete to be used for filling the jute bags, be placed as a dry mix. The jute bags, before being filled with concrete, shall have a dimension of 460 mm x 660 mm (18" x 26"). The jute bags shall be filled with concrete so that when they are laid flat, they will be approximately 100 mm (4") thick, 300 mm (12") to 380 mm (15") wide and 460 mm (18") long. The concrete jute bag headwall to be provided at the end of the pipe shall be of single bag wall construction or as specified otherwise. The concrete filled bags shall be laid so that the 460 mm (18") dimension is parallel with the length of the new pipe. The concrete filled bags shall be laid on a footing of plain concrete being 460 mm (18") wide, extending for the full length of the wall, and from .3 metres (1 ft.) below the bottom of the corrugated pipe to the bottom of the culvert pipe. All concrete used for the footing shall have a minimum compressive strength of 20.7 MPa in 28 days. The completed jute bag headwalls shall be securely embedded a minimum of .50 metres (20") into the side slopes of the drain.

Upon completion of the jute bag headwall the Contractor shall cap the top row of concrete filled bags with a layer of plain concrete, 150 mm (6") thick, and hand trowelled to obtain a pleasing appearance. The Contractor shall fill all voids between the concrete filled jute bags and the corrugated steel pipe with concrete, particular care being taken underneath the pipe haunches to fill all voids.

As an alternate to constructing a concrete filled jute bag headwall, the Contractor may construct a grouted concrete rip rap headwall. The specifications for the installation of a concrete filled jute bag headwall shall be followed with the exception that broken sections of concrete may be substituted for the jute bags. The concrete rip rap shall be approximately 18" square and four inches thick and shall have two flat parallel sides. The rip rap shall be fully mortared in place using a mixture composed of three parts of clean, sharp sand to one part of Portland Cement.

#### 11.0 QUARRIED ROCK END PROTECTION FOR CULVERTS

Where specified and after the corrugated steel pipe has been set, the Contractor shall backfill the pipe with granular "B" material, O.P.S.S. Spec. 1010 with the exception of the top 30 cm (12") of the backfill over the top and ends of the corrugated steel pipe. The top 30 cm of the backfill for the full width of the excavated area (between each side slope of the drain) and for the top width of the driveway, shall be granular "A" material, O.P.S.S. Spec. 1010. The granular backfill shall be compacted in place to a Standard Proctor Density of 100% by means of mechanical compactors. The equipment and method of compacting the backfill material shall be to the full satisfaction of the Commissioner in charge.



The backfill over the ends of the corrugated steel pipe shall be set on a slope of 1½ metres horizontal to 1 metre vertical from the bottom of the corrugated steel pipe to the top of each side slope and between both side slopes. The top 30 cm (12") in thickness of the backfill over the ends of the corrugated steel pipe shall be quarried rock. The quarried rock shall be placed on a slope of 1½ metres horizontal to 1 metre vertical from the bottom of the corrugated steel pipe to the top of each side slope of the drain and between both side slopes. The quarried rock shall have a minimum dimension of 100 mm (4") and a maximum dimension of 225 mm (9"). Prior to placing quarried rock end protection over the granular material, the Contractor shall lay a non woven geotextile filter fabric equal to a "TerraFix 270R" or approved equal. The geotextile filter fabric shall extend from the bottom of the corrugated steel pipe to the top of each side slope of the drain and between both side slopes of the drain. The Contractor shall take extreme care not to damage the geotextile filter fabric when placing the quarried rock on top of the filter fabric.

## 12.0 PLACING OF CORRUGATED STEEL PIPE

When specified the Contractor shall install all culvert bridges in the location directed by the Commissioner. The excavation for placing the culvert, the type and class of bedding and backfill and culvert and treatment shall be carried out to the width, depth and alignment as specified herein. The surface on which the culvert is to be laid shall be true to grade and alignment and shaped to accept the materials to be placed. The pipe shall be laid to the alignment and grade shown in the report but may not be placed on a bed containing frozen materials. The Contractor shall carefully place the bedding and backfill material so damage to or movement of the pipe is avoided. Backfill and cover materials shall be placed in layers not exceeding 250 mm (10") in thickness, loose measurement. Each layer shall be thoroughly compacted before the next layer is placed. Backfill on each side of the pipe shall be placed simultaneously and at no time shall the levels on each side of the pipe differ by more than 250 mm. Where native backfill is approved to be used the material shall not contain boulders larger than 150 mm or other deleterious material. The Contractor will be required to fully restore all paved driveways with materials of similar type and depths. The Contractor shall neatly saw cut all paved driveways at a distance of 300 mm beyond the edge of the excavated trench and this shall be done immediately prior to final restoration of the paved driveway.

When an access culvert or bridge does not have to be lowered or replaced, the Contractor shall clean it to its full cross sectional area using care to avoid causing damage to it in the process. Where a pipe culvert is to be reset to a new grade, the Contractor shall carefully remove it, clean it to its full cross sectional area and replace it in the drain as specified herein. Where a culvert is to be replaced, the Contractor shall carefully remove the existing pipe from the drain, clean it to its full cross sectional area and leave it on the drain bank. Should either the property owner or the Commissioner in charge not require the salvaged pipe then the Contractor shall dispose of the pipe at the Contractors expense.

The helical corrugated steel pipe, when specified shall be installed so that the helix angle is constant for the total length of the installation and each pipe section shall be installed next to the previous section such that the lock seam forms a continuous helix. Rivetted corrugated steel pipe, when specified, shall be laid with the inside circumferential laps pointing in the direction of flow. The longitudinal laps shall be located in the upper half of the pipe. Corrugated steel pipe sections shall be joined together by means of a plant manufactured steel coupler. The couplers shall be installed to lap approximately equal portions of pipe sections being connected, such that the corrugations or projections of the coupler properly engage the pipe corrugations.

