FORM OF TENDER AND AGREEMENT

INSTRUCTIONS TO TENDERERS

TIMMERMANS DRAIN 2021

Township of Adelaide Metcalfe

Sealed tenders shall be received at the Municipal Offices on Tuesday, October 19, 2021 at 12:00 PM

At: 2340 Egremont Drive, Strathroy Ontario N7G 3H6

1. **SCOPE**: The work to be done under this specification consists of supplying all labour, materials and equipment to construct the work as outlined on the drawing(s). In some Municipalities the Contractor shall supply all materials while in other Municipalities he shall supply only certain materials. The Form of Tender and Agreement lists which materials are to be supplied by the Contractor.

2. **DRAWINGS AND SPECIFICATIONS:** The Tenderer must satisfy themself that they understand the meaning and intent of the drawings and specifications before submission of his tender. The standard specifications have been separated into sections for reference purpose only. They shall be considered complementary and, where a project is controlled under one of the sections, the remaining sections will still apply for miscellaneous works. In case of any inconsistency or conflict in the Tender Documents, the following order of precedence shall apply:
    1. Addendums
    2. Instruction to Tenderers
    3. Contract Drawings
    4. Form of Tender and Agreement
    5. Specifications (dated January 2020)
    6. Standard Drawings

3. **TENDERS:** Tenders are to be submitted on a lump sum basis for the complete works or a portion thereof, as set out in the Form of Tender and Agreement.

4. **TENDERER TO INVESTIGATE**: The Tenderer shall examine the premises and site to compare them with the drawings and specifications in order to satisfy himself of the existing conditions and the extent of the work to be done before submission of his tender. No allowance shall subsequently be made on behalf of the Contractor by reason of any error on his part. If required, the above specifications and/or further information are available at the office of the Engineers, Spriet Associates London Limited, 155 York Street, London, Ontario N6A 1A8.

   Any estimates of quantities shown or indicated on the drawings or extent of work are “neat” calculations and are provided for the convenience of the Tenderer. Any use made of these quantities by the Tenderer in calculating his tender shall be done at his own risk. The Tenderer, for his own protection, should check these quantities for accuracy.

5. **INTERPRETATION OF CONTRACT DOCUMENTS:** No oral interpretation will be made. Any interpretations made to Tenderers will be in the form of an Addendum to the contract documents which will be forwarded to all Tenderers.

   Discrepancies, omissions or doubts as to the meaning of drawings and specifications should be communicated at once to the Contract Administrator for interpretation. Tenderers should act promptly to allow sufficient time for a reply to reach them before the submission of their tender and any such interpretation made by the Contract Administrator prior to the receipt of tenders shall be made a part of the Contract.

6. **PRICES SUBMITTED**: The tender price or prices tendered in the Tender shall be in full compensation for all labour, equipment and materials and utility and transportation services necessary to perform and complete all work under the Contract, including all miscellaneous work, whether specifically included in the Tender Documents or not. It is the intention of the Drawings and Specifications to provide finished work. Any items omitted therefrom which are clearly necessary for the completion of the work shall be considered part of the work, though not directly specified in the Tender Documents.

7. **ACCEPTANCE**: Tenders shall be made on a lump sum basis on the forms provided. It shall be noted that any alteration of the “Form of Tender and Agreement”, failure to complete the Form of Tender in full or any other requirements set out in these documents, will render the tender liable to rejection by the Municipality. Acceptance of the Tender by the Municipality shall constitute a formal and binding contract when signed by the Municipal Officials.

   The Tenderer shall keep his Tender open for acceptance and irrevocable until 45 days have elapsed from the closing date of the Tender or a formal contract is executed, based on a Tender other than his own.

   The owner reserves the right to reject all or any tenders received. The contract, when awarded, shall be made for each branch or division of the work or for the whole work as deemed in the best interested of the owner.

   The lowest bid or any bid will not necessarily be accepted. Special consideration may be placed upon the commencement and competition date provided as part of the contractor’s tender.

   The owner reserves the right, upon award of Tender, to reduce the extent of work to be performed in this contract based on higher tendered costs versus estimated project costs.

8. **TENDER SECURITY**: The tender shall be accompanied by a security in the amount of ten percent (10%) of the Tender Price including all applicable taxes. Tender security shall be in the form of a bid bond or a certified cheque made payable to the Owner in Canadian Currency. If the tender security is a Bid Bond then the Tenderer shall include with his tender an Agreement to Bond executed under its corporate seal by the surety company from which he proposed to obtain the required bonds. This bid bond shall guarantee that, if awarded the Contract, the Contractor will furnish the required bonds within seven (7) days from the date of the award of a contract, otherwise the tender security shall be forfeited.

Tender Security (cont'd)

In cases where a Tenderer withdraws his Tender before the Council has considered the Tenders and awarded a Contract, the amount of the Tender deposit of the Tenderer so withdrawing his Tender may be forfeited to the Owner.

Tender Security of unsuccessful tenderers will be returned upon award and execution of the Contract.

9. **CONTRACT SECURITY**: If the successful contractor submits a certified cheque as tender security, the Municipality will retain 3% of the Contract Price for one year as warranty. After the completion of the work, any part of this warranty holdback may be used to correct defects which may develop within that time from faulty workmanship or material or loose backfill, provided that notice shall first be given to the Contractor and that he may promptly make good such defects, if he desires. The Certified Cheque of the successful Tender shall be retained by the Municipality until the contract is completed and a completion certificate is issued by the Engineer. The successful Contractor shall have the option of furnishing the Municipality with Bonds to replace the tender security and warranty holdback as outlined below.

