

ENGINEER'S REPORT
for the
MCGINNIS MUNICIPAL DRAIN
in the
TOWNSHIP OF FLOS
COUNTY OF SIMCOE

Ainley and Associates Limited
Consulting Engineers and Planners
105 Hurontario Street
COLLINGWOOD, Ontario

File No. 7374
May 27, 1974

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Reeve and Members of Council
Township of Flos
ELMVALE, Ontario

Gentlemen:

RE: Township of Flos, File No. 7374
Proposed McGinnis Municipal Drain

Acting on your instructions we have made a study of the land described in the petition for drainage works being Lots 12 to 16 inclusive in Concession VIII and hereby submit this our report setting up a new municipal drain to be known as the McGinnis Drain to drain the land requiring drainage and other land in the same basin.

According to the Township records an award drain was constructed in the year 1890 to drain off the surface water in the area now petitioning for drainage works. The existing ditch does not have enough capacity and has a poor outlet.

The drainage work required is widening and deepening of the existing ditch to prevent flooding, provide a better outlet and allow all adjacent farms to be tile drained.

The McGinnis Drain shall begin at a point in the south limit of the South East quarter of Lot 12, Concession VIII opposite an existing culvert on the 8th Line road and run north and west following more or less the course of the existing ditch; crossing County Road 29 in Concession VIII and crossing Highway No. 92 in Lot 16 then ending at the culvert across Highway No. 92 in Lot 17 where there is sufficient outlet in an existing watercourse. Drawing No. 7374-1 shows the general location of this drain and the lands affected by the drain.

The McGinnis Drain as set out herein is 14,773 feet in length and carries surface water from over 1,800 acres. Through Lot 12 the grade of the ditch will have good slopes but in Lot 13 the grade flattens and remains flat through Lots 14, 15 and 16 (in Concession VIII) as the existing culvert on the County Road and on the Highway (Lot 16) control the depth to which the

drain can be taken. It is our opinion that reconstruction of these structures to gain more depth would not be economical at this time. In Concession IX the grade steepens again and carries on to the end of the drain.

Drawing No. 7374-2 shows the ditch in plan and profile. The profile indicates the depths and slopes of the drain and the plan indicates in detail the features found along the drain as well as the work required to improve the drain. This drawing together with the Specifications attached to this report and the Estimate of Cost herein describe what work is to be done and how it is to be done.

We estimate the cost of Constructing the improved ditch or the Contract Work to be as follows: -

1. Clearing and grubbing of trees and debris including one large elm \$ 800.00
2. Earth Excavation for ditch improvement including spreading of excavated material
23,000 cubic yards @ \$0.75 \$17,250.00
3. Excavation of earth to construct pond in South 1/2 of Lot 16, Concession IX including spreading of excavated material
1,000 cubic yards @ \$0.80 \$ 800.00
4. Construct crossing between house and barn South 1/2 Lot 16, Concession IX including removal of existing structure, placing two structural plate 12 gauge steel 8' - 6" span x 6' - 2" high pipe arches 40 feet long stone bedding and granular backfill \$ 5,500.00
5. Cleanout Highway No. 92 concrete culvert (15' x 4' x 54' long) and County Road 29 concrete culvert (10' x 6' - 6" x 40' long)
90 cubic yards @ \$5.00 \$ 450.00
6. Construct field crossing in North 1/2 Lot 15, Concession VIII including one structural plate 12 gauge steel 12' - 3" span x 7' - 6" high pipe arch 40 feet long and stone bedding \$ 3,500.00
7. Relocate side ditch culvert in South 1/2 Lot 14, Concession VIII (Station 86+00) \$ 30.00
8. Construct field crossing in South East 1/4 of Lot 12, Concession VIII (Station 137+40) using pipe salvaged from existing crossing at Station 143+50) \$ 50.00