The Contractor if using a batter board system for establishing the grade of the culvert pipe, shall utilize a minimum of three batter board stakes for each culvert. The Contractor shall ensure that the batter board stakes placed on the grade stakes shall line up, this being done prior to any excavation taking place for the proposed culvert.

Where pipes are scheduled to be moved or replaced the Contractor shall confirm the new location of the culvert pipe with the owner prior to installation. Where the Contractor has excavated a culvert pipe which has been scheduled to be cleaned and reinstalled and it is found that the condition of the existing culvert pipe is not satisfactory to be reused, the Contractor shall immediately notify the Commissioner in charge who will verify the condition of the existing pipe and may instruct the Contractor to supply a new length of corrugated steel pipe.

Where pipes are scheduled to be cleaned and flushed only, the material which is removed from the culvert pipe is to be loaded and hauled away, over digging of the drain at the downstream end of the culvert to accommodate material flushed from a culvert pipe will not be allowed.

## 13.0 CUTS

The cuts as shown on the accompanying drawing are to be taken from the ground beside the stakes to the bottom of the finished drain, unless otherwise noted on the drawing.

#### 14.0 DAMAGE TO TRAVELLED PORTION OF MUNICIPAL ROAD

The Contractor will be responsible for any damage caused by him to any portion of the municipal road system, especially to the travelled portion. When excavation work is being carried out and the excavation equipment is placed on the travelled portion of a road, the travelled portion shall be protected by having the excavation equipment placed on satisfactory timber planks or timber pads. If any parts of the travelled portion of the road is damaged by the Contractor, the Municipality shall have the right to have the necessary repair work done by its employees and the cost of all labour and materials used to carry out the repair work shall be deducted from the Contractor's contract and credited to the Municipality.

#### 15.0 CERTIFICATE OF CLEARANCE

The Contractor will be required to submit to the Municipality, a Certificate of Good Standing from the Worker's Compensation Board prior to the commencement of the work and the Contractor will be required to submit to the Municipality, a Certificate of Clearance for the project from the Worker's Compensation Board before final payment is made to the Contractor.

#### 16.0 PROGRESS ORDERS

Monthly progress orders for payment shall be furnished to the Contractor by the Commissioner in charge; said orders shall not be for more than 90% of the value of the work done and the materials furnished on the site. The paying of the full 90% does not imply that any portion of the work has been accepted. The remaining 10% will be paid 45 days after the final acceptance and completion of the work.

#### 17.0 SEEDING AND MULCHING

All side slopes of the drain that have been excavated shall be covered with a seed and mulch mixture. The seed and mulching operation shall be carried out according to Ministry of Transportation Specifications, Form 572, dated April 1976 or as subsequently amended or as amended by these specifications. The seeding mixture and rate of application per hectare shall be as follows: Creeping Red Fesque 54 kg (120 lbs.), Kentucky Blue Grass 22 kg (49 lbs.), Perennial Rye Grass 13 kg (30 lbs.), Crown Vetch 11 kg (25 lbs.), Wild White (Dutch) Clover 6 kg (12 lbs.) and Oats or Rye 62 kg (135 lbs.). If the seeding and mulching operation is carried out in the Spring, the seeding mixture shall contain Oats and if the seeding and mulching operation is carried out in the Fall, the seeding mixture shall contain Rye. The seeding and mulching operation shall be only carried out as weather conditions permit during the months of May and June in the Spring, and September and October in the Fall. If the excavation work is carried out during the months of May and June, or September or October, the Contractor has the option of contacting the Commissioner in charge and if the Contractor receives his written permission, the seed mixture as above specified, may be placed on the excavated side slopes by the Contractor by hand, daily, at the completion of his daily excavation operation. If the Contractor has been given written permission by the Commissioner to place the seeding mixture by hand daily, at the completion of his daily excavation operation, the Contractor shall be responsible to give the side slopes a rough, harrowed texture prior to placing the seed mixture.

#### 18.0 CLEANING UP

The Contractor shall leave the whole of the site of the work in a neat, thorough and workmanlike appearance to the full satisfaction of the Commissioner. He shall haul away any excess earth from the site. He shall haul to the site, sufficient earth to fill any depressions caused by his work at his own expense. The site shall be left as close as possible in the same condition as it was prior to the commencement of the work.

#### 19.0 QUARRIED ROCK

The Contractor shall place quarried rock protection at the areas indicated on the accompanying plans. The quarried rock shall be graded in size from a minimum size of 100 mm to a maximum size of 230 mm. The quarried rock shall be placed 300 mm in thickness on a layer of geotextile filter fabric placed on the bottom of the excavation. The filter fabric shall be "Terrafix 270-R" or equal. The Contractor shall excavate for the quarried rock so that the top of the completed quarried rock protection is level with the adjacent ground.

The Contractor shall remove all trees, brush and debris from the area on which the quarried rock is to be placed. The quarried rock shall be carefully placed by the Contractor at the locations and to the dimensions as shown on the accompanying specifications. The specified filter cloth shall be hand laid and have an overlap of 600 mm and all quarried rock that is to be placed over the filter cloth shall be carefully hand or machine placed so that it does not damage the filter cloth. The filter cloth shall extend up the sides of the trench excavated to accept the quarried rock and the quarried rock shall extend 300 mm above the top of the surface inlet pipe where applicable.