If the successful contractor submits a bid bond as tender security or intends to replace their certified cheque with Bonds then the contactor shall supply the Municipality with a Bond in the amount of 100 per cent of the Contract Price for Maintenance and Performance and a bond in the amount of 50 per cent of the Contract Price for Labour and Materials with a satisfactory Guaranty Surety Company with Head Office in the Province of Ontario will be required for this Contract. These bonds shall ensure completion of the work and maintenance of the work for a period of one year after the date of the competition certificate. The cost of these Bonds shall be included in the total Contract Price. Bonding submitted as a security shall be in accordance with the standards of the Canadian Construction Association and shall be from the same Guaranty Surety Company supplying the Performance and Labour and Materials Bonds for this Contract.

10. **TAXES**: The total contract price shall be inclusive of all applicable taxes, including Harmonized Sales Tax (H.S.T.), custom duties and excise taxes applicable with respect to the contract, and shall be paid by the Contractor unless otherwise provided by statute. The estimated amount of H.S.T. must be disclosed separately on the Form of Tender. The Municipality will pay the Contractor all amounts of the H.S.T. in respect of the project.

11. **INSURANCE**: The successful Contractor shall be required to provide insurance in accordance with the following:
1) Bodily Injury Liability: The Contractor shall effect and maintain a Comprehensive General Liability Policy, or its equivalent, covering claims for bodily injury, including death, arising from and during operations under his Contract whether performed by himself, by a sub-contractor, or by anyone directly or indirectly employed by either of them in the sum of $ 5,000,000.00.
2) Property Damage: The Contractor shall effect and maintain Property Damage Liability Insurance to cover his and the sub-contractor's operations in the sum of $ 2,000,000.00.
3) Fire Insurance: The Contractor shall procure fire and extended coverage insurance on the work to 100% of the Contract Amount.
4) The following are to be named as co-insured: Successful Contractor
Sub-Contractor
Municipality
Spriet Associates London Limited

5) Within 7 days of award of Contract and prior to commencing work, the successful Contractor shall file with the Municipality a copy of each insurance policy and certificate required. All such insurance shall be maintained until final completion of the work, including the making good of faulty work or materials; except that coverage of completed operations liability shall in any event be maintained for twelve (12) months from the date of final completion as certified by the Engineer.

12. **CERTIFICATE OF CLEARANCE:** The successful Contractor shall provide a Certificate of Clearance from the Workplace Safety and Insurance Board within 7 days of the award of the contract and prior to commencing work, stating that all compensation has been paid.

13. **PAYMENT:** Payments shall be made on the written request of the Contractor to the Engineer in accordance with the Construction Act including the 10% Statutory Holdback and any unresolved liens. If the contract is not bonded then the holdback shall be 13% which includes the Warranty Holdback. The Statutory Holdback will be due 60 days after project is certified complete or Certificate of Publication has been supplied by the Contractor. This payment shall be released once the Contractor provides the Municipality with a Statutory Declaration that all material and/or labour incorporated in the work has been fully paid for, along with a Certificate of Clearance from the Workplace Safety and Insurance Board stating that all compensation has been paid.

A proper invoice submission, in addition to the definition provided by the Construction Act, shall require the following:

1. Quantities and unit prices shall be provided for contingency/provisional items. For extras the Contract Administrator has the ability to accept quantities and unit prices or require detailed labour and material breakdown.
2. WSIB Clearance and Statutory Declaration, as required by the Contract.
3. To be submitted by person or electronically to the following:
   a. For drawings stamped by M.P. DeVos, P.Eng., or G.A. Verekyn, P.Eng. invoices shall be emailed to mpdevos@spriet.ca with a carbon copy to george@spriet.ca and armin@spriet.ca.
   b. For drawings stamped by J.M. Spriet, P.Eng. or B.E. Widner, P.Eng., invoices shall be emailed to john@spriet.ca with a carbon copy to brandon@spriet.ca and adamh@spriet.ca.

If any of these requirements are not met to the satisfaction of the Engineer, the Engineer shall notify the Contractor promptly, at which time the Contractor shall revise the invoice to the satisfaction of the Engineer. Prompt payment procedures shall not begin until the Engineer receives a proper invoice to their satisfaction.

14. **SUPERINTENDENT:** The word "Superintendent", as used hereinafter in these specifications, shall refer to a Drainage Superintendent appointed by the Municipality. The Superintendent will act as the Engineer's representative. The Superintendent shall have the power to direct the execution of the work and to make any necessary minor adjustments. Adjustments in tile sizes or gradients shall not be made without the approval of the Engineer. Any instructions given by the Superintendent, which changes considerably the proposed work or with which the Contractor does not agree, shall be referred to the Engineer for his decision.

15. **SUPERVISION:** The Contractor shall give the work his constant supervision and shall keep a competent foreman in charge at the site.

16. **INSPECTION:** Final inspection by the Engineer will be made within twenty (20) days after he has received notice in writing from the Contractor that the work is complete. Periodic inspections by the Engineer or Superintendent will be made during the performance of the work. These interim inspections are required to check such items as location of drainage course and structures, tile grades prior to backfilling, backfilling, and miscellaneous work items.

17. **ALTERATIONS AND ADDITIONS:** The Engineer shall have the power to make alterations in the work shown or described in the drawings or specifications and the Contractor shall proceed to make such changes without causing delay. In every such case, the price agreed to be paid for the work under the contract shall be increased or decreased, as the case may require, according to a fair and reasonable valuation of the work added or deleted. The valuation shall be determined as a result of negotiations between the Superintendent, the Contractor, and the Engineer, but in all cases, the Engineer shall maintain the final responsibility for the decision. Such alterations and variations shall in no way render void the contract. No claim for variations or alterations in the increased or decreased price shall be valid unless done in pursuance of an order from the Engineer and/or Superintendent and notice of such claims made in writing before commencement of such work. In no case shall the Contractor commence work which he considers to be extra work before receiving the Engineer's and/or Superintendent's approval in writing.

