

Reference Agreement A-2017-66
as a Schedule to this By-law.

THE CORPORATION OF THE TOWN OF AMHERSTBURG

BY-LAW NO. 2017- 66

**By-law to enter into a contract with SLR Contracting Group Inc.
for the Pickering Drive Phase 1 Watermain Replacement and Road Improvements**

WHEREAS under Section 9 of the Municipal Act 2001, S.O., 2001, c. 25, as amended, a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act.

AND WHEREAS under Section 8(1) of the Municipal Act 2001, S.O., 2001, c. 25, as amended, shall be interpreted broadly so as to confer broad authority on municipalities to enable them to govern their affairs as they consider appropriate and to enhance their ability to respond to municipal issues;

AND WHEREAS the Council of The Corporation of the Town of Amherstburg deems it expedient to enter into a contract with SLR Contracting Group Inc. for the Pickering Drive Phase 1 Watermain Replacement and Road Improvements.

NOW THEREFORE the Council of The Corporation of the Town of Amherstburg enacts as follows:

1. That the Council of The Corporation of the Town of Amherstburg agrees to enter into the contract as attached hereto as Schedule "A" to this By-law.
2. That the Mayor and Clerk are hereby authorized to sign and seal said agreement on behalf of The Corporation of Town of Amherstburg.
3. This By-law shall come into force and take effect immediately upon the final passing thereof.

Read a first, second and third time and finally passed this 10th day of July, 2017.



MAYOR – ALDO DICARLO



MUNICIPAL CLERK – PAULA PARKER



ZURICH

Zurich Insurance Company Ltd
100 King St. W., Suite 5500, P.O. Box 290, Toronto, ON M5X 1C9

PERFORMANCE BOND
CCDC 221 - 2002

No. 6349611

Bond Amount: \$1,023,200.00

SLR CONTRACTING GROUP INC. as Principal, hereinafter called the Principal, and Zurich Insurance Company Ltd, a corporation created and existing under the laws of Switzerland and duly authorized to transact business of Suretyship in Canada as Surety, hereinafter called the Surety, are held and firmly bound unto THE CORPORATION OF THE TOWN OF AMHERSTBURG as Obligee, hereinafter called the Obligee, in the amount of ONE MILLION TWENTY THREE THOUSAND TWO HUNDRED-----00/100 Dollars (\$1,023,200.00) lawful money of Canada, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated the 10 day of JULY, 2017 for

PICKERING DRIVE WATERMAIN REPLACEMENT AND ROAD IMPROVEMENTS PHASE 1

hereinafter referred to as the Contract.

The condition of this obligation is such that if the Principal shall promptly and faithfully perform the Contract then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Whenever the Principal shall be, and declared by the Obligee to be, in default under the Contract, the Obligee having performed the Obligee's obligations thereunder, the Surety shall promptly:

- 1) remedy the default, or;
- 2) complete the Contract in accordance with its terms and conditions or;
- 3) obtain a bid or bids for submission to the Obligee for completing the Contract in accordance with its terms and conditions and upon determination by the Obligee and the Surety of the lowest responsible bidder, arrange for a contract between such bidder and the Obligee and make available as work progresses (even though there should be a default, or a succession of defaults, under the contract or contracts of completion, arranged under this paragraph) sufficient funds to pay to complete the Principal's obligations in accordance with the terms and conditions of the Contract and to pay those expenses incurred by the Obligee as a result of the Principal's default relating directly to the performance of the work under the Contract, less the balance of the Contract price; but not exceeding the Bond Amount. The balance of the Contract price is the total amount payable by the Obligee to the Principal under the Contract, less the amount properly paid by the Obligee to the Principal, or;
- 4) pay the Obligee the lesser of (1) the Bond Amount or (2) the Obligee's proposed cost of completion, less the balance of Contract price.

It is a condition of this bond that any suit or action must be commenced before the expiration of two (2) years from the earlier of (1) the date of Substantial Performance of the Contract as defined in the lien legislation where the work under the Contract is taking place, or, if no such definition exists, the date when the work is ready for use or is being used for the purpose intended, or (2) the date on which the Principal is declared in default by the Obligee.

The Surety shall not be liable for a greater sum than the Bond Amount.

No right of action shall accrue on this Bond, to or for the use of, any person or corporation other than the Obligee named herein, or the heirs, executors, administrators or successors of the Obligee.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated 20th day of July, in the year 2017.

SIGNED and SEALED
in the presence of

SLR CONTRACTING GROUP INC.

Signature
RONALD SAMP

Name of person signing

Zurich Insurance Company Ltd

Signature
ANTONELLA TOPPI, Attorney-in-Fact
Name of person signing



ZURICH

Zurich Insurance Company Ltd
100 King St. W., Suite 5500, P.O. Box 290, Toronto, ON M5X 1C9

LABOUR AND MATERIAL PAYMENT BOND (TRUSTEE FORM)
CCDC 222 - 2002

No. 6349611

Bond Amount: **\$1,023,200.00**

SLR CONTRACTING GROUP INC. as Principal, hereinafter called the Principal, and **Zurich Insurance Company Ltd** a corporation created and existing under the laws of Switzerland and duly authorized to transact the business of Suretyship in Canada as Surety, hereinafter called the Surety, are held and firmly bound unto **THE CORPORATION OF THE TOWN OF AMHERSTBURG** as Obligee, hereinafter called the Obligee, in the amount of **ONE MILLION TWENTY THREE THOUSAND TWO HUNDRED—00/100 Dollars (\$1,023,200.00)** lawful money of Canada, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated the **10** day of **JULY, 2017** for

PICKERING DRIVE WATERMAIN REPLACEMENT AND ROAD IMPROVEMENTS PHASE 1

in accordance with the Contract Documents submitted, and which are by reference made part hereof and are hereinafter referred to as the Contract.

The Condition of this obligation is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A Claimant for the purpose of this Bond is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof, shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract. The prevailing industrial rental value of equipment shall be determined, insofar as it is practical to do so, by the prevailing rates in the equipment marketplace in which the work is taking place.
2. The Principal and the Surety, hereby jointly and severally agree with the Obligee, as Trustee, that every Claimant who has not been paid as provided for under the terms of its contract with the Principal, before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of its contract with the Principal and have execution thereon. Provided that the Obligee is not obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants, or any of them, to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceeding, then such act, action or proceeding, shall be taken on the understanding and basis that the Claimants, or any of them, who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to the Obligee by reason thereof. Provided still further that, subject to the foregoing terms and conditions, the Claimants, or any of them may use the name of the Obligee to sue on and enforce the provisions of this Bond.
3. It is a condition precedent to the liability of the Surety under this Bond that such Claimant shall have given written notice as hereinafter set forth to each of the Principal, the Surety and the Obligee, stating with substantial accuracy the amount claimed, and that such Claimant shall have brought suit or action in accordance with this Bond, as set out in sub-clauses 3 (b) and 3 (c) below, Accordingly, no suit or action shall be commenced hereunder by any Claimant:
 - a) unless such notice shall be served by mailing the same by registered mail to the Principal, the Surety and the Obligee, at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or Territory in which the subject matter of the Contract is located. Such notice shall be given.

CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)

07/21/2017

BROKER



HUB International Ontario Limited
 24 Seacliff Drive East, Unit 100
 Leamington, ON N8H0C2
 Canada
 Liz Hooker

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policies below.

Company A	Economical Insurance Group
Company B	
Company C	
Company D	
Company E	

INSURED'S FULL NAME AND MAILING ADDRESS
 SLR Contracting Group Inc., SLR Leasing Group Inc., 1818718 Ontario Ltd.
 6260 Westar Dr.
 LaSalle, ON N9J 0B5
 Canada

COVERAGES

This is to certify that the policies of insurance listed below have been issued to the insured named above for the policy period indicated, not withstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain. The insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies. Limits shown may have been reduced by paid claims.

TYPE OF INSURANCE	CO LTR	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS OF LIABILITY (Canadian dollars unless indicated otherwise)	
COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCURRENCE <input checked="" type="checkbox"/> PRODUCTS AND/OR COMPLETED OPERATIONS <input checked="" type="checkbox"/> PERSONAL INJURY <input type="checkbox"/> EMPLOYER'S LIABILITY <input checked="" type="checkbox"/> TENANT'S LEGAL LIABILITY <input checked="" type="checkbox"/> NON-OWNED AUTOMOBILE <input checked="" type="checkbox"/> HIRED AUTOMOBILE	A	40027823	05/15/2017	05/15/2018	EACH OCCURRENCE	\$ 2,000,000
					GENERAL AGGREGATE	\$
					PRODUCTS - COMP/OP AGGREGATE	\$ 2,000,000
					PERSONAL INJURY	\$ 2,000,000
					EMPLOYER'S LIABILITY	\$
					TENANT'S LEGAL LIABILITY	\$ 500,000
					NON-OWNED AUTOMOBILE	\$ 2,000,000
					HIRED AUTOMOBILE	\$ 50,000
AUTOMOBILE LIABILITY <input type="checkbox"/> DESCRIBED AUTOMOBILES <input checked="" type="checkbox"/> ALL OWNED AUTOMOBILES <input checked="" type="checkbox"/> LEASED AUTOMOBILES ** <input type="checkbox"/> GARAGE LIABILITY <small>**ALL AUTOMOBILES LEASED IN EXCESS OF 30 DAYS WHERE THE INSURED IS REQUIRED TO PROVIDE INSURANCE</small>	A	64011427	05/15/2017	05/15/2018	BODILY INJURY PROPERTY DAMAGE COMBINED	\$ 2,000,000
					BODILY INJURY (Per person)	\$ 2,000,000
					BODILY INJURY (Per accident)	\$ 2,000,000
					PROPERTY DAMAGE	\$ 2,000,000
EXCESS LIABILITY <input checked="" type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM	A	40027823	05/15/2017	05/15/2018	EACH OCCURRENCE	\$ 10,000,000
					AGGREGATE	\$
OTHER (SPECIFY)						\$
						\$
						\$
						\$
						\$

DESCRIPTION OF OPERATIONS/LOCATIONS/AUTOMOBILES/SPECIAL ITEMS/ ADDITIONAL INSURED

\$5,000 AP Ded - Light
 \$10,000 AP Ded. - Heavy
 21B Fleet policy
 The Corporation of the Town of Amherstburg, Hrycay Consulting Engineers Inc. AMEC Foster Wheeler is added as Additional Insured(s) to the Commercial General Liability Policy but only insofar as their legal liability arises, vicariously, out of operations performed by, or on behalf of, the Named Insured. Policy limits are not increased by such addition.

 Project: Pickering Dr. Watermain Replacement and Road Improvements
 Phase 1- Dalhousie St. to King Street

CERTIFICATE HOLDER

The Corporation of the Town of Amherstburg
 271 Sandwich Street South
 Amherstburg, ON N9V 2A5

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOUR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Per: 



eClearance

Clearance Certificate

Search Results

Contractor Legal / Trade Name	Contractor Address	Contractor Classification Unit and Description	Clearance Certificate Number	Validity period (dd-mm-yyyy)	Principal Legal / Trade Name	Principal Address
<u>SLR CONTRACTING GROUP INC.</u>	6260 WESTAR DR, WINDSOR, ON, N9J3W3, CA	4122-000: Waterworks and Sewage Systems 4121-001: Highways, Streets, and Small Bridges	S000000C54TT	20-May-2017 to 19-Aug-2017	<u>THE CORPORATION OF THE TOWN OF AMHERSTBURG / TOWN OF AMHERSTBURG</u>	271 SANDWICH ST SOUTH, AMHERSTBURG, ON, N9V2A5, CA

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Addendum No. 1

**Contract No. PWD-WM-15-011 /
T04-2017-04**

**Pickering Drive Watermain Replacement and
Road Improvements**

NOTICE TO BIDDERS

This Addendum shall form part of the plans and contract documents for the above-noted project and shall be read in conjunction therewith. This Addendum shall take precedence over all requirements of the original plan and contract documents Issued previously.

1. CLARIFICATIONS

Question 1:

What is the size of the pre-formed vehicle detection loops?

Answer 1:

The pre-formed vehicle detector loops are to be 1.8m in diameter. The loops are to be installed between the base and surface course of asphalt. See Section 2, Amendments, for clarification on the installation of pre-formed vehicle detection loops.

Question 2:

Are backflow preventers required for connections to existing mains?

Answer 2:

Backflow preventers are required for all connections to existing watermains and will be supplied by the Town of Amherstburg.

The Contractor will introduce potable water through a backflow preventer as provided by the Town into the swabbed new main using one of the following methods:

- Bulk water supply of potable water
- Fire hydrant, operated by certified Town Public Works Operator

Question 3:

Can Granular B be used for the watermain trench backfill?

Answer 3:

Watermain trench backfill shall be Granular A as per the specifications and Contract Drawings. Quantities for Item D5(b) - Granular A Road Base in Trenches shall be measured in cubic metres and converted to tonnes as per OPSS CDED B314.

Question 4:

What is required for the connection of service lines $\geq 100\text{mm}$ dia?

Answer 4:

The intention is to provide a new service valve at the property line for large-diameter services, with the new service tying into the existing service with a combination of bends and new pipe lengths, followed by the removal of the old service valve. The supply of all bends, pipe, and couplers and the removal of the existing valves shall be included in the unit price for each connection. The supply and installation of new valves is covered under a separate item.

Question 5:

Can pavement markings be obliterated through grinding as opposed to blasting?

Answer 5:

Pavement marking obliteration through grinding is acceptable provided that:

- The depth of the removal shall be the minimum required to totally remove the existing pavement markings, to a normal depth, typically averaging 3 mm.
- The Contractor shall control the operation so that the asphalt pavement is not damaged in any way and to ensure that no pavement marking remains visible upon completion.
- The Contractor's operation shall be carried out in accordance with approved methods as specified in OPSS 128, so as to control any dust or effluent generated by the operation.

Question 6:

Do tapping sleeves include tapping valves?

Answer 6:

At locations where the new watermain is connected to the existing water distribution system, tapping sleeves with tapping valves shall be provided and are included in Item C3 – Appurtenances. Locations of tapping sleeves and tapping valves are as follows:

- At the connection to the existing 300mm dia. watermain on Dalhousie
- At the connection to the existing 300mm dia. watermain on Sandwich Street
- At the connection to the existing 150mm dia. watermain on King Street

Refer to Section 2, Amendments, of this Addendum for quantity updates.

2. AMENDMENTS

Item C3: Appurtenances

Refer to revised Form of Tender for item details. The quantities for the following appurtenances has been updated for clarity:

- b) Gate Valves, 150mm Dia. – **9.00** ea.
- d) Gate Valves, 300mm Dia. – **1.00** ea.
- k) Tapping Sleeve & Valve, 150mm Dia. – **1.00** ea.
- l) Tapping Sleeve & Valve, 300mm Dia. – **2.00** ea.

Changes to the location of the King Street tapping sleeve and valve has been reflected in the revised Tender Drawings, Addendum No. 1, Sheet C-004.

Item E13: Preformed Vehicle Detection Loops

The Contractor shall amend the Contract Documents and update SP45 as follows:

Delete the following paragraphs:

Saw cutting shall utilize water as a lubricant and as an aid to dust control. Saw cut depths shall be adjusted to obtain a minimum clearance of 25 mm from the loop cable to finished pavement grade.

Corner cutting shall not exceed a 45° angle and shall be extended only far enough past each corner to obtain the full depth of the loop slot.

Upon completion of saw cutting, the slot shall be cleaned and dried by means of oil free compressed air forced through a suitable nozzle at a minimum pressure of 500 KPA.

Cold pumped commercial joint sealing compound shall be 3M Canada Ltd. Detector Loop Sealant 5000 or approved alternative. Cold poured sealant compounds shall be installed according to the directions of the manufacturer as either directly poured (gravity feed) or pumped (pressure feed).

Sealing compound shall be installed as bedding and protection for cables. A layer of compound of 6 mm minimum thickness shall be installed in the loop and loop lead slots as bedding prior to the installation of the first turn of loop cable.

The compound shall be installed over the completed cable system so as to fill all voids to a homogeneous consistency. The slot shall be slightly overfilled to form a bead in the order of 1 mm high above the top of pavement to allow for any shrinkage or leakage.

Care shall be taken to confine the sealing compound to the area of the slot. All excess spillage or compound shall be immediately removed.

A compound setting time of 1 hour shall be allowed prior to allowing traffic to cross the loop.

Add the following paragraphs:

Loop detectors located at overlay or new pavement locations shall be incorporated into pavement during placement operations. Loop detector wire, loop detector cable, and preformed loop detectors shall be encased in conduit of the size necessary to contain the number of turns as indicated in the Contract Documents and as directed by the Engineer when incorporated into pavement placement operations. Loops incorporated into hot asphalt pavement placement operations shall be encased in a high temperature resistant conduit. Conduit shall be included in the unit price for this item.

All conduit connections shall be sealed to prevent moisture penetration. Conduit ends shall be sealed to prevent entry of water and debris immediately upon installation. Sealant shall not be adversely affected by surrounding environment or moisture. Open conduit ends shall not be allowed in the field for any period of time.

New Item:

F3 – Additional Excavation for Soft Spots, SP 50

Refer to revised Form of Tender for item details. The Contractor shall amend the Contract Documents to include the following special provision, and re-number subsequent items and SPs accordingly.

**50. ADDITIONAL EXCAVATION FOR SOFT SPOTS. (PROVISIONAL)
ITEM F3**

GENERAL: The provisions of OPSS 206 and 510 shall apply for this item except as amended herein.

SCOPE AND SPECIFICS: This work consists of all labour, equipment and materials required to carry out additional earth excavations to soft or loose subgrade within the roadway. The Contractor shall proof-roll the subgrade and sub-excavate any soft or loosened subgrade areas. Additional Granular 'A' material required to backfill the excavation will be paid under Item D5(a).

Where the Engineer determines that the depth of excavation required for the construction of the roadway should be increased beyond that specified on the Contract Drawings, the Contractor shall sub-excavate unsuitable material to the depth and/or extent below the subgrade as directed by the Engineer.

The Contractor shall dispose of all excavated material off-site, at his expense. If arrangements are made between the Contractor and private property owners accepting any excavated material, the Contractor shall provide a written authorization from those private property owners indicating that they will not hold the Town responsible or liable for any damages. Excavated rubble (concrete, sewer pipe, etc.) shall be hauled to an approved disposal site at no additional cost to the Owner.

MEASUREMENT: Measurement for this item shall be per cubic metre of additional earth excavation required, as measured in the field.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

The Contractor is not entitled to payment for Provisional Items, except for additional work required or requested, approved by the Contract Administrator and completed in accordance with the Contract Documents and then only to the extent of such additional work.

No payment will be made for any and all excavation below the grades shown on the drawings, except where directed by the Contract Administrator in writing.

3. CONTRACT DRAWINGS:

Replace Drawing No. C-004, with the attached Addendum No. 1 Drawing. All changes have been identified by revision clouds.

- End of Addendum -

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PICKERING DRIVE WATERMAIN REPLACEMENT AND ROAD IMPROVEMENTS
PHASE 1 – DALHOUSIE STREET TO KING STREET

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PICKERING DRIVE WATERMAIN REPLACEMENT AND ROAD IMPROVEMENTS
PHASE 1 – DALHOUSIE STREET TO KING STREET

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INFORMATION TO BIDDERS

1. BACKGROUND INFORMATION

The Town of Amherstburg is located in southwestern Ontario, approximately 30 kilometers southwest of the City of Windsor and is one of seven lower-tier municipalities in the County of Essex. The current population of the Town of Amherstburg is just over 21,000.

The Town is seeking Tenders from qualified contractors to supply and install a PVC watermain with services, place new asphalt pavement, and construct intersection improvements along Pickering Drive in the Town of Amherstburg.

The Contractor will be under the direct supervision of the Consultant and the Town of Amherstburg Engineering and Public Works Department. An Inspector will be supplied to accompany the Contractor.

This contract must be conducted within the specified timelines.

2. DEFINITIONS

“Contractor” or “Bidder” means the individual, firm, company or corporation submitting a Tender to the Town.

“Contract Administrator” refers to the authorized employee(s) of the Corporation, or his/her designate, to whom carriage and administration of this Contract has been granted. For the purposes of this Contract the Contract Administrator is the Manager of Engineering.

“Corporate Contact” is the Town employee defined as the sole contact in relation to the administration of the Tender process.

“Engineer” refers to the Corporation’s Engineer who has been assigned to oversee this Contract. The Engineer’s duties may be assumed by the Contract Administrator, as the Corporation may so advise the Contractor.

“Project Manager” is the Town employee who will oversee the completion of the contract in accordance to this tender, contract and agreement. This individual will take management of the project after the contract has been successfully awarded.

“Total Tender Price” means an evaluation of quality and service in assessment of Tenders and the sum of all expenses, warranties, taxes, local service costs, lifecycle costs, time of completion or delivery, inventory carrying costs, operating and disposal costs and any applicable disbursements that determine the lowest compliant Tender.

“Town” or “Corporation” means the Corporation of the Town of Amherstburg

2. DEFINITIONS – Continued

“Work” means any of the following tasks, or combinations, thereof:

- a) Supply or provision of articles or materials;
- b) Supply of labour;
- c) Performance of functions and tasks;
- d) Provision of services;
- e) Equipment operated or not operated;
- f) Construction or repairs as specified;
- g) Security deposit

3. TENDER CLOSING DATE AND TIME

Tenders, contained in a sealed envelope with the provided envelope cover (Appendix A) firmly affixed, will be received by:

**Clerks Department
Town of Amherstburg – Town Hall (Upper Level)
271 Sandwich Street South, Amherstburg, Ontario, N9V2A5**

Up until

11:00 am (local time), Tuesday, July 4th, 2017

Tenders will be opened in public shortly after the official closing time.

Tenders must be received at the address noted above no later than the specified closing time. Tenders received after said closing time will not be accepted or considered.

4. METHOD OF SUBMISSION

Tenders must be submitted in a sealed envelope by way of hand delivery, courier service, or mail prior to the Tender closing time.

Delivery of Tender through a third party mail courier service shall be at the risk of the Bidder and must be arranged in due time for the Tender to arrive at the specified location before the Tender closing time. Failure of a third party courier service to submit the Tender prior to the Tender closing time will result in the disqualification of the Tender, and will be at no fault of the Town.

Tenders sent by email or facsimile will not be accepted.

5. SUBMISSION ENVELOPE

The Tender must be supplied in a sealed envelope with the envelope cover supplied in Appendix A of this document. The envelope cover must be affixed to the Bidder's envelope without any extra exterior covering. Failure to affix the envelope cover to the submission envelope may result in disqualification of the Tender.

6. TENDER SUBMISSION REQUIREMENTS

Tenders shall be prepared and submitted in accordance with the outline set specified in this document.

The Tender shall be bound and contained in a sealed envelope bearing Appendix A – Envelope Cover, and include the following minimum requirements, as found in the Form of Tender (T-#) pages:

- T-1 Contractor Identification Sheet
- T-2 to T-8 Tender Price
- T-9 Contractor Qualifications and Experience
- T-10 to T-11 References
- T-12 Acknowledgement of Tender Documents Received by Bidder and Addenda

7. BID BOND

No tender shall be considered as bona fide unless accompanied by a Bid Bond or Certified Cheque in the amount of 10% of the submission price and made payable to the Corporation of the Town of Amherstburg. The Certified Cheque or Bid Bond of the unsuccessful Proponents will be returned without interest upon execution of the tender with the successful contractor.

The Certified Cheque or Bid Bond of the successful Contractor will be retained as liquidated damages to indemnify the Owner in case of default until such time as the contract is executed. All Certified Cheques or Bid Bonds will be returned without interest should a contract not be executed within ninety (90) days of the date of closing of this quotation.

8. PERFORMANCE BOND AND LABOUR AND MATERIAL PAYMENT BOND

The Contractor, together with a surety company approved by the Owner and authorized by law to carry on business in the Province of Ontario, shall furnish to the Owner a Performance Bond and a separate Labour and Material Payment Bond in the amount of one hundred percent (100%) of the total tender price (not including H.S.T.) and such additional amount, if any, as may be required by the Owner.

8. PERFORMANCE BOND AND LABOUR AND MATERIAL PAYMENT BOND – Continued

The Owner will notify the selected Tenderer accordingly when the Tender has been awarded. The Contractor will be required to execute and furnish to the Owner the Performance Bond and the Labour and Material Payment Bond as required herein and after notification of the award of contract by the Owner. Contracts will not be executed without the provision of said bonds and no work shall commence until said bonds have been provided.

9. EXAMINATION OF SITE, PLANS AND SPECIFICATIONS

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

10. AGREEMENT AND GENERAL CONDITIONS

Tenders will be received and contracts awarded only in the form as shown on the tender page unless otherwise provided, for the completion of the whole work or of specified sections thereof in accordance with the plan and specification. The Contractor agrees to enter into a formal contract with the Town upon acceptance of the tender.

All work included in the contract must be completed on or before the date fixed in the contract and must, at the time of completion and final inspection, be in first class condition and comply fully with the specifications.

Final inspection will be made by the Amherstburg Public Works Department within 20 days after the Town has received notice in writing from the Contractor that the work is completed, or as soon thereafter as weather conditions permit.

The Contractor will be held liable for any damage or expenses occasioned by his failure to complete the work on time and for any expenses of inspecting, superintending or relating due to his neglect or failure to complete the work satisfactorily. Any such expense or damages may be deducted from the amount of the Contract or may be recovered by the Town from the Contractor and his sureties.

11. INSURANCE

Upon award of the contract and prior to commencement of work, the Contractor shall furnish the Manager of Engineering with a satisfactory Certificate of Insurance (COI) containing the information below, for the period of the execution of the work:

- i. A Commercial General Liability (CGL) policy that shall be not less than 5 million dollars per occurrence.
- ii. The CGL policy shall include bodily injury including death, personal injury, property damage, tenants legal liability, non-owned automobile and contain a cross liability/severability of interest clause. The certificate must also include acknowledgement that coverage under the policy specifically extends to the works in question. The COI shall name the Town of Amherstburg, HCEI and Amec Foster Wheeler as additional insured to the policy.
- iii. The CGL policy shall not contain any exclusion or limitation in respect to shoring, underpinning, raising or demolition of any building or structure, pile driving, caisson work, collapse of any structure or subsidence of any property, structure or land from any cause.
- iv. The liability insurance shall be endorsed to provide that the policy shall not be altered, cancelled or allowed to lapse without 30 days prior written notice to the Town of Amherstburg.

12. CORPORATE CONTACT AND COMMUNICATIONS

Additional information, including clarifications, regarding this Tender may be obtained by contacting the following person by telephone or email:

Administrative Inquiries (regarding tender procedures, insurance, etc.)

Bobbi Reive, Financial Planning Administrator

Town of Amherstburg

Phone: 519-736-0012 extension 226

Email: breive@amherstburg.ca

Technical Inquiries (regarding the scope of work of the contract)

Justine Arbour, P.Eng

Hrycay Consulting Engineers Inc.

Phone: 519-737-7234

Email: jarbour@hcei.ca

Contact with Town of Amherstburg officials or staff other than the staff members named as is not permitted and will be considered grounds for disqualification in the bidding and selection process. No verbal instructions or verbal information to bidders will be binding on the Town.

After the contract has been awarded, a Project Manager for the Town of Amherstburg may be named which may differ from the contact individual noted above. This individual will be the Manager that will oversee the completion of the contract per the specifications noted in this document.

13. TENDER VALIDITY PERIOD

Tenders shall remain valid and open for acceptance for a period of 90 days from the Tender closing date. Bidders shall ensure that sub-trade and supply tenders are valid for a sufficient length of time to accommodate the noted validity period.

14. SUBMISSION CONFIDENTIALITY

All Tenders submitted to the Town will be considered confidential, conditional to the Municipal Freedom of Information and Protection of Privacy Act. All pricing information regarding content of Tenders will remain confidential as the Town reserves the right to negotiate with bidders.

At no time will bidders divulge any confidential information provided to or acquired by the bidder or disclosed by the Town throughout the course of the intended project.