## 20.0 MAINTAINING FLOW AND EXISTING SEWERS

The Contractor shall support and maintain the flow and existing sewers and house connections and any other drainage works encountered in the progress of the work and at no expense to the owner. The Contractor shall obtain written approval from the engineer to stop up any drain, and if necessary, provide pumping equipment, build necessary by-passes, etc. at no expense to the owner.

## 21.0 MEASUREMENT AND PAYMENT

Payment for the work shall be on a lump sum basis unless otherwise indicated and shall include all the work shown on the accompanying drawings and specifications.

## 22.0 COMMISSIONER

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

The Commissioner will be permitted to make minor variations in the work so long as these variations will result in either a more satisfactory drain or a more economical one. These variations, however, must not be such as to change the intent of the work performed nor are they to reduce the standard of quality.

## 23.0 SPECIAL PROVISIONS

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

## 24.0 LINES, LEVELS AND GRADES

The Contractor shall take note that the Engineer will carry out surface surveys and establish bench marks and references showing the lines and levels required for the work. The Contractor will be responsible for establishing the lines and grades for the work from the references and bench marks established by the Engineer.

The Engineer shall have the right to check all lines and grades to see whether they conform with the required lines and grades. The contractor shall protect from damage or loss, all markers, stakes, bench marks or other appurtenances established by the Engineer. In case any such markers or stakes are lost or destroyed, the Contractor shall notify the Engineer in writing and all expense incurred by the Engineer in replacing same shall be charged against the Contractor and shall be deducted or collected from the Contract Price.

Any work done without accurate lines and levels having been established or without the supervision of the Engineer or Inspector, may not be estimated or paid for and if found to be inaccurate, shall be removed or corrected by the Contractor at his own expense.

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

## 25.0 REMOVAL OF TREES

Whenever practical, existing trees not scheduled for removal will be preserved. The Contractor shall exercise the utmost caution to ensure that the trees are not damaged or disturbed.

## 26.0 EXTRA WORK

Extra work is work which is required, but not described, in the Contract Documents or on the plans. No work shall be regarded as extra work unless it is approved in writing by the Engineer, and with the agreed price and method of payment for it specified in the said approval, provided the said price is not otherwise determined by this Contract.

All notification of claims for extra work shall be made to the Engineer before the extra work is started. Notwithstanding anything contained in the General Conditions, when it is necessary to perform work additional to the Tender items, unit prices to cover the cost of the work shall be negotiated whenever possible.

Where it is impractical, due to the nature of the work, to negotiate unit prices for extra work not included in the Tender, the cost of the additional work may be paid for by a force account, previously agreed upon and authorized by an order issued prior to carrying out the work, and for which payment is based on the O.P.S.S. Schedule of Rental Rates, 127 April 1, 1986, or a percentage thereof.

## 27.0 CONSTRUCTION SAFETY ACT

The Contractor shall comply with all the requirements of the Occupational Health and Safety Act, 1990 and Regulations for Construction Projects as administered by the Ontario Ministry of Labour and all subsequent amendments of the said Act. In the event that the Contractor fails to comply with the requirements of the above mentioned Act, the Engineer may suspend the operation of the work forthwith and the suspension will remain in effect until the Contractor has taken whatever remedies are necessary to comply with the said Act. Suspension of the work by the Engineer on account of the provisions of this clause, shall not allow the Contractor any extension of the Time of Completion and the Contractor may be liable for liquidated damages to the Township.

## 28.0 INSURANCE

The Contractor, as part of the contract, shall provide a comprehensive Liability Insurance Coverage for not less than \$1,000,000.00 on the project and shall name the Township, its Officials and the Consulting Engineer as equally insured under the policy and shall also contain a cross liability and a save harmless clause for the said Township and said Consulting Engineer. Such copy of this policy to be submitted to both the Township Clerk and the Consulting Engineer prior to commencement of the work.

The liability insurance shall not contain any exclusions or limitations in respect to shoring, underpinning, raising or demolition of any building or structure, pile driving, caisson work, collapse of any structure or subsidence of any property, structure or land from any cause. The liability insurance shall be endorsed to provide that the policy shall not be altered, cancelled or allowed to lapse without 30 days prior written notice to the Township.

## 29.0 MAINTENANCE

The Contractor shall repair and make good at his expense any damages or faults in the work that may appear within one year after its completion (as evidenced by the final inspection report), as the result of imperfect or defective work done or materials furnished.

Nothing herein contained shall be construed as in any way restricting or limiting the liability of the Contractor under the appropriate laws under which the work is being done.

## 30.0 INSPECTOR'S POWERS

An inspector acting as agent for the Engineer or an inspector acting as agent for the Township, may be employed to see that the provisions of the specifications are faithfully adhered to, especially as regard to quality of workmanship, and materials. An inspector may stop the work if any of the provisions of these specifications are not strictly adhered to or for any good and sufficient cause. Any work done in the absence of an inspector maybe ordered to be opened up for thorough examination and must be rebuilt or replaced as directed and at the Contractor's expense. Approval by an inspector shall not be taken or be construed as an acceptance of defective or improper work or material which must, in every case, be removed and properly replaced whenever discovered at any stage of the work. Orders given by an inspector relating to the quality or type of material and workmanship shall be at once obeyed by the Contractor.