18. **LIMITATIONS OF OPERATIONS:** Except for such work as may be required by the Engineer to maintain the works in a safe and satisfactory condition, the Contractor shall not carry on his operations under the contract on Sundays without permission in writing of the Municipality.

19. **LOSSES:** The Contractor shall take all risks from floods or casualties of any kind.

20. **SUB-CONTRACTORS:** The Contractor shall not sublet the whole or any part of the contract without the approval of the Engineer or Superintendent.

21. **PERMITS, NOTICES, LAWS AND RULES:** The Contractor shall ensure that all necessary permits or licences required for the execution of the work have been obtained (but this shall not include M.T.O. encroachment permits, County Road Permit, permanent easements, or rights of servitude). The Contractor shall give all necessary notices and pay all fees required by law and comply with all laws, ordinances, rules, and regulations (including the Occupational Health and Safety Act) relating to the work and to the preservation of the public's health and safety and if the specifications and drawings are at variance therewith, any resulting additional expenses incurred by the Contractor shall constitute an addition to the contract price.

22. **TERMINATION OF CONTRACT BY THE MUNICIPALITY:** If the Contractor should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should refuse or fail to supply enough properly skilled workmen or proper materials after having received seven (7) days' notice in writing from the Engineer to supply additional workmen or materials, or if he should fail to make prompt payment to sub-contractors or for material or labour or persistently disregarding laws, ordinances, or the instruction of the Engineer, or otherwise being guilty of a substantial violation of the provisions of the contract, then the Municipality, upon the certification of the Engineer that sufficient cause exists to justify such action, may without prejudice to any other right or remedy, by giving the Contractor written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools and appliances, thereon, and complete the work by whatever method the Engineer may deem expedient, but without undue delay or expense. In such case, the Contractor shall not be entitled to receive any further payment until the work is completed. If the unpaid balance of the contract price exceeds the expense of completing the work, including compensation to the Engineer for his additional services, such excess shall be paid to the Contractor. If such expense does not exceed such unpaid balance, the Contractor shall pay the difference to the Municipality. The expense incurred by the Municipality, as herein provided, shall be certified by the Engineer. Where a Contractor fails to commence work within seven (7) days of his commencement date as indicated by him on his Tender Form, and such extension of time as allowed due to poor weather or ground conditions, then the Municipality shall have the option, after providing the Contractor with seven (7) days' notice of their intention to terminate the contract, award the contract to another Contractor at their discretion by retendering the project, inviting bids or by appointment. The additional costs of the above or retendering, and all other administration costs shall be deducted from the Contractor's bid deposit and the balance, if any, returned to him.

23. **ERRORS AND UNUSUAL CONDITIONS:** The Contractor shall notify the Engineer immediately of any error or unusual condition which may be found. Any attempt by the Contractor to make changes because of the error or unusual condition on his own shall be done at his own risk. Any additional cost incurred by the Contractor to remedy a wrong decision on his part shall be borne by the Contractor.

    The Engineer shall make the alteration necessary to correct errors or to adjust for unusual conditions during which time it will be the Contractor's responsibility to keep his men and equipment gainfully employed elsewhere on the project. The contract amount shall be adjusted in accordance with a fair evaluation of the work added or deleted.

FORM OF TENDER AND AGREEMENT

FORM OF TENDER

TO: Mayor and Council: **Township Of Adelaide Metcalfe**
RE: Construction of: **Timmermans Drain 2021**

The undersigned, having carefully examined the drawings, specifications and location of the work and understanding all conditions hereby offers to enter into a contract to construct the said work for the said Municipality, complete and ready for use in accordance with drawings and specifications on file at the office of the Municipality or Engineer, which drawings and specifications form the basis of the proposal for the following prices:

To Wit: Supply of Labour, Equipment and Materials

Contract Price:	$ _____
Contingency Allowance (Page 5 of 8):	$ _____
TOTAL TENDER (before HST):	$ _____
Plus H.S.T. 13%	$ _____
TOTAL TENDER (including HST):	$ _____

*See General Notes on Drawings

The above quantity is of a provisional nature only, exact lengths and quantities of extra work and materials to be used, if any, shall be determined by the Drainage Superintendent or Engineer at the time of construction. The Tenderer agrees that he is not entitled to payment of any part of the Contingency Allowance except for additional work carried out by him in accordance with the contract and only for the extent of such additional work.

We understand that the Municipality may accept tenders for the complete works or a portion thereof as set out above and that the lowest or any tender may not necessarily be accepted.

The Tender shall enclose the following:

(a) A Certified cheque/Bid Bond of $..... representing the bid deposit as specified in the Information for Tenderers.
(b) Signed copies of all Addendums issued on this project.

The Tender shall also complete the following section:

(a) If awarded the Contract, the Tender agrees to commence work on or before…… and to fully complete the work on or before ……

(b) The major equipment proposed for use on this project is .....
……

(c) If an excavator is listed in (b) above, it will be used to excavate the following sections of closed drain:
.....

(d) If any work is to be sub-let, list work and the proposed sub-contractor here:
.....

Provisional Items - Tributary Tile Connections:
Contractor to be paid as follows on tributary drain connections that are **not** noted on drawings:

100mm Connections to	Total c/w Coring	150mm Connections to	Total c/w Coring	200mm Connections to	Total c/w Coring
250-675	$75.00	300-675	$85.00	350-675	$115.00
750-900	$110.00	750-900	$120.00	750-900	$150.00

- The above prices include supply of up to a 3m length of tile, or tubing to make connections.
- The connections in excess of 3m shall be paid for at the rate of $15.00/m for 100mm and 150mm dia. and $25.00/m for 200mm dia. All the above prices include the supply of materials.