The successful bidder acknowledges that information of any kind provided throughout the course of the intended project are the exclusive property of the Town and shall not be disclosed or released to any person or organization without written authorization from the Town having been previously provided.

15. INFORMAL OR UNBALANCED TENDERS

Tender documents must be legible. All entries in the Form of Tender shall be made in ink or by typewriter. Entries or changes made in pencil shall be subject to automatic rejection, unless otherwise decided by the Town.

Alterations of any kind must be clearly made and initialed by the bidder, or the Tender may be subject to automatic rejection.

Tenders containing a project period or schedule adverse to the objectives of the Town's interests may be rejected.

Tenders containing prices so unbalanced as to adversely affect the interests of the Town may be subject to rejection.

All items must be bid with the unit price for every item and other entries clearly shown. If any amount within the Tender does not agree with the extension of the estimated quantity and unit price, the unit price shall govern and the amount and the Total Tender Price shall be corrected accordingly, unless the Town decides otherwise.

A discrepancy in addition or subtraction shall be corrected by the Town by adding or subtracting the items correctly and correcting the Total Tender Price, unless the Town decides otherwise. If an error has been made transposing an amount from one part of the Tender to another, the amount shown before transfer shall, subject to any corrections as previously noted, be taken to be correct and the amount shown after the transfer and the Total Tender Price shall be corrected accordingly.

If an omission has occurred wherein an item of work has not been provided a price in the Form of Tender, the bidder shall, unless otherwise stated in his Tender, be deemed to have allocated this price elsewhere in the Form of Tender for the cost of carrying out said item of work and, unless otherwise directed by the Town, no increase shall be made in the Total Tender Price because of said omission.

The Town may waive formalities at its discretion, provided the Town's Purchasing Policy has been adhered to.

16. CORPORATE SEAL

The Form of Proposal requires the application of the Proponent's corporate seal on a number of pages. The corporate seal must be applied on each page as required to make the proposal valid. If a corporate seal is not present on the required Form of Proposal pages, the Proponent must indicate that the proposal signatory is legally authorized to bind the company by completing the acknowledgement provided below the request for the corporate seal.

Failure to provide corporate seals or acknowledgement that the signatory is legally able to bind the company in the required locations on the Form of Proposal may result in the rejection of the proposal.

The Town reserves the right to request proof of legal authority to bind the company at its discretion.

17. WORKPLACE SAFETY AND INSURANCE BOARD PAYMENTS

The Contractor will be required to submit to the Town a Certificate of Good Standing from the Workplace Safety & Insurance Board prior to the commencement of the work and the Contractor will be required to submit to the Town a Certificate of Clearance for the project from the Workplace Safety & Insurance Board before final payment is made to the Contractor.

The Contractor shall provide and maintain the necessary first aid items and equipment as called for under the First Aid Regulations of the Workplace Safety & Insurance Act.

18. RESERVATION OF RIGHT

Contractors will not have the right to change conditions, terms or prices of the Tender once the Tender has been submitted in writing to the Town. Bidders may withdraw a Tender once it has been submitted, in accordance with provisions of Section 28 – Withdrawal or Qualifying of Tenders.

19. ADDENDA

Bidders may be notified during the Tender period of required additions to, deletions from, or alterations in the requirements of the Tender documents.

Any addenda issued after the posting of this Tender will be emailed to each bidder up to 48 hours prior to the Tender closing time. It is the sole responsibility of contractors to review and respond to addenda issued following the issuance of this request for Tender in their submissions.

If addenda are issued within to 48 hours of closing this request for Tender, the closing date of this request for Tender will be adjusted accordingly.

Addenda must be acknowledged on page T-13 and provided with the Tender. Failure to acknowledge addenda may result in the rejection of the Tender. Bidders must also acknowledge if no addenda were received.

20. HARMONIZED SALES TAX (HST)

The Proponent will be required to calculate and include both of the following items in his Tender:

- a) Tender Price (not including HST)
- b) Total Tender Price (including 13% HST)

For the purposes of evaluating Tenders, the Total Tender Price must be the base Tender Price plus 13%. If a percentage other than 13% is added, the Tender will be assumed to be in error and will be corrected accordingly.

21. PRICING TO REMAIN FIRM

Pricing provided under this Tender shall remain firm and unchanged for the entire validity period stated in this Tender. (See Section 13 – Tender Validity Period)

22. COSTS INCURRED BY BIDDERS

Expenses incurred by bidders for the preparation and submission of Tenders to the Town, or any work done in correlation thereof, shall be borne by the bidder.

No payment will be provided for any Tenders submitted or for any other effort made by the bidder prior to the commencement of the services as defined and approved by the Town.

23. TENDER FEES

The Tender Fee shall be a firm price (upset limit) and include all payroll costs, benefits, overhead and profit. All costs for printing, telephone and facsimile charges, and approved travel shall be included.

24. PAYMENT OF FEES

Unit prices are provided for the evaluation of tenders and the selection of a successful contractor. Payment for the items in the tender will be on a unit price basis as per the tender. Quantities have been estimated based on anticipated work required.

25. WITHDRAWAL OR QUALIFYING OF TENDERS

A bidder who has already submitted a Tender may submit a further Tender at any time up to the official closing time. The last Tender received shall supersede and invalidate all Tenders previously submitted by the bidder for this contract.

A bidder may withdraw his Tender at any time up to the official closing time by presenting a letter with his signature and corporate seal. Said letter must be received at the Tender closing location in sufficient time to be marked with the time and date of receipt, and for the Tender contact to note the withdrawal of the Tender prior to the official closing time.

When a request to withdrawal a Tender has been received prior to the closing time, and it has been verified to be signed and sealed by the Town, the unopened submission envelope will be returned to the bidder.

No telegrams, facsimiles, or telephone calls will be considered for official withdrawal of a Tender. If applicable, the bid deposit shall be forfeited to the Town when a bidder attempts to withdraw their Tender after the Tender closing time, in addition to any consequence or applicable legal penalty.

26. DISQUALIFIED TENDERS

The Town will not accept Tenders that:

- a) Are received by the Town at the closing location any time after the closing time advertised for the Tender
- b) Do not contain the required bid bond, certified cheque or bank draft in the required amount (if so required by the request for Tender)

Disqualifications of Tenders shall be subject to the Town's Purchasing Policy.

27. ABILITY AND EXPERIENCE OF CONTRACTOR

The successful contractor must submit satisfactory evidence that they have the ability and experience for this type of work and that they have the necessary plant and capital to enable them to proceed and complete the work in a satisfactory manner. This evidence must be provided on the submitted form of Tender.

The Town of Amherstburg may investigate as it deems necessary to determine the ability of the bidder to perform the work and the bidder shall furnish the Town of Amherstburg all such information and data for this purpose as the Town of Amherstburg may request.

27. ABILITY AND EXPERIENCE OF CONTRACTOR – Continued

The Town of Amherstburg reserves the right to reject any tender if the evidence submitted by or investigation of such bidder fails to satisfy the Town of Amherstburg that the bidder is qualified to carry out the obligations of the contract.

28. PRIVILEGE CLAUSE

The lowest or any Tender may not necessarily be accepted. The Corporation of the Town of Amherstburg reserves the right to delete any part, or parts from the Tender without stating reasons therefore. In the event of any deletion, it is agreed that the contractor will have no claim for loss of potential profit or overhead costs.

29. RECORD AND REPUTATION

Without limitation to any other privilege of the Town, and notwithstanding whether a submitted Tender otherwise satisfies the requirements of the Tender or not, the Town may instantly reject any Tender from a bidder where in the opinion of Council, the affiliation between the Town and said bidder has been damaged by prior or current acts or omission of said bidder, including but not limited to:

- 1) Litigation with the Town
- 2) The failure of the bidder to pay, in full, any outstanding payments, interests, and costs owing to the Town after the Town has requested payment of same
- 3) The refusal of the bidder to enter into the contract with the Town after the bidder's Tender has been accepted by the Town
- 4) The refusal of the bidder to perform or complete performance of a contract with the Town at any time after the bidder has been awarded the contract by the Town
- 5) The refusal of the bidder to follow logical directions of the Town or to alleviate a default under any contract with the Town when required by the Town or the Town's representative
- 6) Acts or omissions by the bidder resulting in a claim by the Town under a bid bond, performance bond or any other security required to be submitted by the bidder on a tender, RFP or RFQ within a five year period immediately preceding the date on which the tender, RFP or RFQ is awarded

30. TENDER ACCEPTANCE OR REJECTION

It is understood that the Corporation of the Town of Amherstburg is not bound to accept the lowest, or any bid submission.

Reporting and authorization of resulting contracts shall be conducted in accordance with the Town's Procurement Policy.

A Tender is accepted by the Town when the agreement is executed by the Town and the successful bidder; or upon written authorization from the Town within the 90 day validity period, where the Town has issued a written order to commence work to the successful bidder. The acceptance of the Tender is also conditional upon the receipt of a Performance Bond (if required), and Labour and Material Payment Bond (if required).

The Town is not responsible for any liabilities, expenses, loss or damage to the Bidder subsequent to or by reason of the acceptance or non-acceptance by the Town of any Tender or by reason of any delay in the acceptance of a Tender. Tenders are subject to a formal contract being prepared and executed.

If an insufficient number of Tenders are received, Tenders may be returned unopened.

31. TENDER RESULTS

A Council report indicating the results of this Tender shall be a matter of public record. The results of the Tender, when requested, may be made public by the Town, and may contain the Total Tender price.

The name of the successful bidder and the contract price shall be deemed public information following the award of contract, however unit prices contained in the form of Tender will not be released.

Unsuccessful bidders may request information regarding their Tender evaluation from the Corporate Contact.

32. AGREEMENT

The successful bidder will be required to enter into an agreement with the Town upon acceptance of their Tender. An agreement will be executed in quadruplicate by the Town and will be provided to the Contractor in the executed contract.

If a mathematical error has been found in the Contractor's submission and has been properly corrected and initialed by the bidder, the price stipulated in the agreement will be the corrected price.

33. CONTRACT EXECUTION

Upon approval of the award of contract, the successful bidder will be notified by the Town that their Tender has been accepted and an official award of contract letter will be provided.

The successful bidder will be given no more than fourteen days from the receipt of the contract documents for execution of the contract documents and to provide the necessary guarantees, insurance, etc. Failure to execute the contract documents, and failure to provide the required guarantees, insurance, etc. within the specified time may result in forfeiture of the Tender deposit (if applicable). No work shall commence on the project until the documents have been executed by the bidder and the insurance and guarantees have been received.

There shall be no variation or substitution from this Tender unless approved in writing by the Town.

Receipt of materials, equipment, work or service will not waive any of the requirements of the contract. Defective goods, materials, or equipment found will be returned at the risk of the supplier and at the supplier's expense.

Failure to deliver or complete the terms of the contract outside of the stipulated project schedule shall entitle the Town to cancel the contract without being liable for any costs, fees, or charges of any kind.

In the event of labour or supplier strikes, or unexpected events that cease work, the Town reserves the right to suspend this contract.

34. BIDDER DECLARATION

The bidder, by submission of a Tender, declares that:

- 1) The bidder has carefully reviewed the required deliverables and specifications in accordance to this Tender
- 2) No one other than the bidder has any interest in this Tender or in the assignment of the pending contract from this Tender
- 3) That all representation in the Tender submission are true and factual
- 4) The bidder and their heirs, administrators, successor, executor and assigns are to forfeit all claims against the Town under the contract. This includes claims for all work done and/or supplies and/or service provided under the contract should it seem that a member of Council or a Town employee has been furnished with a direct or indirect financial benefit

35. CONFLICT OF INTEREST

The bidder, by submission of a Tender, declares that:

Contractors participating in this Tender process shall disclose, prior to entering into an agreement, any potential direct or indirect conflict of interest. If such a conflict exists, the Town of Amherstburg may, at its discretion, withhold the award of a contract from the Contractor until the matter is resolved. If the conflict is deemed to remain unresolved, and the Town deems it necessary, the Town reserves the right to withhold the award of contract to the bidder altogether and provide the contract to the next qualified bidder.

36. SUBCONTRACTORS OR SUPPLIERS

If the Contractor proposes to use any product or services from another firm or subcontractor for any part of the work, other than those listed in the Form of Tender, the contractor must request approval in writing from the Project Manager. The Owner reserves the right at any time to object or refuse to accept any subcontractor, firm or supplier for inclusion in the work and shall not be required to give a reason for such objection or refusal.

No substitute for any firm, subcontractor or supplier shall be allowed without written consent from the Project Manager. Nothing contained in the contract documents shall create any contractual relationship between any subcontractor, firm or supplier and the Owner. Should the contractor request to change any subcontractor, firm or supplier, the Owner will not be responsible for any additional costs incurred by the contractor as a result of this request.

37. CONTRACTOR'S LIABILITY

The successful Bidder, his agents, employees, or persons under his control including sub-contractors, shall use due care that no person or property is injured and that no rights are infringed in the prosecution of the work. The Contractor shall be solely responsible for all damages, by whomsoever claimable, in respect to any injury to persons or property of whatever description and in respect of any infringement of any right, privilege or easement whatever, occasioned in the carryon of the work, or by any neglect on the Contractor's part.

38. INDEMNIFICATION

The Contractor will indemnify and save harmless the Town, its officers, partners, agents, employees and Council members from and against all claims, demands, losses, damages, costs, expenses, actions and suits that may arise, directly or indirectly from its performance of the contract or by reason of any matter or thing done, permitted or omitted to be done by the Contractor, its sub-contractors or their agents or employees with respect to the contract.

39. ERRORS AND OMISSIONS

The Town shall not be held liable for any errors or omissions contained in any part of this Tender. The Town has put forth significant effort to ensure accurate data in this Tender. The information contained in this Tender is supplied exclusively as parameters for bidders. The information contained in the Tender documents is not guaranteed or warranted to be accurate, nor is it necessarily comprehensive. No information provided in the Tender is intended to relieve the bidder from forming their own conclusions with respect to the matters contained therein.

40. CONTRACT DOCUMENTS

The Proponent shall take note that the Contract Documents shall include a Contract Agreement, a Certificate from the Workplace Safety & Insurance Board, a Certificate of Insurance, Labour and Materials Payment Bond and a Performance Bond, all to be furnished by the Contractor in a form satisfactory to the Owner's solicitor. The Proponent shall consult with the Owner's solicitor as to the forms required for the Contract and the Proponent shall not qualify his Quotation in respect to these matters.

41. LIQUIDATED DAMAGES

If the works are not entirely completed by **November 30, 2017** the contractor's payment will be reduced for liquidated damages in the amount of \$2,000.00 for each day beyond November 30, 2017 until such time the Town indicates the project has been completed.

42. PROJECT COMMENCEMENT AND COMPLETION DATE

This project shall not proceed until after the award of Contract and execution of the Contract Agreement, and must be complete in every respect by November 30, 2017. Once mobilized, the contractor must remain on site until the work is completed.

43. OCCUPATIONAL HEALTH AND SAFETY ACT

The contractor shall comply with all requirements of the Occupational Health and Safety Act, 1990 and Regulation for Construction Projects and Amendments, as administered by the Ontario Ministry of Labour and all subsequent amendment of said act. In the event that the contractor fails to comply with the requirements of the above mentioned act, the Town may suspend the continuation of the work forthwith and the suspension will remain in effect until the contractor has taken whatever remedies are necessary to comply with said act.

43. OCCUPATIONAL HEALTH AND SAFETY ACT – Continued

Suspension of the work by the Town on account of the provisions of this clause, shall not allow the contractor an extension of the time of completion and the contractor may be liable for liquidated damages to the Town.

44. PROCUREMENT POLICY BY-LAW / GOVERNING LAW

Tenders will be called, received, evaluated, accepted and processed in accordance with the Town's Procurement and Purchasing Policy, respecting purchasing (copy available upon request). By submitting a Tender for this subject, the Contractor agrees to be bound by the terms and conditions of such Policy and any amendments thereto, as fully as if it were incorporated herein.

Any Contract resulting from this Request for Tender shall be governed by and interpreted in accordance with the laws of the Province of Ontario.

45. ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT (AODA)

The Contractor shall ensure that all its employees, agents, volunteers, or others for whom the Contractor is legally responsible receive training regarding the provision of the goods and services contemplated herein to persons with disabilities in accordance with Section 6 of Ontario Regulation 429/07 (the "Regulation") made under the Accessibility for Ontarians with Disabilities Act, 2005, as amended (the "Act"). The Contractor shall ensure that such training includes, without limitation, a review of the purposes of the Act and the requirements of the Regulation, a review of the Town's Policy on Accessible Customer Service Standards, as well as instruction regarding all matters set out in Section 6 of the Regulation.

The Contractor shall also maintain a record of all training provided to the Contractor's personnel on the Town's accessible customer service standards as required under this section, which shall include at a minimum the dates on which the training was provided and the number of individuals to whom the training was provided. The Vendor shall furnish any required records of accessible customer service training to the Town within ten (10) days of the Town's request, unless otherwise agreed upon by the Town. The Town reserves the right to require the contractor to amend its training policies to meet the requirements of the Act and the Regulation.

The Town's Accessible Customer Service Standards Policy has been provided in Appendix B.

Information on accessible customer service training is available online from the Ministry of Community and Social Services at www.accesson.ca/index.aspx.

AGREEMENT

THIS AGREEMENT made in quintuplicate this 10th day of July, 2017.

BETWEEN THE CORPORATION OF THE TOWN OF AMHERSTBURG

(hereinafter called the Corporation) of the first part.

AND

SLR CONTRACTING GROUP INC.

(hereinafter called the Contractor) of the second part.

WHEREAS the Corporation is desirous that certain works should be designed for the implementation of:

**Pickering Drive Phase 1 Watermain Replacement
and Road Improvements**

In the Town of Amherstburg and has accepted a Quotation by the Contractor for this purpose.

NOW THIS AGREEMENT WITNESSES AS FOLLOWS:

The Contractor hereby covenants and agrees to provide and supply at his expense, all and every kind of labour and materials for, and to undertake and complete in strict accordance with his Tender submitted to the Town on the:

4th day of July, 2017

And the Agreement Documents (consisting of the contents and requirements for this Tender, including all modifications thereof and incorporated in the said documents before their execution) prepared by the Town of Amherstburg and all of which said documents are annexed hereto and form part of this Agreement to the same extent as fully embodied herein, the construction of the above noted works for the sum of:

One million, twenty three thousand and two hundred dollars (\$ 1,023,200.00) excluding H.S.T.

The Contractor hereby covenants and agrees with the Corporation in the following manner:

(1) To execute and perform the whole of the work herein mentioned in a workmanlike manner, in strict accordance with the provisions of this Agreement, including the said Specifications, General Conditions and the Plans (where applicable) therein referred to. The Contractor shall,

in the execution and performance of the said work perform, observe, fulfill and abide by all the covenants, agreements, stipulations, provisions and conditions mentioned and contained in this Agreement.

(2) The Contractor will indemnify and save harmless the Town, its officers, partners, agents, employees and Council members from and against all claims, demands, losses, damages, costs, expenses, actions and suits that may arise, directly or indirectly from its performance of the contract or by reason of any matter or thing done, permitted or omitted to be done by the Contractor, its sub-contractors or their agents or employees with respect to the contract.

(3) To pay to the Corporation, on demand, all loss, costs, damages or expenses incurred by the Corporation or any of its officers, servants or agents in consequence of any such action, suit, claim, lien, execution or demand, and any monies paid or payable by the Corporation or any of its officers, servants or agents in settlement or in discharge thereof, or on account thereof. If in default of said monies so paid or payable by the Corporation, its officers, servants or agents, including any monies payable by the Contractor under any of the terms and conditions of the Contract, these said monies may be deducted from any monies of the Contractor then remaining in possession of the Corporation on account of this or any other Contract, or may be recovered from the Contractor or the Surety named in the Bond hereto attached in any court of competent jurisdiction and monies paid at their request.

The Corporation covenants with the Contractor that if the said work, including all extras in connection therewith, shall be duly and properly executed as aforesaid, the Corporation will pay the Contractor the Contract price mentioned in said tender (which are to apply to all extras of the character specified in the schedule of rates forming part of said Tender). Payment shall be made in the manner, subject to drawbacks and liquidated damages mentioned in the said General Conditions, upon estimates or certificates signed by the Engineer, issued in accordance with the conditions incorporated with and made part of this Agreement.

No monies shall become due or be payable under this Agreement unless and until an estimate or certificate therefore shall have been signed by the said Engineer, the possession of which is hereby made a condition precedent to the right of the Agreement to be paid or to maintain any action for such money or for any part thereof, the Corporation shall not be liable or compelled to pay for any extras or additional work not included in this Agreement, except only in the manner and as provided for herein. The Corporation shall not be liable or compelled to grant or insure any estimate or certificate for work rejected or condemned by the said Engineer or to pay any money therefore until the work so rejected or condemned has been replaced by new material and workmanship to the written satisfaction of the said Engineer. It is hereby expressly provided that the granting of any estimate or certificate, or the payment of any monies thereunder, shall not be construed as an acceptance of any bad or defective work or material, to which the same relates, or as an admission of liability to pay any money in respect thereof, and shall not in any manner lessen the liability of the Contractor to replace such work or material, although the condition of the same may not have been known to, or discovered by the said Engineer at the time such estimate or certificate was granted, or monies paid thereon.

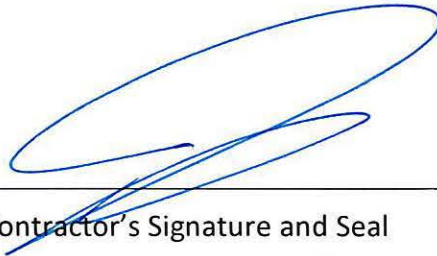
AND it is understood and agreed between the parties hereto as follows:

That this Agreement, and the covenants and conditions herein, and in the said General Conditions contained shall extend to and be binding upon the heirs, executors, administrators, successors and assigns, of the said Contractor and the Corporation respectively. In this Agreement, and in the Contract, of which this Agreement forms a part, the words, "person", "plans", "shall", "may", "herein", "work", "Contract", "Contractor", "Inspector", "Engineer", and words used in the singular number of the masculine gender, shall have the meaning and effect given them in the General Conditions hereto annexed or in the Interpretation Act of the Revised Statutes of Ontario.

IN WITNESS WHEREOF the parties hereto have hereunto affixed their Corporate Seals, if any, duly attested by the signature of their proper officers in that behalf, respectively.



WITNESS AS TO SIGNATURE OF
CONTRACTOR



Contractor's Signature and Seal

SLR CONTRACTING GROUP INC

Contractor's Name

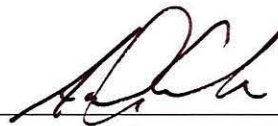
6260 WESTAR DRIVE WINDSOR ONTARIO N9J 3W3

Contractor's address

CORPORATION OF THE TOWN OF AMHERSTBURG



WITNESS AS TO SIGNATURE OF
CORPORATION



Aldo DiCarlo, Mayor



Paula Parker, Clerk



ZURICH

Zurich Insurance Company Ltd
100 King St. W., Suite 5500, P.O. Box 290, Toronto, ON M5X 1C9

BID BOND
CCDC 220 - 2002

No. 6328782-94

10%

SLR CONTRACTING GROUP INC. as Principal, hereinafter called the Principal, and **Zurich Insurance Company Ltd**, a corporation created and existing under the laws of Switzerland and duly authorized to transact the business of Suretyship in Canada as Surety, hereinafter called the Surety, are held and firmly bound unto **THE CORPORATION OF THE TOWN OF AMHERSTBURG** as Obligee, hereinafter called the Obligee, in the amount of **TEN PERCENT OF THE AMOUNT OF TENDER Dollars (10%)** lawful money of Canada, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has submitted a written bid to the Obligee, dated **4** day of **JULY**, in the year **2017** for

PICKERING DRIVE WATERMAIN REPLACEMENT AND ROAD IMPROVEMENTS PHASE 1: DALHOUSIE TO KING PWD-WM-15-011/T04-2017-04

The condition of this obligation is such that if the Principal shall have the bid accepted within the time period prescribed in the Obligee's bid documents, or, if no time period is specified in the Obligee's bid documents, within **NINETY (90)** days from the closing date as specified in the Obligee's bid documents, and the Principal enters into a formal contract and gives the specified security, then this obligation shall be void; otherwise, provided the Obligee takes all reasonable steps to mitigate the amount of such excess costs, the Principal and the Surety will pay to the Obligee the difference in money between the amount of the bid of the Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former.

The Principal and Surety shall not be liable for a greater sum than the Bond Amount.

It is a condition of this bond that any suit or action must be commenced within seven (7) months of the date of this Bond.

No right of action shall accrue hereunder to or for the use of any person or corporation other than the Obligee named herein, or the heirs, executors, administrators or successors of the Obligee.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated 20th day of June, in the year 2017.

SIGNED and SEALED
in the presence of

SLR CONTRACTING GROUP INC.

