



The Municipal Corporation of the Town of Fort Erie

By-law No. 83-2018

Being a By-law to provide for Drainage Works in the Town of Fort Erie for the Winger Road Drain (Hydro Culverts)

Whereas the Municipal Council of the Town of Fort Erie has procured a report under Section 78 of the *Drainage Act* for the Winger Road Drain (Hydro Culverts); and

Whereas the Engineer's Report dated February 9, 2018 prepared by K.Smart Associates Limited was filed with the Town Clerk on February 20, 2018 and is attached as Schedule "A" and forming part of this by-law; and

Whereas the total cost of the drainage works is Twenty Four Thousand, Eight Hundred and Twenty Dollars and Seventy Two Cents (\$24,820.72); and

Whereas the Engineer's Report and notice of the Public Meeting under the *Ontario Drainage Act* was mailed to all affected property owners on March 14, 2018; and

Whereas at the Council-in-Committee Meeting held May 22, 2018 Report No. IS-19-2018 under Section 78 of the *Act* was approved to accept the new Engineer's Report for the Winger Road Drain (Hydro Culverts) and to direct staff to continue with the legislative process in accordance with the *Ontario Drainage Act* and establish the date for the Court of Revision; and

Whereas Section 52(1) of the said *Act* provides an owner of land assessed for the drainage works may appeal to the Court of Revision on any of the following grounds:

- (1) Any land or road has been assessed an amount that is too high or too low;
- (2) Any land or road that should have been assessed has not been assessed;
- (3) Due consideration has not been given to the use being made of the land; and

Whereas the initiating municipality sets the date of the Court of Revision in conjunction with any area municipalities who has affected landowners within the drainage watershed; and

Whereas the date of the Court of Revision shall be determined; and

Whereas a copy of the provisional by-law and notice of the Court of Revision date shall be mailed to all affected landowners within thirty (30) days after the passage of this by-law; and

Whereas Section 52(2) of the said *Act* provides that to appeal, an owner shall send a notice to the clerk of the initiating municipality setting out the grounds of the appeal at least ten (10) days before the first sitting of the court; and

Whereas it is deemed expedient to accept the new Engineer's Report to establish a schedule of assessments for the construction and future maintenance for the Winger Road Drain (Hydro Culverts);

Now therefore the Municipal Council of The Corporation of the Town of Fort Erie enacts as follows:

1. **That** the new Engineer's Report prepared by K.Smart Associates Limited dated February 9, 2018, attached as Schedule "A" and forming part of this by-law to establish a schedule of assessments for the construction and future maintenance for the Winger Road Drain (Hydro Culverts) is adopted and approved.
2. **That** a Schedule of Assessments of lands, roads and utilities in the Town of Fort Erie, aforesaid in the Engineers Report, is attached as Schedule "A" to this by-law.
3. **That** this by-law shall come into force and effect on the passing thereof.

Read a first and second time and provisionally adopted this 18th day of June, 2018.

Mayor

Clerk

Read a third time and finally passed this day of , 2018.

Mayor

Clerk

I, Carol Schofield, the Clerk, of The Corporation of the Town of Fort Erie certifies the foregoing to be a true copy of By-law No. 83-2018 of the said Town. Given under my hand and the seal of the said Corporation, this day of , 2018.

ENGINEERING REPORT

for the

WINGER ROAD DRAIN (HYDRO CULVERTS)

Town of Fort Erie



Region of Niagara

Date: February 9, 2018

File No. 04-242



K. SMART ASSOCIATES LIMITED
85 McIntyre Drive, Kitchener, ON N2R 1H6



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February 9, 2018

File No. 05-182

WINGER ROAD DRAIN (HYDRO CULVERTS)

Town of Fort Erie

SUMMARY

The original report for the Winger Road Drain was dated March 1, 2006.

On June 21, 2010, the Town of Fort Erie in Bylaw 61-10 appointed K. Smart Associates Limited to prepare an updated report for the Winger Road Drain under Section 78 of the Drainage Act.

There are two objectives for this report. First is to amend the original report to include the changes of the Order of the Agriculture, Food and Rural Affairs Appeal Tribunal dated May 28, 2008.

Second is to update the Winger Road Drain to provide for changes required to the drain at the time of construction which included culverts to protect the hydro poles in the ditch along Winger Road.