OFFERED ON BEHALF OF THE CONTRACTOR

COMPANY NAME: .....

ADDRESS: .....

.....

Signature: .....

Date: .....

ACCEPTED ON BEHALF OF THE MUNICIPALITY

MAYOR .....

CLERK .....

DATE .....

(Seal if Incorporated) (Seal)

FORM OF TENDER AND AGREEMENT

CONTINGENCY ALLOWANCES

TIMMERMANS DRAIN 2021

TOWNSHIP OF ADELAIDE METCALFE

CONTINGENCY ALLOWANCE to divert water from existing tile prior to installing the new tile in the same location as the existing tile or installation of the new tile immediately adjacent to the existing tile and destroying the existing tile with a rubber tile backhoe afterwards. (see General Notes on Drawing)

(Approx. 1,879 meters) $ _____/m $_____ Total

TOTAL CONTINGENCY ALLOWANCES $_____

The above quantities are of a provisional nature only, exact lengths and quantities of extra work and materials to be used, if any, shall be determined by the Drainage Superintendent or Engineer at the time of construction.

The Tender agrees that he is not entitled to payment of any part of the Contingency Allowance except for additional work carried out by him in accordance with the contract and only to the extent of such additional work.

The total amount of CONTINGENCY ALLOWANCES shall appear in Item (c) on Page 4 of 8 of the Form of Tender.

EXTENT OF WORK

TIMMERMANS DRAIN 2021

Township of Adelaide Metcalfe

Our Job No. 219287 May 14, 2021

MAIN DRAIN

Supply & install 6 meters of 600mm dia., H.D.P.E. plastic sewer pipe including rodent gate and quarry stone rip-rap protection around pipe and end of ditch (Approximately 3m³ quarry stone req'd) $ _____ L.S.

Installation of the following concrete field tile including supply & installation of geotextile around tile joints (approx. 1,840m req'd)

152 meters of 350mm dia. concrete tile $ _____ L.S.
293 meters of 400mm dia. concrete tile $ _____ L.S.
312 meters of 450mm dia. concrete tile $ _____ L.S.
279 meters of 525mm dia. concrete tile $ _____ L.S.
110 meters of 600mm dia. concrete tile $ _____ L.S.
Supply of the above listed tile $ _____ L.S.

Strip, stockpile, and relevel topsoil from tile trench and adjacent working area (4m wide) specified on drawings (approx. 1,118m) $ _____ L.S.

17 meters of 375mm sewer pipe(subsurface)
14 meters of 525mm sewer pipe(surface)
Supply $ _____ L.S.
Installation under Seed Road Line by open cut including concrete block wall and removal & disposal of existing 300mm & 450mm C.S.P.s $ _____ L.S.

Construct grassed WASCoB (Berm) @ Sta. 0+277 using on-site native material
Strip, stockpile, and relevel topsoil (approx. 300m²) $ _____ L.S.
Construct berm using adjacent on-site material including compaction (40 m³) $ _____ L.S.
Seed berm upon completion $ _____ L.S.
Supply & install one 250mm dia. "Hickenbottom" catchbasin including 3m - 250mm lead $ _____ L.S.
Clearing and grubbing $ _____ L.S.

Construct grassed WASCoB (Berm) @ Sta. 0+659 using on-site native material
Strip, stockpile, and relevel topsoil (approx. 530m²) $ _____ L.S.
Construct berm using adjacent on-site material including compaction (65 m³) $ _____ L.S.
Seed berm upon completion $ _____ L.S.
Supply & install one 250mm dia. "Hickenbottom" catchbasin including 3m - 250mm lead $ _____ L.S.

Construct WASCoB (Berm) @ Sta. 1+015 using on-site native material
Strip, stockpile, and relevel topsoil (approx. 1,490m²) $ _____ L.S.
Construct berm using adjacent on-site material including compaction (160 m³) $ _____ L.S.
Supply & install one 4500x2000mm Blind Inlet catchbasin including 3m - 250mm lead $ _____ L.S.

Supply and install one 900mm x 1200mm ditch inlet catchbasin and one 600mm x 600mm standard catchbasin including grates, lead, removal, and disposal of existing catchbasins $ _____ L.S.

Clearing and Grubbing $ _____ L.S.

Exposing and locating existing tile drains and utilities $ _____ L.S.

Tile and catchbasin connections as noted on plan including fittings $ _____ L.S.

TIMMERMANS DRAIN 2021
Township of Adelaide Metcalfe

BRANCH 1

Installation of the following concrete field tile including supply & installation of geotextile around tile joints (approx. 270m req'd)
245 meters of 200mm dia. concrete tile $ _____ L.S.
Supply of the above listed tile $ _____ L.S.

Strip, stockpile, and relevel topsoil from tile trench and adjacent working area (4m wide) specified on drawings (approx. 245m) $ _____ L.S.

Supply and install one 600mm x 600mm standard catchbasin including grate $ _____ L.S.

Clearing & grubbing $ _____ L.S.

Exposing and locating existing tile drains $ _____ L.S.

Tile connections as noted on plan $ _____ L.S.

BRANCH 3

Installation of the following concrete field tile including supply & installation of geotextile around tile joints (approx. 210m req'd)
265 meters of 200mm dia. concrete tile $ _____ L.S.
Supply of the above listed tile $ _____ L.S.

Strip, stockpile, and relevel topsoil from tile trench and adjacent working area (4m wide) specified on drawings (approx. 265m) $ _____ L.S.

Supply and install one 600mm x 600mm standard catchbasin including grate $ _____ L.S.

Exposing and locating existing tile drains $ _____ L.S.

Tile connections as noted on plan $ _____ L.S.

BRANCH 4

Installation of the following concrete field tile including supply & installation of geotextile around tile joints (approx. 205m req'd)
221 meters of 250mm dia. concrete tile $ _____ L.S.
Supply of the above listed tile $ _____ L.S.