## 31.0 ONTARIO PROVINCIAL STANDARD SPECIFICATIONS

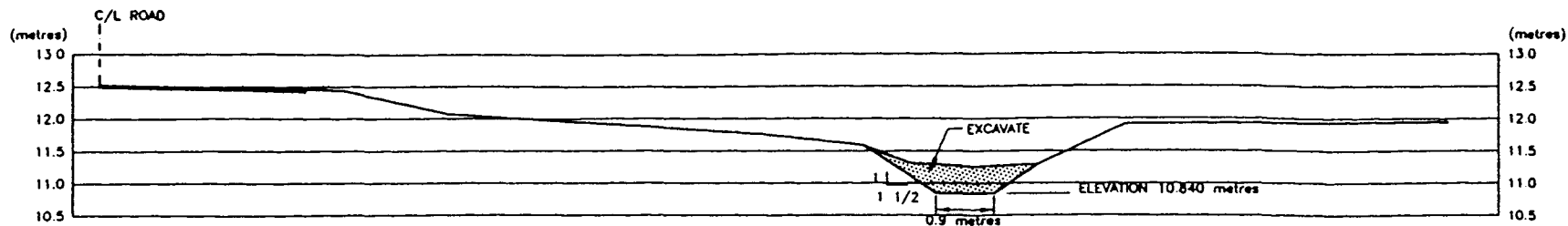
Except as extended and amended herein the General Specifications, the construction of the whole work shall conform with the Ontario Provincial Standard Specifications as issued by the Ministry of Transportation from time to time and shall be current.

The Contractor will be required to have available, the current specifications of the O.P.S.S. and the Ministry of Transportation with respect to all aspects of the construction. He is advised that these specifications are available from the Ministry of Transportation upon payment of the prescribed fee charged therefor.

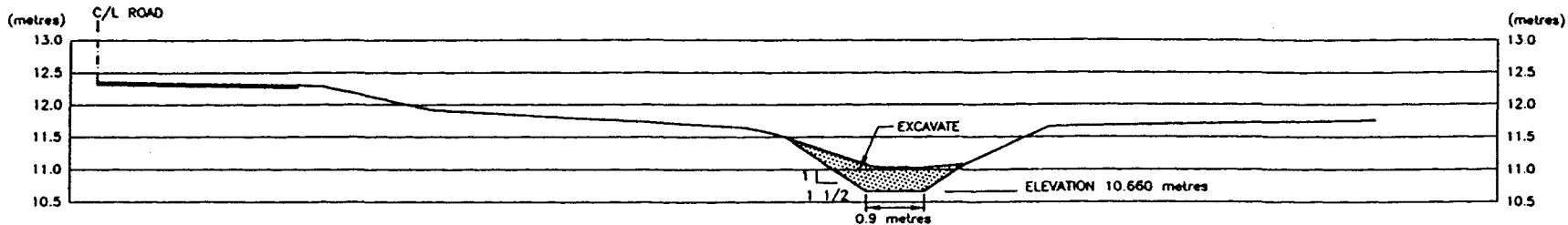
## 32.0 TAXES

The Contractor shall include all applicable taxes in his tender submission.

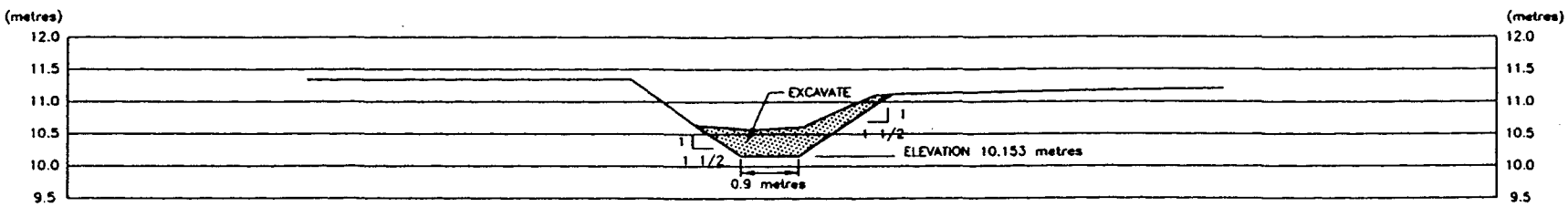
NOTE: ALL EXCAVATED SIDESLOPES TO BE 1 1/2 TO 1 (TYPICAL).