A summary of the Winger Road Drain (Hydro Culverts) is as follows:

- 3– twin 6m lengths of 900mm diameter corrugated steel pipe for hydro pole protection (2 pipes at each hydro pole) to be incorporated

The total estimated cost of the work is \$24,820.72

Total length of new culvert is 18m

Total watershed area affected is 54.8 hectares (135 acres)

A Schedule of Assessment is not provided as the total estimated cost in this report is assessed as Special Assessments to the Town of Fort Erie for Winger Road and to Canadian Niagara Power Inc. for the hydro pole protection.

Schedule A and B from the original report have been revised to address the decisions of the Court of Revision and the Tribunal. They have not been included in this report but are available for review at the Town office.

Under Section 74 of the Drainage Act, the Town of Fort Erie will be responsible for maintaining the new culverts on the Winger Road Drain in accordance with the maintenance provisions in this report.

DRAIN HISTORY

The report for the Winger Road Drain was dated March 1, 2006.

The report was appealed to the Agriculture, Food and Rural Affairs Appeal Tribunal (Tribunal). The Tribunal conducted a hearing on the appeals on April 3, 2008. The Decision of the Tribunal dated May 28, 2008, contained the following Order:

TRIBUNAL ORDER

1. The location of the Winger Road Drain will remain as recommended in the Report.
2. The soil around the roots of up to five mature trees (to be selected by Ms. Eckert or her designate) at the back of the Eckert and/or Eckro Precision properties will be hand excavated to limit damage to the roots from mechanical excavating equipment during construction of the drain. The costs of such work should be considered as part of the "Construction Cost Estimate" in the Report and therefore should be adjusted in the Report by the Engineer if necessary.
3. The design of the drain will be modified by the Engineer to include specifications for protection of the south side of the drain with costs to be allocated in a similar fashion to those costs allocated for the buffer on the north side of the drain.
4. All costs will be borne by the drain as allocated.
5. Costs will remain as ordered by the Court of Revision except as follows:
 - i. Benefit assessment (Schedule A of the Report) will be adjusted to decrease the amount by \$500 for the Eckert, Eckro Precision, Waeger, Maxner and Cote properties and to increase the amount by \$2500 for the Young property.
 - ii. Allowances (Schedule B of the Report as modified by the Court of Revision) related to the provision of buffer protection along the south side of the ditch will be adjusted in the same manner used to provide allowances for affected lands on the north side of the drain.

Schedules A and B will be revised by the Engineer to reflect these changes in the Benefits, Actual Assessments and Allowances, respectively, and incorporated into the Report.

Following the resolution of all appeals the Winger Road Drain report was adopted with third reading to Bylaw 166-04.

Construction of the Winger Road Drain took place in January and February 2010 and final billing occurred in 2016.

The Actual Cost Bylaw (Bylaw 94-2016) was dated August 22, 2016.

CONSTRUCTION ISSUES

Hydro Poles along Winger Road

The new Winger Road Drain ditch cross cross-section was approximately twice as wide as the existing road ditch. The new cross-section had the hydro poles appeared to be in the middle of the road ditch.

Canadian Niagara Power, the owner of the hydro poles, expressed concern about the stability of the poles due to the extensive excavation in the area of the poles. On Winger Road to the south of the Winger Road, Drain culverts had to be installed in the new road ditch on the east side of each hydro pole with earth backfill to the original ground elevation placed around each pole.

After further site examination, it was determined that a 900mm diameter corrugated steel pipe could easily be placed on each side of the three hydro poles without impacting on the road bed bank slope or the west bank of the Winger Road ditch. The west bank of the Winger Road Drain ditch cannot be altered as there is a buried gasline approximately below the west top of the bank and any change to the top of bank or the bank slope could reduce the cover on the gasline. In design analysis, it was determined that the two 900mm

pipes would provide a flow capacity equivalent to the 1390 x970mm arch culvert across Winger Road. Based on design criteria provided by Canadian Niagara Power for culvert protection at hydro poles it was determined that a 6m length of pipe was required at each pole.

RECOMMENDATIONS

For the protection for the three hydro poles in the Winger Road Drain along Winger Road it is recommended that the two 6m lengths of 900mm diameter corrugated steel pipe (68x13mm spiral corrugation – 1.6mm wall) that were installed on each side of each of the hydro poles (6 pipes in total) including using the backfill material excavated from the road ditch to remove the step in the channel cross-section, be incorporated as part of the Winger Road Drain.

DRAWINGS

For the locations of the hydro culverts, refer to Stations 781, 874 and 964 on Drawing 1 of 3 (Watershed Plan) from the March 1, 2006, report.