Strip, stockpile, and relevel topsoil from tile trench and adjacent working area (4m wide) specified on drawings (approx. 495m) $ _____ L.S.

Construct grassed WASCoB (Berm) @ Sta. 0+216 using on-site native material
- Strip, stockpile, and relevel topsoil (approx. 140m^2) $ _____ L.S.
- Construct berm using adjacent on-site material including compaction (25 m^3) $ _____ L.S.
- Seed berm upon completion $ _____ L.S.
- Supply & install one 250mm dia. "Hickenbottom" C.B. including 3m - 250mm lead $ _____ L.S.

Clearing and grubbing $ _____ L.S.

Exposing and locating existing tile drains $ _____ L.S.

Tile connections as noted on plan $ _____ L.S.

TIMMERMANS DRAIN 2021
Township of Adelaide Metcalfe

MISCELLANEOUS

Mobilization of equipment		$ _____
Tender security		$ _____
	TOTAL CONTRACT PRICE	$ _____

NOTE: The Extent of Work is to be attached to the Tender Form.

COMPANY NAME: _____

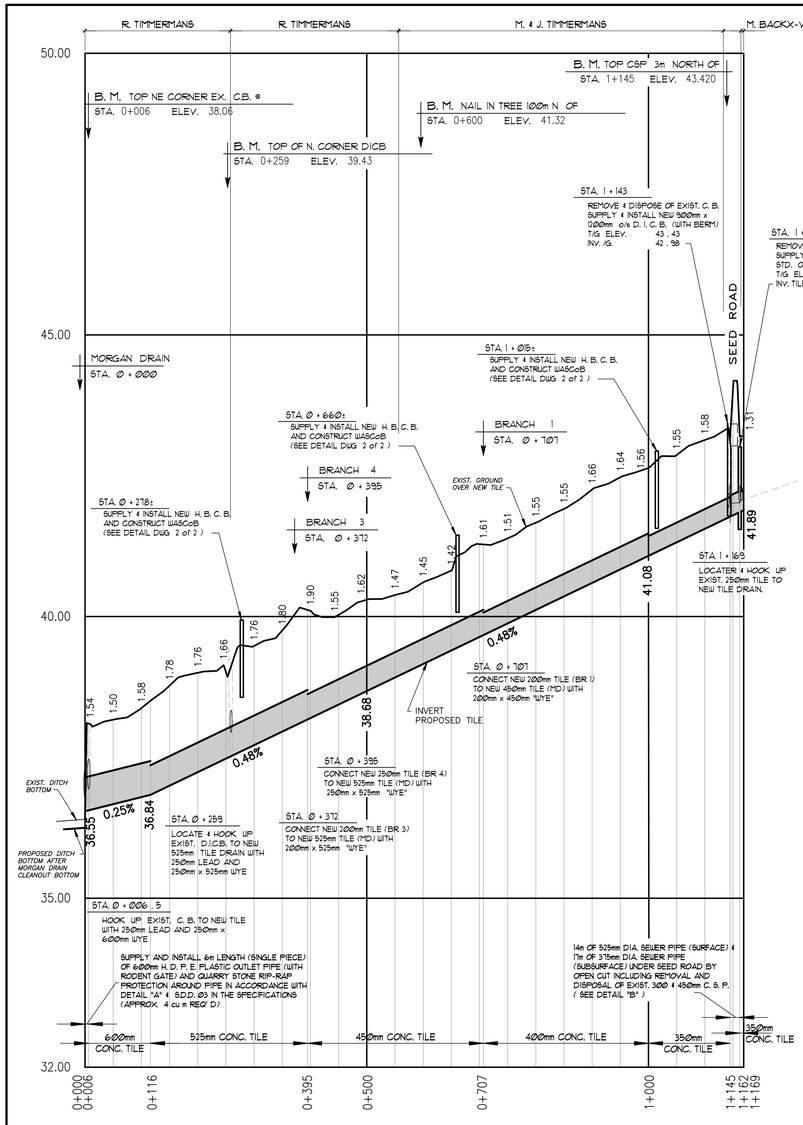
ADDRESS: _____

_____

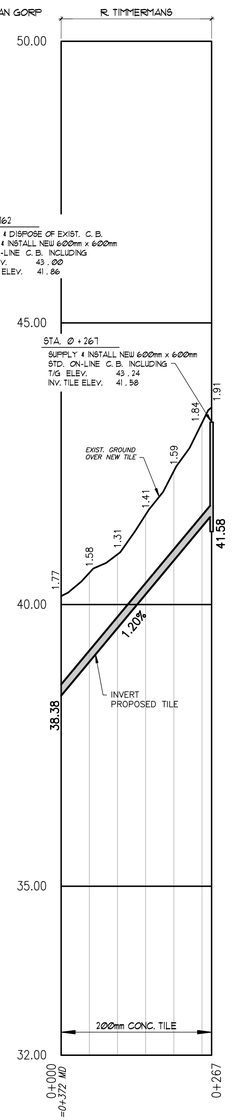
_____

TELEPHONE NO: _____ DATE: _____

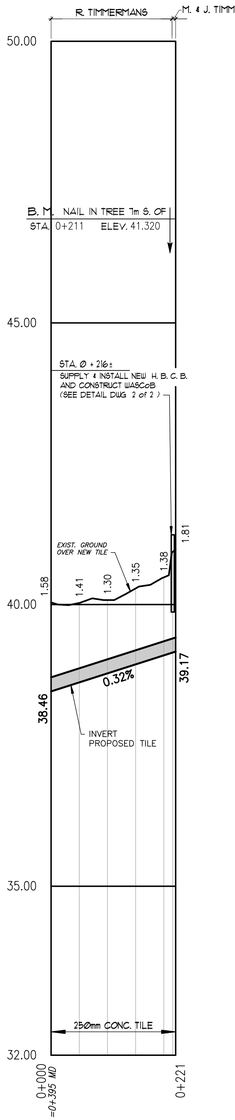
NOTE: This "Extent of Work" form has been prepared for the convenience of the Contractor and he is to use this summary in conjunction with the plan and profile, tender form and standard specifications available from the Clerk to tender this project. In case of any inconsistency or conflict between the drawings and this "Extent of Work", the drawings shall take precedence over the "Extent of Work".