SECTION 0+125  
SCALE: 1 : 50



SECTION 0+350  
SCALE: 1 : 50



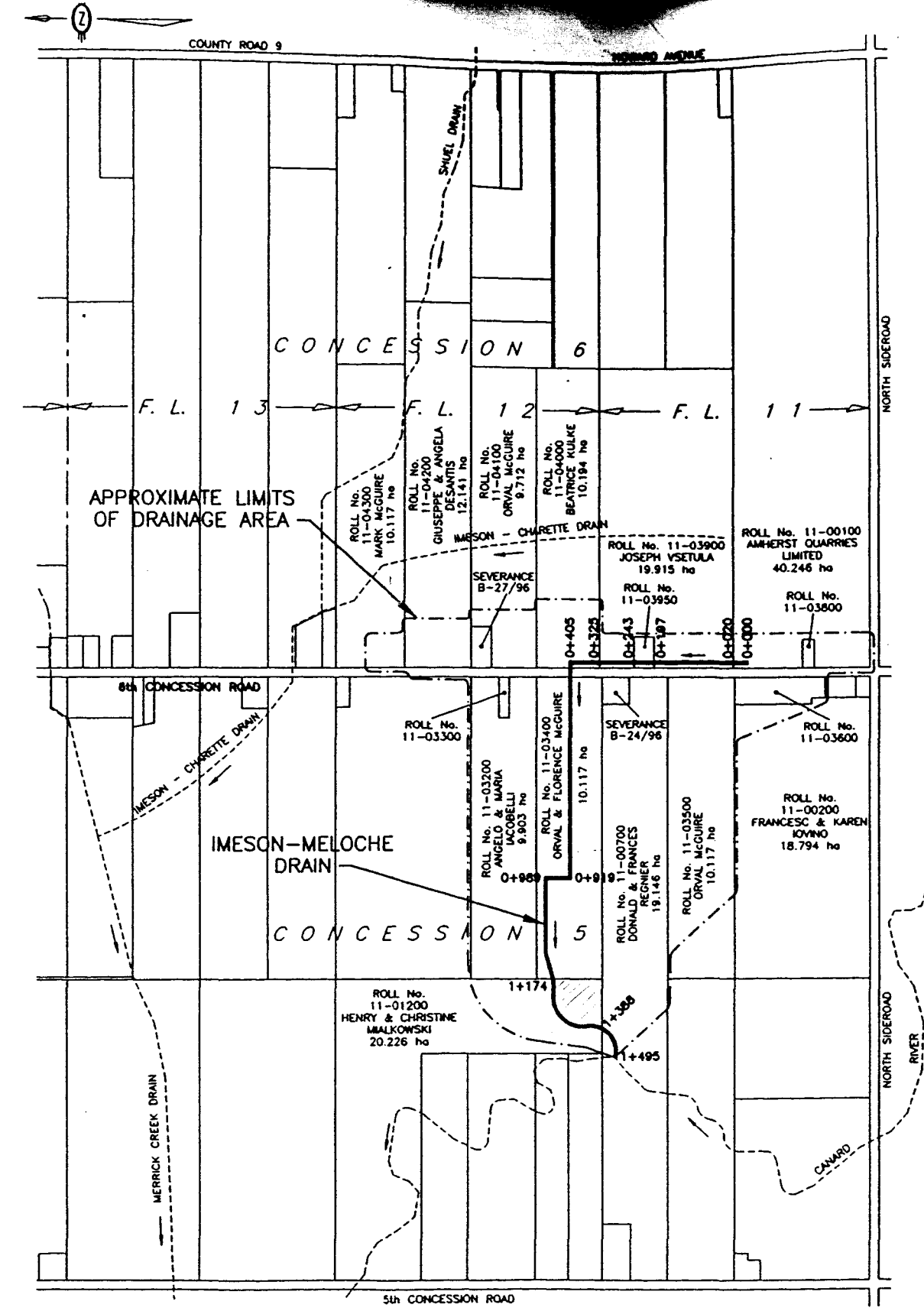
SECTION 0+700  
SCALE: 1 : 50

**BENCH MARKS**

- 1) NAIL IN HYDRO POLE AT STATION 0+200.  
ELEVATION = 12.534 metres
- 2) TOP SOUTH END OF EAST HEADWALL OF CONCRETE ROAD BRIDGE AT STATION 0+413.3.  
ELEVATION = 12.421 metres
- 3) NAIL IN EAST FACE OF TREE AT STATION 0+951.  
NAIL IS APPROXIMATELY 0.6m ABOVE THE GROUND.  
ELEVATION = 11.332 metres
- 4) NAIL IN WEST FACE OF DOUBLE TRUNK (200mm DIA. & 250mm DIA.) TREE AT STATION 1+369.  
ELEVATION = 9.533 metres
- 5) NAIL IN NORTH FACE OF 600mm DIAMETER WALNUT TREE AT STATION 1+490.  
ELEVATION = 8.295 metres

RESIDENTIAL LAND OWNERS		
ROLL NO.	HECTARES OWNED	NAME OF OWNER
11-03800	0.223	MALDEN QUARRIES LIMITED
11-03950	0.320	GREGORY & SHERRI SHAW
B-27/96	0.405	ORVAL McGUIRE
11-03600	1.170	MICHAL & ANA PUCOVSKY
B-24/96	0.279	DONALD & FRANCES REGNIER
11-03300	0.210	DAVID JONCAS

NOTE: RECENTLY SEVERED PROPERTIES THAT DO NOT HAVE ROLL NUMBERS ARE SHOWN WITH THEIR SEVERANCE NUMBER.



**PLAN**  
SCALE: 1 : 6000 (APPROX.)

THIS PLAN HAS BEEN REDUCED IN SIZE FOR PRESENTATION PURPOSES AND THEREFORE IT IS NOT TO THE SCALES INDICATED. A FULL SIZE SET OF DRAWINGS IS AVAILABLE FOR REVIEW AT THE TOWNSHIP OFFICE.



DECEMBER 23, 1997  
*Lou Zarlinga*  
LOU ZARLINGA, P.Eng

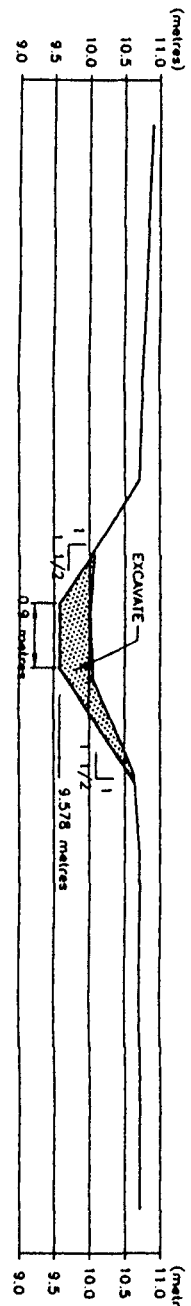
**TOWNSHIP OF ANDERDON**  
MAYOR : TONY TIEFENBACH  
ADMINISTRATOR : DAVID MAILLOUX  
DRAINAGE SUPERINTENDENT : TONY DICIOCCO