9.	Construct crossing between buildings and 8th line in South East 1/4 Lot 12, Concession VIII (Station 143+50) including removal of existing pipe, placing one 36" dia. corrugated steel pipe 14 gauge 40 feet long, stone bedding and granular backfill	\$ 800.00
10.	Supply and install field tile to relocate and/or extend existing field tile as may be required, any size up to and including 8 inch diameter	
	250 lineal feet @ \$1.50	\$ 375.00
11.	Supply and place rodent proof outlets for field tile outlets as may be required, any size up to and including 8 inch diameter	
	4 @ \$20.00	\$ 80.00
12.	Supply and erect new standard 9 wire cedar post and wire fence	
	200 lineal feet @ \$1.20	\$ 240.00
13.	Supply and erect new brace panels for new or existing post and wire fence as may be required	
	8 @ \$30.00	\$ 240.00
14.	Lower 1 inch diameter waterline between house and barn in South 1/2 lot 16, Concession 9	
	30 lineal feet @ \$1.50	\$ 45.00
15.	Contingency Allowance	\$ 1,000.00
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	TOTAL ESTIMATED CONTRACT AMOUNT	\$31,160.00
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Included in the work shall be the placing of the north-south section of the drain on the east side of County Road 29 far enough to the east to accommodate a 17 foot widening along the County Road east limit. Although this involves relocation of or working around a buried telephone cable and field tile this would be an opportune time to move the drain off the County Road.

Road Authorities affected may do the required work on their right-of-way providing notice is given to Flos Township before the passing of the by-law.

Owners of land through which the drain is constructed shall be responsible for seeding on the drain slopes or excavated material and additional work on fence crossings to render them sufficient for live-stock.

The construction of the McGinnis Drain shall be supervised by the Township of Flos and the person authorized by the Township to inspect the work may make necessary changes in the work during construction providing such changes are consistent with the intent of this report.

Cash allowances shall be provided for land owners in accordance with the following Schedule of Allowances. Assessments may be deducted from allowances by Flos Township so that the actual payment to any one land owner receiving allowances will be the excess of allowance over assessment if any.

SCHEDULE OF ALLOWANCES

FOR MCGINNIS DRAIN

<u>OWNER AND LOT</u>	<u>SPREADING DAMAGES \$</u>	<u>LAND FOR ACCESS \$</u>	<u>LAND FOR DITCH \$</u>	<u>EXISTING DITCH \$</u>	<u>TOTAL \$</u>
Spring Valley Farms Ltd. S 1/2 Lot 17, Concession IX	50.	82.	155.	30.	317.
W. & B. Trace s 1/2 Lot 16 Concession IX	87.	134.	260.	50.	531.
L. Spring N 1/2 Lot 16 Concession VIII	152.	120.	220.	50.	542.
K. Spring N 1/2 Lot 15 Concession VIII	460.	300.	760.	200.	1,720.
F. Mucci S 1/2 Lot 14 Concession VIII	132.	196.	320.	100.	748.
T. Lush N 1/2 Lot 14 Concession VIII	45.	90.	150.	20.	305.
F. & L. Jonelis NW 1/4 Lot 13 Concession VIII	75.	162.	230.	25.	492.

OWNER AND LOT	SPREADING DAMAGES \$	LAND FOR ACCESS \$	LAND FOR DITCH \$	EXISTING DITCH \$	TOTAL \$
F. & L. Jonelis SW 1/4 Lot 13 Concession VIII	36.				36.
E. & P. DuBeau NE 1/4 Lot 13 Concession VIII	71.	142.	170.	30.	413.
G. & D. Ritchie NW 1/4 Lot 12 Concession VIII	89.	118.	170.	45.	422.
E. & J. Bianchi V. & C. Palozzi SW 1/4 Lot 12, Concession VIII Pt. SE 1/4 Lot 13 Concession VIII	130.	130.	160.	10.	430.
G. & A. Doan SE 1/4 Lot 12 Concession VIII	36.	72.	90.	40.	238.
TOTALS	<u>1,363.</u>	<u>1,546.</u>	<u>2,685.</u>	<u>600.</u>	<u>6,194.</u>

The total amount of the allowances being \$6,194. shall be a charge against the drain and included in the cost of the work.