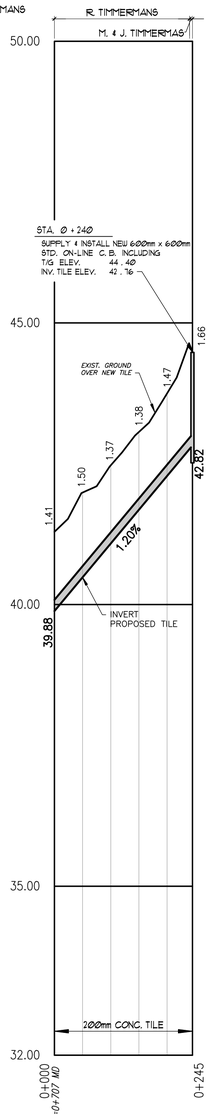
MAIN DRAIN PROFILE



BR. 3 PROFILE

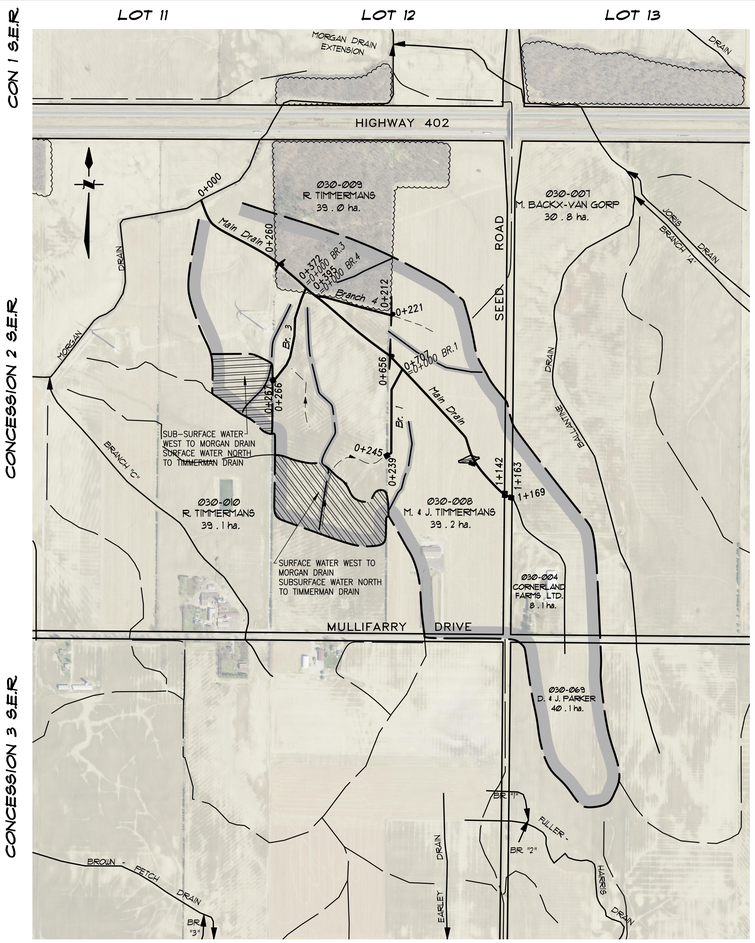


BR. 4 PROFILE



BR. 1 PROFILE

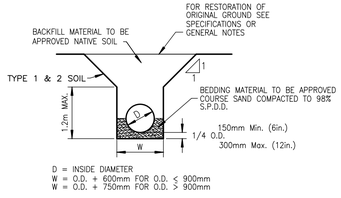
PROFILE SCALES : HOR. 1 : 5,000
VERT. 1 : 50



PLAN SCALE 1:7,500

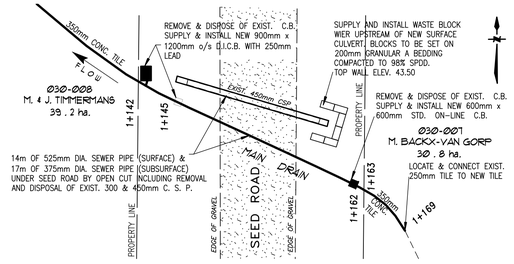
PLAN LEGEND

- LIMIT OF WATERSHED AREA
- PROPOSED DRAINAGE WORKS
- EXTERIOR OR INTERIOR WATERSHED
- TO BE INCLUDED FOR FUTURE MAINTENANCE
- EXIST. MUNICIPAL DRAIN
- PRIVATE TILE OR SURFACE WATER RUN
- EXIST. WATERCOURSE OR PRIVATE DITCH
- 30 - 009 — ASSESSMENT ROLL NUMBER
- R. SMITH — OWNERS NAME
- 40.5 ha. — HECTARES OWNED
- BUSH AREA



D = INSIDE DIAMETER
W = O.D. + 600mm FOR O.D. ≤ 900mm
W = O.D. + 750mm FOR O.D. > 900mm

DETAIL "A" N.T.S.