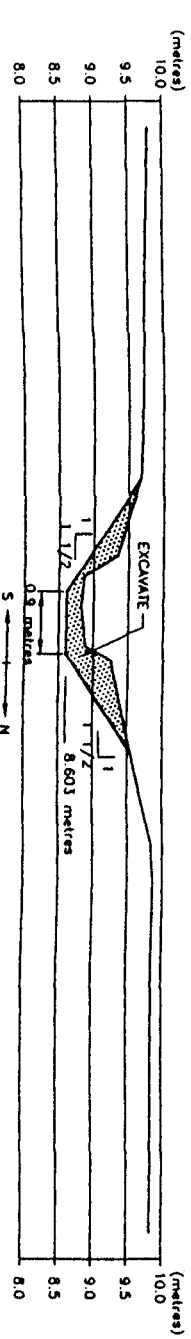
**BRUCE D. CROZIER ENGINEERING INC.**  
CONSULTING ENGINEERS  
209 ONE STREET SOUTH  
LEAMINGTON, ONTARIO  
N8H 3C1

Project No: **IMESON-MELOCHE DRAIN**  
Sheet No: **PLAN & CROSS-SECTIONS**

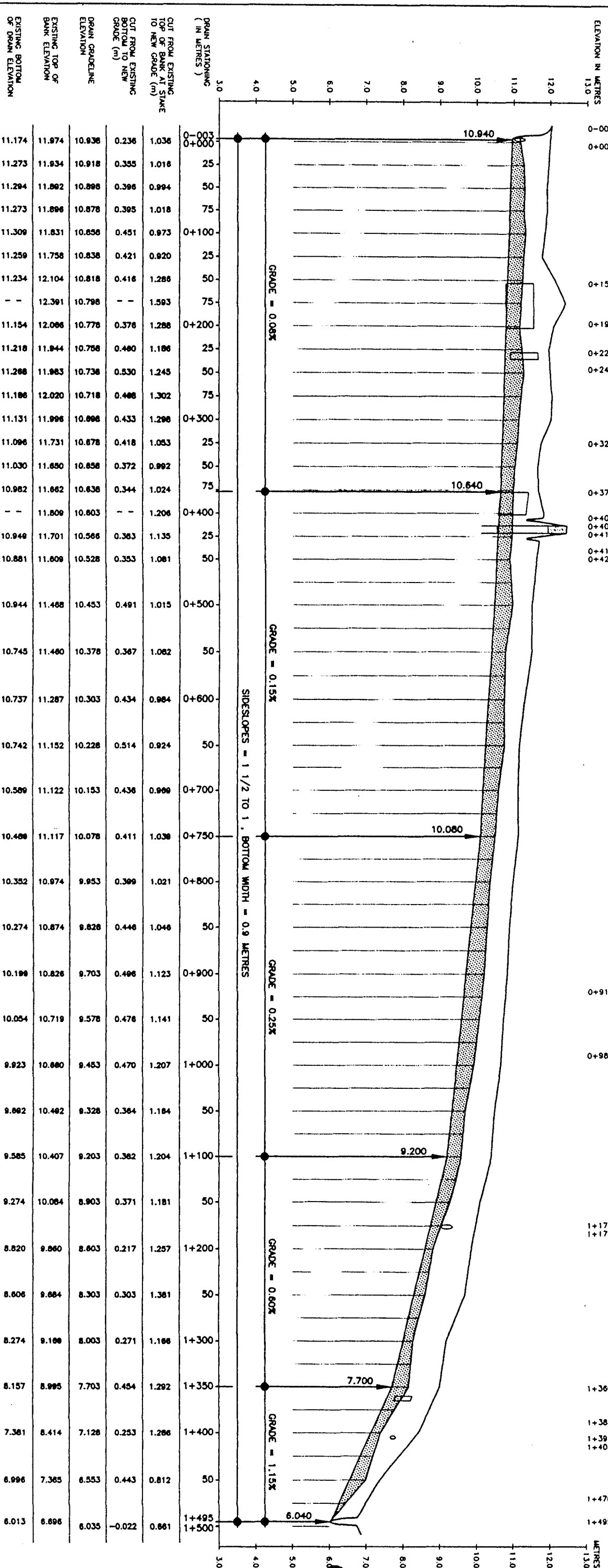
Date: DEC. 23/97  
Scale: AS NOTED  
Drawn by: M.L.  
Checked by: L.Z.  
Project No: BC-96-114  
Sheet No: 1 of 2



SECTION 0+950  
SCALE: 1 : 50



SECTION 1+200  
SCALE: 1 : 50



- 0-003 - 300mm DIA. C.S.P. FROM WEST UNDER 6th CONCESSION ROAD
- 0+000 - START OF IMESON-MELOCHE DRAIN
- 0+154 - SOUTH END 750mm DIA. C.S.P. (48.7m LONG) SOUTH END 0.045m BELOW GRADE DO NOT EXCAVATE
- 0+197 - LINE BETWEEN VSETULA & SHAW
- 0+228 - SOUTH END 750mm DIA. C.S.P. (7.3m LONG) TO BE LOWERED TO GRADE
- 0+243 - LINE BETWEEN SHAW & VSETULA
- 0+325 - LINE BETWEEN VSETULA & KULKE
- 0+377 - SOUTH END 750mm DIA. C.S.P. (24.1m LONG)
- 0+405 - GO WEST
- 0+409 - ROAD DITCH FROM NORTH
- 0+413 - EAST END 1.53m WIDE CONCRETE ROAD CULVERT (7.9m LONG)
- 0+417 - CENTRE OF 6th CONCESSION ROAD
- 0+424 - ROAD DITCH FROM EAST & WEST
- 0+919 - GO NORTH
- 0+989 - GO WEST
- 1+174 - LINE BETWEEN MCGUIRE & MALKOWSKI
- 1+176 - 300mm DIA. STEEL PIPE FROM SOUTH
- 1+360 - NORTH END OLD 450mm DIA. CONCRETE CROCKS IN BOTTOM OF DRAIN (5.0m LONG). REMOVE EXISTING CROCKS AND INSTALL NEW 1080mm DIA. C.S.P. CULVERT
- 1+388 - LINE BETWEEN MALKOWSKI & REGNIER
- 1+393 - WIRE FENCE ACROSS DRAIN
- 1+405 - GO WEST
- 1+405 - 150mm DIA. P.V.C. PIPE FROM SOUTH
- 1+470 - GO NORTH
- 1+495 - OUTLET OF DRAIN INTO CANARD RIVER
- END OF IMESON-MELOCHE DRAIN