We estimate the cost of the complete work for assessment purposes to be as follows: -

Allowances	\$ 6,194.00
Contract Work	\$31,160.00
Utility Relocation Allowance	\$ 500.00
Engineering Survey and Plans	\$ 2,900.00
Engineers Fee for Report and Attending Meetings	\$ 3,000.00
Clerk's Fee	\$ 100.00
Distributing Notices and By-law	\$ 200.00
Preparing By-law	\$ 100.00
Court of Revision	\$ 100.00

Advertising and letting Contract	\$ 100.00
Supervision of Construction	\$ 3,000.00
Interest on Temporary Financing	\$ 4,000.00
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TOTAL ESTIMATED COST	\$51,354.00
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The cost of the McGinnis Drain shall be paid for by the lands and roads using the drain as an outlet or receiving benefit from the works all as set out in the attached Schedule of Assessments. Should the actual cost of the work differ from the estimated cost, the actual cost shall be charged against said lands and roads in the same proportion as the estimated cost.

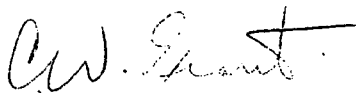
Only lands and roads in the Township of Flos are affected by this Drain.

It is anticipated that Flos Township will receive a provincial grant equal to one third of the assessment on agricultural land and if so the assessment on agricultural land shall be reduced accordingly.

The road authorities shall be responsible for all maintenance of the ditch and culverts on their right-of-way at their own expense. Owners of land through which the drain runs shall be responsible for field crossings, maintaining fences and keeping debris from entering the drain at their own expense. The remainder of the maintenance shall be done by Flos Township and the cost charged to the lands and roads paying for the construction of the drain in the same proportion as they shared the cost of construction.

This report is respectfully submitted to Council for consideration.

AINLEY AND ASSOCIATES LIMITED



C. W. Grant, P. Eng.

CWG/jc

TOWNSHIP OF FLOS
McGINNIS DRAIN
SCHEDULE OF ASSESSMENTS

CONCESSION	LOT	APPROX ACRES AFFECTED	OWNER	BENEFIT ASSESS- MENT (\$)	OUTLET LIABILITY ASSESSMENT (\$)	TOTAL ASSESSMENT (\$)
VII	N 1/2 lot 11	5	R. & E. Usher	325.	96.	421.
"	N 1/2 lot 12	12	H. & D. Dykstra	600.	297.	897.
"	E 1/2 lot 13	17	G. & L. Archer	-	233.	233.
"	W 1/2 lot 13	48	G. Archer	-	515.	515.
"	NE 1/4 lot 14	28	J. Picko F. Simonka A. Toth	-	105.	105.
"	NW 1/4 lot 14	38	County of Simcoe *	-	95.	95.
"	N 1/2 lot 15	10	D. Fagan	-	125.	125.
VIII	S 1/2 lot 11	56	R. Usher	400.	1,540.	1,940.
"	Pt. N 1/2 lot 11	1	Ministry of Transportations & Communications *	-	25.	25.
"	Pt. N 1/2 lot 11	2.5	M. Monaco *	-	41.	41.
"	Pt. N 1/2 lot 11	4.5	P. Rinaldi *	-	73.	73.
"	Pt. N 1/2 lot 11	5.5	P. Monaco *	-	92.	92.
"	Pt. N 1/2 lot 11	6.5	A. Bufalini *	-	109.	109.
"	Pt. N 1/2 lot 11	7.5	M. Monaco *	-	125.	125.

CONCESSION	LOT	APPROX. ACRES AFFECTED	OWNER	BENEFIT ASSESS- MENT (\$)	OUTLET LIABILITY ASSESSMENT (\$)	TOTAL ASSESSMENT (\$)
VIII	Pt. N 1/2 lot 11	10	A. Bufalini *	-	165.	165.
"	Pt. N 1/2 lot 11	10	P. Rinaldi *	-	165.	165.
"	Pt. N. 1/2 lot 11	10	P. Monaco *	-	165.	165.
"	Pt. N 1/2 lot 11	10	A. Bufalini *	-	165.	165.
"	Pt. N 1/2 lot 11	10	M. Monaco *	-	165.	165.
"	E 1/2 lot 12	99	G. & A. Doan	800.	1,946.	2,746.
"	Pt. NE 1/4 lot 12	0.1	G. Kitchen *	-	25.	25.
"	SW 1/4 lot 12 & Pt. SE 1/4 lot 13	73	V. & C. Palozzi E. & J. Bianchi	4,200.	1,000.	5,200.
"	NW 1/4 lot 12	50	G. & D. Ritchie	1,000.	410.	1,410.
"	Pt SE 1/4 lot 13	27	P. Bebeckas	750.	237.	987.
"	NW 1/4 lot 13	50	F. & L. Jonelis	1,500.	438.	1,938.
"	SW 1/4 lot 13	50	F. & L. Jonelis	1,500.	438.	1,938.
"	NE 1/4 lot 13	50	E. & P. DuBeau	1,500.	437.	1,937.
"	S 1/2 lot 14	100	F. Mucci	3,000.	1,375.	4,375.
"	N 1/2 lot 14	100	T. Lush	4,400.	1,465.	5,865.

