

ELLIOTT KITCHEN DRAIN

Norfolk County



**SPRIET
ASSOCIATES**

ENGINEERS & ARCHITECTS

155 York Street
London, Ontario N6A 1A8
Tel. (519) 672-4100
Fax (519) 433-9351
E-mail MAIL@SPRIET.ON.CA

London, Ontario
October 12, 2023

ELLIOTT KITCHEN DRAIN

Norfolk County

To the Mayor and Council of
the Norfolk County

Mayor and Council:

We are pleased to present our report on the reconstruction of parts of the Elliott Kitchen Municipal Drain serving parts of Lots 19 to 22, Concessions 11 and 12 (geographic Township of Windham) now Norfolk County. The total watershed area contains approximately 136 hectares.

AUTHORIZATION

This report was prepared pursuant to Sections 78 of the Drainage Act in accordance with instructions received from your Municipality with respect to a motion of Council in accordance with Section 8 of the Drainage Act.

HISTORY

The Elliott Kitchen Drain was originally constructed pursuant to a report submitted by J.B. Dodd, O.L.S., dated January 11, 1963 and consisted of the construction of a closed drainage system containing a Main Drain and four Branch Drains. The drainage system commenced at the Haymarsh Drain and travelled northerly to service Lots 19 through 22 in Concessions 11 and 12. In total, approximately 4,600 lineal meters of 150mm to 400mm diameter tile was installed.

EXISTING DRAINAGE CONDITIONS

A site meeting held with respect to the project and through later discussions the owners reported the following:

- that the Drainage Superintendent for Norfolk County indicated that the drain needed constant repair and that it was no longer economically viable to repair. Further, he indicated that the drain was constructed on quicksand and, as a result, the tiles had shifted, which further diminished the functioning of the drain
- that the landowner, C., J. & M. Elliott (Roll No. 24-435), concurred with the observation of the Drainage Superintendent, that the drain was in poor condition & portions of it need to be replaced



EXISTING DRAINAGE CONDITIONS (cont'd)

A field investigation and survey were completed. Upon reviewing our findings, we note the following:

- that the existing drain is undersized by today's standards and that based on the history of repairs, is in poor condition

Preliminary design, cost estimates, and assessments were prepared and an informal public meeting was held to review the findings and preliminary proposals. Further input and requests were provided by the affected owners at that time and at later dates. It was decided, based on the preliminary design and costs, to proceed with the request to improve the Main Drain only.

DESIGN CONSIDERATIONS

The Drainage Coefficient method contained in the "DRAINAGE GUIDE FOR ONTARIO", Publication 29 by the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) is typically used to design municipal drains. The Drainage Coefficient defines a depth of water that can be removed in a 24-hour period and is expressed in millimetres per 24 hours. The coefficient used to design this drain with respect to capacity was 38mm per 24 hrs.

We would like to point out that there have been indications of sandy soil conditions. It should be noted that no formal soil investigation has been made, with this information being provided by the owners.

The proposed design and report have been generally completed using the "GUIDE FOR ENGINEERS WORKING UNDER THE DRAINAGE ACT IN ONTARIO" OMAFRA Publication 852.

RECOMMENDATIONS

We are therefore recommending the following:

- that the Elliott Kitchen Main Drain be improved commencing at the pond just north of the Haymarsh Drain and travel north-westerly through the lands of C., J. & M. Elliott (Roll No. 24-435) to across Windham Road 12. The drain will then continue north-westerly through the lands of P. & S. Van Berlo Ltd. (Roll No. 24-060) to its head on the east side of Brantford Road, for a total length of approximately 1,475 lineal meters
- that the drain be constructed on a bedding of crushed stone wrapped in filter cloth to minimize the shifting of tiles due to poor soil conditions
- that catchbasins be installed along the course of the drain to alleviate surface flows and ponding.
- that the road crossing under Windham Road 12 be done by boring to minimize disturbance to the operation of the roadway and the existing pipe will be seal with grout
- that the existing Main Drain from Sta. 0+000 to Sta. 1+475 be officially abandoned from municipal status pursuant to Section 19 of the Drainage Act



ENVIRONMENTAL CONSIDERATIONS AND MITIGATION MEASURES

There are no significant wetlands or sensitive areas within the affected watershed area or along the route of the drains. The proposed construction of the Elliott Kitchen Drain includes quarry stone outlet protection and surface inlets which greatly help reduce the overland surface flows and any subsequent erosion. A temporary flow check of silt fencing is to be installed in the ditch downstream of the tile outlet for the duration of the construction.

SUMMARY OF PROPOSED WORK

The proposed work consists of approximately 1,475 lineal meters of 300mm (12") to 675mm (27") diameter concrete field tile, including related appurtenances.

SCHEDULES

Four schedules are attached hereto and form part of this report, being Schedule 'A' - Allowances, Schedule 'B' - Cost Estimate, Schedule 'C' - Assessment for Construction, and Schedule 'D' - Assessment for Maintenance.

Schedule 'A' - Allowances. In accordance with Sections 29 and 30 of the Drainage Act, allowances are provided for right-of-way and damages to lands and crops along the route of the drain as defined below.

Schedule 'B' - Cost Estimate. This schedule provides for a detailed cost estimate of the proposed work which is in the amount of \$ 317,000.00. This estimate includes engineering and administrative costs associated with this project.

Schedule 'C' - Assessment for Construction. This schedule outlines the distribution of the total estimated cost of construction over the roads and lands which are involved.

Schedule 'D' - Assessment for Maintenance. In accordance with Section 38 of the Drainage Act, this schedule outlines the distribution of future repair and/or maintenance costs for portions of, or the entire drainage works.

Drawing No.'s 1, Job No. 220068, and specifications form part of this report. They show and describe in detail the location and extent of the work to be done and the lands which are affected.

ALLOWANCES

DAMAGES: Section 30 of the Drainage Act provides for the compensation to landowners along the drain for damages to lands and crops caused by the construction of the drain. The amount granted is based on \$3,613.00/ha. for closed drain installed with wheel machine. This base rate is multiplied by the hectares derived from the working widths shown on the plans and the applicable lengths.



ALLOWANCES (cont'd)

RIGHT-OF-WAY Section 29 of the Drainage Act provides for an allowance to the owners whose land must be used for the construction, repair, or future maintenance of a drainage works.

For tile drains where the owners will be able to continue to use the land, the allowance provides for the right to enter upon such lands, and at various times for the purpose of inspecting such drain, removing obstructions, and making repairs. Also, the allowance provides for the restrictions imposed on those lands to protect the right-of-way from obstruction or derogation. The amounts granted for right-of-way on tile drains is based on a percentage of the value of the land designated for future maintenance. Therefore, the amount granted is based on \$6,670.00/ha. through cropped lands. This value is multiplied by the hectares derived from the width granted for future maintenance and the applicable lengths.