PROFILE OF IMESON-MELOCHE DRAIN  
SCALE: Horizontal 1 : 2000 Vertical 1 : 50

DRAIN STATIONING (IN METRES)	CUT FROM EXISTING TOP OF BANK AT STAKE TO NEW GRADE (m)	CUT FROM EXISTING BOTTOM TO NEW GRADE (m)	DRAIN GRADELINE ELEVATION	EXISTING TOP OF BANK ELEVATION	EXISTING BOTTOM OF DRAIN ELEVATION
0-003	1.036	0.236	10.936	11.974	11.174
0+000	1.018	0.355	10.918	11.934	11.273
25	0.994	0.396	10.896	11.892	11.294
50	1.018	0.395	10.878	11.896	11.273
75	0.973	0.451	10.858	11.831	11.308
0+100	0.920	0.421	10.838	11.758	11.259
25	1.286	0.416	10.818	12.104	11.234
50	1.593	-	10.798	12.391	-
75	1.286	0.376	10.778	12.086	11.154
0+200	1.186	0.460	10.758	11.944	11.218
25	1.245	0.530	10.738	11.863	11.268
50	1.302	0.466	10.718	12.020	11.186
75	1.296	0.433	10.698	11.998	11.131
0+300	1.053	0.418	10.678	11.731	11.096
25	0.992	0.372	10.658	11.680	11.030
50	1.024	0.344	10.638	11.662	10.982
75	1.135	-	10.603	11.809	-
0+400	1.081	0.363	10.566	11.701	10.949
25	1.015	0.353	10.528	11.609	10.881
50	1.015	0.491	10.453	11.468	10.944
0+500	1.062	0.367	10.378	11.460	10.745
50	0.984	0.434	10.303	11.287	10.737
0+600	0.924	0.514	10.228	11.152	10.742
50	0.996	0.436	10.153	11.122	10.589
0+700	1.038	0.411	10.078	11.117	10.468
0+750	1.021	0.399	9.953	10.974	10.352
0+800	1.046	0.446	9.828	10.874	10.274
50	1.123	0.496	9.703	10.828	10.198
0+900	1.141	0.476	9.578	10.719	10.054
50	1.207	0.470	9.453	10.680	9.923
1+000	1.184	0.364	9.328	10.492	9.892
50	1.204	0.362	9.203	10.407	9.585
1+100	1.181	0.371	8.903	10.084	9.274
50	1.257	0.217	8.603	9.860	8.820
1+200	1.381	0.303	8.303	9.664	8.606
50	1.166	0.271	8.003	9.198	8.274
1+300	1.292	0.454	7.703	8.995	8.157
1+350	1.286	0.253	7.128	8.414	7.361
1+400	0.812	0.443	6.553	7.365	6.996
50	0.861	-0.022	6.035	6.896	6.013
1+495					
1+500					

March 17, 1998

Mayor and Municipal Council  
Corporation of the Town of Amherstburg  
Formerly Township of Anderdon  
3400 Middle Sideroad  
R. R. #4  
Amherstburg, Ontario  
N9V 2Y9

Mayor Hurst and Councillors

**SUBJECT: Addendum Drainage Report  
Imeson - Meloche Drain**  
in the Former Township of Anderdon  
Our Project Reference BC-96-114

## **1.0 PREVIOUS REPORT AND BACKGROUND**

On March 10, 1998 the Municipal Council considered and adopted a drainage report for the Imeson - Meloche Drain, dated December 23, 1997 and prepared by the undersigned.

During the meeting to consider the report I explained that Henry Mialkowski had previously contacted the Municipality and indicated he no longer wished the reconstruction of an existing farm bridge situated in the Imeson - Meloche Drain at Station 1+360. Mr. Mialkowski further disagreed that 4.047 hectares of his land are affected by the Drain as shown in the above noted December 23, 1997 report.

Accordingly, on March 13, 1998 I attended the above noted lands owned by Henry Mialkowski and I was accompanied by Mr. Tony DiCiocco, Drainage Superintendent for the former Township of Anderdon. We took elevations of the ground situated within the southeast portion of the Mialkowski lands and further being situated north of the Drain. I found that 2.145 hectares of the Mialkowski lands would direct surface runoff into the Imeson - Meloche Drain. The balance of the Mialkowski lands tend to drain in a northwest direction into the Canard River. On March 14, 1998 I contacted Mr. Mialkowski, informed him of my findings and Mr. Mialkowski indicated that 2.145 hectares affected was acceptable. During my phone conversation with Mr. Mialkowski he also confirmed he no longer wished to have the existing farm bridge at Station 1+360 reconstructed.

## **2.0 FINDINGS**

I find that the hectares affected for the Mialkowski lands should be reduced to 2.145 hectares from the currently shown 4.047 hectares. I further find this will reduce the total Outlet and Benefit assessment to the Mialkowski lands by \$714.44 and this amount must be distributed to the remaining affected lands.