Signature

PAUL K. ROBINSON

Name of person signing

Zurich Insurance Company Ltd

Signature

ANTONELLA TOPPI, Attorney-in-fact

Name of person signing

(CCDC 220 – 2002 has been approved by the Surety Association of Canada)

FORM OF TENDER

CONTRACTOR IDENTIFICATION SHEET

BUNSIINESS NAME OF CONTRACTOR:	SLR CONTRACTING GROUP INC.
MAILING ADDRESS OF CONTRACTOR (including postal code):	6260 WESTAR DR. WINDSOR ON N9J 3W3
NAME OF CONTACT PERSON REPRESENTING CONTRACTOR:	CHRIS ASKIN
TELEPHONE NUMBER & EXTENSION OF PERSON REPRESENTING CONTRACTOR:	(519) 978-3111 EXT 2519
FAX NUMBER OF CONTRACTOR:	(519) 978-1119
EMAIL ADDRESS OF PERSON REPRESENTING CONTRACTOR:	caskin@slrcontracting.ca
NAME OF PERSON SIGNING ON BEHALF OF CONTRACTOR:	DONNA SPURR
TITLE OF PERSON SIGNING ON BEHALF OF CONTRACTOR:	VICE PRESIDENT

SIGNATURE OF PERSON AUTHORIZED TO ACT ON
BEHALF OF PROPONENT:

CORPORATE SEAL:



(Please affix Corporate Seal)

If a corporate seal does not exist, please acknowledge the following:

*"The signature of the person applied to this tender document is authorized to act on
behalf of the proponent and is legally able to bind the company."*

_____ Signatory Initials

TENDER PRICE

WE the undersigned, having examined the locality and site of the Works, Drawings and Specifications as prepared by The Town of Amherstburg and hereby offer to furnish all materials including all appropriate sales taxes and perform all the work necessary as described in the above documents and in accordance with the said documents under the supervision of the Project Manager of the Town of Amherstburg, made up as follows:

Item No.	Spec. No.	Item	Unit	Estimated Quantity	Unit Price	Estimated Total
PART A - GENERAL WORKS						
A1	1	Mobilization & Demobilization	L.S.	1.00		\$ 6000 ⁻
A2	2	Contractor Layout	L.S.	1.00		\$ 7000 ⁻
A3	3	Contract Bonding, Insurance and Permits	L.S.	1.00		\$ 10500 ⁻
A4	4	Traffic Control & Detour Route Signing	L.S.	1.00		\$ 29127 ⁻
A5	5	Pre-Construction Photographic Survey	L.S.	1.00		\$ 7500 ⁻
A6	6	Protection Of Existing Utilities And Services	L.S.	1.00		\$ 500 ⁻
A7	7	Utility Conflict Investigation & Existing Watermain Locates	L.S.	1.00		\$ 5500 ⁻
PART A - GENERAL WORKS SUBTOTAL						\$ 66127 ⁻
PART B – REMOVALS						
B1	8	Saw-Cutting of Pavement & Concrete, Full Depth	m	910.00	\$ 4 ⁵⁰	\$ 4095 ⁻
B2	9	Removal of Asphalt Pavement, Full Depth	m2	6,030.00	\$ 3 ⁵⁰	\$ 21105 ⁻
B3	10	Removal of Sidewalks & Driveways	m2	300.00	\$ 8 ⁻	\$ 2400 ⁻
B4	11	Removal of Concrete Curb & Gutter	m	100.00	\$ 8 ⁻	\$ 800 ⁻
B5	12	Pavement Marking Obliteration				
		a) Lines, 100mm wide	m	40.00	\$ 6 ⁻	\$ 240 ⁻
		b) Stop Bars, 600mm wide	m	17.00	\$ 15 ⁻	\$ 255 ⁻
PART B – REMOVALS SUBTOTAL						\$ 28895 ⁻

Item No.	Spec. No.	Item	Unit	Estimated Quantity	Unit Price	Estimated Total
PART C – WATERMAIN						
C1	13	Supply and Install PVC DR18 Watermain by Open Cut				
		a) 100mm ø	m	14.00	\$ 325 ⁻	\$ 4550 ⁻
		b) 150mm ø	m	95.00	\$ 340 ⁻	\$ 32300 ⁻
		c) 200mm ø	m	60.00	\$ 365 ⁻	\$ 21900 ⁻
		d) 300mm ø	m	565.00	\$ 381 ⁻	\$ 215265 ⁻
C2	14	50mm – Water Service Connections, Long (>10m)	ea.	3.00	\$ 3000 ⁻	\$ 9000 ⁻
C3	15	Appurtenances				
		a) Gate Valves, 100mm Dia.	ea.	1.00	\$ 1100 ⁻	\$ 1100 ⁻
		b) Gate Valves, 150mm Dia.	ea.	9.00	\$ 1400 ⁻	\$ 12600 ⁻
		c) Gate Valves, 200mm Dia.	ea.	4.00	\$ 2200 ⁻	\$ 8800 ⁻
		d) Gate Valves, 300mm Dia.	ea.	1.00	\$ 4200 ⁻	\$ 4200 ⁻
		e) Tee, 200x200x150mm Dia.	ea.	2.00	\$ 800 ⁻	\$ 1600 ⁻
		f) Tee, 300x300x100mm Dia.	ea.	1.00	\$ 900 ⁻	\$ 900 ⁻
		g) Tee, 300x300x150mm Dia.	ea.	11.00	\$ 1000 ⁻	\$ 11000 ⁻
		h) Tee, 300x300x200mm Dia.	ea.	3.00	\$ 1100 ⁻	\$ 3300 ⁻
		i) Fire Hydrant Sets (Including Valve and Lead)	ea.	3.00	\$ 6500 ⁻	\$ 19500 ⁻
		j) Reducers (300-200)	ea.	1.00	\$ 550 ⁻	\$ 550 ⁻
		k) Tapping Sleeve & Valve, 150mm Dia.	ea.	1.00	\$ 3500 ⁻	\$ 3500 ⁻
		l) Tapping Sleeve & Valve, 300mm Dia.	ea.	2.00	\$ 6000 ⁻	\$ 12000 ⁻
C4	16	Flushing, Testing & Disinfection of Watermains	L.S.	1.00		\$ 1500 ⁻

Item No.	Spec. No.	Item	Unit	Estimated Quantity	Unit Price	Estimated Total
C5	17	Connect to Existing Watermain				
		a) To existing 300mm dia. Watermain at Dalhousie St.	ea.	1.00	\$ 2800 ⁻	\$ 2800 ⁻
		b) To existing 300mm dia. Watermain at Sandwich St. (West)	ea.	1.00	\$ 2800 ⁻	\$ 2800 ⁻
		c) To existing 300mm dia. Watermain at Sandwich St. (East)	ea.	1.00	\$ 1600 ⁻	\$ 1600 ⁻
		d) To existing 150mm dia. Watermain at King St. (North)	ea.	1.00	\$ 2700 ⁻	\$ 2700 ⁻
		e) To existing 150mm dia. Watermain at King St. (South)	ea.	1.00	\$ 2700 ⁻	\$ 2700 ⁻
		f) To existing 150mm dia. Watermain at King St. (To Existing, Temp)	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		g) To existing 150mm dia. Watermain Service at 401 Pickering Dr.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		h) To existing 150mm dia. Watermain Service at 400 Sandwich St.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		i) To existing 150mm dia. Watermain Service at 100 Pickering Dr.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		j) To existing 200mm dia. Watermain Service at 400 Sandwich St.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		k) To existing 150mm dia. Watermain Service at 124 Pickering Dr.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		l) To existing 200mm dia. Watermain Service at 130 Pickering Dr.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		m) To existing 200mm dia. Watermain Service at 400 Sandwich St.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻

Item No.	Spec. No.	Item	Unit	Estimated Quantity	Unit Price	Estimated Total
		n) To existing 100mm dia. Watermain Service at 400 Sandwich St.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		o) To existing 150mm dia. Watermain Service at 380 Sandwich St.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		p) To existing 150mm dia. Watermain Service at 401 Sandwich St.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
		q) To existing 150mm dia. Watermain Service at 160 Pickering Dr.	ea.	1.00	\$ 1200 ⁻	\$ 1200 ⁻
C6	18	Abandon Existing Watermain	L.S.	1.00		\$ 1600 ⁻

PART C – WATERMAIN SUBTOTAL \$392165⁻

PART D - ROADWORKS

D1	19	Supply and Place Hot Mix Asphalt				
		a) Hot Mix HL-3 Surface Course (40mm)	t	640.00	\$ 99 ⁻	\$63360 ⁻
		b) Hot Mix HL-4 Base Course (50mm)	t	805.00	\$ 97 ⁻	\$78085 ⁻
D2	20	Hand-Laid Asphalt Placement				
		a) Hot Mix HL-3 Surface Course (40mm)	m2	35.00	\$ 23 ⁻	\$ 805 ⁻
		b) Hot Mix HL-4 Base Course (50mm)	m2	35.00	\$ 29 ⁻	\$ 1015 ⁻
D3	21	Adjust Existing Appurtenances / Structures	ea	23.00	\$ 245 ⁻	\$ 5635 ⁻
D4	OPSS 314	Fine Grade Existing Base Stone	m2	5,990.00	\$ 1 ⁻	\$ 5990 ⁻
D5	22	Granular 'A'				
		a) Additional Road Base Material	t	790.00	\$ 23 ⁻	\$18170 ⁻
		b) Road Base in Trenches	t	1480.00	\$ 32 ⁻	\$ 47360 ⁻
		c) Driveways, Sidewalks, and Curb and Gutter	t	150.00	\$ 40 ⁻	\$ 6000 ⁻

Item No.	Spec. No.	Item	Unit	Estimated Quantity	Unit Price	Estimated Total
D6	23	Tack Coat	m2	5,990.00	\$ 1 ⁻	\$ 5990 ⁻
D7	24	Lap Joint	m	100.00	\$ 20 ⁻	\$ 2000 ⁻
D8	25	Concrete Sidewalk	m2	195.00	\$ 55 ⁻	\$ 10725 ⁻
D9	26	Concrete Curb and Gutter	m	185.00	\$ 83 ⁻	\$ 15355 ⁻
D10	27	Tactile Walking Surface Indicators	ea	8.00	\$ 650 ⁻	\$ 5200 ⁻
D11	28	Pavement Marking				
		a) Centrelines and Lane Markings (100mm wide)	m	515.00	\$ 2 ⁻	\$ 1030 ⁻
		b) Stop Bars (600mm wide)	m	30.00	\$ 24 ⁻	\$ 720 ⁻
		c) Crosswalks, Ladder-Style	m	60.00	\$ 39 ⁻	\$ 2340 ⁻
D12	29	Site Restoration, Boulevard	L.S.	1.00		\$ 6300 ⁻
D13	30	Driveway Restoration	m2	135.00	\$ 55 ⁻	\$ 7425 ⁻
PART D – ROADWORKS SUBTOTAL						\$ 283505⁻

PART E – TRAFFIC SIGNALS

E1	31	Electrical Handholes	ea	3.00	\$ 1800 ⁻	\$ 5400 ⁻
E2	32	Underground Conduit	L.S.	1.00		\$ 6400 ⁻
E3	33	Electrical Wiring	L.S.	1.00		\$ 11790 ⁻
E4	34	Grounding System	L.S.	1.00		\$ 1200 ⁻
E5	35	Power Supply and Metering Service	ea	1.00	\$ 3800 ⁻	\$ 3800 ⁻
E6	36	Sectional Steel Poles, Base Mounted	ea	7.00	\$ 2740 ⁻	\$ 19180 ⁻
E7	37	Concrete Footings in Earth	ea	7.00	\$ 2000 ⁻	\$ 14000 ⁻
E8	38	Installation of Highway Type Traffic Signal Heads and Hangers	L.S.	1.00		\$ 4900 ⁻

Item No.	Spec. No.	Item	Unit	Estimated Quantity	Unit Price	Estimated Total
E9	39	Pedestrian Type Signal Heads	ea	8.00	\$ 1220 ⁻	\$ 9760 ⁻
E10	40	Single Member Arms				
		a) 4.6m	ea	5.00	\$ 760 ⁻	\$ 3800 ⁻
		b) 6.1m	ea	1.00	\$ 900 ⁻	\$ 900 ⁻
		c) 6.7m	ea	2.00	\$ 960 ⁻	\$ 1920 ⁻
E11	41	Traffic Signal Controller Installation on Concrete Pad	ea	1.00	\$ 4630 ⁻	\$ 4630 ⁻
E12	42	Controller Cabinet Concrete Pad Installation	ea	1.00	\$ 2600 ⁻	\$ 2600 ⁻
E13	43	Audible Pedestrian Pushbuttons	ea	8.00	\$ 1266	\$ 10128 ⁻
E14	44	Pedestrian Pushbutton Pole and Concrete Foundation	ea	8.00	\$ 1860 ⁻	\$ 14880 ⁻
E13	45	Pre-Formed Loop Detectors	ea	3.00	\$ 3010 ⁻	\$ 9030 ⁻
E14	46	Intersection Street Lighting	ea	1.00	\$ 2790 ⁻	\$ 2790 ⁻
E15	47	Traffic Signal Equipment Removal or Salvage	L.S.	1.00		\$ 4200 ⁻

PART E – TRAFFIC SIGNALS SUBTOTAL \$ 131308⁻

PART F - PROVISIONAL ITEMS AND ALLOWANCES

F1	48	Field Adjustment for Watermain Alignment <i>(Provisional)</i>	L.S.	1.00		\$ 1500 ⁻
F2	49	Storm Sewer Connection at 182 Pickering Dr. <i>(Provisional)</i>	L.S.	1.00		17000 ⁻
F3	50	Additional Excavation of Soft Spots <i>(Provisional)</i>	m3	100.00	\$ 27 ⁻	\$ 2700 ⁻
F4	51	Material Testing and Inspection <i>(Allowance)</i>	L.S.	1.00		\$10,000.00
F5	52	Contingency <i>(Provisional)</i>	L.S.	1.00		\$90,000.00

PART F - PROVISIONAL ITEMS AND ALLOWANCES SUBTOTAL \$ 121200⁻

PART A SUBTOTAL	\$ <u>66 127⁻</u>
PART B SUBTOTAL	\$ <u>28 895⁻</u>
PART C SUBTOTAL	\$ <u>392 165⁻</u>
PART D SUBTOTAL	\$ <u>283 505⁻</u>
PART E SUBTOTAL	\$ <u>131 308</u>
PART F SUBTOTAL	\$ <u>121 200⁻</u>
SUBTOTAL	\$ <u>1 023 200⁻</u>
HST 13%	\$ <u>133 016⁻</u>
TOTAL TENDER PRICE	\$ <u>1 156 216⁻</u>

Note: The Town reserves the right to delete items of work from the Contract after awarding the contract.

SIGNATURE OF PERSON AUTHORIZED TO ACT ON
BEHALF OF PROPONENT:

CORPORATE SEAL:



(Please affix Corporate Seal)

If a corporate seal does not exist, please acknowledge the following:

"The signature of the person applied to this tender document is authorized to act on behalf of the proponent and is legally able to bind the company."

_____ Signatory Initials

REFERENCES

Provide a minimum of three (3) related projects successfully completed by the firm. Note that the references may be contacted.

Reference No.1

Company Name: DILLON CONSULTING

Address: 3200 DEZIEL DR, WINDSOR ON

Contact Name & Title: MARK HERNANDEZ

Telephone Number: (519) 948-4243 Email: mhernandez@dillon.ca

Description of Project: FIRST STREET PUMP STATION OUTLET & RELIEF
INSTALLATION OF STORM SEWER OUTLET & RELIEF DRAIN
INCLUDING HEADNALLS

Date of Project: 2015

Reference No.2

Company Name: WINDSOR UTILITIES COMMISSION

Address: 4545 RHODES DR, WINDSOR ON

Contact Name & Title: SPENCER JOHNSTON

Telephone Number: (519) 251-7300 ex 609 Email: sjohnston@erwin.com

Description of Project: WYANDOTTE RD & WATERMAIN REPLACEMENT

Date of Project: 2015

REFERENCES- (cont'd)

Reference No.3

Company Name: RC SPENCER ASSOCIATES INC

Address: 261 SHEPHERD ST E, Windsor On

Contact Name & Title: RICK SPENCER

Telephone Number: (519) 946-1122 Email: rcspencer@rcspencer.ca

Description of Project: EASTLAWN PHASE 1 & 2

ROAD, SEWER, WATERMAIN

Date of Project: 2014

**Provide any attachments in this regard immediately following this sheet*

ACKNOWLEDGEMENT OF TENDER DOCUMENTS AND ADDENDA RECEIVED BY BIDDER

I/We, the undersigned, hereby acknowledge and confirm on behalf of: _____

SLR CONTRACTING GROUP INC.

That I/We have received all of the documents noted in the Table of Contents contained in this document and have been provided with all of the details required to permit me/us to submit a bid on Request for Quotation.

1. I/We declare that this bid is made without any connection, knowledge, comparison of figures or arrangements with any other company, firm or person submitting a Tender for the supply of the same goods and services.
2. I/We declare that I/We have carefully read this document and have satisfied ourselves as to the nature of the goods and services required and do hereby make our bid to the Corporation of the Town of Amherstburg for the goods and services described herein.
3. I/We agree to have the required equipment and labour at the site to work continuously on this project (weather conditions permitting) on (provide date): SEPTEMBER 11 2017 and agree to complete the works by the specified completion date of November 30th, 2017.
4. I/We acknowledge that we have received the following addendum to this Request for Quotation and that it is my/our responsibility to ensure that all addenda issued by the Corporation of the Town of Amherstburg has been received.

Receipt of Addendum No: 1 to 1.

Signature:

Corporate Seal:



If a corporate seal does not exist, please acknowledge the following:

"The signature of the person applied to this tender document is authorized to act on behalf of the proponent and is legally able to bind the company."

_____ Signatory Initials

GENERAL CONDITIONS

1. PAYMENTS

The Contractor shall be entitled to receive monthly payments at the rate of ninety percent (90%) of the value of the work actually done and materials in place, according to the estimate of the Engineer, less all stipulated forfeitures and deductions. These payments shall be made on progress certificates, which will be based on approximate estimates only, and must not be taken or construed as an acceptance of the work so estimated or as an admission that the Commission is in any way liable to the Contractor in respect thereof. The ten percent (10%) holdback shall be released forty-five days after the Completion of the work or publication of Substantial Completion as defined by the Construction Lien Act, or as soon thereafter as practicable. A certificate for one hundred percent (100%) of the whole amount due under the contract, including extras (less forfeitures and deductions as aforesaid) will be issued payable to the Contractor. After provisions of the contract have been fully complied with, the Bond shall be returned to the Contractor.

A Statutory Declaration form must be submitted at completion of contract and prior to release of the final payment stipulated in the final progress certificate.

The Town shall not be liable for, or be held to pay, any money to the Contractor, except as provided above, and on making the completion payment aforesaid, the Town shall be released from all claim or liability to the Contractor for anything done or furnished for, or relating to, the work, except the claim against the Commission for the remainder, if any there be, of the amounts kept or retained as provided above.

Payments to the Contractor will be made out of the funds under the control of the Town in their public capacity, and no member of the Town or officer of the Town is to be held personally liable or responsible to the Contractor under any circumstances whatsoever.

2. ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS)

All relevant and current as of the date of Tender Closing, Ontario Provincial Standard Specifications (OPSS) as referenced on the contract drawings or within the contract specifications, inferred to by the item description or industry use, and as may be referenced by other related Ontario Provincial Standard Specifications (OPSS) or Ontario Provincial Standard Drawings (OPSD) shall apply to this contract. OPSS "Municipal Oriented Specifications" will apply

It shall be the Contractor's responsibility to obtain current copies of the Ontario Provincial Standard Specifications (OPSS) indicated above, which shall form part of this Contract.

3. CONTRACT TIME

The Contract shall be substantially performed by November 30, 2017, with the exception of surface course asphalt which may be placed in Spring 2018.

Weather conditions will not constitute a basis for extension of the completion date unless, in the sole opinion of the Engineer, conditions have varied substantially from what is reasonably considered normal for the season(s) (i.e. in the event of abnormal inclement weather).

4. SCHEDULE OF WORK

Upon being awarded the contract, the Contractor shall forthwith supply to the Engineer for approval a copy of a detailed planned Schedule of Work, showing clearly that the work will be completed within the stipulated time. The schedule of work shall indicate proposed progress in 2 week periods for at least the following work:

- mobilization and site preparation
- pavement removal
- watermain installation
- traffic signal installation
- final grading
- Asphalt pavement placement

5. ENGINEER'S FIELD OFFICE

A separate field office for the Engineer will not be required for this contract. Construction meetings shall be held at the Town's Public Works Department.

6. WINTER WORK

No additional payment will be considered for the protection of the Work as required by the relevant OPSS for cold weather or Winter Conditions. The Contractor is encouraged to schedule their work to avoid placing concrete, asphalt or other temperature sensitive materials in cold weather and to avoid freezing of granular material during the operations employing these materials.

Where the Contractor's schedule shows work involving temperature sensitive materials during a time frame where cold weather conditions may potentially or can be reasonably expected to occur, the price in the schedule of unit prices shall be deemed to include the necessary cold weather provisions and no additional costs will be considered.

7. TEMPORARY WATER AND POWER

The Contractor shall make their own arrangements for the supply of temporary power. Water shall be supplied by the Town which shall be metered but not charged to the Contractor.

8. TRAFFIC PROTECTION PLAN

The Contractor shall prepare a traffic protection plan including all signage at the site in accordance with the latest revision of the Ontario Traffic Manual Book 7 Temporary Conditions. The Contractor shall have the plan available on site at all times for inspection by the Town or Ministry of Labour.

9. TRAFFIC CONTROL

The Contractor shall provide all necessary lights, signs, and barricades to protect the public. All work shall be carried out in accordance with the requirements of the Occupational Health and Safety Act, and the latest amendments thereto. If traffic control is required on this project, signing is to comply with the M.T.O. Manual of Uniform Traffic Control Devices (MUTCD) for Roadway Work.

The Contractor shall exercise all due care and attention in working within the road allowances. The Contractor shall comply to all current safety regulations, and with signing requirements according to Division 5, Temporary Conditions, of the M.T.O. Manual of Uniform Traffic Control Devices. The Contractor shall provide sufficient flag persons while working within the allowances to ensure safety to workers and the public in general.

The Ontario Traffic Manual Book 7 Temporary Conditions shall be utilized to apply traffic control devices in temporary construction, maintenance and utility work zones, to ensure worker safety, motorist safety, and motorist mobility. The plan is to be prepared and submitted prior to construction illustrating the appropriate signing and channelization required for any roadway work operations.

10. EMERGENCY TELEPHONE NUMBER

The Contractor shall have a representative from his staff on call, 24 hours a day, and seven days a week. The representative should be familiar with the project, and be able to handle any emergency that may arise during the course of the project.

11. PRIVATE PROPERTY

The Contractor shall assume full responsibility for crossing or making use of private property. Before the Contractor or any of his sub-contractors shall make use of any private property for any purpose, he shall first submit to the Engineer a copy of a written agreement granting permission by the Owner.

12. PEDESTRIAN AND VEHICULAR ACCESS

The Contractor shall be required to provide for pedestrian and vehicular access to private homes, business premises and through the construction work to streets where and as directed by the Town. This may require the provision of adequate temporary board walks, steps or ramps where necessary to allow pedestrian and/or vehicular access to new houses and business premises temporarily cut off from normal traffic due to new construction.

13. FIRST AID EQUIPMENT

The Contractor shall provide and maintain the necessary First Aid items and equipment as called for under the First Aid Regulations of the Worker's Compensation Act.

14. SITE MEETINGS

Site meetings shall be held at regular intervals as required.

15. DUST AND MUD CONTROL

The Contractor will be responsible for dust control as deemed necessary by the Owner during construction by watering and calcium application as directed by the Engineer. Clean-up of mud tracking off site shall similarly be the Contractor's responsibility.

16. DISPOSAL OF MATERIALS

The Contractor shall dispose of all waste and/or surplus materials in a disposal area selected by the Contractor in accordance with O.P.S.S. 180. The site shall be located off the Municipal right-of-way. The Contractor shall be responsible for all work involved in disposing the waste or excess material including trucking, access roads, leveling, and all haulage and/or dumping fees applicable.

The Contractor shall identify the disposal area and provide a release from the disposal area owner upon completion of the work.

Where any materials are designated to be salvaged, the Contractor can consult the appropriate special provisions for direction.

17. EXISTING CONDITIONS

The Contractor shall clean up and restore all disturbed areas to condition equal to or better than existing conditions using materials equal to or better than existing materials. This includes the removal and disposal of all layout materials, string lines, batter boards and other such materials.

The Contractor shall maintain flow in all existing sewers, drains, ditches, watercourses, house and inlet connections as applicable.

Sanitary sewers shall not be used for the discharge of water from excavations or dewatering operations.

18. DAMAGE BY VEHICLES AND OTHER EQUIPMENT

If at any time, in the opinion of the Engineer, damage is being or is likely to be done to any highway or any improvement thereon, other than such portions as are part of the work, by the Contractor's vehicles or other equipment, whether licensed or unlicensed, the Contractor shall, on the direction of the Engineer and at the Contractor's own expense make changes in or substitutions for such vehicles or other equipment or shall alter loading or shall in some manner remove the cause of such damage to the satisfaction of the Engineer.

19. MEASUREMENT AND PAYMENT

Unless otherwise noted in the Schedule of Unit Prices, no measurement of quantities will be made for the General Work and no direct payment will be made for any of the General Work. The cost of such work shall be deemed to be reasonably distributed within the overall cost of the work.

Payment for payable items shall be based upon the lump sum or unit price bid, as listed in the Schedule of Unit Prices, using actual "as-constructed" quantities (or plan quantities) as determined by the Engineer. In the event of conflict between the Schedule of Unit Prices and OPSS, the basis of payment indicated in the Schedule shall take precedence (as modified by "pay lines" or payment clauses indicated elsewhere in these documents, if applicable).

20. HOURS OF WORK

The Contractor must adhere to the following hours of work:

Monday to Friday, 7.am. – 8 p.m.

Saturday and Sunday, 7 a.m. – 8 p.m.

The Contractor shall coordinate disconnections and tie-ins greater than or equal to 100mm with the Town, the Engineer and the affected property owner so that service reconnections are performed during relevant “off peak” hours.

21. HEALTH AND SAFETY

The Contractor must submit a copy of their health and safety policy to the Town of Amherstburg prior to the start of construction. The Contractor must also review and be familiar with the Town of Amherstburg’s health and safety policy.

STANDARD REQUIREMENTS

1. MATERIALS

All materials (except as specifically indicated in the Special Provisions) required on this Contract shall be supplied by the Contractor. All materials used shall meet Town of Amherstburg Standards. If not covered by the Town Standards then they shall be selected from the appropriate M.T.O. designated Sources List. It is the Contractor's responsibility to verify that all materials meet the Town of Amherstburg Standards.

The Contractor will be required to obtain a copy of the most up to date Town of Amherstburg Development Manual. A copy can be downloaded from the Town web site at <http://www.amherstburg.ca/devmanual>.

The Contractor shall be responsible for any theft of material or damage to the works until the date of Substantial Performance.

2. LIST OF DESIGNATED SUBSTANCES

In accordance with the Occupational Health and Safety Act, R.S.O. 1990, C. S.30, the Contractor is advised of the presence of the following Designated Substances.

The Contractor is advised that the Designated Substances silica (Ontario Regulation Number 521/92), lead (519/92) and arsenic (508/92) are generally present throughout the Working Area, occurring naturally or as a result of vehicle emissions. Exposure to these substances may occur as a result of activities by the Contractor such as sweeping, grinding, crushing, drilling, blasting, cutting, and abrasive blasting.

3. FIELD SAMPLING

The field sampling and testing shall be undertaken by the Engineer or person engaged by the Engineer for this purpose.

Any references to testing to be undertaken by the Contractor shall be revised to read by the Engineer.

4. ENVIRONMENTAL PROTECTION

The preservation, protection and restoration of the local environment will form part of the work of this Contract.

The Contractor shall maintain an environmentally safe work place. It is intended that the works proposed be executed in such a manner which, to the fullest possible extent, minimizes any adverse effect on the cultural and natural environment of the project area. It is a responsibility of the Contractor that all his personnel be sufficiently instructed so that the work is carried out in a manner consistent with minimizing environmental insult.

Procedures for the interception and rapid cleanup and disposal of spillages that occur shall be submitted to the Engineer for review prior to starting work. All materials required for cleanup of fuel spillages shall be readily accessible on site.

Any spills apt to cause impairment to the natural environment must be immediately reported by the Contractor to the Ministry of Environment Spills Action Centre (800-268-6060) and the local MOE District Office (Windsor – 519-948-1464).

The Contractor shall also advise the Engineer and the Owner after notifying the MOE Spills Action Centre.

No direct measurement of quantities will be made for this work. The work will be administered as being part of the related environmental protection items or as part of the overall site work.

5. PROTECTION OF PUBLIC TRAFFIC

Open Excavations

The Contractor shall schedule the Work so that there will be no open excavation adjacent to a lane carrying traffic overnight and on non-working days except where a traffic barrier designed to restrain errant vehicles is located between the traffic and the excavation.

Location and Storage of Materials and Equipment

Materials shall not be stored within 3m of the traveled portion of any roadway except where a traffic barrier designed to restrain errant vehicles is provided.

Notwithstanding the foregoing, the Contractor shall, at the Contractor's expense, remove any vehicle, equipment or material, which, in the opinion of the Engineer, constitutes a traffic hazard or obstruction to maintenance operations.

Delivery and Trucking

The Contractor shall plan and schedule the routes of vehicles transporting all materials to, from or within the job, so that vehicular movements are accomplished with minimum interference and interruptions to traffic. This will necessitate vehicles to "slip-off" or "slip-on" in the direction of traffic, in order to merge with and thereby avoid crossing traffic lanes.

The Contractor shall obtain the Engineer's prior approval for the location of any "slip-off" or "slip-ons". The Engineer reserves the right to alter, reject or close same as considered necessary. The Contractor shall notify suppliers of materials and equipment of the above requirements.

Holiday Restrictions

The use of construction accesses, shoulder closures, lane closures, ramp closures, and the loading and unloading of materials and construction equipment onto and from the traveled portion of the highway shall not be carried out on the following Canadian Statutory/Civic Holidays:

- Victoria Day
- Canada Day
- August Civic Holiday
- Labour Day
- Thanksgiving Day

or after 3:00pm on days which precede holiday weekends.

Basis of Payment

OPSS 706 is amended in that payment for all costs associated with the number of lane closures and the number of days of speed control activities stipulated above is deemed to be included in the Traffic Control Signing item and no additional payment will be made.

Any additional Town of Amherstburg Police-assisted lane closures and speed control activities that result from the Contractor's chosen sequence and/or method of operation are deemed to be included in the Traffic Control Signing item and no additional payment will be made.

If a third party stipulates that additional Town of Amherstburg Police-assisted lane closures or speed control activities are required, the Owner will compensate the Contractor for the cost of the Town of Amherstburg Police services as Extra Work in accordance with OPSS 0100 – OPS General Conditions of Contract.