ASSESSMENT DEFINITIONS

In accordance with the Drainage Act, lands that make use of a drainage works are liable for assessment for part of the cost of constructing and maintaining the system. These liabilities are known as benefit, outlet liability and special benefit liability as set out under Sections 22, 23, 24 and 26 of the Act.

BENEFIT as defined in the Drainage Act means the advantages to any lands, roads, buildings or other structures from the construction, improvement, repair, or maintenance of a drainage works such as will result in a higher market value or increased crop production or improved appearance or better control of surface or sub-surface water, or any other advantages relating to the betterment of lands, roads, buildings, or other structures.

OUTLET liability is assessed to lands or roads that may make use of a drainage works as an outlet either directly or indirectly through the medium of any other drainage works or of a swale, ravine, creek, or watercourse.

In addition, a Public Utility or Road Authority shall be assessed for and pay all the increased cost to a drainage works due to the construction and operation of the Public Utility or Road Authority. This may be shown as either benefit or special assessment.

ASSESSMENT

A modified "Todgham Method" was used to calculate the assessments shown on Schedule 'C'- Assessment for Construction. This entailed breaking down the costs of the drain into sections along its route. Special Assessments were then extracted from each section.

The remainder is then separated into Benefit and Outlet costs. The Benefit cost is distributed to those properties receiving benefit as defined under "Assessment Definitions", with such properties usually being located along or close to the route of the drain. The Outlet Costs are distributed to all properties within the watershed area of that section on an adjusted basis. The areas are adjusted for location along that section, and relative run-off rates. Due to their different relative run-off rates roads and residential properties have been assessed for outlet at higher rates than cleared farmlands.



ASSESSMENT (cont'd)

The actual cost of the work involving this report, with the exception of Special Assessments, is to be assessed on a pro-rata basis against the lands and roads liable for assessment for benefit, outlet, and for special assessments as shown in detail below and on Schedule 'C' - Assessment for Construction. The Special Assessments shall be levied as noted in the Section "Special Assessment".

SPECIAL ASSESSMENT

In accordance with Section 26 of the Drainage Act, a Special Assessment has been made against Norfolk County being the increased cost to the drainage work for boring a 457mm (18") diameter pipe across their road allowance due to the construction and operation of Windham Road 12. The Special Assessment shall be made up of the actual cost of this work and both the final and estimated values of the Special Assessment are to be calculated as follows:

Drain	Cost of Work	Less Equivalent Drain Cost (Fixed)	Plus Administration Cost	Plus Interest & Net H.S.T.	Special Assessment
457mm smooth wall steel pipe	\$19,900.00	\$670.00	\$3,400.00	\$570.00	\$23,200.00

The above special assessments shall not apply for future maintenance purposes.

If any additional work is required to the drainage works due to the existence of buried utilities such as gas pipelines, communications cables, etc. or if any of the utilities require relocation or repair, then, the extra costs incurred shall be borne by the utility involved in accordance with the provisions of Section 26 of the Drainage Act.

GRANTS

In accordance with the provisions of Section 85 of the Drainage Act, a grant **may** be available for assessments against privately owned parcels of land which are used for agricultural purposes and eligible for the Farm Property Class Tax rate. Section 88 of the Drainage Act directs the Municipality to make application for this grant upon certification of completion of this drain. The Municipality will then deduct the grant from the assessments prior to collecting the final assessments.

MAINTENANCE

Upon completion of construction, all owners are hereby made aware of Sections 80 and 82 of the Drainage Act which forbid the obstruction of or damage or injury to a municipal drain.

After completion, the Elliott Kitchen Drain constructed under this report shall be maintained by Norfolk County at the expense of all upstream lands and roads assessed in Schedule 'D' - Assessment for Maintenance and in the same relative proportions until such time as the assessment is changed under the Drainage Act.



MAINTENANCE (cont'd)

Special Assessments shall **not** be pro-rated for future maintenance purposes.

The above existing portions of the drain shall be maintained in accordance with the grades, dimensions and schedules set out in the report, plans and specifications contained in the report submitted by J.B. Dobb, OLS, dated January 11, 1963.



Respectfully submitted,

SPRIET ASSOCIATES LONDON LIMITED

B. Widner, P.Eng.



SCHEDULE 'A' - ALLOWANCES

ELLIOTT KITCHEN DRAIN

Norfolk County

In accordance with Sections 29 and 30 of the Drainage Act, we determine the allowances payable to owners entitled thereto as follows:

CONCESSION	LOT	ROLL NUMBER (Owner)	Section 29 Right-of-Way	Section 30 Damages	TOTALS
MAIN DRAIN					
11	21	24-060 (P & S Van Berlo Ltd.)	\$ 1,820.00	\$ 1,480.00	\$ 3,300.00
12	21	24-435 (C., J. & M. Elliott)	7,870.00	6,400.00	14,270.00
			=====		
Total Allowances			\$ 9,690.00	\$ 7,880.00	\$ 17,570.00
			=====		
TOTAL ALLOWANCES ON THE MAIN DRAIN					\$ <u>17,570.00</u>

ELLIOTT KITCHEN DRAIN**Norfolk County**

We have made an estimate of the cost of the proposed work which is outlined in detail as follows:

MAIN DRAIN

6 meters of 750mm dia., H.D.P.E. plastic sewer pipe including rodent gate,
quarry stone rip-rap protection around pipe and bank of pond
(Approximately 8m³ quarry stone req'd)

Supply	\$	1,700.00
Installation	\$	1,700.00

Installation of the following concrete field tile on crushed stone, including
supply and installation of geotextile around tile joints (approx. 2700m req'd)

277 meters of 300mm dia. concrete tile	\$	13,900.00
182 meters of 450mm dia. concrete tile	\$	9,100.00
750 meters of 600mm dia. concrete tile	\$	41,300.00
100 meters of 600mm dia. concrete tile (2000D)	\$	5,500.00
144 meters of 675mm dia. concrete tile	\$	7,900.00

Supply of the above listed tile	\$	80,200.00
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Supply & delivery of 19mm crushed stone (Approx. 580 tonnes req'd)	\$	19,300.00
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Strip, stockpile and relevel topsoil from tile trench and adjacent working area (4m wide) specified on drawings (approx. 1459m)	\$	8,800.00
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16 meters of 457mm dia., 7.9mm thickness smooth wall steel pipe		
Supply	\$	4,500.00
Installation under Windham Road 12 by boring	\$	13,900.00
Grouting of Existing Pipe	\$	1,500.00

Supply and install one 600mm x 600mm ditch inlet catchbasin, one 900mm x 1200mm ditch inlet catchbasins, two 900mm x 1200mm standard catchbasin, including berms, leads, ditching, geotextile, prefabricated fittings, removal and disposal of existing catchbasins	\$	13,400.00
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Exposing and locating existing tile drains and utilities	\$	2,000.00
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Tile connections and contingencies	\$	11,200.00
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Allowances under Sections 29 & 30 of the Drainage Act	\$	17,570.00
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ADMINISTRATION