Drawing 1 in this 2018 report shows the cross-sections and other details for the culverts.

COST ESTIMATE

The cost estimate consists of the construction and engineering costs both including the Net HST (1.76%), all as outlined in the following sections.

a) Allowances

No allowances are required since the work did not cause damage to lands or crops.

b) Construction Cost Estimate

The actual cost of labour, equipment, and materials for the construction work is outlined in the following section. These are detailed in Belchoir Contracting and Excavating Ltd. Change Order 3 (Progress Payment Certificate 3), Invoice No. 360501-51.

<u>Station</u>	<u>Work Description</u>	<u>Cost</u>
781,874,964	3 – twin 6m long 900mm diameter corrugated steel pipe (1.6mm wall - 68x13mm spiral corrugation) including the installation of the 900mm culverts on each side of hydro poles including excavation as required and compacted backfill for culverts at hydro poles using ditch excavation material, seeding backfill, traffic control and construction signs	\$ 20,280.94
	Net HST (1.76%)	\$ 356.94
	TOTAL CONSTRUCTION COST:	\$ 20,637.88

c) Engineering Cost Estimate

i) Report Preparation

There will be no Engineering fee charged for the preparation of this report and for attending the consideration of the report and the court of revision

Total Report Preparation: \$ 0

ii) <u>Construction Supervision</u>	
Construction inspection	\$ 4,110.50
Net HST (1.76%)	\$ 72.34
TOTAL ENGINEERING COST:	\$ 4,182.84

The cost for report preparation is usually not altered at the conclusion of a project unless the report is referred back or the report is appealed to the Drainage Tribunal. The costs shown for construction supervision are the actual costs incurred.

d) Estimated Cost Summary

Allowances	\$ 0
Construction	20,637.88
Engineering	4,182.84
TOTAL ESTIMATED COST:	\$ 24,820.72

ASSESSMENTS

The Drainage Act, RSO 1990 requires that the total estimated cost is assessed to the affected lands and roads under the categories of Benefit (Section 22), Outlet Liability (Section 23), Injuring Liability (Section 23), Special Benefits (Section 24), and Special Assessment (Section 26).

Since the work in this report was required due to the presence of a road and a utility the estimated cost shall be assessed as a special assessment in accordance with Section 26 of the Drainage Act. The special assessment shall be divided equally to the Town of Fort Erie for Winger Road and Canadian Niagara Power Inc. for the hydro poles protection. The final special assessment shall be based on the actual cost for the work outlined in this report.

Owner/Utility/Road	Assessment (\$)
Town of Fort Erie (Winger Road)	12,410.36
Canadian Niagara Power Inc.	12,410.36
Total Cost	24,820.72

Schedules A and B from the original report have been revised to reflect the decision of the Court of Revision and the Tribunal and have not been included with this report but are available for review at the Town office.

MAINTENANCE

The culverts to be incorporated in this report shall be considered to be part of the Winger Road Drain and shall be maintained by the Town of Fort Erie with the cost of maintenance to be assessed to the upstream lands and roads pro rata with the assessments in the revised Schedule A, except that the special assessment shall not apply and maintenance cost shall only include the removal of accumulated sediment or debris within the culverts.

If any culverts in this report should require structural repair, maintenance or replacement the costs shall be assessed equally to the Town of Fort Erie and Canadian Niagara Power Inc. Removal of accumulated sediment or debris within the culverts shall be considered as normal maintenance and assessed as per a ditch cleanout along Winger Road.

In the future, the revised Schedule A shall be used for assessing maintenance cost on the Winger Road Drain as per the provisions in the original report.

SPECIFICATIONS

The specifications from the March 1, 2006 report will also apply to this 2018 report and be used when doing maintenance.

BYLAW

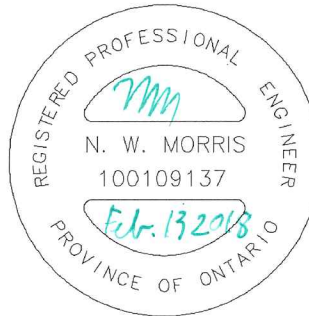
This report including the drawing, when adopted in bylaw form in accordance with the Drainage Act, RSO 1990, will provide the basis for incorporation and maintenance of the Winger Road Drain (Hydro Culverts).