CONCESSION	LOT	APPROX. ACRES AFFECTED	OWNER	BENEFIT ASSESSMENT (\$)	OUTLET LIABILITY ASSESSMENT (\$)	TOTAL ASSESSMENT (\$)
VIII	S 1/2 lot 15	97	C. & P. Hunter	300.	850.	1,150.
"	N 1/2 lot 15	99	K. Spring	4,564	600.	5,164.
"	S 1/2 lot 16 & Pt. S 1/2 lot 17	23	A. & S. Robertson	-	70.	70.
"	N 1/2 lot 17	73	L. Spring	1,530.	450.	1,980.
"	Pt. N 1/2 lot 16	1	A. Currie *	-	25.	25.
IX	S 1/2 lot 11	36.5	M. Steele	-	400.	400.
"	SE 1/4 lot 12	32	K. & J. Thorope	-	364.	364.
"	SW 1/4 lot 12 & Pt. S 1/2 lot 13	102	M. & S. Watson	-	357.	357.
"	N 1/2 lot 13	6	D. & M. Bertram	-	30.	30.
"	SE 1/4 lot 14 & Pt. S 1/2 lot 13	75	Simcoe Timberlands Limited	-	225.	225.
"	SW 1/4 lot 14	50	J. Longman	-	100.	100.
"	N 1/2 lot 14	62	E. & E. McFadden	-	340.	340.
"	lot 15	187	G. & A. Ververs	-	1,077.	1,077.
"	Pt. SW 1/4 lot 15	2	R. & A. Dillworth *	-	40.	40.

CONCESSION	LOT	APPROX. ACRES AFFECTED	OWNER	BENEFIT ASSESSMENT (\$)	OUTLET LIABILITY ASSESSMENT (\$)	TOTAL ASSESSMENT (\$)
IX	S 1/2 lot 16	54	W. & B. Trace	1,500.	190.	1,690.
"	Pt. S 1/2 lot 16	2	R. Trace *	-	25.	25.
"	Pt. S. 1/2 lot 16	8	S. Russ Estate *	-	64.	64.
"	N 1/2 lot 16	11	G. & W. Langman	-	44.	44.
X	S 1/2 lot 15	6	E. & E. McFadden	-	25.	25.
Road Bet. Conc. VII & VIII	lot 11 to 15 Incl.	14	Township of Flos*	1,000.	334.	1,334.
Road Bet. Conc. VIII & IX	lot 11 to 16 Incl.	23.5	Ministry of Transportations & Communications*	2,800.	414.	3,214.
Road Bet. Conc. IX & X	lot 15	2	Township of Flos *	-	25.	25.
VIII	Road Bet. Lot X & XI	0.5	Township of Flos *	-	25.	25.
VIII & IX	Road Bet. lot 15 & 16	12.5	County of Simcoe*	1,450.	94.	1,544.
TOTALS				\$33,119.	\$18,235.	\$51,354.

* NOT ELIGIBLE FOR AGRICULTURAL GRANT

SUMMARY OF ASSESSMENTS

I	On Private Land: -	
	(a) Agricultural	\$43,648.00
	(b) Non-Agricultural	\$ 1,444.00
II	On Public Land: -	
	(a) Ontario	\$ 3,239.00
	(b) Simcoe County	\$ 1,639.00
	(c) Flos Township	\$ 1,384.00
	TOTAL ASSESSMENT	<u>\$51,354.00</u>

TOWNSHIP OF FLOS
McGINNIS DRAIN

SPECIFICATIONS

GENERAL

The work shall be performed as set out in the Engineer's Report, these specifications and drawings no. 7374-1 and 7374-2 prepared by Ainley and Associates Limited.