Interest and Net Harmonized Sales Tax	\$	11,530.00
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Survey, Plan and Final Report	\$	38,300.00
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Expenses	\$	2,530.00
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Supervision and Final Inspection	\$	11,170.00
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TOTAL ESTIMATED COST	\$	<u>317,000.00</u>
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SCHEDULE 'C' - ASSESSMENT FOR CONSTRUCTION

ELLIOTT KITCHEN DRAIN

Norfolk County

Job No. 220068

October 12, 2023

* = Non-agricultural

CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	BENEFIT	OUTLET	TOTAL
MAIN DRAIN						
11	19	0.30	24-010 (W-W Airview Farms Ltd.)	\$	\$ 197.00	\$ 197.00
11	20	26.90	24-020 (Wholesome Pickins Ltd.)		25,819.00	25,819.00
* 11	Pt. 20	0.39	24-023 (S. & L. Ryder)		257.00	257.00
11	21	22.10	24-060 (P & S Van Berlo Ltd.)	26,940.00	33,064.00	60,004.00
* 11	21	0.30	24-060-50 (K. Tarka & J. Gilchrist)		546.00	546.00
11	21	0.64	24-061 (K. & T. Tostik)		1,196.00	1,196.00
* 11	22	0.11	24-115 (D. & R. Brown)		272.00	272.00
* 11	22	0.10	24-120 (S. Fletcher)		254.00	254.00
* 11	22	0.10	24-125 (J. Ebdon)		254.00	254.00
* 11	22	0.10	24-130 (B. & M. Ploj)		254.00	254.00
* 11	22	0.10	24-135 (D. Hasilo & L. Hantz)		254.00	254.00
* 11	22	0.10	24-140 (J. & J. Flight)		254.00	254.00
* 11	22	0.23	24-141 (B. Johnson)		565.00	565.00
* 11	22	0.34	24-100 (S. & W. Mudde-Bonnell)		837.00	837.00
* 11	22	0.28	24-145 (Purrfect Companions of Norfolk)		681.00	681.00
* 11	22	0.14	24-150 (E. Butler)		350.00	350.00
* 11	22	0.08	24-155 (R. Wouters & M. Marques Wouters)		195.00	195.00
* 11	22	0.22	24-160 (J. Fritz Estate)		545.00	545.00
* 11	22	0.11	24-165 (D. Piquette & C. Welke)		272.00	272.00
* 11	22	0.11	24-170 (R. & M. Ferreira)		272.00	272.00
* 11	22	0.11	24-175 (J. Ferreira)		272.00	272.00
* 11	22	0.18	24-180 (R. Ronson)		447.00	447.00
* 11	22	0.16	24-225 (F. Hogg & D. Fischer-Hogg)		390.00	390.00
* 11	22	0.12	24-220 (D. Clapdorp)		292.00	292.00
* 11	22	0.12	24-215 (S. Emre)		292.00	292.00
* 11	22	0.13	24-210 (S. Jacques & R. Carpenter)		311.00	311.00
* 11	22	0.13	24-205 (J. & B. Sypher)		311.00	311.00
* 11	22	0.08	24-200 (J. Carter)		195.00	195.00
* 11	22	0.15	24-195 (M. Riley & M. Packer)		370.00	370.00
* 11	22	0.41	24-190 (K. Cooper)		993.00	993.00
* 11	22	0.20	24-186 (D. Evans)		486.00	486.00
* 11	22	0.11	24-185 (R. Clarke)		272.00	272.00
* 11	22	0.08	24-278 (R. Empey & A. Estrela)		195.00	195.00
* 11	22	0.10	24-276 (R. & J. Demoor)		234.00	234.00
* 11	22	0.21	24-275 (D. Wirth)		506.00	506.00
* 11	22	0.19	24-250 (R. Wouters & M. Marques Wouters)		467.00	467.00
* 11	22	0.13	24-265 (H. & B. Doughty)		311.00	311.00
* 11	22	0.15	24-260 (H. Pasek)		370.00	370.00
12	20	14.60	24-415 (N. & M. Kitchen)		9,441.00	9,441.00
12	20	9.31	24-420 (Capital Fruit Farm Inc.)		5,816.00	5,816.00

CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	BENEFIT	OUTLET	TOTAL
MAIN DRAIN (cont'd)						
* 12	20	0.39	24-420-50 (K. & L. Vandebussche)	\$	\$ 257.00	\$ 257.00
12	21	43.00	24-435 (C., J. & M. Elliott)	108,540.00	24,895.00	133,435.00
12	22	4.41	24-450 (D. & J. Van De Velde)		4,615.00	4,615.00
* 12	22	0.45	24-448 (J. Van De Velde)		587.00	587.00
* 12	22	0.09	24-490 (R. Ford & C. Johns)		111.00	111.00
* 12	22	0.09	24-495 (R. Dennie & B. Walsh)		111.00	111.00
* 12	22	0.09	24-500 (Community Living Access Support)		111.00	111.00
* 12	22	0.09	24-505 (M. Dertinger)		111.00	111.00
* 12	22	0.09	24-510 (Al. & A. Rivard)		111.00	111.00
* 12	22	0.09	24-515 (L. Hill)		111.00	111.00
* 12	22	0.13	24-520 (L. Louks)		234.00	234.00
* 12	22	0.13	24-525 (J. & J. Arnold)		234.00	234.00
* 12	22	0.10	24-530 (W. Overholt & A. Ferrell)		189.00	189.00
* 12	22	0.10	24-535 (C. Ward)		189.00	189.00
* 12	22	0.19	24-540 (G. Lutz)		351.00	351.00
* 12	22	0.10	24-545 (K. & L. Morgan)		189.00	189.00
* 12	22	0.11	24-550 (L. & A. Kaye)		195.00	195.00
* 12	22	0.23	24-455 (J. & J. Taves)		423.00	423.00
* 12	22	0.15	24-595 (D. Ploj & L. Clement-Ploj)		280.00	280.00
* 12	22	0.15	24-590 (T. Paine)		280.00	280.00
* 12	22	0.15	24-585 (J. & B. Tschirsow)		280.00	280.00
* 12	22	0.15	24-580 (S. & C. Boughner)		280.00	280.00
* 12	22	0.15	24-575 (P. Laevens)		280.00	280.00
* 12	22	0.14	24-570 (J. & L. Bakke)		260.00	260.00
* 12	22	0.14	24-565 (S. Sherman)		260.00	260.00
* 12	22	0.14	24-560 (R. Howard & R. Cheney-Howard)		260.00	260.00
* 12	22	0.14	24-555 (S. Plant)		260.00	260.00
TOTAL ASSESSMENT ON LANDS				\$ 135,480.00	\$ 123,773.00	\$ 259,253.00
* Windham Rd. 12	2.60	Norfolk County	\$ 5,480.00	\$ 8,252.00	\$ 13,732.00	
* Church Street	0.60	Norfolk County		2,628.00	2,628.00	
* Brantford Road	0.69	Norfolk County	3,210.00	5,374.00	8,584.00	
* Earl Street	0.89	Norfolk County		5,199.00	5,199.00	
* Elizabeth Street	0.16	Norfolk County		935.00	935.00	
* Greening Drive	0.10	Norfolk County		442.00	442.00	
* Courtland Street	0.16	Norfolk County		703.00	703.00	
* Fertilizer Road	0.74	Norfolk County		2,324.00	2,324.00	
TOTAL ASSESSMENT ON ROADS				\$ 5,480.00	\$ 8,252.00	\$ 34,547.00
SPECIAL ASSESSMEN against Norfolk County for the increased cost of installing a 457mm (18") dia. Smooth Wall Steel Pipe under Windham Road 12 by boring						\$ 23,200.00
TOTAL ASSESSMENT ON THE MAIN DRAIN						\$ 317,000.00