6. ONTARIO TRAFFIC MANUAL (OTM)

All references in the contract to the Manual of Uniform Traffic Control Devices (MUTCD), including all Parts and Divisions thereof, or MTO Traffic Control Manual for Roadway Work Operations, or Traffic Control Manual for Roadway Operations Field Editions are hereby deleted and replaced by the following books of the Ontario Traffic Manual (OTM):

Book 5 - Regulatory Signs;
Book 6 - Warning Signs;
Book 7 - Temporary Conditions (and Temporary Conditions Field Edition);
Book 11 - Pavement, Hazard and Delineation Markings;
Book 12 - Traffic Signals.

Any reference in the contract to OTM shall be deemed to be the Ontario Traffic Manual (Books 5, 6, 7, 11 & 12).

The Contractor shall comply with the applicable requirements of the above Ontario Traffic Control Manual book(s).

To order the above noted books, contact:

Publications Ontario
Ministry of Government Services
210 Wicksteed Ave
Toronto, ON M4G 2C3

Phone: 416-326-5300
Toll free within Canada: 800-668-9938
TTY toll free within Ontario: 800-268-7095
Billing and account inquiries: 416-326-5306
<http://www.publications.serviceontario.ca/ecom/>

7. EXISTING UTILITIES AND OTHER MUNICIPAL SERVICES

The Contractor's attention is drawn to the presence of underground utilities and municipal services such as telephone, electrical, cable, water, sanitary and storm. The locations of such, if indicated on the drawings represent to the best of the Owner and Engineer's knowledge, the approximate location of such utilities and services. The Contractor shall be responsible for all stakeouts as per GC7.01.16 as well as any inspection or test pits required and the inspection of any manholes, catch basins, sewers or vaults necessary to locate any utility. The Contractor shall be wholly responsible for the accuracy of the information gathered by their own forces.

OPSS 491, Construction Specification for Preservation, Protection and Reconstruction of Existing Facilities applies to all existing services.

Repair of any part of the existing watermain, storm or sanitary sewer system due to the Contractor's negligence shall be at the contractor's expense.

All repairs to any municipal service shall be approved by the Engineer or the Town. In line splices or connectors will not be allowed for any damaged water services. The contractor shall at their own expense replace the entire line from main stop to curb stop as directed by the Engineer. In line repairs will be allowed for sanitary and storm services but must only contain one in line connector such as a "Fernco". All material, installation and testing practices must be as per the related Town Engineering, OPS and AWWA standards.

The work site is located directly adjacent to underground Bell telephone and Rogers lines, Hydro lines and Union Gas lines. The Contractor shall be aware of these lines at all times and shall utilize equipment and methodologies in the undertaking of the work that do not constitute a hazard, disruption to services, or safety violation under the Occupational Health and Safety Act.

The Town shall undertake any relocation of permanent utilities as required.

8. LANE CLOSURES

Two-way traffic is to be maintained at all times. Single lane closures may occur temporarily for deliveries of materials or construction activities provided qualified flag persons are present. All temporary lane closures are to be approved by the Engineer at least 24 hours prior to the planned lane closure. No overnight, weekend, or holiday lane closures are permitted.

SPECIFICATIONS

1. MOBILIZATION AND DEMOBILIZATION ITEM A1

SCOPE: Contractor shall mobilize to the site upon approval by the Corporation and the Engineer. The Contractor shall not commence works until finalization of all necessary agreements and approvals.

Site mobilization shall include but not be limited to: site set up, staging areas, securing the construction perimeter, providing all safety measures such as temporary signs, barricades, fencing lighting, storage areas, access equipment for inspection, and other related material and equipment that is deemed necessary for the work that is required as part of this contract.

Contractor shall supply install and maintain all environmental protection and erosion/sediment control measures including, mats, shrouding of demolition work, silt fencing, and other measures as required in accordance with OPSS 182 and OPSS 805. Note that the environmental measures shall be submitted to the Engineer and the local conservation authority for review and approval prior to the commencement of any construction work.

As part of this item, the Contractor shall supply, place and remove a 600mm high silt fence around the site where required, to ensure all surface run-off is treated prior to entering any drain. The Contractor shall supply and install a silt fence as per OPSD219.110. The Contractor is to review the plan and process with the Essex Regional Conservation Authority (ERCA), and provide a copy to the Engineer.

Once mobilized to the site, the Contractor shall be deemed the Constructor as defined in the Ontario Health and Safety Act and shall be responsible for the safety and safeguard of public, workers, equipment and property within the designated work area.

The Contractor shall conduct a pre and post site inspection with the Engineer and a representative from the Town of Amherstburg prior to site mobilization and at the completion of the work to record the existing condition of the area under consideration that may be affected during the construction process.

The Contractor shall determine with the Engineer and a representative from the Town of Amherstburg any required repairs to elements that were damaged during construction. Completing any identified repairs that occurred during the construction is the sole responsibility of the selected contractor.

At the completion of the work, the Contractor shall demobilize from site and restore the site to its original condition.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment for this item shall be at the unit bid price and shall be full compensation for all equipment, labour and materials required to complete this work in every aspect.

Payment for mobilization and demobilization will be made as follows:

- 50% payable on first Progress Payment Certificate
- 50% payable on the Substantial Performance Payment Certificate

2. CONTRACTOR LAYOUT ITEM A2

SCOPE: Layout will be provided by the Contractor.

The Contractor shall be responsible for the true and proper setting out of the work and for the correctness of the position, elevation and alignment of all parts of the work in accordance with established Town procedures. Using qualified personnel and following accepted engineering practice, the Contractor shall layout, calculate, establish and maintain all lines and grades necessary for the construction of the work, and shall provide such information on the calculations, layout, lines and grades as the Contract Administrator may at any time require.

The Contractor shall provide horizontal and vertical control at uniform offsets, every 20 metres along all tangential sections and every 10 metres along any curvature sections of the work. For roadway construction the Contractor will provide Lines and Grades on both sides of the work being constructed.

The Contract Administrator shall provide basic horizontal and vertical control from which the location of the work may be determined. For horizontal and vertical control this shall comprise of either survey bars and ties sufficient to locate the centreline, or control points and their values sufficient to lay out the work. During the progress of the work the Contractor shall be responsible for notifying the Contract Administrator forthwith of any errors, omissions or inconsistencies in the geometric information and the controls provided by the Town.

The Contractor shall give the Contract Administrator 48 hours notice of the time and place where the Horizontal and Vertical control is required for their use in setting out the work.

All bars, benchmarks and other reference points provided by the Contract Administrator shall be located and identified by the Contract Administrator to the Contractor on the site at the start of the work, and shall be carefully preserved by the Contractor, and in the case of their movement, destruction or removal shall be replaced at the Contractor's expense.

Any work done without lines and levels, or to improperly set grade stakes or without the supervision of an inspector when an inspector is required to be in attendance by the provisions of the contract or by the order of the Contract Administrator, shall not be paid for. Such work may, at the discretion of the Contract Administrator, be ordered removed and replaced by correctly aligned and inspected work at no cost to the Town.

If requested by the Contractor in writing, the Contract Administrator will provide, if available, electronic data to assist the Contractor in laying out the works. The software format and version supplied to the Contractor will be the same version as that used by the Contract Administrator to create the files. The Contractor Administrator will not convert the electronic data between software platforms or versions of the same software platform. The Contractor, in requesting and utilizing any such electronic data, acknowledges and agrees that there may be discrepancies in whole or in part between the electronic data and the Contract Drawings and that it is the Contractor's sole responsibility to ensure that the electronic data is the same. In the event of any discrepancy between the Contract Drawings and the electronic data, the Contract Drawings shall take precedence and govern. Any discrepancies must be reported immediately to the Contract Administrator. Any use or manipulation of any part or parts of the electronic data by any party, including the Contractor, any subcontractor of the Contractor or any party or parties carrying on any work associated with the project on behalf of the Contractor, is at the sole risk and responsibility of the Contractor and neither the Contract Administrator nor the Town of Amherstburg shall be liable in any way to the Contractor based on such.

Any manipulation of any part or parts of the electronic data by any party, including a Contractor, proponent, or any party or parties carrying on any work associated with the project, is at the sole risk and responsibility of such party or parties.

The electronic data provided will normally include but may not be limited to:

- Existing topographic survey
- Survey control points and benchmarks
- Original ground triangulated irregular network (TIN) surface
- Road alignments
- Location of the proposed works
- Road profiles

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment for this item shall be at the unit bid price and shall be full compensation for all equipment, labour and materials required to complete this work in every aspect.

3. CONTRACT BONDING, INSURANCE AND PERMITS
ITEM A3

SCOPE: This item shall include the supply of all required bonds and liability insurance as specified elsewhere in the contract documents.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item. The lump sum price shall cover the Contractor's cost for provision of the Performance/Payment Bonds and Liability Insurance.

PAYMENT: Payment for Contract Bond and Insurance will be made as follows:

- 100% payable on first Payment Certificate

4. TRAFFIC CONTROL & DETOUR ROUTE SIGNING
ITEM A4

SCOPE: This item will include the supply, placement, maintenance, repair and replacement as necessary, and removal of all signs, delineators and barricades necessary to advise the public, control traffic and protect the work area during all stages of construction in accordance with OPSS 706 and the Ontario Traffic Manual, Book 7 Temporary Conditions.

Payment of the contract lump sum price for this item includes the preparation and implementation of the traffic protection plan required under Regulation 145/00 that amends Regulation 213 made under the Occupational Health and Safety Act.

The Contractor shall provide the Engineer with a detailed Construction Sign and Traffic Protection plan as per OTM Book 7 – Temporary Conditions three (3) days prior to the pre-construction meeting. The plan shall include all necessary advisory signs, all detour signs including type, size and location as well as all signs and barricades to limit vehicle and pedestrian traffic during construction.

The Contractor is required to provide a list of Traffic Control Persons and confirm in writing that they have been trained as required under the Occupational Health and Safety Act.

The Contractor shall also barricade the work area to prevent vehicles or pedestrians from gaining access to the work area. Barricades shall be preceded by warning signs and shall be sufficient to prevent an errant vehicle from entering any work area or excavation. Local entrances shall be retained.

The Contractor shall maintain a daily traffic control signing log book complete with photographs.

Reference should also be made to Standard Requirement No. 3 – Protection of Public Traffic.

MEASUREMENT: No measurement will be made for this Lump Sum item.

PAYMENT: Payment for this item shall be made on the appropriate unit price bid in the Schedule of Quantities and shall be compensation in full for all labour, materials and equipment to complete the work as specified herein

5. PRE-CONSTRUCTION PHOTOGRAPHIC SURVEY

ITEM A5

SCOPE: The Contractor shall perform a pre-construction photographic survey of existing facilities, structures, and other improvements that might be damaged by the operations of the Contractor.

An acceptable photographer shall take the photographs at digital image quality of at least 3 Megapixels. Each photograph shall be marked to indicate the date, name of work, and the location where the photograph was taken.

Before construction may start, a digital copy of each pre-construction exposure, complete with all required photographic information, shall be delivered to the Engineer.

Pre-construction photographs shall be taken at an approximate average interval of 20 metres as designated by the Engineer. Photographer shall be equipped at all times to take either interior or exterior exposures.

Prints shall be submitted as a digital photo album, two photos per each 8.5"x11" page, grouped according to street, lateral or line, and in sequence. All files, including the digital photo album and all digital photographs, are to be submitted to the Engineer on a CD or USB storage drive.

All photographs which do not conform to these specifications or which, in the Engineer's estimation, are unsatisfactory shall be re-photographed.

The above photographs are intended for use as indisputable evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and are for the protection of the adjacent property owner, the Contractor, and the Town of Amherstburg, and will be means of determining whether and to what extent damage, resulting from the Contractor's operations, occurred during the contract work.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: The contract lump sum shall include full compensation for furnishing all labour, materials, tools, equipment, and incidentals, and for doing all the work involved in all pre-construction surveys, as specified in these special provisions, and as directed by the Engineer.

6. PROTECTION OF EXISTING UTILITIES AND SERVICES

ITEM A6

SCOPE: The scope of work includes, but is not necessarily limited to, the following:

- The completion of a locate survey to confirm location / presence of all utilities within the limits of Construction.
- The design, supply of materials, installation, maintenance during construction and removal of any and all temporary support systems for existing utilities / services affected as a result of construction operations. The Contractor shall ensure that all temporary support systems (as required) are designed, implemented and maintained to the satisfaction of the Engineer and the applicable authority.

The Contractor is fully and solely responsible for contacting all applicable utilities / service companies which may have utilities / services in the area to obtain locates for such utilities / services. The Contractor shall follow all guidelines, policies and other requirements as may be required by applicable utility / service companies in order to properly and safely remove, protect and reinstate all such utilities / services. The Contractor shall be solely and fully responsible for any and all costs associated with any damage to existing utilities / services or interruption to service.

The information provided below does not excuse the contractor from his duty to perform the necessary locates and contacting any agencies, which may have utilities in the area and providing for their removal, protection and reinstatement.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment at the Contract lump sum price for this item shall be full compensation for all labour, materials and equipment required to complete the work. Contractor shall bear all immediate, subsequent and consequential costs associated with change in the schedule, staging, and methodology of the work.

7. UTILITY CONFLICT INVESTIGATION & EXISTING WATERMAIN LOCATES

ITEM A7

GENERAL: Prior to commencing work, the Contractor shall expose and locate the existing watermains at the proposed watermain connection locations and at a locations as identified by the Engineer along Pickering Drive. The purpose of these investigations is to determine the extent of vertical deflection of the proposed watermain in order to meet minimum vertical and horizontal separation from sewer pipes, structures and watercourses.

Work associated with adjustments to the horizontal and vertical alignment of the proposed watermain are included under a separate provisional item.

The existing piping and utilities have been shown on the drawings as per the best available information. However, it shall be the responsibility of the Contractor to locate the existing infrastructure in the field.

The Contractor shall provide all necessary traffic control during the locates and shall temporarily restore any excavations to the satisfaction of the Engineer and the Corporation. The level of restoration required will depend on the time the location will be left in a disturbed state until the final works are completed.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

8. SAW-CUTTING OF PAVEMENT & CONCRETE, FULL DEPTH ITEM B1

GENERAL: The requirements of OPSS 510 shall apply except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to saw-cut full depth the existing road pavement, sidewalks and driveways, regardless of thickness or pavement composition.

The Contractor will be required to saw-cut to full depth of all existing asphalt and/or concrete roadways, sidewalks and driveways as to ensure a neat and straight edge. Should saw-cuts be damaged by vehicular or construction traffic, re-cutting is to be at the cost of the Contractor.

MEASUREMENT: Measurement for this item shall be per lineal metre of pavement saw-cut, measured in a horizontal plane.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

**9. REMOVAL OF ASPHALT PAVEMENT, FULL DEPTH
ITEM B2**

GENERAL: The requirements of OPSS 510 shall apply except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to excavate, load and haul the existing pavement, within the areas delineated by saw-cutting for the installation of the watermain within the R.O.W. limits.

Regardless of thickness or composition, the contractor shall remove existing asphalt pavement as required for the proposed work and dispose of removed materials off-site at an approved location.

Any additional removals of existing concrete curb and gutter, other than areas shown on the Contract Drawings, shall be considered incidental to this item and no additional payment will be made.

MEASUREMENT: Measurement for this item shall be per square meter of pavement removed and disposed at an appropriate facility.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

**10. REMOVAL OF SIDEWALKS & DRIVEWAYS
ITEM B3**

GENERAL: The requirements of OPSS 510 shall apply except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to remove, load, haul and dispose of concrete sidewalk, concrete and asphalt driveways and parking areas, various thickness (reinforced or not reinforced), including the removal of any excavated material up to a depth of 50mm, or as instructed by the Engineer.

Concrete sidewalk removal shall include placement of Granular 'A' material, which shall be temporarily placed upon removal of concrete and removed prior to compacting base and the new sidewalk construction.

The Contractor will be required to saw-cut to full depth all existing concrete sidewalks and driveways to ensure a neat and straight edge. Any damaged edges shall be repaired by re-cutting and paid at the Contractor's expense. All saw-cutting shall be carried out and compensated under Item B1 Saw-Cutting of Pavement & Concrete, Full Depth.

Extreme care shall be taken when removing concrete sidewalk along existing buildings. Saw-cutting may be required along buildings to safely remove concrete sidewalks

The Contractor shall make every effort to prevent damage to the portion of the sidewalk which is to remain in place. Any damage to sidewalks that are scheduled to remain shall be repaired at the Contractor's expense.

Temporary granular driveways and sidewalk ramps shall be provided during construction for pedestrian and vehicular access to private homes, businesses and through the construction work to streets, where directed by the Engineer. The work shall include the supply and installation of temporary ramping and wooden boardwalks, as necessary, at driveway entrances or at sidewalk ramp locations to allow pedestrian and/or vehicular access to houses and business premises temporarily cut off from normal traffic due to new construction. The unit price bid shall include the removal and disposal of all temporary ramping prior to final asphalt placement.

MEASUREMENT: Measurement for this item shall be per square meter of material removed, regardless of thickness or number of layers.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment, material and tipping fees required to complete the work in every aspect.

11. REMOVAL OF CONCRETE CURB AND GUTTER

ITEM B4

GENERAL: The requirements of OPSS 510 shall apply except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to remove and dispose of concrete curb and gutter (various types), reinforced or not reinforced.

Curb and gutter will be defined to mean all concrete curb and gutter types, curb only and curb and gutter with paved over gutter. The Contractor will be required to saw-cut all existing curb and gutter to ensure a neat and straight edge. All saw-cutting for curb removals shall be included in this item.

The Contractor shall make every effort to prevent damage to the portion of curb and gutter which is to remain in place. Any damaged edges shall be repaired by re-cutting, at the Contractor's expense.

MEASUREMENT: Measurement for this item shall be per lineal meter of concrete curb removed, measured along the gutter line of the existing curb.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every aspect.

12. PAVEMENT MARKING OBLITERATION

ITEM B5

- a) Lines, 100mm wide**
- b) Stop Bars, 600mm wide**

GENERAL: The requirements of OPSS 710 shall apply except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to obliterate existing pavement markings as directed by the Engineer.

The depth of the removal shall be the minimum required to totally remove the existing pavement markings, to a normal depth, typically averaging 3 mm.

Pavement marking obliterating shall be carried out using a soft abrasive blast cleaning system at the Pickering Drive / Sandwich Street intersection as it relates to the new stop bar and crosswalk locations.

The Contractor shall control the operation so that the asphalt pavement is not damaged in any way and to ensure that no pavement marking remains visible upon completion.

The Contractor's operation shall be carried out in accordance with approved methods as specified in OPSS 128, so as to control any dust or effluent generated by the operation.

MEASUREMENT: Measurement for this item shall be per lineal meter of pavement marking obliterated.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every aspect.

13. SUPPLY AND INSTALL PVC DR18 WATERMAIN BY OPEN CUT

ITEM C1

- a) 100mm ϕ
- b) 150mm ϕ
- c) 200mm ϕ
- d) 300mm ϕ

GENERAL: The requirements of OPSS 441 shall apply except as amended or extended herein.

SCOPE: The work under this item shall include without limitation, all labour, material and equipment required for the supply and installation of 100mm diameter and greater watermains in the material, sizes and classes as specified and to the elevations, grades and locations as detailed on the Contract Drawings.

The following shall be included in this item:

- a) Excavation to grade including the disposal of all surplus materials off site at a location arranged and paid for by the Contractor.
- b) Dewatering inside and outside of all trenches including provision of erosion control measures.
- c) Supply and installation of all pipe, fittings, bends, adapters, reducers, sleeves, joint restraints, corrosion protection, thrust blocks, etc. All fittings, valves and hydrants shall have mechanically restrained joints. All fittings shall be mechanical joints and pressure rated to 1035 kPa.
- d) PVC pipe that does not allow joint deflection shall not be permitted.
- e) Granular bedding material shall be clean graded sand, as per Town standards. All sand bedding shall be thoroughly rammed into place and tamped by hand. Materials used for bedding shall be supplied and installed by the Contractor and the cost for the bedding shall be included in the Tender Price for supplying and installing the Watermain pipe.
- f) Backfill material under roadways shall be Granular 'A' placed in 300mm thick lifts, with each lift uniformly compacted to 100% Standard Proctor Maximum Dry Density.
- g) Backfill material outside of the roadway to be approved by the Engineer or the Town's Representative and shall be clear of stone, rocks, concrete, asphalt and all other foreign material. Backfill shall be placed in 300mm thick lifts, with each lift uniformly compacted to at least 95% Standard Proctor Maximum Dry Density or as directed by the Engineer.
- h) Backfill to subgrade level with select subgrade material as per OPSS.MUNI 1010. The cost for the backfilling operations, including materials and labour, shall be included in the Tender Price for supplying and installing the Watermain pipe.
- i) Supply and install a tracer wire along the total length of the Water Distribution System. Tracer wire shall be 12 gauge TWH multi-strand copper and shall be fastened to the main at suitable intervals to prevent separation of the wire and the main. The wire should be attached to the main according to the pipe manufacturer's recommendations. Wire shall be spiced together using DryConn Waterproof

Connectors, specifically DryConn King 6 Blue Connectors with silicone sealant. Tracer wire shall be brought to the surface in PVC conduit at each hydrant.

- j) No existing watermain or valve shall be operated by the Contractor.
- k) The Contractor shall notify all businesses and property owners 48 hours prior to plant disruption and shall ensure that these properties and businesses are inconvenienced as little as possible.
- l) Temporary and permanent support of all services along or across trenches shall be ensured by the Contractor.
- m) Unless otherwise noted, it is intended that the existing watermain and services remain operational until the proposed/temporary watermain is in service. The Contractor shall be responsible for all work and costs to repair, maintain and keep the existing watermain and services operational or to otherwise install, connect, operate, test and maintain a temporary water system which will provide water to the ratepayers on the street. System to be tested as per Provincial requirements and protocols.
- n) All water services are to be connected to the watermain using double-bolt stainless steel service saddles.

Excavation and Trench Preparation

The trench shall be excavated to the alignment and depth shown on the Contract Drawings. The trench shall not be opened for a length greater than 50m, unless permitted by the Engineer. The trench bottom shall be smooth and free of large stones, dirt clods and frozen material. Excavation for bells shall be made so the pipe is uniformly supported along its length.

A hydro-vac truck must be present on-site during all excavation near existing utilities and shall be utilized to locate all tile laterals, buried electrical power, gas lines, or any other existing utility prior to excavation, or as directed by the Engineer on site.

The width of the trench and bracing shall meet requirements of the Occupational Health & Safety and be sufficient to permit the pipe to be laid and joined properly, and the backfill to be placed and compacted.

Excavation shall include removal of asphalt deposits, hard pan, frost, boulders, rock concrete, quicksand, ice or any obstacles found in the trench. Removal of asphalt road surface shall be covered under a separate item listed in the Contract Documents. Excavated material not required for backfill shall be placed directly onto trucks for disposal. Material shall not be placed on the roadways.

Backfilling operations are to follow immediately behind watermain installation. Backfilling shall not commence before the Engineer or Town's Representative has inspected the watermain pipe installation. If backfilling has commenced prior to inspection, the Contractor shall re-excavate and expose the watermain for inspection at the Contractor's expense.

Excavations shall be kept free of water while backfilling is in progress. If necessary in the opinion of the Engineer, sheeting and shoring shall be withdrawn progressively as the backfill is brought up, rather than being completely removed prior to backfilling.

Backfill must be carefully placed and not pushed directly onto the pipe.

Backfill shall be bladed down the end of the trench so that the backfill material rolls into the trench. The trench shall be filled evenly to prevent the displacement of the pipe. The open end of the pipe shall be suitably protected to prevent foreign material from entering the pipe.

Removal and Replacement of Unsuitable Materials:

If unsuitable materials such as silt, clay, muskeg or rock is encountered in any part of the trench bottom and is considered unsatisfactory by the Engineer for the support of the pipe, the Contractor shall make further excavations as may be required and shall backfill the extra excavation with suitable compacted material.

Disturbance to sub-grade resulting from the Contractor's failure to completely dewater the trench shall be the Contractor's responsibility.

If unsuitable soils are encountered in the trench bottom, the Contractor may be required to install filter fabric between the trench bottom and the bedding. The fabric shall have Equivalent Opening Size equal to Standard Sieve No. 70 (0.2mm or 0.008 inches).

Installation and Setting Out

Watermains shall be laid out to the lines shown on the Contract Drawings and/or 1.70m minimum cover to finished grade. Pipe shall not deviate from line or grade by more than 75mm unless otherwise approved by the Engineer. Deflection of the watermain to achieve elevations on the Contract Drawings will require mechanical joints in all cases unless otherwise noted on the Contract Drawings.

The Contractor shall take such precautions as are necessary to prevent foreign material from entering the pipe. If the Engineer is not satisfied that this requirement is being met, they may require that before lowering the pipe into the trench, a heavy tightly-woven canvas bag be placed over each end of the pipe and shall only be removed immediately prior to connection of adjacent pipes.

The outside of the pipe spigot and the inside of the bell shall be wiped clean and dry and free from oil and grease before the pipe is laid.

As each length of pipe is placed in the trench, the spigot end shall be centered in the bell and the pipe forced home using a bar and block and brought to correct line and grade. The pipe shall be secured in place with approved backfill material tamped under it, except at the bells. Precautions shall be taken to prevent dirt from entering the joint space.

Pipe shall be laid with bell ends facing the direction of laying.

All pipe, fittings and valves shall be carefully lowered into the trench piece by piece in such a manner as to prevent damage to watermain materials and protective coatings and linings. Under no circumstances shall watermain materials be dropped and dumped into the trench.

If damage occurs to any pipe, fittings, valves or watermain accessories in handling, the damaged items shall be removed and replaced at the Contractor's expense.

At times when pipe laying is not in progress, the open ends of the pipe shall be closed by a watertight plug approved by the Engineer. If water is in the trench, the seal shall remain in place until the trench is pumped completely dry.

The cutting of pipe for inserting valves, fittings or closure pieces shall be done in a neat and workmanlike manner without damages to the pipe so as to leave a smooth end at right angles to the axis of the pipe.

When crossing over or under sewers and culverts, a full pipe must be used so that joints are a maximum distance away from the sewers and culverts (minimum of 0.5m separation required).

Tracer Wire

All pipe shall include tracer wire. Tracer wire shall be 12 gauge TWH multi-strand copper wire. Splices shall be accomplished using manufactured connectors completely encased with Dryconn King 8 Blue Waterproof Connectors with silicone sealant, or approved equal.

Tracer wire shall be fastened to the main at suitable intervals to prevent separation of the wire and the new watermain and services. Wire shall be continuous up and through all mainline valve boxes (including fire hydrant valves) and shall be rolled into a coil immediately below the valve box caps.

Bending and Joint Deflection

Wherever it is necessary to deflect the pipe from the straight line, the pipe may be curved in accordance with the Manufacturer's recommendations. Deflection of the pipe at the joint shall also be in accordance with the Manufacturer's recommendations. Bending of pipe materials may not be combined with joint deflection to achieve required curvature.

Utility Supports

The Contractor shall construct permanent utility supports as detailed on the Contract Drawings or as required by the respective Utility Companies. Permanent utility supports for

utilities shown on the Contract Drawings, constructed in accordance with the Contract Drawings shall be considered incidental to the completion of the Contract.

No payment shall be made for supports for utilities either permanent or temporary if required by the Engineer or the Utility Company. The Contractor shall have any existing signs and guy wires which conflict with the location of the proposed work removed and relocated by the respective Road Authorities and Utility Companies at their expense.

Mail boxes to be reinstated at the correct elevation and offset as approved by Canada Post.

MEASUREMENT: Measurement for this item shall be made horizontally, straight through fittings on a lineal metre basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every aspect.

14. WATER SERVICE CONNECTIONS **ITEM C2 – 50mm, Long (>10m)**

GENERAL: The requirements of OPSS 441 shall apply except as amended or extended herein.

SCOPE: All water service connections to the proposed watermain shall be replaced by extending a new service line by tapping new watermain using double-bolt stainless steel service saddles, extending the service line to a new curb stop and curb box located at the property line. This work shall include connection to the existing water service using fittings as required. The Contractor's tender price for all such connections shall include the cost of supplying each service with cocks, tees or saddles, curb stops, and shut-off boxes, together with all necessary labour for tapping the main (the Town will perform the tap on the watermain where saddles are placed and the cost for such work will be billed to the contractor), excavating, pipe laying and sand backfilling or punching under pavements where applicable.