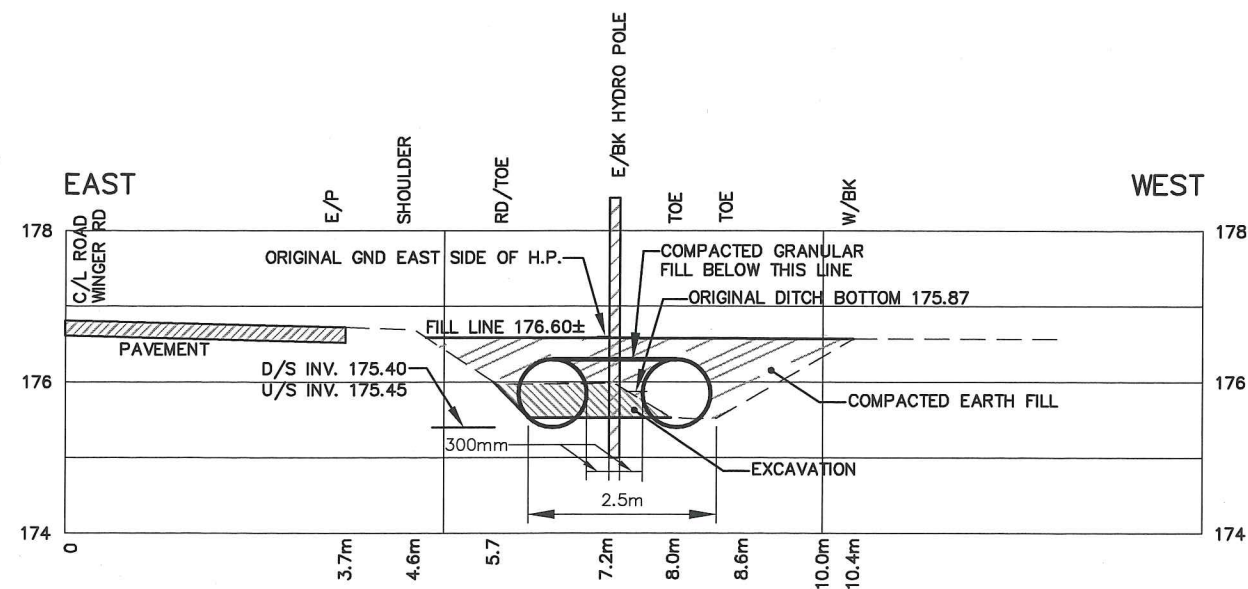
All of which is respectfully submitted.

K. SMART ASSOCIATES LIMITED

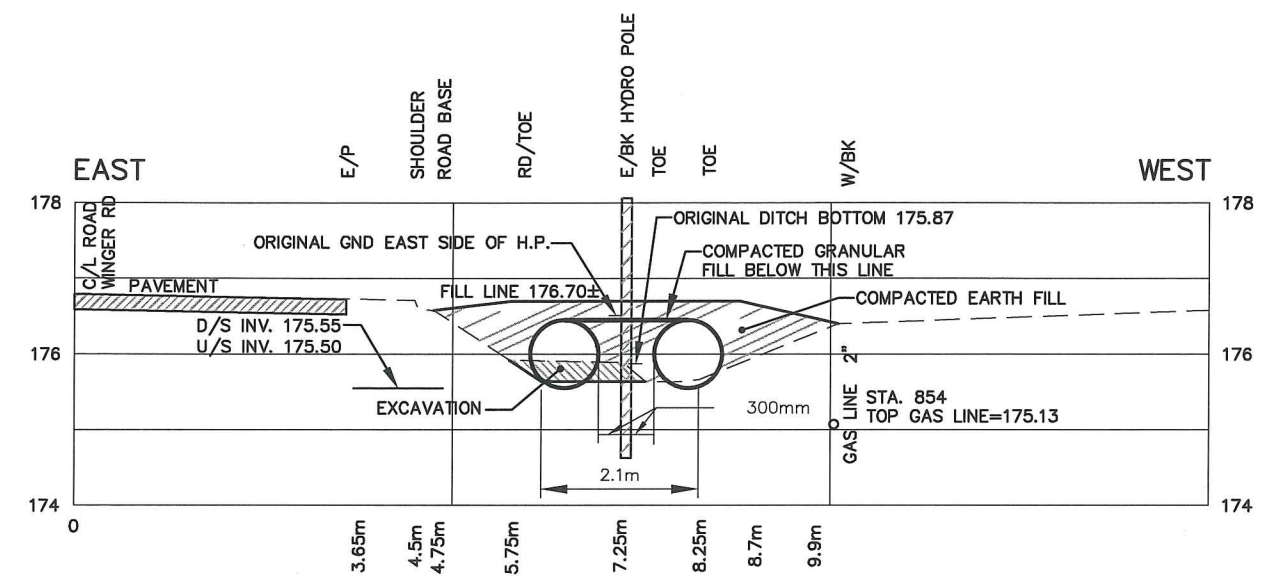
Neal Morris

Neal Morris, P. Eng.