SCHEDULE 'D' - ASSESSMENT FOR MAINTENANCE

ELLIOTT KITCHEN DRAIN

Norfolk County

Job No. 220068

October 12, 2023

CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	PERCENTAGE OF MAINTENANCE COST
MAIN DRAIN				
11	19	0.3	24-010 (W-W Airview Farms Ltd.)	0.10 %
11	20	26.9	24-020 (Wholesome Pickins Ltd.)	11.70
11	Pt. 20	0.4	24-023 (S. & L. Ryder)	0.10
11	21	22.1	24-060 (P & S Van Berlo Ltd.)	21.10
11	21	0.3	24-060-50 (K. Tarka & J. Gilchrist)	0.20
11	21	0.6	24-061 (K. & T. Tostik)	0.50
11	22	0.1	24-115 (D. & R. Brown)	0.10
11	22	0.1	24-120 (S. Fletcher)	0.10
11	22	0.1	24-125 (J. Ebdon)	0.10
11	22	0.1	24-130 (B. & M. Ploj)	0.10
11	22	0.1	24-135 (D. Hasilo & L. Hantz)	0.10
11	22	0.1	24-140 (J. & J. Flight)	0.10
11	22	0.2	24-141 (B. Johnson)	0.30
11	22	0.3	24-100 (S. & W. Mudde-Bonnell)	0.40
11	22	0.3	24-145 (Purrfect Companions of Norfolk)	0.30
11	22	0.1	24-150 (E. Butler)	0.20
11	22	0.1	24-155 (R. Wouters & M. Marques Wouters)	0.10
11	22	0.2	24-160 (J. Fritz Estate)	0.20
11	22	0.1	24-165 (D. Piquette & C. Welke)	0.10
11	22	0.1	24-170 (R. & M. Ferreira)	0.10
11	22	0.1	24-175 (J. Ferreira)	0.10
11	22	0.2	24-180 (R. Ronson)	0.20
11	22	0.2	24-225 (F. Hogg & D. Fischer-Hogg)	0.20
11	22	0.1	24-220 (D. Clapdorp)	0.10
11	22	0.1	24-215 (S. Emre)	0.10
11	22	0.1	24-210 (S. Jacques & R. Carpenter)	0.10
11	22	0.1	24-205 (J. & B. Sypher)	0.10
11	22	0.1	24-200 (J. Carter)	0.10
11	22	0.2	24-195 (M. Riley & M. Packer)	0.20
11	22	0.4	24-190 (K. Cooper)	0.40
11	22	0.2	24-186 (D. Evans)	0.20
11	22	0.1	24-185 (R. Clarke)	0.10
11	22	0.1	24-278 (R. Empey & A. Estrela)	0.10
11	22	0.1	24-276 (R. & J. Demoor)	0.10
11	22	0.2	24-275 (D. Wirth)	0.20
11	22	0.2	24-250 (R. Wouters & M. Marques Wouters)	0.20
11	22	0.1	24-265 (H. & B. Doughty)	0.10
11	22	0.2	24-260 (H. Pasek)	0.20
12	20	14.6	24-415 (N. & M. Kitchen)	4.30
12	20	9.3	24-420 (Capital Fruit Farm Inc.)	2.60

SCHEDULE 'D' - ASSESSMENT FOR MAINTENANCE (cont'd)

ELLIOTT KITCHEN DRAIN
Norfolk County

CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	PERCENTAGE OF MAINTENANCE COST
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MAIN DRAIN (cont'd)

12	20	0.4	24-420-50 (K. & L. Vandenbussche)	0.10 %
12	21	43.0	24-435 (C., J. & M. Elliott)	35.00
12	22	4.4	24-450 (D. & J. Van De Velde)	2.10
12	22	0.5	24-448 (J. Van De Velde)	0.30
12	22	0.1	24-490 (R. Ford & C. Johns)	0.10
12	22	0.1	24-495 (R. Dennie & B. Walsh)	0.10
12	22	0.1	24-500 (Community Living Access Support)	0.10
12	22	0.1	24-505 (M. Dertinger)	0.10
12	22	0.1	24-510 (Al. & A. Rivard)	0.10
12	22	0.1	24-515 (L. Hill)	0.10
12	22	0.1	24-520 (L. Louks)	0.10
12	22	0.1	24-525 (J. & J. Arnold)	0.10
12	22	0.1	24-530 (W. Overholt & A. Ferrell)	0.10
12	22	0.1	24-535 (C. Ward)	0.10
12	22	0.2	24-540 (G. Lutz)	0.20
12	22	0.1	24-545 (K. & L. Morgan)	0.10
12	22	0.1	24-550 (L. & A. Kaye)	0.10
12	22	0.2	24-455 (J. & J. Taves)	0.20
12	22	0.2	24-595 (D. Ploj & L. Clement-Ploj)	0.10
12	22	0.2	24-590 (T. Paine)	0.10
12	22	0.2	24-585 (J. & B. Tschirsow)	0.10
12	22	0.2	24-580 (S. & C. Boughner)	0.10
12	22	0.2	24-575 (P. Laevens)	0.10
12	22	0.1	24-570 (J. & L. Bakke)	0.10
12	22	0.1	24-565 (S. Sherman)	0.10
12	22	0.1	24-560 (R. Howard & R. Cheney-Howard)	0.10
12	22	0.1	24-555 (S. Plant)	0.10

TOTAL ASSESSMENT ON LANDS

85.70 %

Windham Rd. 12	2.6	Norfolk County	5.10 %
Church Street	0.6	Norfolk County	1.30
Brantford Road	0.7	Norfolk County	3.30
Earl Street	0.9	Norfolk County	2.50
Elizabeth Street	0.2	Norfolk County	0.50
Greening Drive	0.1	Norfolk County	0.30
Courtland Street	0.2	Norfolk County	0.10
Fertilizer Road	0.7	Norfolk County	1.20

TOTAL ASSESSMENT ON ROADS

14.30 %

TOTAL ASSESSMENT FOR MAINTENANCE**100.00 %**

SCHEDULE OF NET ASSESSMENT

ELLIOTT KITCHEN DRAIN

Norfolk County

(FOR INFORMATION PURPOSES ONLY)