I further find that reconstruction of the Mialkowski bridge was previously estimated to cost \$3,200.00 in the December 23, 1997 report. Therefore elimination of this work will reduce the estimated cost of this project by a similar amount. A portion of the bridge reconstruction cost totalling \$580.00 was previously assessed against all upstream situated lands. I further find the assessments against said upstream affected lands should be reduced accordingly to account for elimination of the reconstruction of the Mialkowski farm bridge.

## **3.0 RECOMMENDATIONS**

In order to accommodate the above described findings I would recommend the previous December 23, 1997 report be amended as follows:

- a) Delete reference for reconstruction of a new farm bridge to the Mialkowski lands from Section 11.0 of the report.
- b) Delete Item No. 5 for construction of the Mialkowski bridge from Section 13.0 of the report.
- c) Revise the total estimate of cost from \$28,600.00 to \$25,400.00 in Section 13.0 of the report.
- d) Delete reference for reconstruction of the farm bridge to the Mialkowski lands and description of assessment for same from Section 14.0 of the report.

SCHEDULE OF ASSESSMENT

IMESON - MELOCHE DRAIN

IN THE FORMER TOWNSHIP OF ANDERDON

PROJECT REFERENCE BC-96-114

Addendum Report  
Mar.17, 1998

Entry No.	or Plan	Lot	Roll No.	Hectares Owned	Name of Owner	Hectares Affected	Value of Benefit	Value of Outlet	Special Benefit	Total	
1	6	PT LT 11	11-00100	40.246	AMHERST QUARRIES LIMITED	* 2.206	\$591.56	\$486.02	\$46.60	\$1,124.18	
2	6	PT LT 11	11-03800	0.223	MALDEN QUARRIES LIMITED	0.223	89.83	146.29	14.13	250.25	
3	6	PT LT 11	11-03900	19.915	JOSEPH VSETULA	* 2.108	565.28	442.10	33.37	1,040.75	
4	6	PT LT 11	11-03950	0.320	GREGORY & SHERRI SHAW	0.320	257.43	201.34	160.00	618.77	
5	6	PT LT 12	11-04000	10.194	BEATRICE KULKE	* 2.428	651.09	470.63	0.00	1,121.72	
6	6	PT LT 12	11-04100	9.712	ORVAL McGUIRE	* 1.619	217.21	313.82	0.00	531.03	
7	6	PT LT 12	B-27/96	0.405	ORVAL McGUIRE	0.405	163.04	235.52	0.00	398.56	
8	6	PT LT 12	11-04200	12.141	GIUSEPPE & ANGELA DESANTIS	* 1.619	217.21	313.82	0.00	531.03	
9	6	PT LT 12	11-04300	10.117	MARK McGUIRE	* 0.450	60.34	87.23	0.00	147.57	
10	5	PT LT 11	11-03600	1.170	MICHAL & ANA PUCOVSKY	1.170	470.62	773.31	0.00	1,243.93	
11	5	PT LT 11	11-00200	18.794	FRANCESC & KAREN IOVINO	* 0.449	30.30	65.63	0.00	95.93	
12	5	PT LT 11	11-03500	10.117	ORVAL McGUIRE	* 8.094	542.76	1,183.11	0.00	1,725.87	
13	5	PT LT 11	11-00700	19.146	DONALD & FRANCES REGNIER	* 11.052	986.83	1,615.48	0.00	2,602.31	
14	5	PT LT 11	B-24/96	0.279	DONALD & FRANCES REGNIER	0.279	112.36	122.35	0.00	234.71	
15	5	PT LT 12	11-03400	10.117	ORVAL & FLORENCE McGUIRE	* 10.117	2,712.97	1,693.14	0.00	4,406.11	
16	5	PT LT 12	11-03200	9.903	ANGELO & MARIA IACOBELLI	* 9.903	884.93	1,552.42	0.00	2,437.35	
17	5	PT LT 12	11-03300	0.210	DAVID JONCAS	0.210	56.31	122.12	0.00	178.43	
18	5	PT LT 12	11-01200	20.226	HENRY & CHRISTINE MIALKOWSKI	* 2.145	575.20	290.82	0.00	866.02	
<b>TOTAL ON LANDS</b>							<b>\$9,185.27</b>	<b>\$10,115.15</b>	<b>\$254.10</b>	<b>\$19,554.52</b>	
6TH CONCESSION ROAD							2.085	\$3,354.73	\$2,424.85	\$65.90	\$5,845.48
<b>TOTAL ON ROADS</b>							<b>\$3,354.73</b>	<b>\$2,424.85</b>	<b>\$65.90</b>	<b>\$5,845.48</b>	
<b>TOTAL ASSESSMENT</b>							<b>\$12,540.00</b>	<b>\$12,540.00</b>	<b>\$320.00</b>	<b>\$25,400.00</b>	

\* INDICATES LANDS USED FOR AGRICULTURAL PURPOSES





- e) Delete reference to construction details for the reconstruction of the Mialkowski farm bridge from Section 8.0 of the Special Provisions of the Specifications.
- f) Amend the assessments shown in the December 23, 1997 Schedule of Assessment in accordance to the assessments contained in the accompanying Schedule of Assessment dated March 17, 1998.
- g) Further reference to the previous December 23, 1997 drainage report should include the additional description "and March 17, 1998 Addendum."

All of which is respectfully submitted.

**BRUCE D. CROZIER ENGINEERING INC.  
CONSULTING ENGINEERS  
209 ERIE STREET SOUTH  
LEAMINGTON, ONTARIO  
N8H 3C1**

  
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Lou Zarlenga, P.Eng.