DETAIL "B"

SCALE 1:250

TIMMERMANS DRAIN 2021

Township of Adelaide Metcalfe

Drainage Superintendent:
ANDREW NEELY
519-247-3687

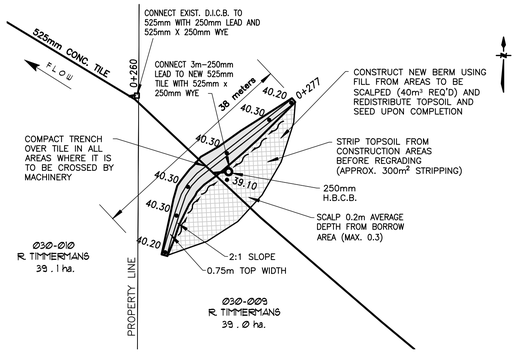
No.	REVISIONS	DATE

LICENSED PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO — M. P. DAVIS — MAY 14/21

Drawn By: dk	Field Book	JOB No.	Drawing No.
Date: MAY 14, 2021	GPS	219287	1 of 2

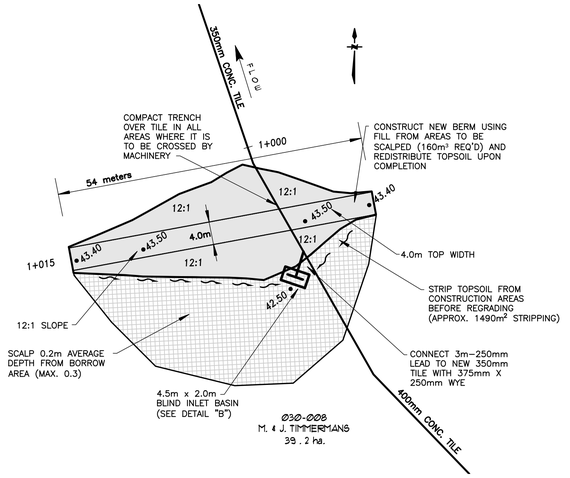
PLAN, PROFILES, & DETAIL

SPRIET ASSOCIATES
LONDON LIMITED
CONSULTING ENGINEERS
155 YORK STREET — LONDON (519) 672-4100 — N6A 1A8



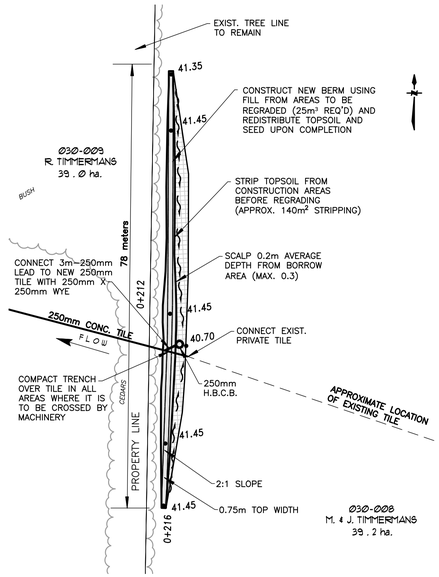
WASCOB BERM
MAIN DRAIN 0 + 277

SCALE 1 : 500



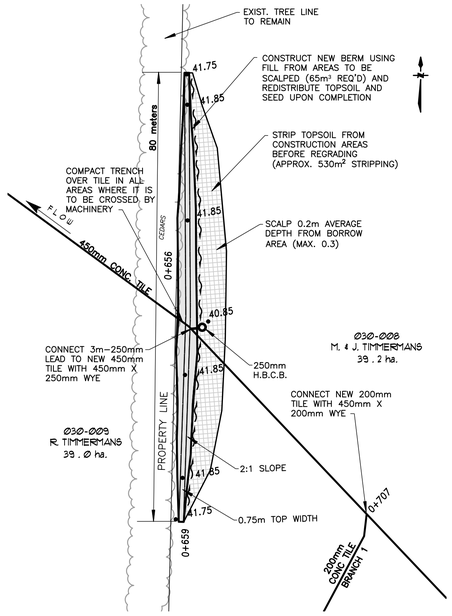
WASCOB BERM
MAIN DRAIN 1 + 015

SCALE 1 : 500



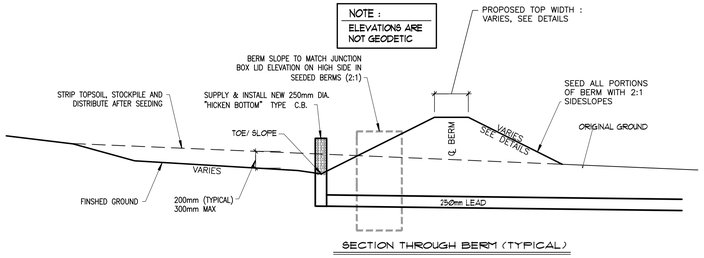
WASCOB BERM
BRANCH 4 0 + 216

SCALE 1 : 500



WASCOB BERM
MAIN DRAIN 0 + 659

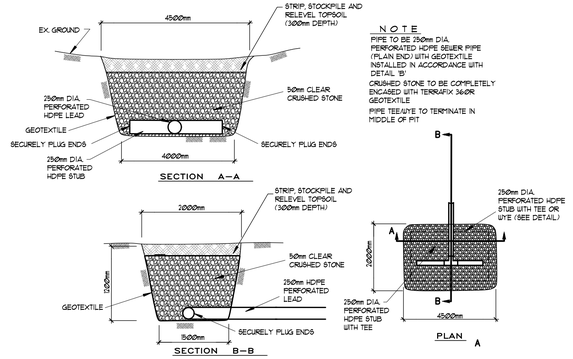
SCALE 1 : 500



SECTION THROUGH BERM (TYPICAL)

DETAIL "F"

N. T. S.



TYPICAL BLIND INLET BASIN

DETAIL "B"

N. T. S.

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 .
CLOSED PORTIONS - 20 meters
THE WORKING WIDTH FOR PURPOSES OF FUTURE MAINTENANCE SHALL BE THE SAME AS ABOVE EXCEPT FOR CLOSED PORTIONS (NOT THROUGH BUSH) 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. 12" 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 .