Job No. 220068

October 12, 2023

* = Non-agricultural

ROLL NUMBER (OWNER)	TOTAL ASSESSMENT	GRANT	ALLOWANCES	APPROX. NET
24-010 (W-W Airview Farms Ltd.)	\$ 197.00	\$ 66.00	\$	\$ 131.00
24-020 (Wholesome Pickins Ltd.)	25,819.00	8,606.00		17,213.00
* 24-023 (S. & L. Ryder)	257.00			257.00
24-060 (P & S Van Berlo Ltd.)	60,004.00	20,001.00	3,300.00	36,703.00
* 24-060-50 (K. Tarka & J. Gilchrist)	546.00			546.00
24-061 (K. & T. Tostik)	1,196.00	399.00		797.00
* 24-115 (D. & R. Brown)	272.00			272.00
* 24-120 (S. Fletcher)	254.00			254.00
* 24-125 (J. Ebdon)	254.00			254.00
* 24-130 (B. & M. Ploj)	254.00			254.00
* 24-135 (D. Hasilo & L. Hantz)	254.00			254.00
* 24-140 (J. & J. Flight)	254.00			254.00
* 24-141 (B. Johnson)	565.00			565.00
* 24-100 (S. & W. Mudde-Bonnell)	837.00			837.00
* 24-145 (Purrfect Companions of Norfolk)	681.00			681.00
* 24-150 (E. Butler)	350.00			350.00
* 24-155 (R. Wouters & M. Marques Wouters)	195.00			195.00
* 24-160 (J. Fritz Estate)	545.00			545.00
* 24-165 (D. Piquette & C. Welke)	272.00			272.00
* 24-170 (R. & M. Ferreira)	272.00			272.00
* 24-175 (J. Ferreira)	272.00			272.00
* 24-180 (R. Ronson)	447.00			447.00
* 24-225 (F. Hogg & D. Fischer-Hogg)	390.00			390.00
* 24-220 (D. Clapdorp)	292.00			292.00
* 24-215 (S. Emre)	292.00			292.00
* 24-210 (S. Jacques & R. Carpenter)	311.00			311.00
* 24-205 (J. & B. Sypher)	311.00			311.00
* 24-200 (J. Carter)	195.00			195.00
* 24-195 (M. Riley & M. Packer)	370.00			370.00
* 24-190 (K. Cooper)	993.00			993.00
* 24-186 (D. Evans)	486.00			486.00
* 24-185 (R. Clarke)	272.00			272.00
* 24-278 (R. Empey & A. Estrela)	195.00			195.00
* 24-276 (R. & J. Demoor)	234.00			234.00
* 24-275 (D. Wirth)	506.00			506.00
* 24-250 (R. Wouters & M. Marques Wouters)	467.00			467.00
* 24-265 (H. & B. Doughty)	311.00			311.00
* 24-260 (H. Pasek)	370.00			370.00

SCHEDULE OF NET ASSESSMENT (Cont'd)