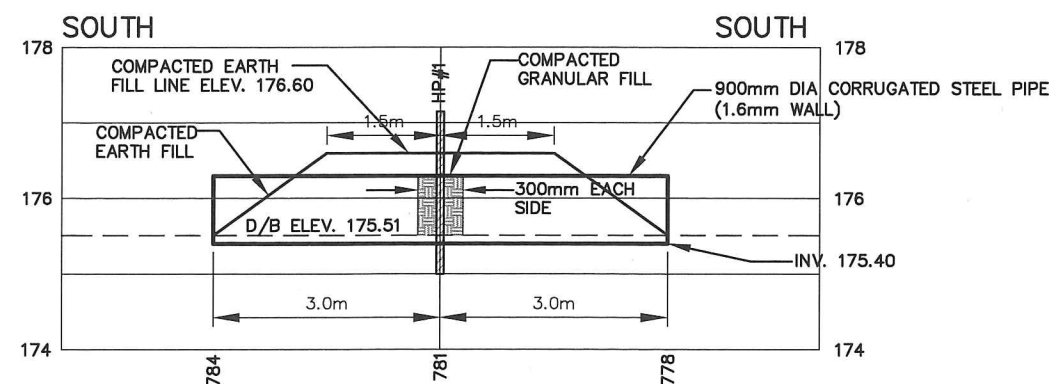




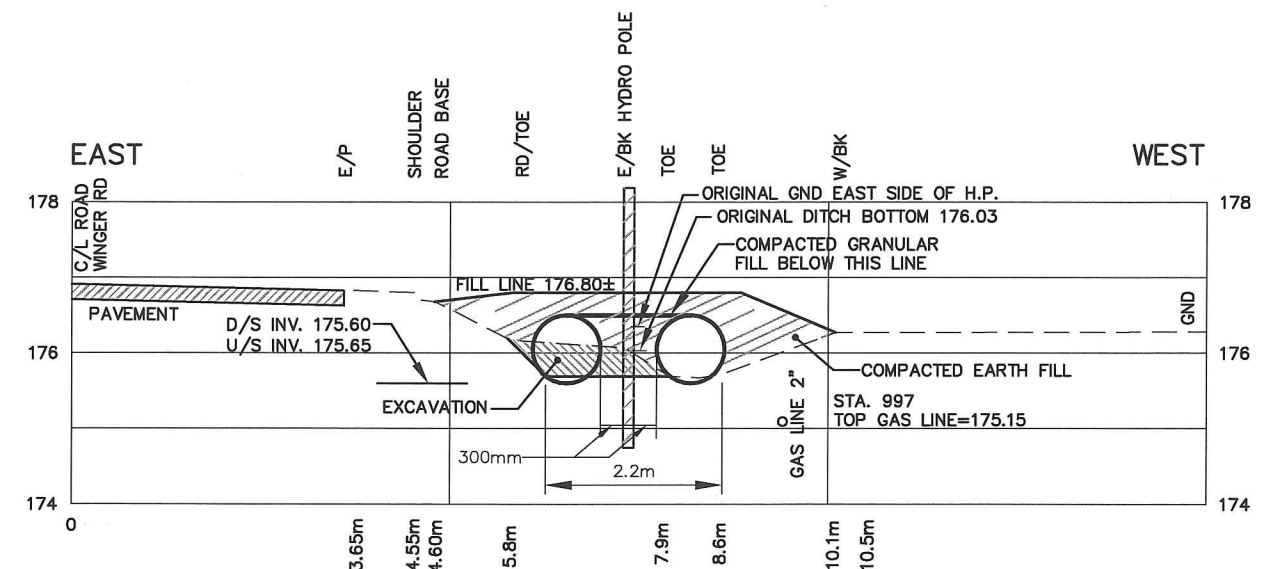
SECTION #1 STA. 781
(AT H.P. #1)