8/ ALL CONCRETE AND PLASTIC TILE AND PIPE TO CONFORM TO "SECTION C. 1 " IN THE SPECIFICATIONS.
a) SEWER PIPE TO BE CONCRETE, H. D. P. E. PLASTIC 320 MPA (BELL & SPIGOT WITH RUBBER GASKETS, CONFORMING TO C.S.A. Ø16-08) , PVC ULTRA RIB OR PVC SDR 35
b) CONCRETE TILE SHALL BE HEAVY DUTY, UNLESS SPECIFIED AS 2000 D OR 2400 D ON PROFILE.
c) PLASTIC TILE SHALL BE PERFORATED AGRICULTURAL TUBING WITH FILTER SOCK CONFORMING TO TERRAFIX 270R, TEXEL F-100 (D OR APPROVED EQUAL)

9/ ALL CATCHBASINS SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH "SECTION C. 16 " IN THE SPECIFICATIONS , EXCEPT AS FOLLOWS :
a) ALL CATCHBASIN LEADS TO BE CONNECTED TO NEW TILE DRAIN WITH PRE-FABRICATED " WYE "

10/ NEW TILE DRAINS TO BE PLACED IN SAME LOCATION AS EXISTING MUNICIPAL TILE DRAINS WHERE POSSIBLE . EXIST. TILE TO BE DESTROYED AND EXPOSED TILE SHALL BE DISPOSED OF OFF - SITE 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 .

11/ a) INSTALLATION OF TILE AND TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH "SECTION C - TILE DRAIN" IN THE SPECIFICATIONS .
b) SEWER PIPE UNDER TRAVEL PORTION OF ROADS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILED DRAWING No. 02 IN THE SPECIFICATIONS .
c) ALL OTHER SEWER PIPE TO BE INSTALLED IN ACCORDANCE WITH DETAIL " A "
d) ALL CONCRETE TILE AND TILE-PIPE JOINTS TO BE WRAPPED WITH GEOTEXTILE IN ACCORDANCE WITH "SECTION C. 8 " IN THE SPECIFICATIONS.
e) NO CONSTRUCTION EQUIPMENT OR FARM MACHINERY SHALL CROSS OVER THE MOUNDED BACKFILLED TILE TRENCHES UNTIL SUFFICIENT SETTLEMENT HAS OCCURRED .
f) STRIP AND STOCKPILE TOPSOIL FROM CONSTRUCTION AREA (4 metre width) EXCEPT LANEWAYS & ROADS . EXCESS SPOIL TO BE LEVELLED AND TOPSOIL RELEVELLED OVER SPOIL, MOUNDED TRENCH AND REMAINING CONSTRUCTION AREA.

12/ a) IF IT BECOMES IMPRACTICAL TO INSTALL THE NEW TILE IN THE EXISTING TILE LOCATION DUE TO EXISTING TILE ALIGNMENT AND/OR TOO MUCH WATER FLOWING THROUGH THE TILE, THEN THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND/OR THE DRAINAGE SUPERINTENDENT.

b) IF SO ORDERED BY THE ENGINEER AND/OR DRAINAGE SUPERINTENDENT THEN THE CONTRACTOR SHALL INSTALL THE NEW TILE IMMEDIATELY ADJACENT TO THE EXISTING TILE. AFTER CONSTRUCTION IS COMPLETED THE EXISTING TILE SHALL BE DESTROYED WITH A RUBBER TIRE BACKHOE. TILE CONNECTIONS INTO THE EXISTING TILE SHALL BE CONNECTED TO THE NEW TILE.

13/ a) THE CONTRACTOR SHALL ENSURE THAT ALL TRIBUTARY DRAINS ARE CONNECTED DURING TIME OF CONSTRUCTION . ANY MISSED TILE CONNECTIONS THAT ARE FOUND DURING THE WARRANTY PERIOD OF THE CONTRACT SHALL BE COMPLETED BY THE CONTRACTOR AND SHALL BE PAID THE AMOUNT SET OUT ON PAGE 2 OF THE " FORM OF TENDER" . NO ADDITIONAL PAYMENT FOR MOBILIZATION WILL BE ALLOWED. THE CONTRACTOR IS NOT RESPONSIBLE FOR COMPLETING MISSED TILE CONNECTIONS THAT ARE FOUND AFTER THE WARRANTY PERIOD FOR THE CONTRACT HAS EXPIRED.
b) ALL TILE CONNECTIONS TO BE MADE WITH CORING MACHINE AND PLASTIC ADAPTOR OR PREFABRICATED FITTINGS.
c) THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A LIST SHOWING STATIONS OF ALL TILE CONNECTIONS UPON COMPLETION OF CONSTRUCTION.

14/ SILT FENCE TO BE PLACED ACROSS DITCH BOTTOM AT STA. 0 + 000 DURING CONSTRUCTION TO PREVENT SILT FROM FLUSHING DOWNSTREAM, AND ARE TO BE MAINTAINED AS NECESSARY DURING CONSTRUCTION . SILT FENCE AND SILT TO BE REMOVED AND DISPOSED OF AFTER CONSTRUCTION .

TIMMERMANS DRAIN 2021

Township of Adelaide Metcalfe

Drainage Superintendent:
ANDREW NEELY
519-247-3687

No.	REVISIONS	DATE

Drawn By: ak
Date: MAY 14, 2021
Field Book: GPS
JOB No.: 219287
Drawing No.: 2 of 2

BERM DETAILS & GENERAL NOTES

LICENSED PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO — May 14/21 — M. P. DeVOS

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