Private water service connections to the proposed watermain are not to be made until after the watermain has been tested, chlorinated and accepted for service. Service connections not made "in the dry", must be performed by the Town's Representative.

Existing services shall be abandoned by closing the existing main stop. Abandonment of existing mainstop must be verified by a Town of Amherstburg representative or designate.

The Contractor may install water services by directional drill or by open cutting, provided that minimal disturbance to private property is considered.

Restoration, if required, of all areas on private property disturbed by the Contractor for the installation of water service connections shall be considered part of this item.

Restoration of curb and gutter, sidewalks, asphalt roadway, boulevard landscaping, etc. within the Right-of-Way shall be paid for under separate items.

All private service connections shall have a suitable corporation main cock, prefabricated PVC tee (in new mains) or teck stainless steel 304, 18 gauge double bolt service saddles with AWWA taper (CC) outlet thread (on existing mains), curb stop, and cast-iron shut-off box with screw-type cap.

All corporation stop inlet threads shall be wrapped with 3 or 4 wraps of Teflon pipe thread tape. Connections shall be lead free compression type for all copper services.

All brass, including ball, in contact with potable water will be heavy wall design made of No Lead material as defined in Section 4 of current C800 specifications. Threading and tolerances will be in accordance with the latest revisions of AWWA C800 specifications. Parts not in contact with potable water may be made of other material suited for buried water services as specified in AWWA C800.

All ball valves, couplings and adaptors shall be pressure rated for 300psi. All fittings will have a lifetime guarantee against lead leachate from the casting. All ball valves will be leak tested in the open and closed position. Non Lead fittings will be Cambridge Brass or approved equal.

Curb boxes shall be D1 #7 or A726-#7 adjustable for 1.5m to 1.8m bury complete with T4 36" or 35" type 304 stainless steel rods.

Water service lines (19mm) shall be Type "K" soft copper conforming to ASTM B.88. Curb boxes must be supplied and installed to provide for a minimum of 150mm adjustment above and below finished grade. The copper service running from the main to the property line curb stop shall be one continuous piece of service pipe. Service pipe connection to the corporation stop shall be bent to form a proper "gooseneck" and tapped into the proposed watermain at the 2 o'clock position.

Water service lines (50mm) shall be Polyethylene (PE) pressure tubing conforming to Series 160 Potable pipe or PE2306, CSA Certified and to AWWA C800-89.

- Main Stop shall be Cambridge Brass 301NL-A7H7 (50 mm)
- Curb Stops shall be Cambridge Brass 202HL-H7H7 (50 mm).

Service pipe shall have a minimum of 1.70m of cover from final grade.

MEASUREMENT: Measurement for this item shall be made per each service supplied and installed complete.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to supply and install the private water services at locations indicated on the Contract Drawings, connection to the watermain and existing live services, excavation, backfill, compaction, fittings, flushing, boring, saddles, curb and main stops, curb boxes, abandonment of old service as per Contract Drawings and complete restoration of private property disturbed by the Contractor.

15. APPURTENANCES

ITEM C3

- a) Gate Valves, 100mm Dia.
- b) Gate Valves, 150mm Dia.
- c) Gate Valves, 200mm Dia.
- d) Gate Valves, 300mm Dia.
- e) Tee, 200x200x150mm Dia.
- f) Tee, 300x300x100mm Dia.
- g) Tee, 300x300x150mm Dia.
- h) Tee, 300x300x200mm Dia.
- i) Fire Hydrant Sets (Including Valve and Lead)
- j) Reducers (300-200)
- k) Tapping Sleeve & Valve, 150mm Dia.
- l) Tapping Sleeve & Valve, 300mm Dia.

GENERAL: The requirements of OPSS 441 and 1010 shall apply except as amended or extended herein.

SCOPE: The Contractor shall furnish all labour, equipment and materials required for the installation of all appurtenances (including valves, bends, tees, hydrants and markers) and accessories as shown on the Contract Drawings. The Contractor shall excavate the trenches to the required dimensions; sheet, brace and support the adjoining ground of structures where necessary; handle all drainage and groundwater; lay and test the pipe. The Contractor shall backfill and compact trenches and pits in accordance with the Contract Drawings, and complete restoration.

Material:

- Fittings for 100, 150 and 200mm PVC pipe shall be injection moulded, colour coded blue with push-on gasketed joints conforming to AWWA C907 and be certified by the Canadian Standards Association to CSA B137.2. Injection moulded fittings shall be produced from 400 psi HOB compound as manufactured by IPEX Inc. or approved equal by the Town of Amherstburg in writing.
- Fittings for 250mm and larger PVC pipe shall be fabricated from PVC pipe, colour coded blue and certified by the Canadian Standards Association to CSA B137.3 as

manufactured by Ipex Inc. or approved equal. Fittings 250mm and 300mm shall be manufactured from segments of AWWA C900 PVC pipe, bonded together and overwrapped with fibreglass-reinforced polyester to meet the requirements of the standard.

- Gate valves shall be Canada Valve "Darling" 55 N.R.S. with split wedge, push on, non-rising stem or approved equal by the Town of Amherstburg in writing.
- All valves shall be in accordance with current AWWA C-500, Class 200W and shall be:
 - Iron body bronze mounted;
 - Inside screw type with non-rising spindle;
 - Suitable for 1.38 MPa (200 psi) cold water working pressure;
 - Direction of opening to be counter-clockwise (black top);
 - 50mm square nut (unless noted otherwise);
 - Mechanical joint ends;
 - Valve top attached to the main body by 4 bolts.
- Fire hydrants
 - shall conform to AWWA C502-64 and shall have Storz connectors;
 - 150mm Canada Valve Century Hydrant by Mueller is approved;
 - 150mm mechanical joint;
 - Draining type;
 - Two hose and one pumper connection, CSA Standard;
 - Each hydrant shall be complete with anchor tee, shut-off valve and box.
- Joint Restraints:
 - Uniflange Series 1300-C, conforming to Unibell PVC Pipe Associations Specification UNI-B-13-92 or equal. Pressure rating equal to the pipe to which they are attached. The Contractor shall provide a restraint drawing completed by the pipe manufacturer showing the location and number of all the restraints in the system.

Procedures

All appurtenances shall be placed on 150mm compacted Granular 'A' material, and shall be rodded to the watermain. All mechanical connections shall be rodded (2 rods/connection) through valves, bends, tees and hydrants and shall include sacrificial nuts, one for each bolt. All thrust rodding shall be 19mm diameter (3/4 inch) hot dipped galvanized steel threaded rods. Hydrants shall be anchored to the valve and tee using stainless steel rods (minimum 19mm diameter) to permit the removal of the hydrant without "shutting down" the watermain.

Valves and Valve Boxes:

The Contractor will be required to furnish and place in position where shown on the drawings or as may be directed by the Developer's Engineer or the Town's Representative, gate valves and to properly install screw-type or auger-type, cast-iron, valve boxes where the same are required. All valve boxes shall be fitted with a two-finger hold lid. The top of the valve box must be set flush with the finished grade or the proposed finished grade of the road.

Valve boxes shall be three pieces, cast-iron boxes equal to Canada Valve Pattern No. 1321, three piece screw-type boxes with No. 6 round boxes or equal. Two piece valve boxes WILL NOT be accepted. Valve boxes shall be set so that the tops are flush with the existing ground level or as directed by the Developer's Engineer or the Town's Representative at the time of construction. Valves installed at a depth greater than 1.70 metres shall be equipped with an operating rod extension.

Tracer wire shall be run on the outside of the valve box. A small hole shall be supplied in the valve box approx. 75mm from the top for the wire to enter the valve box.

Hydrants

The Contractor shall install compression type hydrants without frost jackets. Each hydrant shall have two (2) 65 mm fire hose nozzles, with one Storz Pumper Connection. Hydrants shall be minimum of 1.70 m bury and shall be in accordance with A.W.W.A. Specifications C502. All fire hose nozzles shall be fitted with C.S.A. standard threads. Storz nozzle to be bronze to ASTM B584, nozzle cap to be cast iron and painted black.

Hydrants shall be Mueller "Century" fire hydrants (or approved equal), with push-on base and plugged drain holes. All hydrants shall open to the left, i.e. counter clockwise. All hydrants shall be shop painted #2 Yellow.

The Contractor shall connect all hydrants to the main using 150 mm diameter pipe of the same type as used for the watermain. A 150 mm diameter valve and box shall be placed on the hydrant connection between the main and the hydrant. The "stub" pipe between the hydrant and the valve is to have a 450mm length where possible. Care must be taken to have all valves and hydrants plumb. The Contractor shall also place rodding between the hydrant and valve, and the valve and tee. Hydrants shall be located in a position as shown on the drawings or as directed by the Developer's Engineer or the Town's Representative. Granular "A" material, shall be placed around the base of the hydrant in the amount sufficient, in the opinion of the Developer's Engineer or the Town's Representative. Valves, fittings and 150 mm pipe connections for the hydrants shall conform to the provisions of the appropriate clauses of this specification. Hydrants shall be set so that the bottom of the ground line flange is 100 mm above final grade at hydrant barrel.

The cost of the porous material, the rodding, the 150 mm valve and box, the 150 mm diameter hydrant connection and the fitting on the main as well as all labour and other materials required to install the hydrant shall be included in the Contractor's unit price for hydrants.

Tapping Sleeves and Tapping Valves

Tapping sleeves and valves shall be used when new pipe is being connected into the existing distribution system. Tapping sleeves shall be Mueller #H615 M.J. type for cast-iron or Ductile Iron watermain and Robar #1606 for PVC pipe. Tapping sleeves shall be grouted as per the manufacture's recommendations.

Tapping valves shall be Mueller #H686 double disc tapping valve or Mueller #H687 resilient seal tapping valve opening counter clockwise.

Storage and Handling of Materials

All materials shall be stored and handled by the Contractor at his own expense. He shall be responsible for the safe storage of all materials, for obtaining storage areas, for the safe transportation and distribution of the materials at the job site and their inspection to determine defects and breakage. No additional recompense will be allowed to the Contractor for any loss incurred by him in the storage and handling of the materials.

Pipe, fittings, valves, hydrants and all accessories and appurtenances must be loaded and unloaded by lifting with means of a hoist or skidding so as to avoid shock or damage. Chains shall not be used for lifting watermain pipe, hydrants or fittings, only certified nylon slings will be approved for this exercise. Under no circumstances shall any watermain materials or materials for watermain appurtenances be dropped. Pipe handled on skidways shall not be skidded or rolled against pipe already on the ground.

MEASUREMENT: Measurement for this item shall be made per each unit supplied and installed complete.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

16. FLUSHING, TESTING AND DISINFECTING OF WATERMAINS ITEM C4

GENERAL: Disinfection, testing, swabbing, flushing and connection of the watermain shall be conducted in accordance with AWWA C651-14 Standard for Disinfecting Watermains, Town of Amherstburg standards, and OPSS 441, as amended or extended herein.

SCOPE: The Contractor shall furnish all labour, equipment and materials required for flushing, testing and disinfecting all watermains in accordance with the Town's procedures. The Town Representative shall be notified at least 24 hours in advance of the proposed date on which disinfection operations are to commence. Prior to testing the Town of Amherstburg Representative will inspect all water valves and hydrants. During this inspection, each and

every valve will be checked using the proper valve operating key. Each valve must be fully opened or closed as required.

The Contractor shall take due precaution during the chlorination testing, charging and flushing of the watermains so as not to cause contamination to the Town's distribution system, including the temporary supply of a certified backflow prevention device. The Contractor shall take all necessary precautions to prevent freezing of all exposed mains and laterals. The Contractor shall provide a certified back-flow device for all connections to hydrants. The unit price bid shall be deemed to have made due allowance for these requirements.

Watermains shall be flushed in a sequence and in accordance with the procedure set out by the Town of Amherstburg. The Town Representative may permit or require the flushing to be carried out in stages as sections of the system are completed. No unsuitable matter shall be allowed to enter the sections which have been flushed.

Flushing, disinfection and pressure testing of watermains shall be in strict accordance with following Town of Amherstburg procedures:

1. The Town of Amherstburg Public Works Department will perform all testing required to commission the watermain.
2. At no time shall any person other than a Town of Amherstburg Public Works Representative operate any valve on the Town of Amherstburg water distribution system.
3. At no time shall any person other than a Town of Amherstburg Public Works Representative operate or use any fire hydrant on the Town of Amherstburg water distribution system.
4. The Contractor shall provide a sketch to the Town of Amherstburg Public Works Department before testing is to begin.
5. All water samples shall be taken and delivered to an accredited laboratory by the Town of Amherstburg Public Works Department

All regulatory requirements are to be followed when commissioning newly installed watermains, and in addition the following procedures shall be followed and supervised by a Town of Amherstburg Public Works Representative:

- a) Newly installed mains shall be swabbed and flushed using two swabs, or less at the discretion of the Town Representative, until water runs clear;
- b) Any new sections of watermain are then to be chlorinated and chlorine is to remain in the new section for 24 hours;
- c) The new section is then to be entirely re-flushed and a sample(s) are to be taken (as per Town direction);
- d) After 24 hours the new section is to be flushed again and a second sample is to be taken;

- e) Both the above samples have to pass all necessary requirements before pressure testing can occur. There must be two (2) consecutive passed samples before pressure testing;
- f) Subject to the completion of successful sampling, pressure testing can occur. The new section will be tested to a minimum of 1035 kPa (150 psi) for a minimum period of two (2) hours, or at the Town's discretion;
- g) After successful completion of (e) and (f) above, the Town of Amherstburg will allow connection to the water distribution system.
- h) Contractors shall install services on new watermain sections after commissioning the new sections.
- i) The Town of Amherstburg reserves the right to amend any or all of the above procedures at any time should it be deemed necessary in order to ensure the safety of the potable water system.

The Contractor shall supply all necessary materials for the chlorination and the de-chlorination including all hoses, chlorine and sodium thiosulfate and all other materials used to carry out this work. Amounts and types shall be as per the direction of the Town. All hoses shall be free of leaks.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment for this item shall be at the lump sum price tendered and shall be full compensation for all labour, equipment and materials necessary to complete the work. All labour, materials and service costs associated with retesting, water samples or pressure, due to failure as set out above, will be charged to the Contractor.

17. CONNECT TO EXISTING WATERMAINS

ITEM C5

- a) To existing 300mm dia. Watermain at Dalhousie St.
- b) To existing 300mm dia. Watermain at Sandwich St. (West)
- c) To existing 300mm dia. Watermain at Sandwich St. (East)
- d) To existing 150mm dia. Watermain at King St. (North)
- e) To existing 150mm dia. Watermain at King St. (South)
- f) To existing 150mm dia. Watermain at King St. (To Existing, Temp)
- g) To existing 150mm dia. Watermain Service at 401 Pickering Dr.
- h) To existing 150mm dia. Watermain Service at 400 Sandwich St.
- i) To existing 150mm dia. Watermain Service at 100 Pickering Dr.
- j) To existing 200mm dia. Watermain Service at 400 Sandwich St.
- k) To existing 150mm dia. Watermain Service at 124 Pickering Dr.
- l) To existing 200mm dia. Watermain Service at 130 Pickering Dr.
- m) To existing 200mm dia. Watermain Service at 400 Sandwich St.
- n) To existing 100mm dia. Watermain Service at 400 Sandwich St.
- o) To existing 150mm dia. Watermain Service at 380 Sandwich St.
- p) To existing 150mm dia. Watermain Service at 197 Pickering Dr.
- q) To existing 300mm dia. Watermain at King St. (Existing)

GENERAL: The requirements of OPSS 441 shall apply except as amended or extended herein

SCOPE: The unit price for this item shall be full compensation for all labour, equipment and material necessary to cut the existing watermain and services and connect to the new watermain and services including: removal of existing fitting and restraints, excavation, dewatering, trench support and protection of existing utilities where necessary in accordance with the Special Provisions herein. The prices shall include all necessary bends, adaptors, fittings, corrosion protections, restraints etc. for the complete watermain installation.

Only after the tested watermain has passed all chlorine residual and bacteriological requirements and has been approved for service by the Town of Amherstburg, shall the watermain be connected to the existing distribution system. After the final connection, the watermain shall be re-pressurized by the existing system as soon as possible after the final connection has been made.

Shut down time for the existing water supply shall be minimized, and where necessary shall be done for a maximum of four (4) hours. The Contractor shall coordinate disconnections and tie-ins greater than or equal to 100mm with the Town, the Engineer and the affected property owner so that service reconnections are performed during relevant "off peak" hours. The Contractor shall provide the Town of Amherstburg with a minimum of three (3) working days advance notice of the final connection to determine if any special measures must be taken and/or an appropriately licensed operating authority employee is required to oversee the works. The Contractor will be liable for all cost associated with call outs of Town staff if the Contractor fails to notify the Town that the connection will not take place. Operation of existing valves shall be by Town staff only.

The Contractor is required to notify the Town of Amherstburg and affected water customers in writing two (2) working days prior to any water supply interruptions.

The Town of Amherstburg will provide the door hangers which the Contractor will be responsible to deliver to those residences affected by the service interruption.

Town staff shall be present to witness the entire final connection process of the new watermain to the existing water distribution system.

The Contractor shall disinfect the connection watermain following the procedures for connections equal to or less than one pipe length and Connections greater than one pipe length as outlined in AWWA C651-14 section 4.6. Should the Contractor find it necessary to deviate from the protocol outlined in AWWA C651-14, the Contractor shall submit a Connection Plan to the Town of Amherstburg for review and approval. The Town of Amherstburg at their discretion may require the Contractor to flush water through a nearby fire hydrant to remove water with elevated residual.

The Contractor shall also dewater the trench in a controlled manner to not allow backflow into watermains by using all means possible. If trench water, dirt or debris has entered the watermain during the final connection, the watermain shall be aggressively flushed and additional bacteriological samples (associated costs to be borne by the Contractor) shall be taken as directed by the Town of Amherstburg.

The Town of Amherstburg will request the Contractor to submit written procedures for completing the final connection, including the method of dewatering to ensure the existing or new water distribution system is not contaminated.

The Contractor shall note that mechanical thrust restraints must be used where necessary. No additional payment will be made for dealing with thrust control devices.

The Contractor shall inform himself of the exact location, size, depth and material type of the existing watermain prior to making the final connections. No additional payment will be made for down time associated with obtaining proper fittings for the connection.

The Contractor shall note that the location of the existing watermain shown on the Contract Drawings is based on the best available information and that actual field conditions may vary. Should the field conditions, in the opinion of the Engineer, require significant additional work for alignment of the proposed watermain and connection to the existing watermain, the additional labour, materials and equipment may be paid under the contingency allowance.

MEASUREMENT: Measurement for payment shall be per connection to the watermain and shall include all bends, adaptors, fittings, corrosion protection, restraints etc. for the complete watermain installation.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

**18. ABANDON EXISTING WATERMAIN
ITEM C6**

GENERAL: The provisions of OPSS 510 shall apply except as amended or extended herein.

SCOPE: The Contractor shall abandon and/or remove the old watermain after the new watermain is in service.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment for this item shall be at the lump sum price tendered and shall be full compensation for all labour, equipment and materials necessary to complete the work.

**19. SUPPLY AND PLACE HOT MIX ASPHALT
ITEM D1**

- a) HMA - HL-3 Surface Course (40mm)
- b) HMA - HL-4 Base Course (50mm)

GENERAL: Hot mix asphalt (HMA) shall be completed in accordance with OPSS 310 and OPSS 1150 except as indicated otherwise in this section.

SCOPE: This work consists of all labour, equipment and materials required to supply, haul, place and compact hot mix asphalt material for the road as specified on the Contract Drawings.

Asphalt cement shall be PGAC 58 28 as per OPSS 1101. Allowable RAP percentages shall be in accordance with OPSS 1150.

The Contractor shall provide the mix design for the asphalt to the Engineer for review, at least 2 weeks prior to placing asphalt. Asphalt mix design shall be as per OPSS 1150.04.02.

The paver shall be equipped with automatic screed controls recommended or supplied by the manufacturer of the paver, for the control of longitudinal and transverse slope and joint matching.

The automatic control device shall be capable of being operated from either side of the paver. These requirements do not apply where in the opinion of the Engineer the use of the automatic screed controls is impractical.

Machine laid patches or padding shall be required at the discretion of the Engineer and shall be included in the contract unit price for the material so used and no additional payment will be made for such work.

MEASUREMENT: Measurement for this item shall be per tonnes of asphalt supplied, placed and compacted, calculated from weight tickets received on the job site.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

20. HAND-LAID ASPHALT PLACEMENT

ITEM D2

- a) **HMA - HL-3 Surface Course (40mm)**
- b) **HMA - HL-4 Base Course (50mm)**

SCOPE: This item shall be used in asphalt replacement areas that are not large enough for the asphalt to be laid by machine paver.

The specification for the type of asphalt to be hand-laid shall be as specified in SP19, Item D1, Supply and Place Hot Mix Asphalt.

MEASUREMENT: Measurement for this item shall be per square metre of HMA material supplied, hand placed and compacted for roadway.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

The cost of any additional QA grade checks on the recertified area shall be the responsibility of the Contractor. All grading carried out by the Contractor as a result of QA grade checks to ensure tolerances shall be carried out at no additional charge to the Owner.

21. ADJUST EXISTING APPURTENANCES / STRUCTURES

ITEM D3

GENERAL: OPSS 408 shall apply and govern except as amended or extended herein.

Scope: This work consists of all labour, equipment and materials for the adjustment of existing appurtenances and structures to proposed final grade. The Contractor is advised that existing storm and sanitary structures are to remain in place within the limits of road reconstruction. These structures are generally precast concrete structures and may require adjustment to match to proposed grade. This can include removal, adjustment and

replacement of the existing maintenance hole top and/or riser in order to match to proposed grade and provide space for castings and a new concrete cap to support the cast iron frame. In all cases, the existing concrete or brick adjustment section will be replaced. In certain locations the structure may require an additional riser to make the required adjustment.

The Contractor's price for adjusting existing sanitary and storm structures shall include removal of existing adjustment section, saw cutting as necessary, disposal of removed material, and reinforced concrete cap where applicable.

MEASUREMENT: Measurement for this item shall be made per each unit adjusted.

PAYMENT: Payment for this item shall be made on the appropriate unit price bid in the Schedule of Quantities and shall be compensation in full for all labour, materials and equipment to complete the work as specified herein.

The Contractor is not entitled to payment for Provisional Items, except for additional work required or requested, approved by the Contract Administrator and completed in accordance with the Contract Documents and then only to the extent of such additional work.

22. GRANULAR 'A'

ITEM D5

- a) Additional Road Base Material**
- b) Road Base in Trenches**
- c) Driveways, Sidewalks, and Curb and Gutter**

GENERAL: OPSS 314 and 501 shall apply and govern except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to supply, haul, place and compact Granular 'A' material for the road, curb and gutter, driveways and concrete sidewalks, including the application of water to aid in compaction.

Road base (additional material):

- i) Granular 'A' for road base shall be supplied and installed as required to build up unsuitable base material as directed by the Contract Administrator. The granular material shall be supplied, placed and compacted (to 100% standard proctor maximum dry density) in lifts no greater than 300mm.
- ii) Temporary "over-building" with Granular 'A' may be required in order to provide a sufficient base to protect the subgrade from damage resulting from construction traffic.

Concrete and Asphalt Driveways:

- i. Granular 'A' bedding shall be used under all concrete and asphalt driveways. The granular material shall be supplied, placed and compacted (to 98% maximum dry density) in lifts as specified in the Contract Drawings.
- ii. All new concrete and asphalt driveways shall be placed on a minimum of 150mm and 300mm, respectively, of compacted Granular 'A'.

Concrete Sidewalks and Curb and Gutter:

- i. Granular 'A' bedding shall be used under all concrete sidewalks and concrete curb and gutter. The granular material shall be supplied, placed and compacted (to 98% maximum dry density) in lifts as specified in the Contract Drawings.
- ii. All new concrete sidewalks shall be placed on a minimum of 150mm of compacted Granular 'A'.
- iii. All new concrete curb and gutter shall be placed on a minimum of 65mm of compacted Granular 'A'.

Materials:

Granular 'A' material shall conform to OPSS 1010 and shall not contain any recycled material (i.e., recycled concrete material, etc.). In no case shall any materials be placed in the roadbed until it has been tested.

The Contractor shall be responsible for arranging for and carrying out quality assurance testing of granular material and for obtaining, delivery and testing samples for field compaction during placement.

The testing work shall include:

- Granular gradation samples and tests (unless the pit can provide adequate documented evidence of current or recent material-tests).
- Standard or modified Proctor tests to establish compaction targets.
- Nuclear density compaction testing during placement.

Non-conforming material that has been incorporated into the Work shall be removed and replaced with conforming material, or subjected to a payment reduction, as determined by the Contract Administrator.

MEASUREMENT: Measurement for this item shall be per tonne of Granular 'A' material supplied, placed and compacted for roadway, curb and gutter, sidewalks and driveways, calculated from weight tickets received on the job site.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

The cost of any additional QA grade checks on the recertified area shall be the responsibility of the Contractor. All grading carried out by the Contractor as a result of QA grade checks to ensure tolerances shall be carried out at no additional charge to the Owner.

23. TACK COAT ITEM D6

GENERAL: These items shall conform to OPSS 310 except as amended herein.

SCOPE: This work consists of all labour, equipment and materials required to place tack coat on asphalt horizontal surfaces and joint vertical surfaces.

Tack coat is required on the surface of the asphalt base course prior to placement of the asphalt surface course. Tack shall be applied to vertical surfaces at which joints are made, with a thin uniform and continuous coating.

MEASUREMENT: Measurement for this item shall be per square metre of tack coat provided and installed, measured in a horizontal plane.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect, including sweeping the existing surface, and supply and placement of the tack coat.

24. LAP JOINT ITEM D7

SCOPE: At all locations where new asphalt ties into existing, the Contractor shall mill the existing surface course asphalt for a 300 mm width by 40mm depth and tack coat the milled surface prior to placing the surface course asphalt. Disposal of all milled materials shall be included in the item unit price and shall conform to OPSS 510.

MEASUREMENT: Measurement for this item shall be per linear metre of milled joint, measured in a horizontal plane.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

25. CONCRETE SIDEWALK ITEM D8

GENERAL: OPSS 351 and 1350 shall apply and govern except as amended or extended herein.

SCOPE: Sidewalk restoration work consists of all labour, equipment and materials required to restore sidewalk and sidewalk through driveways as shown on the Contract Drawings, or as directed by the Engineer. This work includes expansion joint material, formwork, concrete, finishing and surface sealing.

Sidewalks are to be constructed as per Town's Standards with a thickness of 100 mm for private lead sidewalks, 125 mm for standard sidewalk, 150 mm through residential driveways and 200 mm through all commercial/industrial driveways. Granular 'A' bedding shall be used under all sidewalks, unless otherwise directed by the Engineer.

All existing sidewalks being replaced, if found not to either have sufficient or no existing granular base material shall require the placement of either a minimum 50 mm leveling course of Granular 'A' material or additional Granular 'A' material as directed and approved by the Engineer. Supply, place and compact granular base courses under forms to 100% Standard Proctor Density.

Supply test certificates in accordance with the appropriate specifications for concrete. Provide mix designs for concrete at least two weeks prior to use.

Portland Cement Concrete shall be produced in accordance with CSA-A23. Concrete shall comply with the requirements of OPSS 1350 and the following specific requirements:

Cement Type:	Portland Cement
Class of Concrete:	32 MPa at 28 days
Class of Exposure:	C-2
Course of Aggregate:	19 mm nominal max. size
Air Content:	6.5% + 1.5%
Slump at point of discharge:	80 mm +/- 30mm
Maximum water/cementing materials ratio:	0.45

All sidewalk abutting retaining curb and existing buildings shall have expansion joint filler to ASTM D1751. Work around poles, valves, etc. shall be to OPSD 310.040.