SECTION #3 STA. 874
(AT H.P. #2)



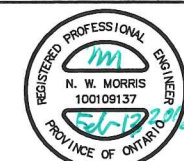
PROFILE ALONG DITCH AT HP#1
TYPICAL DIMENSIONS FOR HP# 2 AND 3
SCALE 1:50



SECTION #4 STA. 964
(AT H.P. #3)

NOTE:
REFER TO DRAWING 1 OF 3 FROM ORIGINAL
REPORT DATED MARCH 1, 2006
FOR THE LOCATION OF THESE STATIONS
ALONG WINGER ROAD

DESIGNED BY: J.W.K.
CHECKED BY: N.W.M.
DRAWN BY: N.M.B.
CHECKED BY: N.W.M.



SCALE
1 : 100
HORIZ.
1m
2m
SCALE
1 : 100
VERT.
(ON 11"x17")

WINGER ROAD DRAIN (HYDRO CULVERTS)

REGIONAL MUNICIPALITY OF NIAGARA TOWN OF FORT ERIE

HYDRO POLE PROTECTION SECTIONS JANUARY 2018

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

REVISED:

JOB NUMBER: 04-242

DRAWING

1 OF 9

Schedule A - Schedule of Assessments
Winger Road Drain
Town of Fort Erie

Con NR	Lot	Roll No. (020-029-)	Owner	Approx Ha Affected	Benefit	Outlet	Total
11	Pt. 15	069-00	K. & M. Smith	0.1	0	12	12
11	Pt. 15	069-01	R. Winger	1.5	0	187	187
*	11	Pt. 15	P. & A. Hogan	5.7	0	561	561
*	11	Pt. 15 & 16	W. & S. Young	39.1	12,500	4,878	17,378
11	Pt. 16	072-00	R. Cote	1.8	3,500	112	3,612
11	Pt. 16	072-01	J. & A. Maxner	1.8	3,000	150	3,150
11	Pt. 16	072-02	E. Waeger	1.2	2,750	150	2,900
*	11	Pt. 16	Eckro Precision Machining		2,500	0	2,500
*	11	Pt. 16	T. Eckert		1,500	0	1,500
*	11	Pt. 16	E. Reddon	2.9	0	362	362
Total Assessment on Lands:				54.1	25,750	6,412	32,162
Netherby/Winger Road					2,500		2,500
Winger Road				0.7	7,000	138	7,138
Special Assessment Winger Road					11,200		11,200
Total Assessments on Roads:					20,700	138	20,838
TOTAL ASSESSMENT ON WINGER ROAD DRAIN:				54.8	46,450	6,550	53,000

Schedule B - Schedule for Actual Cost Bylaw
Winger Road Drain
Town of Fort Erie

Con NR	Lot	Roll No. (020-029-)	Owner	Minus			
				Estimated Assessment	Actual Assessment	1/3 Grant	Minus Allowances
11	Pt. 15	069-00	K. & M. Smith	12	12		
11	Pt. 15	069-01	R. Winger	187	187		
*	11	Pt. 15	P. & A. Hogan	561	561	187	
*	11	Pt. 15 & 16	W. & S. Young	17,378	17,378	5,793	100
11	Pt. 16	072-00	R. Cote	3,612	3,612		450
11	Pt. 16	072-01	J. & A. Maxner	3,150	3,150		500
11	Pt. 16	072-02	E. Waeger	2,900	2,900		600
*	11	Pt. 16	Eckro Precision Machining	2,500	2,500	833	550
*	11	Pt. 16	T. Eckert	1,500	1,500	500	100
*	11	Pt. 16	E. Reddon	362	362	121	
Total Assessments on Lands:				32,162	32,162	7,434	2,300
Netherby/Winger Road				2,500	2,500		
Winger Road				7,138	7,138		
Special Assessment Winger Road				11,200	11,200		
Total Assessments on Roads:				20,838	20,838		0
TOTAL ASSESSMENTS ON WINGER ROAD DRAIN				53,000	53,000	7,434	2,300

Notes:

- In accordance with Section 37 of the Drainage Act, RSO 1990 and OMAF policy lands noted with an asterisk (*) are classified as agricultural.
- Section 21 of the Drainage Act, RSO 1990 requires that assessments be shown opposite each parcel of land and road affected.
The affected parcels of land have been identified using the roll number from the last revised assessment roll for the Town.
For convenience only, the owners' names as shown by the last revised assessment roll has also been included.