ELLIOTT KITCHEN DRAIN

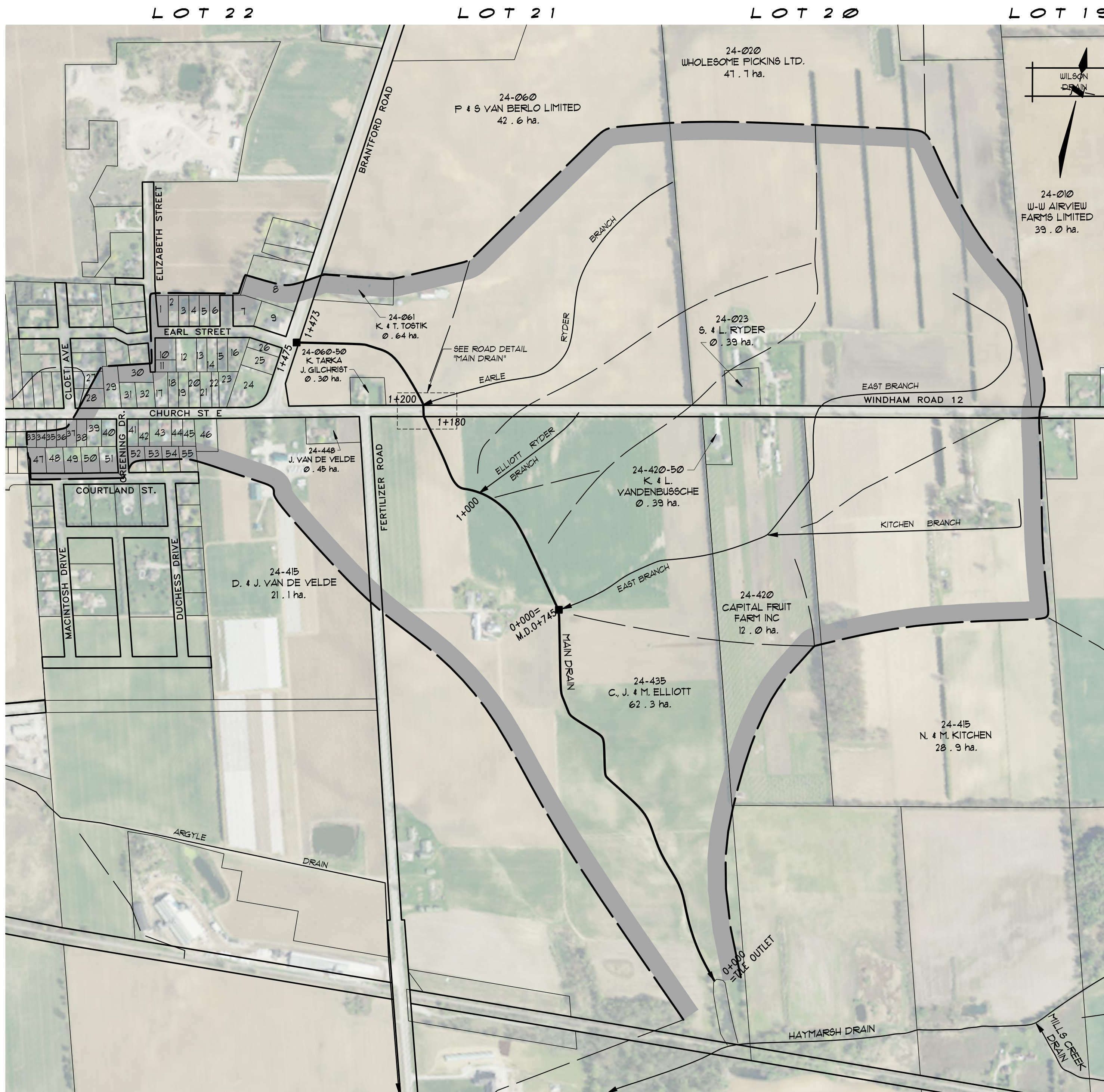
Norfolk County

* = Non-agricultural

	ROLL NUMBER (OWNER)	TOTAL ASSESSMENT	GRANT	ALLOWANCES	APPROX. NET
	24-415 (N. & M. Kitchen)	9,441.00	3,147.00		6,294.00
	24-420 (Capital Fruit Farm Inc.)	5,816.00	1,939.00		3,877.00
*	24-420-50 (K. & L. Vandenbussche)	257.00			257.00
	24-435 (C., J. & M. Elliott)	133,435.00	44,478.00	14,270.00	74,687.00
	24-450 (D. & J. Van De Velde)	4,615.00	1,538.00		3,077.00
*	24-448 (J. Van De Velde)	587.00			587.00
*	24-490 (R. Ford & C. Johns)	111.00			111.00
*	24-495 (R. Dennie & B. Walsh)	111.00			111.00
*	24-500 (Community Living Access Support)	111.00			111.00
*	24-505 (M. Dertinger)	111.00			111.00
*	24-510 (Al. & A. Rivard)	111.00			111.00
*	24-515 (L. Hill)	111.00			111.00
*	24-520 (L. Louks)	234.00			234.00
*	24-525 (J. & J. Arnold)	234.00			234.00
*	24-530 (W. Overholt & A. Ferrell)	189.00			189.00
*	24-535 (C. Ward)	189.00			189.00
*	24-540 (G. Lutz)	351.00			351.00
*	24-545 (K. & L. Morgan)	189.00			189.00
*	24-550 (L. & A. Kaye)	195.00			195.00
*	24-455 (J. & J. Taves)	423.00			423.00
*	24-595 (D. Ploj & L. Clement-Ploj)	280.00			280.00
*	24-590 (T. Paine)	280.00			280.00
*	24-585 (J. & B. Tschirchow)	280.00			280.00
*	24-580 (S. & C. Boughner)	280.00			280.00
*	24-575 (P. Laevens)	280.00			280.00
*	24-570 (J. & L. Bakke)	260.00			260.00
*	24-565 (S. Sherman)	260.00			260.00
*	24-560 (R. Howard & R. Cheney-Howard)	260.00			260.00
*	24-555 (S. Plant)	260.00			260.00
*	Windham Rd. 12	13,732.00			13,732.00
*	Special Assessment	23,200.00			23,200.00
*	Church Street	2,628.00			2,628.00
*	Brantford Road	8,584.00			8,584.00
*	Earl Street	5,199.00			5,199.00
*	Elizabeth Street	935.00			935.00
*	Greening Drive	442.00			442.00
*	Courtland Street	703.00			703.00
*	Fertilizer Road	2,324.00			2,324.00
TOTALS		\$ 317,000.00	\$ 80,174.00	\$ 17,570.00	\$ 219,256.00

CONCESSION 11

CONCESSION 12



PLAN SCALE 1 : 5,000

LOT LEGEND		
ROLL No.	OWNERSHIP	HECTARES OWNED
1) 24-115	D. & R. BROWN	0.11
2) 24-120	S. FLETCHER	0.10
3) 24-125	J. EBDON	0.10
4) 24-130	B. & M. PLOJ	0.10
5) 24-135	D. HASLO & L. HANTZ	0.10
6) 24-140	J. & J. FLIGHT	0.10
7) 24-141	B. JOHNSON	0.23
8) 24-100	S. & W. MUDDÉ-BONNELL	0.79
9) 24-145	PURRFECT COMPANIONS OF NORFOLK	0.28
10) 24-150	E. BUTLER	0.14
11) 24-155	R. WOUTERS & M. MARQUES WOUTERS	0.08
12) 24-160	J. FRITZ ESTATE	0.22
13) 24-165	D. POUETTE & C. WELKE	0.11
14) 24-170	R. & M. FERREIRA	0.11
15) 24-175	J. FERREIRA	0.11
16) 24-180	R. RONSON	0.18
17) 24-225	F. HOGG & D. FISCHER-HOGG	0.16
18) 24-220	D. CLAPDORP	0.12
19) 24-215	S. EMRE	0.12
20) 24-210	S. JACQUES & R. CARPENTER	0.13
21) 24-205	J. & B. SYPHER	0.13
22) 24-200	J. CARTER	0.08
23) 24-195	M. RILEY & M. PACKER	0.15
24) 24-190	K. COOPER	0.41
25) 24-186	D. EVANS	0.20
26) 24-185	R. CLARKE	0.11
27) 24-278	R. EMPEY & A. ESTRELA	0.16
28) 24-276	R. & J. DEMOOR	0.19
29) 24-275	D. WIRTH	0.21
30) 24-250	R. WOUTERS & M. MARQUES WOUTERS	0.19
31) 24-265	H. & B. DOUGHTY	0.13
32) 24-260	H. PASEK	0.15
33) 24-490	R. FORD & C. JOHNS	0.09
34) 24-495	R. DENNIE & B. WALSH	0.09
35) 24-500	COMMUNITY LIVING ACCESS SUPPORT	0.09
36) 24-505	M. DERTINGER	0.09
37) 24-510	AL. & A. RIVARD	0.09
38) 24-515	L. HILL	0.09
39) 24-520	L. LOUKS	0.13
40) 24-525	J. & J. ARNOLD	0.13
41) 24-530	W. OVERHOLT & A. FERRELL	0.10
42) 24-535	C. WARD	0.10
43) 24-540	G. LUTZ	0.19
44) 24-545	K. & L. MORGAN	0.10
45) 24-550	L. & A. KAYE	0.11
46) 24-455	J. & J. TAVES	0.23
47) 24-595	D. PLOJ & L. CLEMENT-PLOJ	0.15
48) 24-590	T. PAINE	0.15
49) 24-585	J. & B. TSCHIRSHOW	0.15
50) 24-580	S. & C. BOUGHNER	0.15
51) 24-575	P. LAEVENS	0.15
52) 24-570	J. & L. BAKKE	0.14
53) 24-565	S. SHERMAN	0.14
54) 24-560	R. HOWARD & R. CHENEY-HOWARD	0.14
55) 24-555	S. PLANT	0.14