The Contractor shall be responsible for the protection of the concrete surfaces against vandalism or temperature changes that may occur during the curing period. Any deficiencies, graffiti, etc., will be removed and replaced at the Contractor's expense.

MEASUREMENT: Measurement for sidewalk restoration shall be per square metre of sidewalk and sidewalk through driveways provided and installed, measured in a horizontal plane.

26. CONCRETE CURB AND GUTTER ITEM D9

GENERAL: OPSS 353 and 1350 shall apply and govern except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to supply and install concrete mountable curb and gutter, concrete barrier curb and gutter, and concrete barrier curb as per the Town's Standards, including placement of expansion joint material, boxouts, formwork, concrete finishing, surface curing compound, colas and reinforcement at catch basins, in accordance with Municipal Standards. The work shall also include any curb terminations or tapered connections as required where connecting to existing curb or terminating in the shoulder.

All road curbing with sidewalk adjacent to it shall be installed with concrete lip edge in accordance with OPSD 310.020.

Portland Cement Concrete shall be produced in accordance with CSA-A23, with a 28-day strength of 32 MPa or other strength as specified by the Engineer. Maximum aggregate size is to be 19mm. Air entraining agent shall comply with ASTM-C260. By volume, 7.0% +/- 1.5% entrained air at placement.

Provide saw-cutting of existing curb designated to remain. Supply, place and compact granular base courses under forms to 100% Standard Proctor Maximum Dry Density. Use flexible forms on curves with radius less than 60m.

Have concrete workmanship conform to CSA-A23. Do not pour concrete until forms and subgrade have been inspected and approved.

Provide 12mm thick expansion joints, cut to full cross-section at 4.5m intervals, at each point of tangent, at points where there is a difference in concrete thickness and at catch basins. All areas within the road right-of-way beyond the edge of pavement including curb and gutters which are disturbed as the result of the Contractor's activities shall be restored and/or repaired as soon as possible.

The curb and gutter shall be constructed to match abutting portions of existing curb and gutter. Transition lengths will be 1.5m in length, unless noted otherwise on the Contract Drawings or as directed by the Engineer. Full depth pre-moulded joint filler material shall be placed to ASTM D1751 at joints where new work abuts existing work or where full depth saw-cut is required.

Finish exposed surfaces with a uniform wood-float or broom finish, and correct surface irregularities before final set. Apply a curing compound after initial set has occurred. Curing compound to ASTM C309, type 2 (white). Work around valves, poles, etc. as per OPSD 310.040.

The Contractor shall be responsible for the protection of the concrete surfaces against vandalism or temperature changes that may occur during the curing period. Any deficiencies, graffiti, etc., will be removed and replaced at the Contractor's expense.

MEASUREMENT: Measurement for curb and gutter restoration shall be on a lineal metre basis, measured horizontally along the face of the curb retaining wall, whether straight or curved, including through catch basin box-outs and setbacks.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

27. TACTILE WALKING SURFACE INDICATORS ITEM D10

GENERAL: These items shall conform to OPSS 351 except as amended herein.

SCOPE AND SPECIFICS: This work consists of all labour, equipment and materials required to place tactile walking surface indicator plates at concrete sidewalk landing areas as indicated in the Contract Drawings.

Gray cast iron tactile walking surface indicator plates shall be as specified in the Contract Documents. Castings shall be according to ASTM A 48M, Class 35B, and shall be bare and not coated with paint or other coatings or substances. Castings shall be sound, free from pouring faults, cracks, blowholes, and other defects.

The surface of each new cast iron plate on both the tops of the truncated domes and the field between the truncated domes shall have a minimum wet and dry static coefficient of friction of 0.8 according to ASTM C 1028.

The initials or trademark of the manufacturer, year of manufacture, and country of manufacture shall be distinctly cast and legible in raised letters on the top side of each plate.

Tactile walking surface indicator plates shall be set into wet prepared concrete at each concrete sidewalk landing area as specified in the Contract Documents and according to the plate manufacturer's installation instructions. Plate alignment and configuration shall be adjusted to suit each location as per the Contract Drawings. Plates shall be cleaned after installation.

MEASUREMENT: Measurement for this item shall be per location at each sidewalk landing area.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

28. PAVEMENT MARKING

ITEM D11

- a) Centrelines and Lane Lines (100 mm wide)**
- b) Stop Bars (600 mm wide)**
- c) Crosswalks, Ladder-Style**

GENERAL: OPSS 710, 1716 and 1750 shall apply and govern except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to apply traffic paint to new asphalt surfaces.

The Contractor shall supply and install Water Based Permanent paint for pavement markings which shall include one 100mm wide centre line and two 600mm wide stop bars.

The product supplied shall be Ennis Paint Canada Permanent, Water-Borne, Yellow traffic paint or approved equivalent and Ennis Paint Canada Permanent, Water-Borne, White traffic paint or approved equivalent.

The product model to be used shall conform to OPSS 1716 (Water Borne Traffic Paint) and be approved by the Ministry of Transportation of Ontario. The colour of the paint shall be in accordance with the current Ministry of Transportation of Ontario Standards. Non-coning paint shall be used.

All pavement markings shall be reflectorized using glass beads. Glass Beads shall conform to OPSS 1750 specifications. Reflectorizing glass beads shall be applied uniformly at a rate of 0.70 kg (\pm 0.10 kg) per litre of paint immediately after paint applications and before the paint dries. The Contractor shall supply and apply "Drop On" glass beads for ALL pavement markings.

All pavement markings shall adhere to Ontario Traffic Manual (Book 11) design standards. Line types and widths shall be installed per the contract drawings. The Engineer shall check and approve all pavement marking layouts before application of pavement marking materials.

Pavement Markings shall have a well-defined edge that is free from waviness, uniformly dimensioned and shaped, and applied with no splatter or overspray. All surfaces shall be dry and free of loose objects, grease or soil before paint is applied.

Any pavement markings that do not meet colour, pattern, dimension, or material specifications shall be removed completely. Black paint shall not be used as pavement marking removal method.

Installation

The Contractor shall layout all pavement markings, as required, unless otherwise directed by the Contract Administrator. The Contractor shall notify the Contract Administrator 48 hours in advance of the application of the pavement markings. All pavement marking layouts shall be approved by the Contract Administrator prior to installation.

MEASUREMENT: Measurement for this item will be made per lineal metre of pavement marking, including all pre-markings.

PAYMENT: Payment for this item shall be made per metre length of centreline and stop bar painted and taped set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

29. SITE RESTORATION, BOULEVARD ITEM D12

GENERAL: OPSS 206, 492, 802 and 803 shall apply and govern except as extended or amended herein.

Areas with turf cover (e.g. boulevards) shall be restored with sod as soon as possible during acceptable growing conditions. The Contractor shall supply and place 100mm of good clean topsoil material in all disturbed areas. Sodding shall not commence until the surface preparation has been approved in writing by the Contract Administrator.

Areas to be sodded shall be free of erosion and shall have a fine graded uniform. The edges of adjacent sod pieces shall be placed tightly against one another without overlapping. Sod shall be countersunk to existing grade level at all edges. Joints shall be tamped to a uniform surface. The Contractor shall be responsible for the establishment and growth of vegetation for the first 30 days following completion of placement. During this period, the placed sod shall be kept healthy, actively growing, and green in leaf colour.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

30. DRIVEWAY RESTORATION
ITEM D13

GENERAL: OPSS 206, 310, 311, 314, 350, 351 and 501 shall apply and govern except as amended or extended herein.

SCOPE: This work consists of all labour, equipment and materials required to excavate to the required depth and re-grade driveway areas to new grades.

Where directed by the Engineer, the Contractor shall excavate to required depth and re-grade driveway areas to new grades. All driveways to be re-graded shall be determined in the field after the placement of the concrete curb and sidewalk. Excavation of granular driveways is included in this item. All granular material shall be compacted to 100% maximum dry density.

Construction of new driveways shall be as noted below.

Residential & Commercial Asphalt Driveway:

300mm Granular 'A'
90mm HL-3 Surface Course

Residential & Commercial Concrete Driveway:

150mm Granular 'A'
150mm 32 MPa Concrete

Gravel Driveway:

150mm Granular 'A'
50mm of 19mm (3/4") Clear Stone

Note: All Granular 'A' noted above shall be paid for under the granular item (D5).

The surface on which asphalt is to be placed shall be thoroughly cleaned. Loose and broken material shall be removed from locations designated in the Contract Documents. Removals shall be according to OPSS 510.

Sound concrete or asphalt surfaces that are to remain shall be uniformly sprayed with emulsified asphalt at the rate of 0.5 kg/m². The emulsified asphalt shall form a continuous film over the surface and shall be allowed to dry until it reaches the required state of tackiness before the resurfacing course is laid.

MEASUREMENT: Measurement for this item shall be per square metre (m²) of driveways provided and installed, measured in a horizontal plane.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

31. ELECTRICAL HANDHOLES

ITEM E1

GENERAL: OPSS Form 602, 620, 2401 and OPSD Form 2113.010 shall apply and govern except as amended or extended herein.

SCOPE: The Contractor shall supply and install rectangular semi-concrete (polymer concrete) underground junction boxes complete with polymer concrete ring and cover, as manufactured by Synertech or Quanzite or approved alternative. The contractor shall select size of junction box to accommodate for all conduits and standard clearance for all cables running in the conduits.

Typical small 330 mm x 610 mm (13"x24"), or medium 610 mm x 915 mm (24"x36"), or large 915 mm x 1525 mm (36" x 60") junction boxes shall be used for most applications depending on number and sizes of conduits running into the junction box. All boxes shall be minimum 460 mm (18") deep.

The junction box lid shall be labelled "TRAFFIC SIGNAL" as per the manufacturer's typical logo style and location.

Junction Boxes shall be installed on top of 300 mm of 15mm to 19mm clear crushed stone sub-base.

The top of the junction box shall match the final grade.

MEASUREMENT: Measurement for payment shall be on a lump sum basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

32. UNDERGROUND CONDUIT

ITEM E2

GENERAL: OPSS Form 401, 603, 620 and 804 and OPSD Form 2103.02, 2103.06 2123.03, and 2520.02 shall apply and govern except as amended or extended herein.

SCOPE: The Contractor shall supply and install underground conduit for the traffic control signal system to meet the requirements of the Contract Drawings, and Ontario Electrical Safety Code standards. Final adjustments to the alignment of each conduit run shall be made as required.

Minimum ductwork shall consist of:

- Under Boulevard to Traffic Signal Poles - two (2) 75 mm conduits shall be installed from nearest junction box to each traffic signal pole.
- Under Boulevard to Pushbutton Poles – one (1) 50 mm conduit shall be installed from nearest junction box to each pushbutton pole.
- Under Boulevard to Controller Cabinet – three (3) 75 mm conduits and one (1) 50 mm conduit shall be installed from the controller cabinet location (pad) to the nearest junction box.
- Under Boulevard for Streetlighting – one (1) continuous length 50 mm conduit for street light wiring from power supply to existing junction box.
- Under Boulevard for Power Supply – one (1) continuous length 100mm conduit and one (1) continuous length 75mm conduit for wiring from power supply to controller cabinet.

One 25 mm conduit shall be installed per vehicle detection loop group wiring as per OPSD 2520.02.

Conduit shall be installed from the roadway surface, under the concrete curb (if applicable) and terminated at the junction box as required. A “V” cut shall be made on the concrete curb to delineate the location and offset of each conduit opening from the curb.

All conduits supplied shall be flexible High Density Polyethylene (HDPE) or Rigid P.V.C. (Scepter or approved alternate). At no time shall carlon be used.

Methods of sub-surface installation which may be used include directional boring, standard boring or torpedoeing. The method used shall be the best method available considering distance to be bored, available boulevard space, existing underground utilities and soil conditions. Choice of method of subsurface boring will not change the unit bid price. Conduits may be installed by open trench method when located off the roadway.

The conduits shall be located at a minimum depth of 1 m below road grade. Conduits shall extend a minimum 150mm above the bottom grade of the junction box. All conduit ends shall fitted with end bells or be cut clean, straight, de-burred and the inside diameter of each conduit end shall be beveled.

The Contractor shall include restoration of all excavations and utility test pits required for the trenchless operation. The Contractor shall backfill all trenches with Granular "A" material tamped to 98% of maximum dry density under all hard surface (asphalt, concrete, paving stone, etc.) locations.

Asphalt roadway excavations shall be restored with 200mm HL4 Asphalt mix installed in maximum lifts of 50mm. Any additional asphalt depth required will be as directed by the Engineer on-site.

The Contractor shall be required to backfill all trenches with compacted native earth fill to matching grade under grass areas. Grassed boulevard areas to be restored with seed and cover.

The Contractor shall leave extra fish wire in duct for future cable pulling. The Contractor shall supply and place through each duct sufficient polyline for purposes of pulling cable for both traffic signals and street lighting.

MEASUREMENT: Measurement for payment shall be on a lump sum basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

33. ELECTRICAL WIRING

ITEM E3

GENERAL: OPSS Form 106, 601, 604, 617, 620, 2409, 2410, and OPSD 2528.01, and 2529.10 shall apply and govern except as amended or extended herein. All electrical work shall adhere to ESA regulations and Ontario Electrical Safety Code at all times. The Contractor shall be IMSA Level II certified to complete all traffic signal wiring and associated work inside the NEMA type traffic sign controller cabinet.

SCOPE: The Contractor shall supply and install all traffic signal and pedestrian signal cable, vehicle and pedestrian actuation cable and street lighting cable, as required per the traffic signal system equipment shown on the Contract Drawings. Wiring shall be supplied and installed for the traffic signal controller operation specified in "Controller Installation". All cable connections, waste cables and all vertical runs of cable to pole hand holes, signal equipment and controller cabinet terminals shall be included.

The Contractor shall supply and install colour coded #14AWG copper wire traffic signal cable (per OPSS 2409) to operate all traffic and pedestrian signal indications shown on the Contract Drawings. The Contractor shall install a separate continuous "home run" of 19 conductor cable from the controller cabinet to each quadrant of the intersection and terminate inside a pole. A minimum of 4 spare conductors shall be provided to each corner. Addition cable runs to other poles on the quadrant shall be sized as required to operate indications.

Pedestrian push button cables shall be 2 conductor, #14AWG shielded copper, PVC jacketed, Canoga #300003 or approved alternate. Each cable shall run from the controller cabinet and terminate at the pedestrian push button.

Vehicle Loop Detector "Lead in" cable shall be 2 conductor, #14AWG shielded copper, PVC jacketed, Canoga #300003 or approved alternate. Each cable shall run from the controller

cabinet and terminate in the junction box. Each cable end shall be labelled in the JB with the assigned Phase number.

Cables for Street Lighting shall be #6 AWG RWU-90-XLINK-40Ø copper. Power supply for street lights mounted on traffic signal poles shall be a separate circuit from traffic signal cabinet power supply. Street light power circuit shall have a separate breaker located at the traffic signal meter service cabinet. Riser cable to each street light shall be 2 conductor with ground #12 NMWU with fuses installed at pole hand hole.

All lead cables to traffic and pedestrian signal heads shall provide a drip loop before entering a pole. All cable holes in the pole shall be lined with a grommet.

High voltage and low voltage wiring shall be installed in separate conduits. All joints are to be made above ground level inside the controller cabinet or traffic signal poles. External connections shall be housed in a weather proof PVC splice box.

MEASUREMENT: Measurement for payment shall be on a lump sum basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

34. GROUNDING SYSTEM ITEM E4

GENERAL: OPSS Form 106, 609, 620 and OPSD 2547.01 shall apply and govern except as amended or extended herein. All electrical work shall adhere to ESA regulations and Ontario Electrical Safety Code at all times.

SCOPE: The Contractor shall supply and install all materials and equipment to provide a grounding system for the traffic signal system. The Contractor shall insure the traffic signal grounding system meets the Ontario Electrical Safety Code requirements.

This work shall include the installation of #6 AWG bare copper or insulated (green) conductor type TWH system and service ground wire together with the installation of 20mm Dia. X 3.0m long copper clad ground rods.

The grounding cable shall form a continuous loop between the signal pole ground rods.

Grounding of the poles shall be accomplished by cable run between the specified pole and the "loop". This shall safeguard the integrity of the grounding loop even if one or more poles are removed from the system.

An insulated #6 AWG copper green coloured cable shall be interconnected between the ground loop and the service cabinet ground bus.

The Contractor shall be responsible for the installation of grounding rods to be distributed as described below and as shown on the Contract Drawings.

Ground wire to ground wire connections shall be by means of a copper compression connector.

All signal poles shall be grounded by means of a 6 AWG TWU cable (green).

The four (4) ground rods (minimum) for signal pole grounding shall be located adjacent to the junction boxes as indicated on the Contract Drawings.

The power cut-out box shall be grounded with two ground rods by means of one (1) eight (8) gauge TWU cable (green) running from the box to an approved ground rod adjacent to the power supply.

The Contractor shall provide grounding for the traffic controller by means of installing a #6AWG insulated copper ground wire from the controller cabinet neutral bus bar to the service breaker ground bus.

These grounding cables shall exit the controller base (base mount cabinet) via a separate conduit stubout provided for the sole use of this cable. The cable shall then be direct buried to service point.

MEASUREMENT: Measurement for payment shall be on a lump sum basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

35. POWER SUPPLY AND METERING SERVICE

ITEM E5

GENERAL: OPSS Form 106, 604, 614, 620, and OPSD 2103.01, 2130.01 and CSA C22.2 shall apply and govern except as amended or extended herein. All electrical work shall adhere to ESA regulations and Ontario Electrical Safety Code at all times.

SCOPE: The Contractor shall supply and install all materials and equipment to provide electrical power to the traffic signal system and associated street lighting. The work under this item consists of the supply and installation of the pole mounted combination meter socket and breaker cabinet, meter, circuit breakers, underground and riser conduits, cable, and service disconnect.

The Contractor shall include all Essex Powerlines and/or ESA fees in the cost of this work.

It shall be the Contractor's responsibility to arrange the connection of the traffic signal system power supply with Essex Powerlines ONE WEEK (MINIMUM) in advance. Essex Powerlines shall provide instructions to the Contractor regarding connection to their plant.

The Contractor shall supply and install one 100A combination 120/240 meter base and breaker cabinet.

Cabinet shall provide one 30 A circuit breaker for controller cabinet and one 30 A circuit breaker for street lighting. This combination cabinet shall function as the supply control cabinet shown in OPSD 2103.01.

Meter/breaker cabinet shall be installed onto 20x6cm aluminium C channel direct buried and lagged to controller cabinet concrete pad as shown on the drawing. The exact height and orientation of the meter socket on the pole shall be carried out in accordance with ESA requirements.

The Contractor shall supply and install all cable and from supply source to meter and breaker cabinet, as required. The Contractor shall supply and install all rigid PVC and polyethylene conduits from supply source to meter and breaker cabinet to traffic signal controller cabinet, as required.

The Contractor shall supply and install three single conductor #6 AWG RWU-90-XLINK-40 copper cables from supply to meter. The Contractor shall supply two single conductor #6 AWG RWU-90-XLINK-40 copper cables from meter cabinet to traffic signal controller. The Contractor shall supply two single conductor #6 AWG RWU-90-XLINK-40 copper cables from meter cabinet to street lights.

Trim and restore disturbed ground surfaces to original grade and condition. Dispose of excess material and debris outside contract limits as directed by the Town or their designate.

MEASUREMENT: Measurement for payment shall be on a lump sum basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to install the power supply and obtain ESA approvals for the work and shall include all costs of supplying and installing the service box, shield and meter base.

36. STEEL POLES, BASE MOUNTED

ITEM E6

GENERAL: OPSS Form 615, 2422 and OPSD Form 2215.02, 2215.03 and 2415.011 shall apply and govern except as amended or extended herein.

SCOPE: Contractor shall supply and install traffic signal poles per the Contract Drawing.

Traffic signal poles shall be heavy duty Sectional Steel Traffic Signal poles, powder-coated black, as supplied by Pole-Fab Inc., or approved alternate, and shall be installed complete with pole caps and handhole covers.

Handhole shall be 450 mm above base flange and have minimum 100 x 300 mm opening with ground clip. Base flange shall have 11" (279mm) square, centre to centre, bolt pattern.

Poles that are required to be used in conjunction with street lighting equipment shall be drilled with the appropriate mounting holes and wiring apertures. All drilled holes shall be treated with zinc rich paint and allowed to dry.

Frangible bases will not be used.

MEASUREMENT: Measurement for this item shall be per each traffic signal poles installed.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

37. CONCRETE FOOTINGS IN EARTH

ITEM E7

GENERAL: OPSS Form 616, 904, and 1350 and OPSD Form 2200.01 and 2215.02 shall apply and govern except as amended or extended herein.

SCOPE: Contractor shall supply and install concrete, steel reinforcement, pole anchor assemblies, and conduits for traffic signal pole bases. Finish grade, circumference, depth, steel reinforcement, and concrete top finish of base shall conform to OPSD 2200.01.

Location of the concrete foundations for the traffic signal poles shall be based on the Contract Drawings.

Final pole base locations shall be approved by the Contract Administrator prior to installation.

Anchor assembly and pole shall be orientated in concrete base to provide proper alignment for pedestrian pushbuttons to the corresponding crosswalks.

Concrete shall comply with the requirements of OPSS.MUNI 1350 and the following specific requirements:

Cement Type:	Portland Cement
Class of Concrete:	32 MPa at 28 days
Class of Exposure:	C-2
Course of Aggregate:	19 mm nominal max. size
Air Content:	6.5% + 1.5%
Slump at point of discharge:	80 mm +/- 30mm
Maximum water/cementing materials ratio:	0.45

The Contractor shall place minimum 2 x 75 mm P.V.C. 90° bends (Scepter or approved alternate) in each pole footing and these ducts shall be oriented toward the nearest traffic signal junction box. All rigid P.V.C. (Scepter or approved alternate) shall meet or exceed C.S.A. Standard, C22.2 Number 211.2.

Preset Anchorage Assemblies with leveling studs shall be installed in concrete base. Bolt diameter and bolt pattern shall be compatible with pole specified. Sentinal, Acrow-Richmond, or approved alternative shall be used.

The concrete footings shall either be augured, hand-dug or vacuumed, as may be required by location of underground utilities. No additional payment will be made for use of a vacuum truck.

MEASUREMENT: Measurement for this item shall be per concrete footing installed, including all reinforcement, anchor assemblies, and conduits.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

38. INSTALLATION OF HIGHWAY TYPE TRAFFIC SIGNAL HEADS AND HANGERS ITEM E8

GENERAL: OPSS Form 620, 2460, 2461, OPSD Form 2502.011, 2522.010, 2524.01, and 2528.01 shall apply and govern except as amended or extended herein.

SCOPE: Traffic signal heads and hangers shall be supplied by the Town of Amherstburg and installed as indicated on the Contract Drawings. Traffic signal heads shall comply with Highway Traffic Act regulations. Each traffic head shall be aligned as shown on the contract drawing.

Traffic signal heads shall be mounted to provide 5.0 m of clearance from the final roadway surface grade.

MEASUREMENT: Measurement for this item shall be lump sum.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

39. PEDESTRIAN SIGNAL HEADS **ITEM E9**

GENERAL: OPSS Form 620, 2460, 2461, OPSD Form 2505.01, 2524.01, and 2528.01 shall apply and govern except as amended or extended herein.

SCOPE: Pedestrian signal heads shall be supplied and installed as indicated on the Contract Drawings.

Pedestrian signal heads shall comply with Highway Traffic Act regulations. Each pedestrian head shall be aligned as shown on the contract drawing.

Pedestrian signal heads shall be LED type with pedestrian countdown (Hand & Walking Man symbol) as per HTA 626 (e.g. colour, size and shape). Housing and visors are to be traffic highway yellow. The inside of visors shall be matte black.

All LED lamps shall comply with MTO and ITE specifications. Acceptable suppliers of traffic signal heads are Econolite, Electromega, Fortran and Tacel Ltd. or approved alternative.

The pedestrian heads shall be mounted with double arm brackets unless otherwise specified. Double arm brackets shall be constructed from 38 mm diameter hot dipped galvanized steel.

Pedestrian heads mounted on specified mast arms shall use cushion (J-Hanger) type hangers. Length of double arm brackets shall be as shown on the drawing.

All pedestrian signal heads shall be mounted to provide 2.75 m of minimum clearance from the finished grade.

MEASUREMENT: Measurement for this item shall be per pedestrian signal head installed.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

**40. SINGLE MEMBER ARMS
ITEM E10**

GENERAL: OPSS Form 620, 2460, OPSD 2501.1 and 2501.2 shall apply and govern except as amended or extended herein.

SCOPE: Aluminium single member arms shall be used for all traffic signal mast arms. Aluminium single member arms shall be supplied by Pole-Fab Inc., or approved alternative. Mast arms shall be equipped with the appropriately sized mounting brackets to suit the applications shown on the Contract Drawings. Arm lengths shall be as shown on the Contract Drawings, however, arm length adjustments may be required based on final location of traffic signal pole bases.

Single member arms shall be black in colour with a polyester powder-coated finish.

MEASUREMENT: Measurement for this item shall be per each.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

**41. TRAFFIC SIGNAL CONTROLLER INSTALLATION ON CONCRETE PAD
ITEM E11**

GENERAL: OPSS Form 616, 620, OPSD 2514.01 shall apply and govern except as amended or extended herein. All electrical work shall adhere to ESA regulations and Ontario Electrical Safety Code at all times. The Contractor shall be IMSA Level II certified to complete all necessary wiring and set-up work inside the NEMA type traffic sign controller cabinet.

SCOPE: Contractor shall install traffic signal controller cabinet (to be supplied by the Town) and shall configure and connect all wire connections for power supply, bonding/grounding, traffic signal indications, vehicle/pedestrian actuations, and communications required to operate the traffic signal system. Contractor shall install all electrical components inside the controller cabinet required to operate the traffic signal system. The Contractor shall install and configure the traffic signal controller cabinet per the instructions and specifications of controller cabinet manufacture.

Controller cabinet shall be bolt lagged to concrete pad with a neoprene gasket installed along the perimeter of the cabinet per OPSD 2514.010. The cabinet shall be installed in the centre of the concrete pad with the door oriented as shown on the drawing.

Existing traffic signal controller shall be removed and salvaged and returned to the Town of Amherstburg Public Works Yard.

The Contractor shall supply and install extension base for the cabinet.

The Contractor shall contact the Engineer for controller cabinet operation specifics prior to controller cabinet installation begins.

The Contractor shall be IMSA Level II certified to complete all necessary wiring and associated work inside the NEMA type traffic sign controller cabinet. All controller cabinet equipment shall be wired and set for operation of the traffic control signal and street lighting system in accordance with the requirements of the Contract Drawings, and SPI Sections "Electrical Wiring" and "Grounding System".

The Controller Cabinet shall be wired and programmed to traffic signal operations as provided by the Town.

All controller cabinets shall be kept **LOCKED** during all non-working hours.

Testing

Prior to signal system start-up, tests on the system shall be made as follows:

- 1) All signal circuits shall be directly connected to 120 V supply (not through load switches) to test for any short circuits which would damage load switches.
- 2) Output of connected load switches shall be measured with a voltmeter. Any load switch showing an output of 10% or more below line voltage shall be replaced with a new unit.
- 3) All signal lamps shall be visually checked for proper operation when connected directly to the 120 V supply and when finally connected through the load switches.
- 4) Testing of the circuitry and components operation of the system shall take place with signal head covers in place.

Controller timings shall be supplied by the Town for input by the Contractor prior to start-up of the traffic signal. The Contractor shall not adjust or tamper with any programming functions unless written approval to do so is obtained by so by the Town.

The Contractor shall contact the Town prior to start-up of the new Traffic Control Signal. The new Traffic Control Signal shall not be started without inspection and approval from the Town.

QUALITY CERTIFICATION:

Traffic Controller Cabinets are to be provided from manufacturer(s) that have an ISO 9001:2008 Quality Management System in place and have been certified to that effect. Each bidder shall include a copy of the intended manufacturer(s) ISO 9001:2008 certification with their bid submission.

Traffic Controller Cabinets and their related modules shall be approved by a recognized Canadian Safety Authority such as The Canadian Standard Association (CSA).