LINE AND GRADE

The centerline of the drain and the elevation of the ditch bottom and pipe inverts will be indicated in the field by the Engineer after a contract has been awarded.

NOTICE TO OWNERS

The Contractor shall give at least two weeks notice to owners with crops still in. The Contractor shall schedule and perform his operations causing the least damage to crops if any.

The Contractor shall not commence work on a public road allowance without having given adequate notice to the road authority having jurisdiction.

DISPOSAL OF MATERIAL

The Contractor shall provide the Engineer with a written release signed by the Owner of property on which the Contractor has a disposal area for material to be removed from the contract site. Said release shall indicate that the owner is satisfied with the condition of the disposal area. A satisfactory release must be produced for each disposal area before any holdback is released to the Contractor.

CLEARING AND GRUBBING

All trees, stumps, roots and debris shall be removed from the site and disposed of by the Contractor at his own expense. No such material shall be buried along the drain.

EARTH EXCAVATION AND GRADING

All excavation required for this project shall be classed as earth excavation regardless what is actually encountered below the ground surface.

Excavation of the ditches shall be carried to the depth and widths indicated on the drawings or as directed by the Engineer in the field. The Contractor shall use excavating or grading equipment that is capable of shaping

the ditch to proper uniform cross-section and uniform grade.

Excavated material shall be placed well back from the edge of the ditch and graded to a uniform elevation no higher than two feet above the average field elevation on the side of the drain as indicated by the hatching on the plan. Flat slopes shall be made on either side of the levelled excavated material. The excavated material shall be moved along or out from the drain to fill local low areas. Where the drain takes a different course from the existing ditch the existing ditch shall be filled.

Low land adjacent to the drain shall be provided with outlets through the graded excavated material as directed by the Engineer. All existing ditches or watercourses along the drain which connect to the drain shall be graded to meet the new ditch up to 50 feet from the new ditch as directed by the Engineer.

No excavated materials shall be hauled away from the work area and placed elsewhere without the Engineer's approval.

At station 15+00 a pond 100 feet by 50 feet shall be excavated to 2 feet below the ditch grade and the excavated material shall be placed on the south side of the ditch as indicated on the plan. Finished side slopes shall be no steeper than 2 horizontal to 1 vertical.

CROSSINGS

Where necessary existing structures and pipes shall be removed. Stone, broken concrete etc. shall be used as rip-rap to ends of the new pipe.

New crossings shall be constructed as detailed in the drawings with the following exceptions: -

- | | |
|-------------------------------|--|
| Station 50+50 | - no crushed gravel top. |
| Station 86+00
(Side Ditch) | - no 3/4" crushed stone bedding.
- no crushed gravel top. |
| Station 137+40 | - no 3/4" crushed stone bedding.
- no crushed gravel top. |

FENCING

The Contractor shall be responsible for removing, replacing or relocating existing fences. Should the Engineer consider additional brace panels are required they shall be installed by the Contractor.

New fence shall be installed by the Contractor as indicated in the field by the Engineer.

The Contractor shall be responsible for temporary fencing for livestock control should such be necessary.

PUBLIC UTILITIES

Any existing public utilities either buried or above ground are to remain. The Contractor is responsible for determining the exact location of

utilities before excavating and the protection of all utilities during the work. Should the Contractor find relocation of a utility is necessary the Engineer shall be informed by the Contractor.

WORK ON PUBLIC ROAD ALLOWANCE

Before commencing any work on a road right-of-way the Contractor must give sufficient notice to the authority having jurisdiction to enable the road authority to arrange for its own inspection of the work should it feel such is necessary. All work in a road right-of-way shall be subject to the approval of the authority having jurisdiction.

The Contractor shall be responsible for obtaining necessary permits and conform to all stipulations made by the road authority. No road shall be closed by the Contractor without written permission from the road authority.

FIELD TILE

It is anticipated that during the work relocation and additions to existing field tile systems will be necessary. Such work shall be equal to or better than the original installation. Any runs over 50 feet in length shall be installed by a licenced tile Contractor.

LAND SURVEY BARS OR MONUMENTS

Land survey bars or monuments located along the work shall be protected by the Contractor. If damaged they shall be replaced at his own expense.