PLAN LEGEND

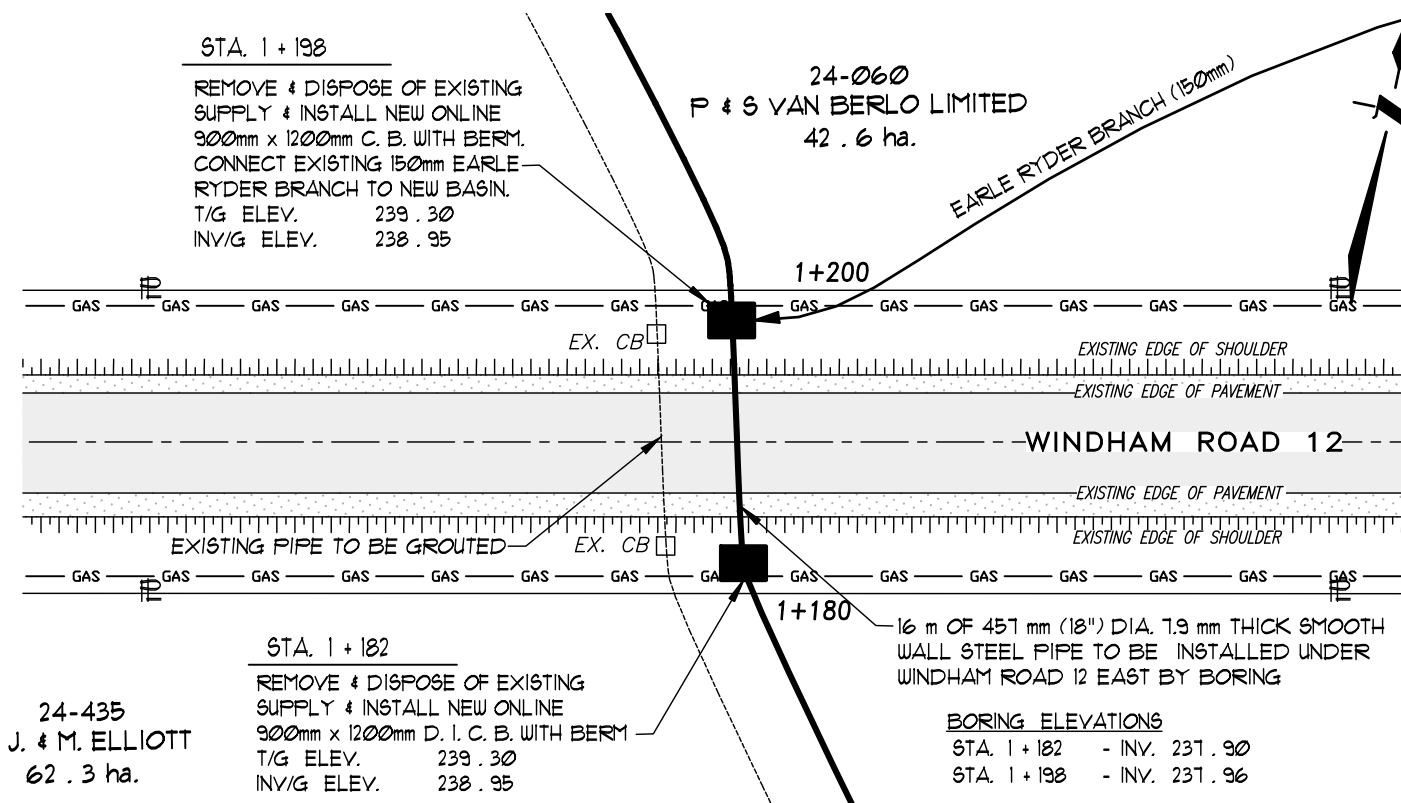
- LIMIT OF WATERSHED AREA
- PROPOSED DRAINAGE WORKS
- EXTERIOR OR INTERIOR WATERSHED
- EXIST. MUNICIPAL DRAIN

GENERAL NOTES

- 1/ OUR SPECIFICATIONS DATED JANUARY 2020 APPLY TO THIS PROJECT.
- 2/ THE WORKING WIDTH AVAILABLE TO THE CONTRACTOR TO CONSTRUCT THE NEW DRAINS SHALL CONSIST OF THOSE LANDS IMMEDIATELY ADJACENT TO THE DRAIN AND CONNECTIONS AND SHALL NOT EXCEED THE FOLLOWING AVERAGE WIDTHS:
 - 15 metersTHE WORKING WIDTH FOR PURPOSES OF FUTURE MAINTENANCE SHALL BE 10m.
- 3/ ALL OWNERS ALONG THE COURSE OF THE DRAIN SHALL MAKE AN ACCESS ROUTE FROM THE NEAREST ROAD TO THE DRAIN LOCATION AVAILABLE TO THE CONTRACTOR THE AVERAGE WIDTH OF THIS ROUTE SHALL NOT EXCEED 8 METERS. THE ACCESS ROUTE SHALL ALSO APPLY FOR FUTURE MAINTENANCE PURPOSES.
- 4/ a) ALL UTILITIES TO BE LOCATED AND EXPOSED PRIOR TO CONSTRUCTION SO THAT THE NEW TILE GRADES CAN BE CONFIRMED. IF THERE IS A CONFLICT IN ELEVATION BETWEEN THE PROPOSED DRAIN AND THE UTILITY, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY.
b) CONTRACTOR TO NOTIFY ALL UTILITIES 72 HOURS PRIOR TO HIS SCHEDULED TIME FOR STARTING THE ABOVE WORK.
c) THE COST FOR THIS WORK SHALL BE INCLUDED IN THE ITEM ON THE EXTENT OF WORK AND NO EXTRA PAYMENT SHALL BE MADE TO THE CONTRACTOR, EXCEPT IF ROAD RESTORATION IS REQUIRED.
- 5/ ALL TREES, SCRUB, BRUSH, ETC. TO BE CLEARED AND GRUBBED IN ACCORDANCE WITH "SECTION B.3 AND C.4" SPECIFICATIONS.
- 6/ RIP-RAP TO BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH "SECTION A.28" IN THE SPECIFICATIONS.
- 7/ CONTRACTOR TO ARRANGE A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, DRAINAGE SUPERINTENDENT, AND THE AFFECTED OWNERS. ALL PARTIES SHALL RECEIVE 48 HOURS NOTICE TO THE MEETING.