MEASUREMENT: Measurement for this item shall be per each.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

42. CONTROLLER CABINET CONCRETE PAD INSTALLATION ITEM E12

GENERAL: OPSS Form 106. 616, OPSD 2514.02 and 2514.02 shall apply and govern except as amended or extended herein.

SCOPE: Where a pad mounted controller is to be installed, the Contractor shall supply and install a concrete base to accommodate the controller cabinet base dimensions. The final concrete pad location shall be approved by the Town prior to installation.

The concrete pad shall be a minimum 200 mm in thickness and rest on a 300 mm sub-base of compacted Granular "A". Where applicable, the concrete controller base grade shall match final grade of sidewalk or boulevard. The concrete pad shall be installed to provide adequate drainage.

Concrete shall comply with the requirements of OPSS.MUNI 1350 and the following specific requirements:

Cement Type:	Portland Cement
Class of Concrete:	32 MPa at 28 days
Class of Exposure:	C-2
Course of Aggregate:	19 mm nominal max. size
Air Content:	6.5% + 1.5%
Slump at point of discharge:	80 mm +/- 30mm
Maximum water/cementing materials ratio:	0.45

The concrete pad dimensions shall be as shown on the drawing. The all conduits shall be installed centred on the concrete pad.

MEASUREMENT: Measurement for payment shall be on an each basis.

PAYMENT: Payment for this item will be made at the unit price bid as set out in the Form of Tender and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

**43. AUDIBLE PEDESTRIAN PUSHBUTTONS
ITEM E13**

GENERAL: OPSS Form 620 and OPSD Form 2505.01 shall apply and govern except as amended or extended herein.

SCOPE: All audible pedestrian pushbuttons shall be installed and aligned on the poles as indicated on the Contract Drawings to the manufacturer's specifications. The contractor shall program the audible pedestrian pushbutton system under supervision of the Town.

The pedestrian pushbuttons shall be installed parallel to the crosswalk it serves, and is adjacent to the sidewalk. Mounting height of pushbutton shall be 1 - 1.2 m above finished grade of adjacent sidewalk.

Each pedestrian push button shall be Polara "Navigator" 2 wire type Audible Pedestrian with Central Control Unit (as supplied by Tacel Ltd). Each pushbutton colour shall have yellow coloured front face plate. Each pushbutton shall include sign design Option "A" (#800-87).

Polara NPA4X2-X Adapter Plates shall be installed as required on pedestrian pushbutton poles, as shown on drawing. Adapters shall be finished in black.

Sign and pushbutton arrows shall point in the direction serviced by the pedestrian pushbutton and shall be included in the bid price for this item.

MEASUREMENT: Measurement for this item shall be per each.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

**44. PEDESTRIAN PUSHBUTTON POLE AND CONCRETE FOUNDATION
ITEM E14**

GENERAL: OPSS Form 616, 904, and 1350 and OPSD Form 2200.041 and 2215.02 shall apply and govern except as amended or extended herein.

SCOPE: Contractor shall supply and install concrete, pole anchor assemblies, and conduit for pedestrian pushbutton pole foundation. Finish grade, circumference, depth, steel reinforcement, and concrete top finish of foundation shall conform to OPSD 2200.041.

Location of the concrete foundations for the pedestrian pushbutton poles shall be based on the Contract Drawings. Final pole base locations shall be approved by the Engineer prior to installation. Anchor assembly and pole shall be orientated in concrete base to provide proper alignment for pedestrian pushbuttons to the corresponding crosswalks.

Concrete shall comply with the requirements of OPSS.MUNI 1350 and the following specific requirements:

Cement Type:	Portland Cement
Class of Concrete:	32 MPa at 28 days
Class of Exposure:	C-2
Course of Aggregate:	19 mm nominal max. size
Air Content:	6.5% + 1.5%
Slump at point of discharge:	80 mm +/- 30mm
Maximum water/cementing materials ratio:	0.45

The Contractor shall place minimum 1 x 50 mm P.V.C. 90° bends (Scepter or approved alternate) in each pole footing and these ducts shall be oriented toward the nearest traffic signal junction box. All rigid P.V.C. (Scepter or approved alternate) shall meet or exceed C.S.A. Standard, C22.2 Number 211.2.

Preset Anchorage Assemblies with leveling studs shall be installed in concrete base. Bolt diameter and bolt pattern shall be compatible with pole specified. Sentinal, Acrow-Richmond, or approved alternative shall be used.

Contractor shall supply and install 1.5m straight round aluminum pole with 127mm diameter, Sentinel Pole and Traffic Equipment Ltd, or approved alternate. Pole shall have .156 6063T-6 Aluminum wall. Handhole shall be 450 mm above base flange and have minimum 100 x 300 mm opening with ground clip and cover. Base flange shall have 134 mm square, centre to centre, bolt hole pattern for ¾" diameter anchors. Pole top shall be closed.

MEASUREMENT: Measurement for this item shall be per each.

PAYMENT: Payment for this item will be made at the unit price bid as set out in the Form of Tender and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

45. PRE-FORMED VEHICLE LOOP DETECTORS ITEM E15

GENERAL: OPSS Form 604, 620 and 2410, OPSD Form 2520.01 and 2520.02 shall apply and govern except as amended or extended herein.

SCOPE: Loop pattern and dimension shall be as shown on the Contract Drawings. Final detector loop locations shall be approved by the Town prior to installation.

Loops shall be installed into base lift of asphalt or milled asphalt surface prior to installation of final surface asphalt lift.

The work under this item consists of the installation of detector loops as indicated on the Contract Drawings including splicing to 2/C shielded cable loop leads in the hand hole of the pole. All splices/connections shall be made in hand hole of pole or junction box. All loop cable splices completed in a junction box shall be completed using waterproof splices. Cables for each detector loop shall be tagged and labeled based on lane designation (direction and lane # from curb) at the splice point.

Loop cable shall be single conductor 7 strand copper #14 AWG type RWU90 with cross linked polyethylene insulation (XLPE). Loop lead cables shall be shielded, twisted pair with high density polyethylene insulation.

The number of turns for the detection loop shall be three (3). The loop shall consist of a continuous length of cable. No cable splices are permitted anywhere in the loop or leads except in a junction box or traffic signal pole, per the contract drawing.

Loop detectors located at overlay or new pavement locations shall be incorporated into pavement during placement operations. Loop detector wire, loop detector cable, and preformed loop detectors shall be encased in conduit of the size necessary to contain the number of turns as indicated in the Contract Documents and as directed by the Engineer when incorporated into pavement placement operations. Loops incorporated into hot asphalt pavement placement operations shall be encased in a high temperature resistant conduit. Conduit shall be included in the unit price for this item.

All conduit connections shall be sealed to prevent moisture penetration. Conduit ends shall be sealed to prevent entry of water and debris immediately upon installation. Sealant shall not be adversely affected by surrounding environment or moisture. Open conduit ends shall not be allowed in the field for any period of time.

MEASUREMENT: Measurement for payment shall be on an each basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

46. INTERSECTION STREET LIGHTING ITEM E16

GENERAL: OPSS Form 604, 609, 617, 2428, 2432, 2485 and OPSD 2420.01 shall apply and govern except as amended or extended herein. All electrical work shall adhere to ESA regulations, and Ontario Electrical Safety Code at all times.

SCOPE: The Contractor shall supply and install LED luminaries for street lighting as per the Contract Drawings.

Luminaires shall meet current Essex Powerlines standards for Cobra Head LED street lights. The Contractor shall contact Essex Powerlines to obtain current material specifications for LED luminaire housings and LED lamp ratings and distribution pattern for street lighting.

Housings shall have black polyester powder paint finish. Mounting shall be slipfitter with +/- 5 degree adjustment, integral mounting pipe stop feature, and be adjustable for 1.25" or 2" mounting pipe.

Each luminaire shall have a 5 Pin controller socket and come complete with a photo-electrical controller to actuate dusk to dawn operation.

The output of each LED luminaire shall be as shown on the Contract Drawings as an equivalent High Pressure Sodium wattage.

- 4,000-5,000 lumens LED = 100W HPS
- 7,000-8,500 lumens LED = 150W HPS
- 8,500-11,500 lumens LED = 200W HPS
- 11,500-14,000 lumens LED = 250W HPS

Luminaires shall be installed onto 2.4 m tapered elliptical aluminium street lighting bracket, black in colour, and shall conform to OPSS 2428, Sentinel Pole and Traffic Equipment number RE8MA or approved alternative. The bracket shall be set perpendicular to the through edge of travelled roadway lanes unless otherwise shown on the Contract Drawings. The bracket shall be mounted with a 16 mm galvanized machine bolt, square washer and nut on the top of the pole plate and with 16 mm stainless steel strapping around the bottom of the pole plate.

The Contractor shall drill a pole-wiring aperture (20 mm Dia.) at 225 mm below the top of the pole. A bolt aperture shall be similarly drilled. Apertures shall be de-burred, touched up with zinc rich paint. Wiring apertures shall be fitted with rubber grommets.

MEASUREMENT: Measurement for payment shall be on an each basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

47. TRAFFIC SIGNAL EQUIPMENT REMOVAL OR SALVAGE ITEM E17

GENERAL: OPSS Form 610 shall apply and govern except as amended or extended herein.

SCOPE: Contractor shall remove and dispose or salvage existing traffic signal equipment.

The existing traffic signal system wiring and the associated street light wiring shall be de-energized.

All existing traffic signal heads and pedestrian heads shall be removed and disposed or salvaged if so designated. All pedestrian actuation buttons shall be removed and disposed.

All existing traffic signal poles shall be removed and disposed or salvaged if so designated.

The Contractor shall completely remove and dispose of existing concrete pole bases. Extreme care shall be taken when working adjacent to utilities. Concrete pole bases are estimated to be 0.76 m in diameter and 2.0 m to 2.5 m in depth.

The Contractor shall backfill all excavations with Granular "A" material tamped to 100% of maximum dry density under all hard surface (asphalt, concrete, paving stone, etc.) locations existing or to be installed per the Contract Drawings. The supply and installation of Granular "A" material shall be included in this item.

Existing Power Supply and Metering Service shall be de-energized, removed, and disposed. Service Meter shall be delivered to Essex Powerlines.

Materials Designated for Salvage:

- Traffic Signal Controller

All salvaged materials shall be delivered to the Town of Amherstburg Public Works Yard. Contractor shall contact the Engineer prior to the start of work to arrange the place and time of delivery of salvaged materials.

MEASUREMENT: Measurement for payment shall be on a lump sum basis.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

48. FIELD ADJUSTMENTS FOR WATERMAIN ALIGNMENT (PROVISIONAL) ITEM F1

GENERAL: The provisions of OPSS 441 shall apply for this item except as amended herein.

SCOPE AND SPECIFICS: This provisional item covers any additional labour, equipment and materials required to adjust the watermain in the field as needed to properly align and connect the new watermain to the existing system.

Exploratory work for determining the need for adjustment shall be paid under Item F1: Existing Watermain Locates.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment for this item shall be made on the appropriate unit price bid in the Schedule of Quantities and shall be compensation in full for all labour, materials and equipment to complete the work as specified herein.

The Contractor is not entitled to payment for Provisional Items, except for additional work required or requested, approved by the Contract Administrator and completed in accordance with the Contract Documents and then only to the extent of such additional work.

49. SANITARY SEWER CONNECTION AT 182 PICKERING DR. (PROVISIONAL) ITEM F2

GENERAL: The provisions of OPSS 410 and 510 shall apply for this item except as amended herein.

SCOPE AND SPECIFICS: This provisional item covers any the labour, equipment and materials required to complete the following work:

- Coring into existing sanitary maintenance hole for new sanitary sewer connection;
- Connection and grouting of new sanitary sewer pipe to existing sanitary maintenance hole;
- Installation of 15.25m – 200mm diameter PVC (DR35) sanitary sewer pipe at 8.0% slope via open cut from sanitary maintenance hole to property line; and
- Capping of new 200mm diameter sanitary sewer pipe at property line for future connection.

This work is to include all required pipe connections, maintenance hole break-ins, fittings, excavations, de-watering, bedding, backfilling in a prepared trench, and boulevard site restoration.

Backfill material under roadways shall be Granular 'A' placed in 300mm thick lifts, with each lift uniformly compacted to 100% Standard Proctor Maximum Dry Density.

Backfill material outside of the roadway to be approved by the Engineer or the Town's Representative and shall be clear of stone, rocks, concrete, asphalt and all other foreign material. Backfill shall be placed in 300mm thick lifts, with each lift uniformly compacted to at least 95% Standard Proctor Maximum Dry Density or as directed by the Engineer.

Asphalt paving of the trench in roadway is covered under separate item.

MEASUREMENT: No measurement will be made for this item as it is a Lump Sum item.

PAYMENT: Payment for this item shall be made on the appropriate unit price bid in the Schedule of Quantities and shall be compensation in full for all labour, materials and equipment to complete the work as specified herein.

The Contractor is not entitled to payment for Provisional Items, except for additional work required or requested, approved by the Contract Administrator and completed in accordance with the Contract Documents and then only to the extent of such additional work.

**50. ADDITIONAL EXCAVATION FOR SOFT SPOTS. (PROVISIONAL)
ITEM F3**

GENERAL: The provisions of OPSS 206 and 510 shall apply for this item except as amended herein.

SCOPE AND SPECIFICS: This work consists of all labour, equipment and materials required to carry out additional earth excavations to soft or loose subgrade within the roadway. The Contractor shall proof-roll the subgrade and sub-excavate any soft or loosened subgrade areas. Additional Granular 'A' material required to backfill the excavation will be paid under Item D5(a).

Where the Engineer determines that the depth of excavation required for the construction of the roadway should be increased beyond that specified on the Contract Drawings, the Contractor shall sub-excavate unsuitable material to the depth and/or extent below the subgrade as directed by the Engineer.

The Contractor shall dispose of all excavated material off-site, at his expense. If arrangements are made between the Contractor and private property owners accepting any excavated material, the Contractor shall provide a written authorization from those private property owners indicating that they will not hold the Town responsible or liable for any damages. Excavated rubble (concrete, sewer pipe, etc.) shall be hauled to an approved disposal site at no additional cost to the Owner.

MEASUREMENT: Measurement for this item shall be per cubic metre of additional earth excavation required, as measured in the field.

PAYMENT: Payment for this item shall be made at the unit price bid as set out in the Schedule of Quantities and shall be compensation in full for all labour, equipment and materials required to complete the work in every respect.

The Contractor is not entitled to payment for Provisional Items, except for additional work required or requested, approved by the Contract Administrator and completed in accordance with the Contract Documents and then only to the extent of such additional work.

No payment will be made for any and all excavation below the grades shown on the drawings, except where directed by the Contract Administrator in writing.

51. MATERIALS TESTING AND INSPECTION (ALLOWANCE)

ITEM F4

SCOPE: This item is intended to cover expenditures required for material testing during the execution of the Contract.

The amount of the Material Testing Allowance shown in the Form of Tender shall be included in the Total Tender Price.

Payment will be made only work authorized by the Contract Administrator, which is completed in accordance with the instructions of the Contract Administrator.

The Contractor will not be entitled to payment of any or all of the material testing allowances unless the work is authorized, in writing by the Engineer. Field Staff are not authorized to allow work under this item.

The Contractor shall provide the Engineer with a minimum of three days' notice prior to requiring material testing. If material testing cannot be completed on that day the Contractor shall provide at least 24 hours notice to the Engineer and testing company. If sufficient notice is not provided, the Contractor shall pay for any costs incurred where material testing could not be completed due to Contractor delays.

52. CONTINGENCY (ALLOWANCE)

ITEM F5

GENERAL: OPS General Conditions of Contract.

SCOPE: Extra work is work which is required, but not described in this document or on the Contract Drawings. No work shall be regarded as extra work unless it is approved in writing by the Town and with the agreed price and method of payment for it specified on the said approval, provided the said price is not otherwise determined by the quote. All notification claims for extra work shall be made to the Town before the extra work is started.

The Contingency is an allowance which is for the sole benefit of the Corporation. While the Corporation shall, as required by the Contract Documents, pay the Contractor for all work performed, the Corporation has no obligation to pay any Contingency to the Contractor.

The amount of the Contingency Allowance shown in the Form of Tender shall be included in the Total Contract Bid.

PICKERING DRIVE WATERMAIN REPLACEMENT AND ROAD IMPROVEMENTS
PHASE 1 – DALHOUSIE STREET TO KING STREET

APPENDIX A

SUBMISSION ENVELOPE

Complete the required information on the following Tender envelope cover sheet and firmly affix to the Tender submission envelope.

SUBMITTED BY:

TENDER

THIS PORTION TO BE COMPLETED BY THE TOWN OF AMHERSTBURG

RECEIVED DATE: _____

RECEIVED TIME: _____

RECEIVER'S INITIALS: _____

SUBMITTER'S INITIALS: _____

APPENDIX B

**TOWN OF AMHERSTBURG
ACCESSIBLE CUSTOMER SERVICE STANDARDS POLICY**

Accessible Customer Service Standards Policy

Disruption of Services

If there is a disruption in a particular facility or service used to allow a person with a disability to access goods or services, the Town will give notice of the disruption to the public by posting the reason for the disruption, the anticipated duration of the disruption, and alternative facilities or services that may be available. This posting will be in a conspicuous place on the premises of the Town of Amherstburg, the Town website and/or by other reasonable methods in the circumstances.

If the Town anticipates a disruption, the Town will provide a reasonable amount of advance notice of the disruption. If the disruption is unexpected, notice will be provided as soon as possible.

Training

The Town will ensure that all persons to whom the *Accessible Customer Service Standards Policy* applies to receive training as required. The amount and format of training given will be tailored to suit each person's interactions with the public and his or her involvement in the development of policies, procedures and practices pertaining to the provision of goods and services. This training includes, but is not limited to, the Town's policies, procedures and practices pertaining to the provision of goods and services to customers with disabilities and how to assist customers with disabilities in accessing the Town's goods and services. The Town will keep records of this training.



Feedback

Feedback from the public is welcomed as it may identify areas that require change and encourage service improvements.

Feedback or complaints may be given by telephone, in person, in writing, or in electronic format or through other methods.

Information about the Town's feedback policy and process is posted on the Town's website (www.amherstburg.ca).

If a complaint is received regarding the accessibility of the Town's goods and services, it will be reviewed by the relevant division or department. These will be reviewed for the purpose of resolving the issue and to improve the Town's understanding of the Town of Amherstburg customer's needs.

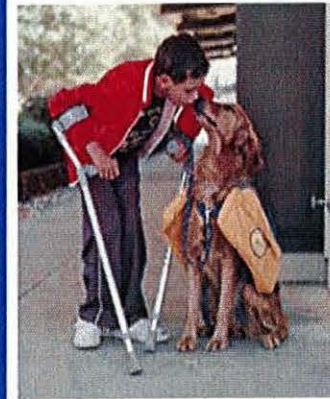
Feedback will be responded to within three (3) business days of its receipt by the Town.

Availability of Documents

This policy will be made available upon request in a format that takes into account the person's disability to any person to whom it provides goods or services as well as on the Town of Amherstburg website.

Town of Amherstburg

Accessible Customer Service Standards Policy



Town of Amherstburg
271 Sandwich Street S.
Amherstburg, Ontario
N9V 2A5

Phone: 519-736-0012

Fax: 519-736-5403

Email:

accessibility@amherstburg.ca



Town of Amherstburg Accessible Customer Service Policy— Background and Purpose

The Accessibility for Ontarians with Disabilities Act, 2005 (AODA) is a Provincial Act with the purpose of developing, implementing and enforcing standards that enhance the ability of persons with disabilities to access the goods and services that are available to others. Accessibility Standards for Customer Service is the first standard to be passed as a regulation and become law in Ontario. Under this standard designated private and public sector organizations must develop certain policies, procedures and practices pertaining to customer service to persons with disabilities.

What is Accessible Customer Service?

Persons with disabilities may require assistance or accommodation in the way that goods and services are provided to them. The type of accommodation provided may vary depending on the customer's unique needs.

Accessible Customer Service Policy Statement

The Town of Amherstburg is committed to providing quality goods and services that are accessible to all persons that we serve.

Exclusions

This Accessible Customer Service Standards Policy shall not apply during any period where Council has declared a "State of Emergency" as defined under the **Emergency Management Act**.

GENERAL PRINCIPLES

The Provision of Goods and Services to Persons with Disabilities

The Town of Amherstburg will use reasonable efforts to ensure that the Town's goods and services are provided in a manner that:

- Respects the dignity and independence of persons with disabilities;
- Provides goods and services to persons with disabilities in an integrated manner with those who do not have disabilities unless an alternative measure is necessary and
- Provides an opportunity equal to that of persons without disabilities to obtain, use or benefit from the Town's goods and services.

When communicating with a person with a disability, the Town will do so in a manner that takes into account the person's disability.

Assistive Devices, Service Animals and Support Persons

Persons with disabilities may use assistive devices, support persons or service animals to assist them in accessing the Town's goods and services.

The Town will allow people to use their personal assistive device to access services. The Town will also ensure that staff is familiar with how to use or how to access information on the use of the assistive devices which are available in their respective area of responsibility.

If a person with a disability is accompanied by a service animal, the Town will permit the person to enter the premises with the animal and keep it with him or her, unless the animal is otherwise excluded by law from the premises. If the service animal is excluded by law from the premises, the Town will look to other avail-

able measures to enable the person with a disability to obtain, use or benefit from the Town's goods and services.

If it is not readily apparent that the animal is a service animal, the Town may ask the person with a disability for a letter from a physician or nurse confirming that the person requires the animal for reasons relating to his or her disability. The Town may also, or instead, ask for a valid identification card signed by the Attorney General of Canada or a certificate of training from a recognized guide dog or service animal training school.

It is the responsibility of the person with a disability to ensure that his or her service animal is kept in control at all times.

If a person with a disability is accompanied by a support person, they are permitted to enter the premises together and are not prevented from having access to each other while on the premises.

The Town may require a person with a disability to be accompanied by a support person while on Town premises in situations where it is necessary to protect the health or safety of the person with a disability or the health and safety of others on the premises.

Where fees for goods and services are advertised or promoted by the Town of Amherstburg, it will provide advance notice of the amount payable, if any, in respect of the support person.



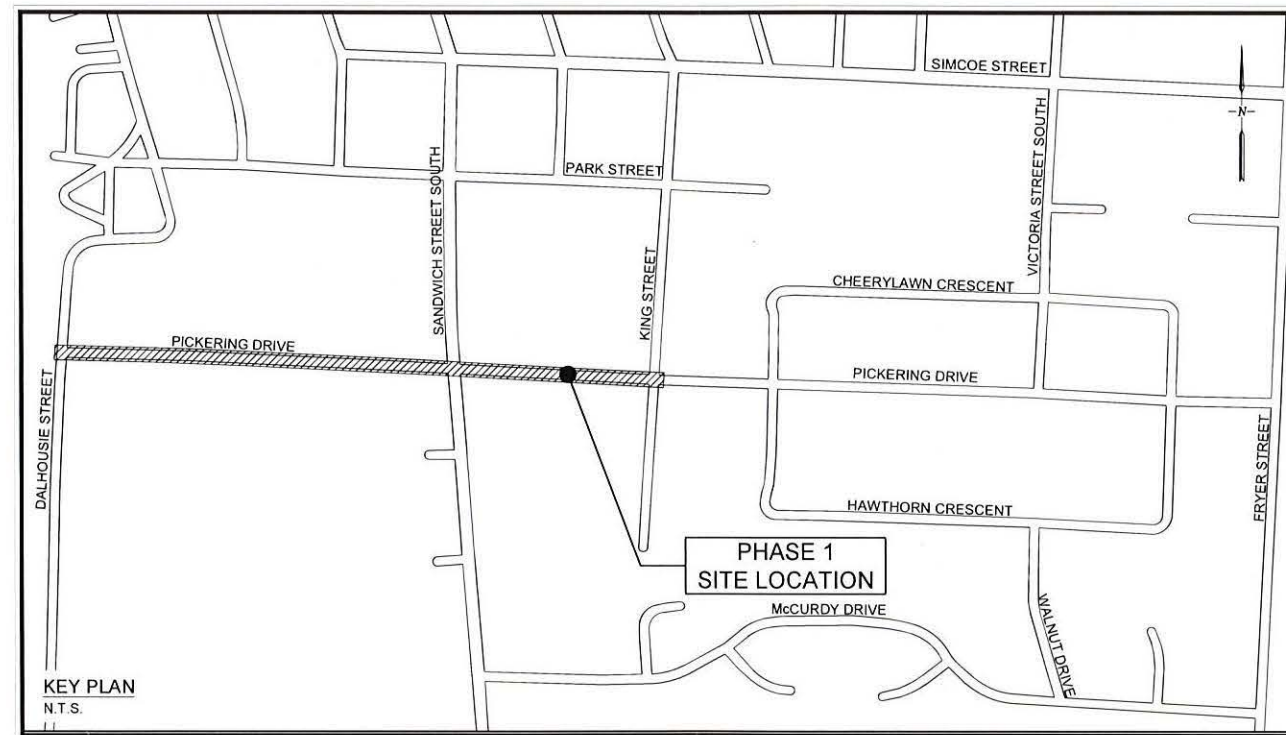
APPENDIX C

CONTRACT DRAWINGS

TOWN OF AMHERSTBURG



TOWN OF AMHERSTBURG
271 SANDWICH STREET SOUTH
AMHERSTBURG, ONTARIO
N9V 2A5



HRYCAY
CONSULTING ENGINEERS INC.