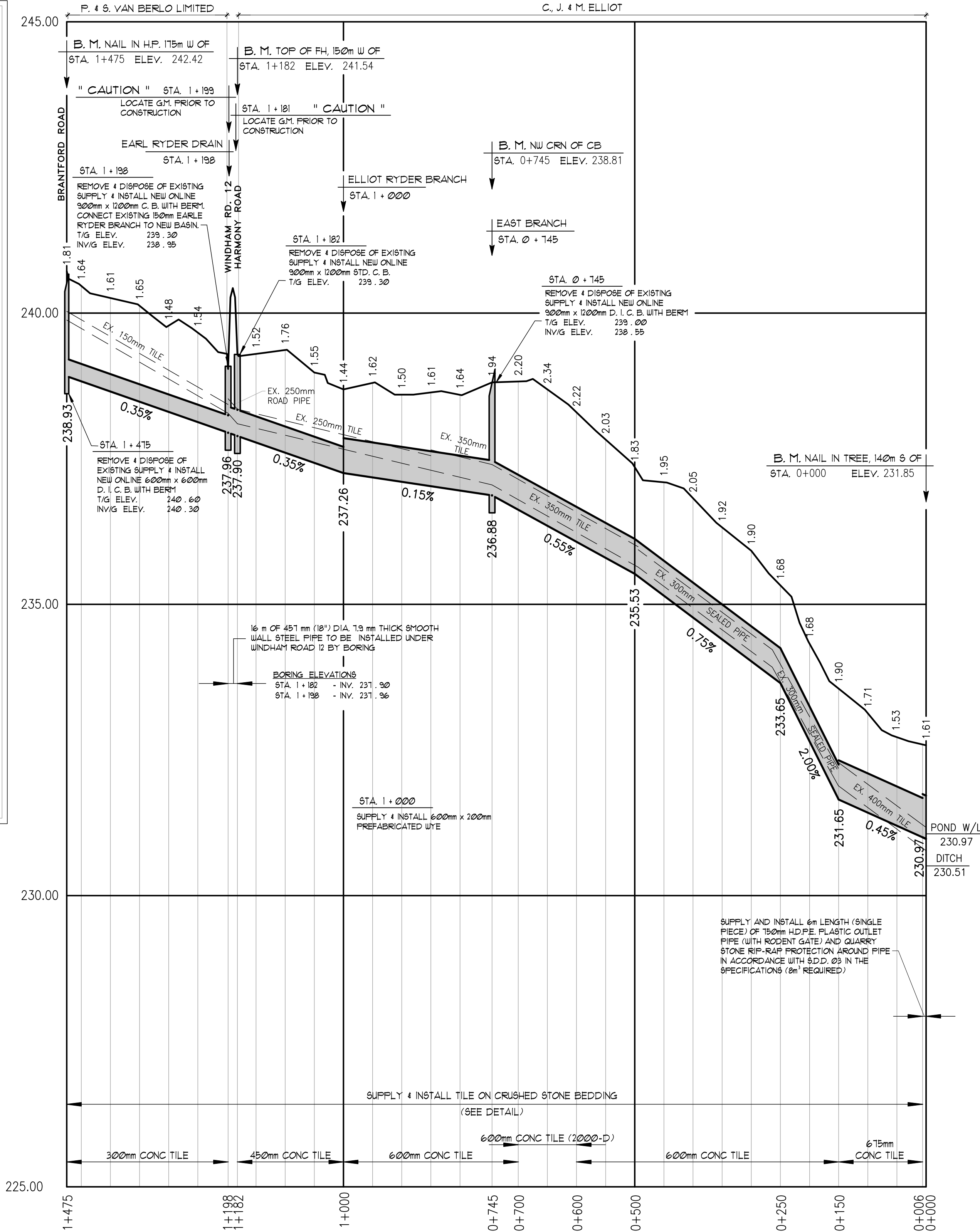
CLOSED PORTIONS

- a) ALL CONCRETE AND PLASTIC TILE AND PIPE TO CONFORM TO "SECTION C.1" IN THE SPECIFICATIONS.
- b) CONCRETE TILE SHALL BE HEAVY DUTY UNLESS OTHERWISE NOTED ON DRAWINGS.
- 3/ EXISTING TILE DRAINS TO BE EXPOSED IN AS MANY LOCATIONS AS ARE NECESSARY TO CONFIRM THEIR EXACT LOCATION AND ELEVATION PRIOR TO CONSTRUCTION. EXACT LOCATION OF NEW TILE DRAINS THEN TO BE CONFIRMED BY DRAINAGE SUPERINTENDENT OR ENGINEER.
- 10/ a) INSTALLATION OF TILE AND TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH "SECTION C - TILE DRAIN" IN THE SPECIFICATIONS.
b) ALL CONCRETE TILE AND TILE-PIPE JOINTS TO BE WRAPPED WITH GEOTEXTILE IN ACCORDANCE WITH "SECTION C.8" IN THE SPECIFICATIONS.
c) NO CONSTRUCTION EQUIPMENT OR FARM MACHINERY SHALL CROSS OVER THE MOUNDED BACKFILLED TILE TRENCHES UNTIL SUFFICIENT SETTLEMENT HAS OCCURRED.
d) STRIP AND STOCKPILE TOPSOIL FROM CONSTRUCTION AREA (4 metre width) FOR ENTIRE LENGTH OF NEW DRAIN (EXCEPT LANEWAYS & ROADS). EXCESS SPOIL TO BE LEVELLED AND TOPSOIL RELEVELLED OVER SPOIL, MOUNDED TRENCH AND REMAINING CONSTRUCTION AREA.



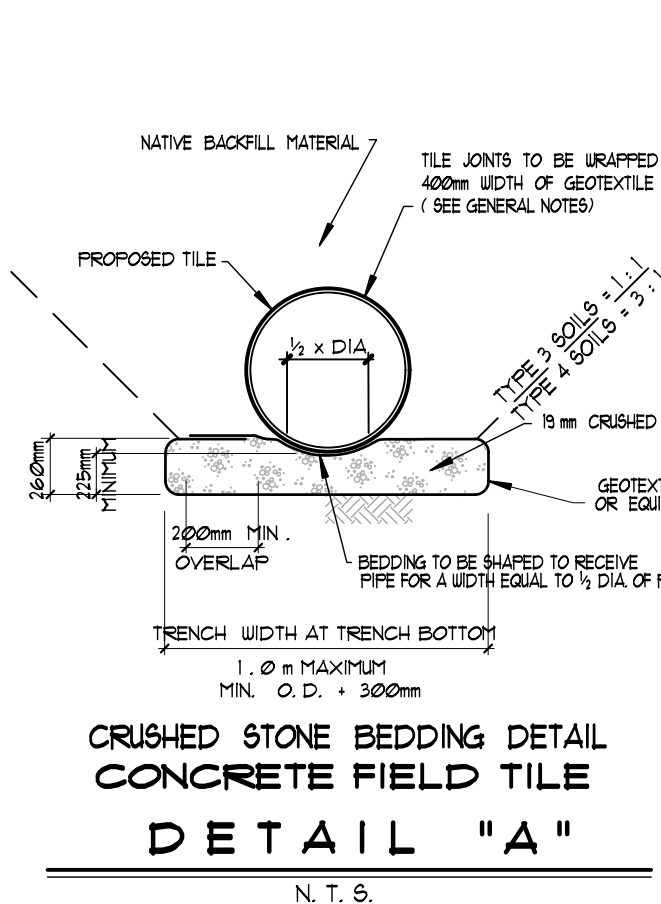
ROAD DETAIL (MAIN DRAIN)

SCALE 1 : 500



MAIN DRAIN

SCALE : HOR 1 : 5,000
VERT. 1 : 50



CRUSHED STONE BEDDING DETAIL
CONCRETE FIELD TILE
DETAIL "A"

N. T. S.

ELLIOTT KITCHEN DRAIN



Norfolk County

Drainage Superintendent:	No.	REVISIONS	DATE
BILL MATES			
519-582-2100			
Drawn By: M.M. & AP	Field Book	JOB No.	Drawing No.
Date: OCT. 12, 2023	G.F.S.	220068	1 of 1
PLAN, PROFILE, DETAILS & NOTES			
SPRIET ASSOCIATES LIMITED			
LONDON CONSULTING ENGINEERS			
155 YORK STREET - LONDON (519) 672-4100 - NEA 1A8			