1725 North Talbot Road
Windsor, Ontario
telephone (519) 737-7234 fax (519) 737-7796
web www.hcei.ca

PROJECT No. PWD-WM-2015-011 / T04-2017-04

PICKERING DRIVE - PHASE 1 WATERMAIN REPLACEMENT AND ROAD IMPROVEMENTS ISSUED FOR CONSTRUCTION

HCEI Project No. M411

INDEX

DWG No.	DESCRIPTION
G-000	DRAWING LIST, LEGEND, AND GENERAL NOTES
C-001	PICKERING DRIVE - PLAN & PROFILE STA 0+996.60 TO STA 1+180
C-002	PICKERING DRIVE - PLAN & PROFILE STA 1+180 TO STA 1+360
C-003	PICKERING DRIVE - PLAN & PROFILE STA 1+360 TO STA 1+540
C-004	PICKERING DRIVE - PLAN & PROFILE STA 1+540 TO STA 1+720
C-005	PICKERING DRIVE AND SANDWICH STREET INTERSECTION
C-601	STANDARD DETAILS I
C-602	STANDARD DETAILS II
C-603	STANDARD DETAILS III
TS-001	TRAFFIC SIGNAL INSTALLATION - SANDWICH STREET AT PICKERING DRIVE

LEGEND

EXISTING

- STD IRON BAR
- IRON BAR
- ROUND IRON BAR
- HYDRO POLE
- HYDRO POLE WITH TRANSFORMER
- UTILITY POLE WITH LIGHT STD
- UTILITY POLE WITH LIGHT STD AND TRANSFORMER
- COMMUNICATION PEDESTAL
- BELL/HYDRO POLE
- LIGHT STD
- SIDEWALK
- WATER SERVICE (CURB STOP)
- EX. HYDRANT
- EX. CATCH BASIN
- CABLE PEDESTAL
- GAS VALVE
- TRANSFORMER
- TREE
- MAIL BOX
- TRAFFIC SIGNAL
- FENCE
- U/G GAS MAIN
- U/G COMMUNICATIONS CABLE
- U/G HYDRO
- WATERMAIN & VALVE
- SAN SEWER & MH
- STM SEWER & MH

PROPOSED

- WATERMAIN & VALVE
- WATER SERVICE & SIZE
- CURB STOP
- HYDRANT
- GRAVEL DRIVEWAY
- ASPHALT DRIVEWAY
- CONCRETE DRIVEWAY

NOTES

GENERAL NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF AMHERSTBURG STANDARDS AND OPSS. WHERE INCONSISTENCY OCCURS, TOWN STANDARDS GOVERN.
- CLEAR STONE WRAPPED IN FILTER FABRIC MAY BE SUBSTITUTED FOR PIPE BEDDING MATERIAL IF APPROVED BY THE CONTRACT ADMINISTRATOR.
- DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 AND 518. THE TOWN WILL OBTAIN DEWATERING PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE TO CARRY OUT DEWATERING AS REQUIRED TO MAINTAIN DRY TRENCH CONDITIONS AND IN ACCORDANCE WITH THE DEWATERING PERMIT.
- UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WORK WITH UTILITIES WHICH MAY ALSO BE UNDER CONSTRUCTION.
- EXISTING GAS MAIN TO BE PROTECTED IN ACCORDANCE WITH UNION GAS SPECIFICATIONS.
- ALL EXISTING ASPHALT PAVED PRIVATE ENTRANCES TO BE REINSTATED WITH 50mm HL3 SURFACE COURSE, 50mm HL4 BASE COURSE AND 150mm GRANULAR 'A' BASE AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
- ALL EXISTING CONCRETE PAVED PRIVATE ENTRANCES TO BE 100mm 30MPa CONCRETE AND 150mm GRANULAR 'A' BASE AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
- ALL EXISTING GRAVEL OR GRASSED PRIVATE ENTRANCES TO BE REINSTATED WITH 50mm OF 19mm (3/4") CLEAR STONE OVER 150mm GRANULAR 'A' AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
- ALL EXISTING UNIT PAVEMENT PRIVATE ENTRANCES TO BE REINSTATED WITH SALVAGED UNIT PAVERS TO PRE-CONSTRUCTION PATTERNS AND CONDITIONS OVER 150mm GRANULAR 'A' BASE AS DIRECTED BY THE CONTRACT ADMINISTRATOR. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED OR MISSING UNIT PAVERS WITH NEW MATERIAL OF IDENTICAL SIZE, SHAPE AND COLOUR TO THE CONTRACT ADMINISTRATOR'S, TOWN'S AND PROPERTY OWNER'S APPROVAL.
- ALL BOULEVARDS AND DISTURBED AREAS TO HAVE 100mm SCREENED TOPSOIL AND HYDROSEED UNLESS OTHERWISE NOTED.
- ACCESS TO BUSINESS AND RESIDENTIAL PROPERTIES MUST BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR MUST GIVE MIN. 48 HOURS NOTICE TO THE TOWN OF AMHERSTBURG PUBLIC WORKS DEPARTMENT THROUGH THE TOWN ENGINEER FOR OFFICIALS TO BE PRESENT FOR THE OPERATION OF VALVES, TESTING, DISINFECTION AND CONNECTION OF WATERMAIN.
- EARTH FILL MATERIAL UP TO AND INCLUDING SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY (SPD). GRANULAR BASE AND SUB-BASE TO BE COMPACTED TO 100% SPD. HOT MIX ASPHALT TO BE COMPACTED TO 97% SPD.
- ALL SANITARY, STORM, WATER, TELEPHONE, GAS, CABLE, ELECTRICAL, ETC. AND STRUCTURES (MANHOLES, CATCHBASINS, VALVE BOXES, PEDESTALS, CURB STOPS, ETC.) WITHIN THE LIMITS OF CONSTRUCTION SHALL BE ADJUSTED TO THE NEW GRADES. ADJUSTMENTS TO THE UTILITY PLANT TO BE PERFORMED BY THE OWNER OF THE UTILITY (GAS, TELEPHONE, CABLE, ELECTRICAL, ETC.). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE WORK BY THE RESPECTIVE UTILITIES.
- ALL MATERIALS SHALL BE CSA CERTIFIED.
- ALL WATERMAIN TO HAVE A MINIMUM 1.7m COVER OR APPROVED EQUIVALENT FROST PROTECTION WITH INSULATION.
- BEDDING AND BACKFILL IN ACCORDANCE WITH OPSS-401.

WATERMAIN:

- ALL WATERMAIN TO BE PVC DR18.
- PVC & PE PIPE INSTALLATION TO INCLUDE 12awg TWN MULTI-STRAND COPPER TRACER WIRE, TWN 75°C 600V OR APPROVED EQUAL. TRACER WIRE CONTINUITY MUST BE TESTED AND CERTIFIED BY PUBLIC WORKS STAFF. TRACER WIRE TO BE ATTACHED TO PIPE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. SPLICING OF TRACER WIRE SHALL BE DRYCONN WATERPROOF CONNECTORS, DRYCONN KING 6 BLUE CONNECTORS.
- CATHODIC PROTECTION (S-12 ZINC ANODES @ 30m SPACING) TO BE PROVIDED IN ACCORDANCE WITH OPSS-702 AS REQUIRED BY GEOTECHNICAL REPORT.
- ALL BEDDING AND BACKFILL SHALL BE SELECT NATIVE MATERIAL PLACED AS PER OPSS 802.010 AND COMPACTED TO 95% SPD UNLESS OTHERWISE DIRECTED BY CONTRACT ADMINISTRATOR.
- THRUST PROTECTION SHALL BE PROVIDED USING MECHANICAL JOINT FITTINGS AND RESTRAINERS.
- VALVES TO BE CANADA VALVE, 'DARLING 55' PUSH-ON, OR APPROVED EQUAL, LEFT HAND OPENING COMPLETE WITH SLIDE TYPE VALVE BOXES 125mm DIA. WITH LIDS MARKED WATER.
- WATER SERVICES TO BE TYPE 'K' COPPER COMPLETE WITH MAIN STOP, MAIN STOP (CAMBRIDGE BRASS, BALL TYPE, NON-LEAD, OR EQUAL), 19mmØ CURB STOP (CAMBRIDGE BRASS, BALL TYPE, NON-LEAD, OR EQUAL), UNLESS OTHERWISE NOTED SERVICES TO INCLUDE TRACER WIRE TO PROPERTY LINE AND BROUGHT TO SURFACE ON THE OUTSIDE OF THE WATER VALVE.
- REMOVE AND REPLACE EXISTING WATER SERVICE LATERALS UP TO AND INCLUDING CURB STOP (AS REQUIRED).
- ALL GRANULAR ROAD BASE SHALL BE COMPACTED TO 100% SPD MAXIMUM DRY DENSITY.
- EXISTING SERVICE LOCATIONS TO BE VERIFIED IN THE FIELD.
- HYDRANT TO BE MUELLER 'CENTURY' WITH PUSH-ON BASE, PLUGGED DRAIN HOLES, 2.50mm PORTS AND FACTORY INSTALLED STORZ FITTING PER OPSS-1105.010.
- MINIMUM VERTICAL SEPARATION 500mm BETWEEN WATERMANS AND SEWERS. MINIMUM HORIZONTAL SEPARATION OF 2.5m BETWEEN WATERMANS AND SEWERS UNLESS MIN. VERTICAL SEPARATION OF 500mm CAN BE ACHIEVED. IF MINIMUM SEPARATION CANNOT BE ACHIEVED, WATERMAIN TO BE ENCASED AS PER SPECIFICATIONS.
- WATERMANS SHALL BE SWABBED, FLUSHED AND PRESSURE TESTED IN ACCORDANCE WITH OPSS 441 WITH TOWN OFFICIALS PRESENT.
- DISINFECTING OF WATERMANS SHALL BE IN ACCORDANCE WITH AWWA C651-14 SPECIFICATIONS.

TOWN OF AMHERSTBURG STANDARD DRAWINGS:

No. R1	TYPICAL CROSS-SECTION FOR LOCAL ROADS 20m RIGHT-OF-WAY
No. R2	TYPICAL CROSS-SECTION FOR COLLECTOR ROAD 22m RIGHT-OF-WAY
No. R5	CONCRETE BARRIER CURB WITH STANDARD GUTTER FOR FLEXIBLE PAVEMENT
No. W1	TYPICAL WATER SERVICE INSTALLATION
No. W4	TYPICAL VALVE SETTINGS
No. W5	HYDRANT INSTALLATION
No. W7	SUPPORT OF UTILITIES OVER EXCAVATIONS

ONTARIO PROVINCIAL STANDARD DRAWINGS:

OPSD-351.040	URBAN RESIDENTIAL ENTRANCE
OPSD-561.010	INTERLOCKING CONCRETE PAVERS ON GRANULAR BASE
OPSD 600.060	CONCRETE SEMI-MOUNTABLE CURB WITH STANDARD GUTTER
OPSD-1101.020	VALVE OPERATOR
OPSD-1103.010	CONCRETE THRUST BLOCKS FOR TEES, PLUGS AND HORIZONTAL BENDS
OPSD-1103.020	CONCRETE THRUST BLOCKS FOR VERTICAL BENDS
OPSD-1104.010	WATER SERVICE CONNECTION, 19mm AND 25mm DIAMETER SIZES
OPSD-1105.010	HYDRANT INSTALLATION
OPSD-1109.010	CATHODIC PROTECTION FOR PVC WATERMAIN SYSTEMS

NOTE: ADDITIONAL STANDARDS MAY APPLY. WHERE INCONSISTENCY OCCURS, TOWN STANDARDS GOVERN.

- This drawing is the exclusive property of HRYCAY Consulting Engineers Inc. The reproduction of any part without prior written consent of HRYCAY is strictly prohibited.
- The contractor shall verify all dimensions, levels, and details on site and report any discrepancies or omissions to the office prior to construction.
- This drawing is to be read and understood in conjunction with all other plans and documents associated with this project.

FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
0	50% DESIGN SUBMISSION	2016-09-06	JEA
1	90% DESIGN SUBMISSION	2017-05-01	JEA
2	100% DESIGN SUBMISSION	2017-06-12	JEA
3	ISSUED FOR TENDER	2017-06-16	JEA
4	ISSUED FOR CONSTRUCTION	2017-07-10	JEA



NOTE:
THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE THEY ARE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED BEFORE STARTING WORK. THE CONTRACTOR SHALL ASCERTAIN THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGES TO THEM.

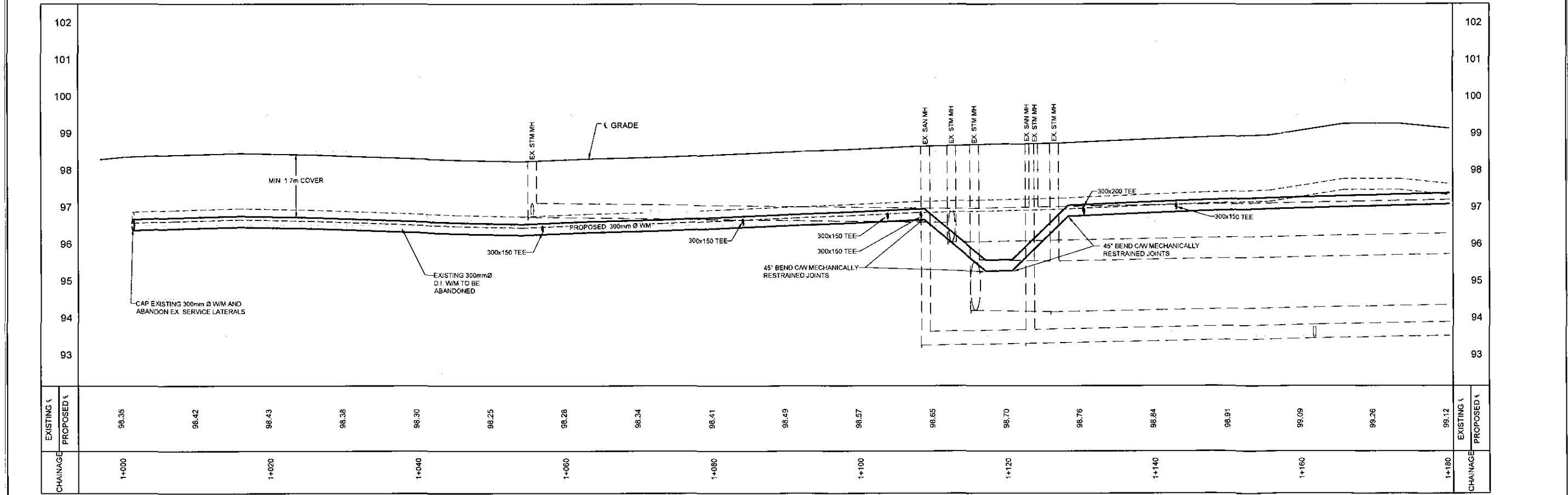
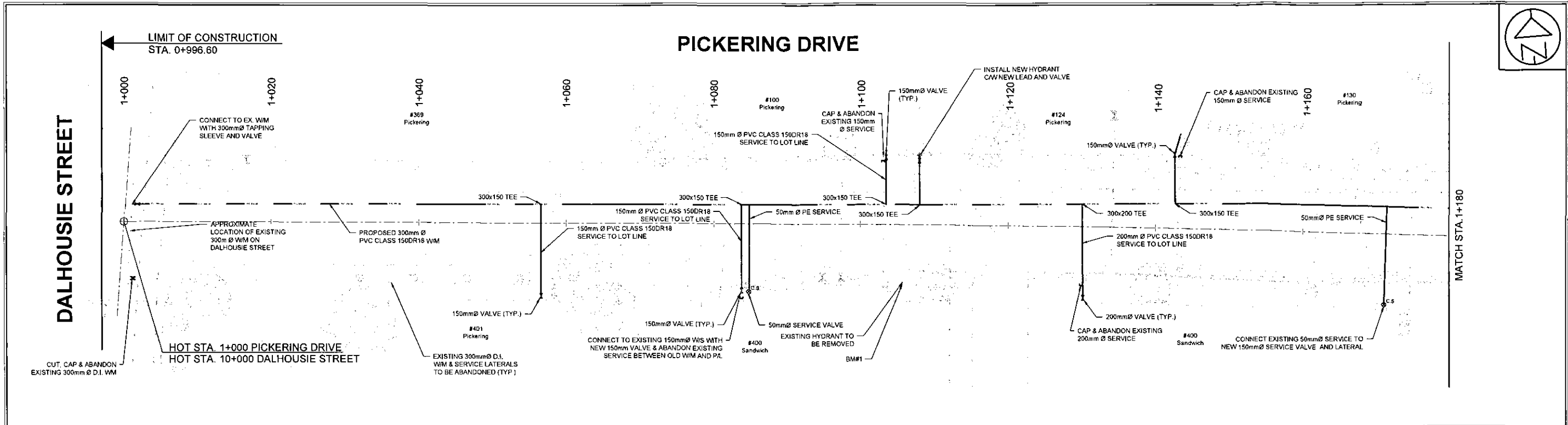
BENCHMARKS

BMB1 FH TOP NUT ON PICKERING DR. ELEV = 100.00 STA = 1+126.65 O.S = 7.84m RT	BMB3 FH TOP NUT ON KING ST. ELEV = 101.77 STA = 1+563.27 O.S = 12.65m LT
BMB2 FH TOP NUT ON SANDWICH ST ELEV = 100.92 STA = 1+385.12 O.S = 18.14m LT	BMB4 FH TOP NUT ON FRYER ST. ELEV = 102.27 STA = 2+177.96 O.S = 15.12m LT



TOWN OF AMHERSTBURG
271 SANDWICH STREET SOUTH
AMHERSTBURG, ONTARIO
N0B 2A5

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Scale	Project No.	Revision No.	Sheet No.		
N.T.S.	M411	4			



CHAINAGE	EXISTING E	PROPOSED E	CHAINAGE	EXISTING E	PROPOSED E
1+000	98.35	98.42	1+180	99.12	99.26
1+020	98.43	98.38			
1+040	98.30	98.25			
1+060	98.28	98.34			
1+080	98.41	98.49			
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1+120	98.70	98.76			
1+140	98.84	98.91			
1+160	98.99	99.09			

FOR CONSTRUCTION

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0	50% DESIGN SUBMISSION	2016-09-06	JEA
1	90% DESIGN SUBMISSION	2017-05-01	JEA
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BENCHMARKS:
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 ELEV = 100.06
 STA = 1+105.86
 OS = 7.84m RT
 BM#2 FH TOP NUT ON SANDWICH ST
 ELEV = 100.92
 STA = 1+289.12
 OS = 18.14m LT
 BM#3 FH TOP NUT ON KING ST.
 ELEV = 101.37
 STA = 1+582.27
 OS = 12.65m LT

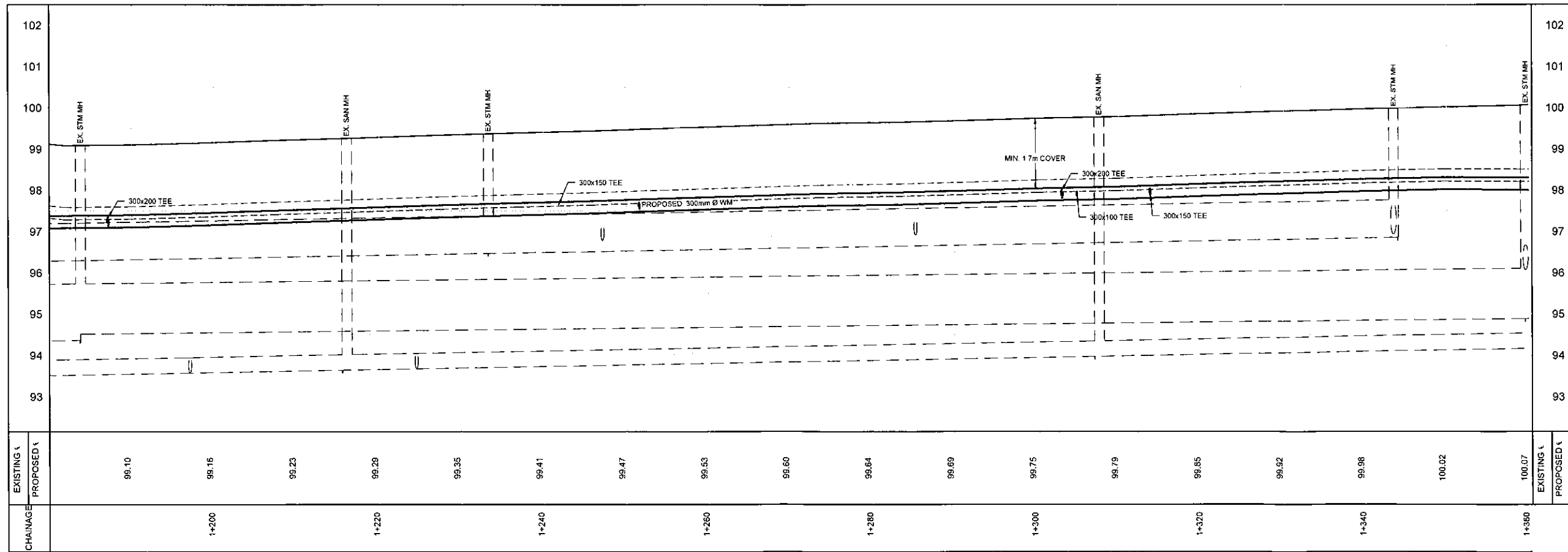
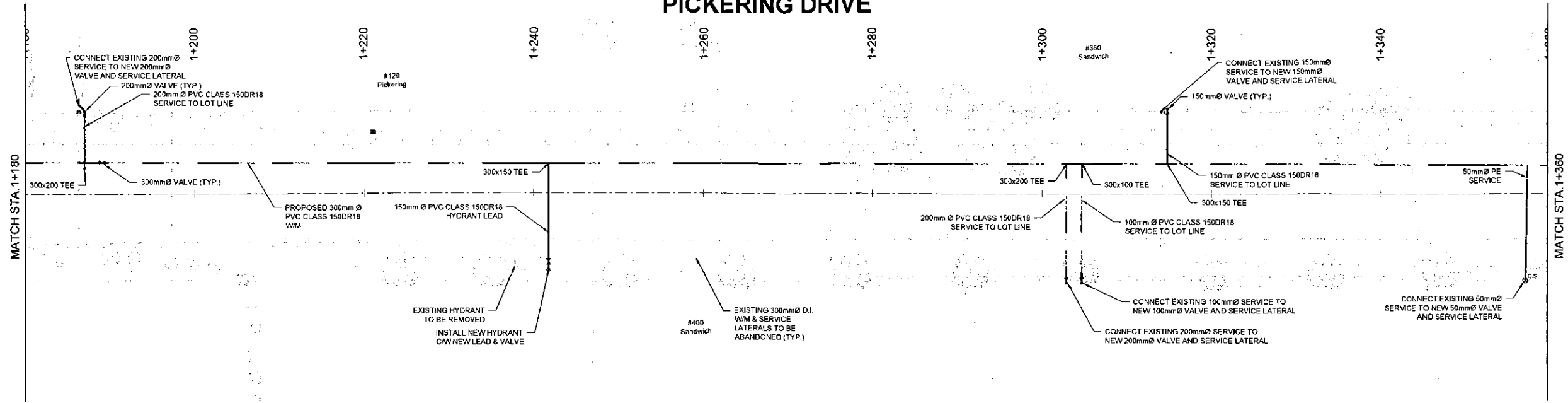
HRYCAY CONSULTING ENGINEERS INC.
 TOWN OF AMHERSTBURG
 271 SANDWICH STREET SOUTH
 AMHERSTBURG, ONTARIO
 N1V 2A5

PICKERING DRIVE WATERMAIN REPLACEMENT - PWD-WM-2015-011 / T04-2017-04 - PHASE 1
 PICKERING DRIVE
 PLAN AND PROFILE
 STA. 0+966.60 TO STA. 1+180

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Scale	Project No.	Sheet No.	Revision No.		
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C-001

PICKERING DRIVE



FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
0	50% DESIGN SUBMISSION	2018-09-06	JEA
1	90% DESIGN SUBMISSION	2017-05-01	JEA
2	100% DESIGN SUBMISSION	2017-05-12	JEA
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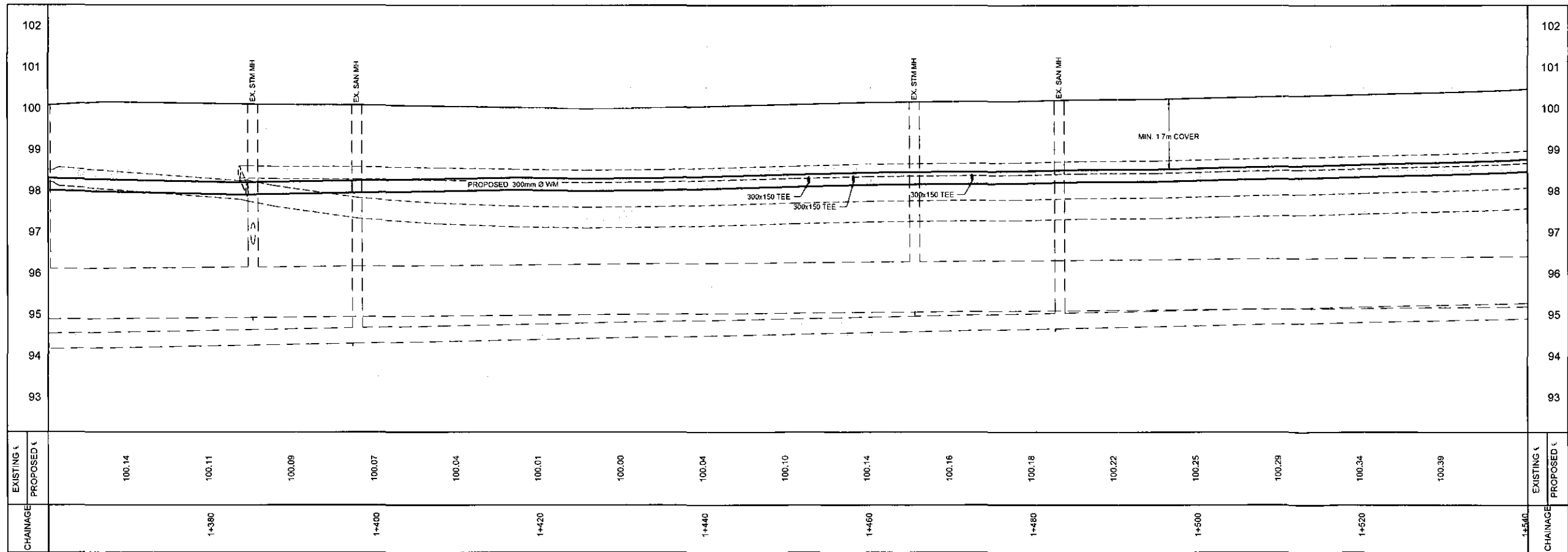
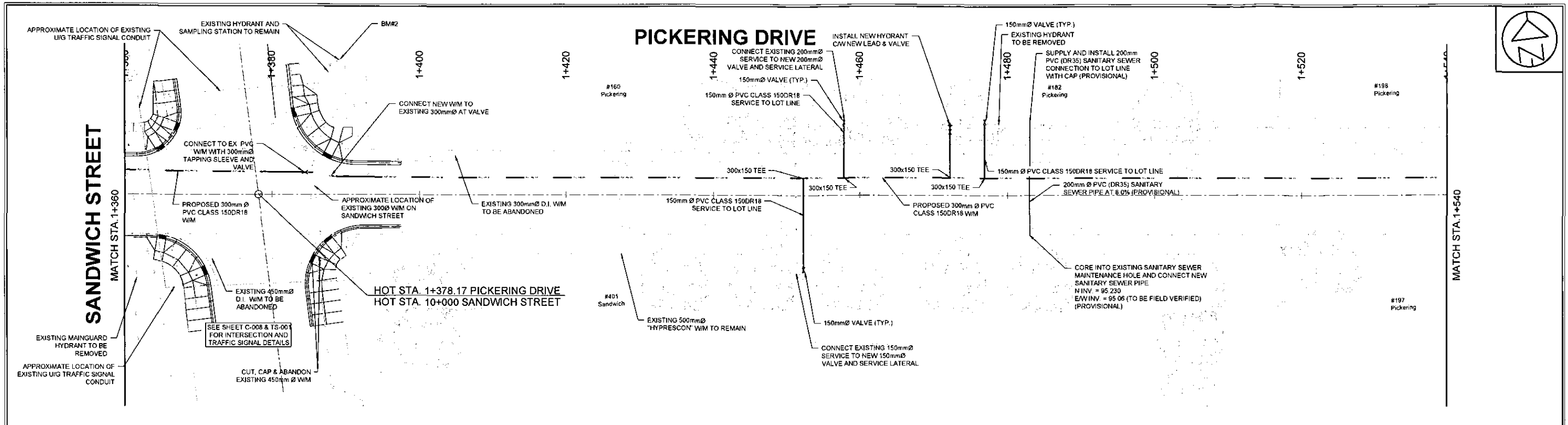
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BENCHMARKS	
BMS1	PH TOP NUT ON PICKERING DR. ELEV. = 100.90 STA. = 1+108.48 O.S. = 7.84m RT
BMS2	PH TOP NUT ON SANDWICH ST ELEV. = 100.92 STA. = 1+389.12 O.S. = 18.14m LT
BMS3	PH TOP NUT ON KING ST ELEV. = 101.77 STA. = 1+563.27 O.S. = 12.65m LT

HRICAY CONSULTING ENGINEERS INC.

TOWN OF AMHERSTBURG
271 SANDWICH STREET SOUTH
AMHERSTBURG, ONTARIO
N2V 2A5

DRAWING TITLE				
PICKERING DRIVE WATERMAIN REPLACEMENT - PWD-WM-2015-011 / T04-2017-04 - PHASE 1				
PICKERING DRIVE PLAN AND PROFILE STA. 1+180 TO STA. 1+360				
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FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
0	50% DESIGN SUBMISSION	2016/09/06	JEA
1	90% DESIGN SUBMISSION	2017/05/01	JEA
2	100% DESIGN SUBMISSION	2017/06/12	JEA
3	ISSUED FOR TENDER	2017/06/18	JEA
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BM#1 FH TOP NUT ON PICKERING DR. ELEV = 100.00 STA = 1+165.86 G.S = 7.84m RT	BM#3 FH TOP NUT ON KING ST ELEV = 101.27 STA = 1+583.27 G.S = 12.85m LT
BM#2 FH TOP NUT ON SANDWICH ST ELEV = 100.92 STA = 1+369.12 G.S = 18.14m LT	

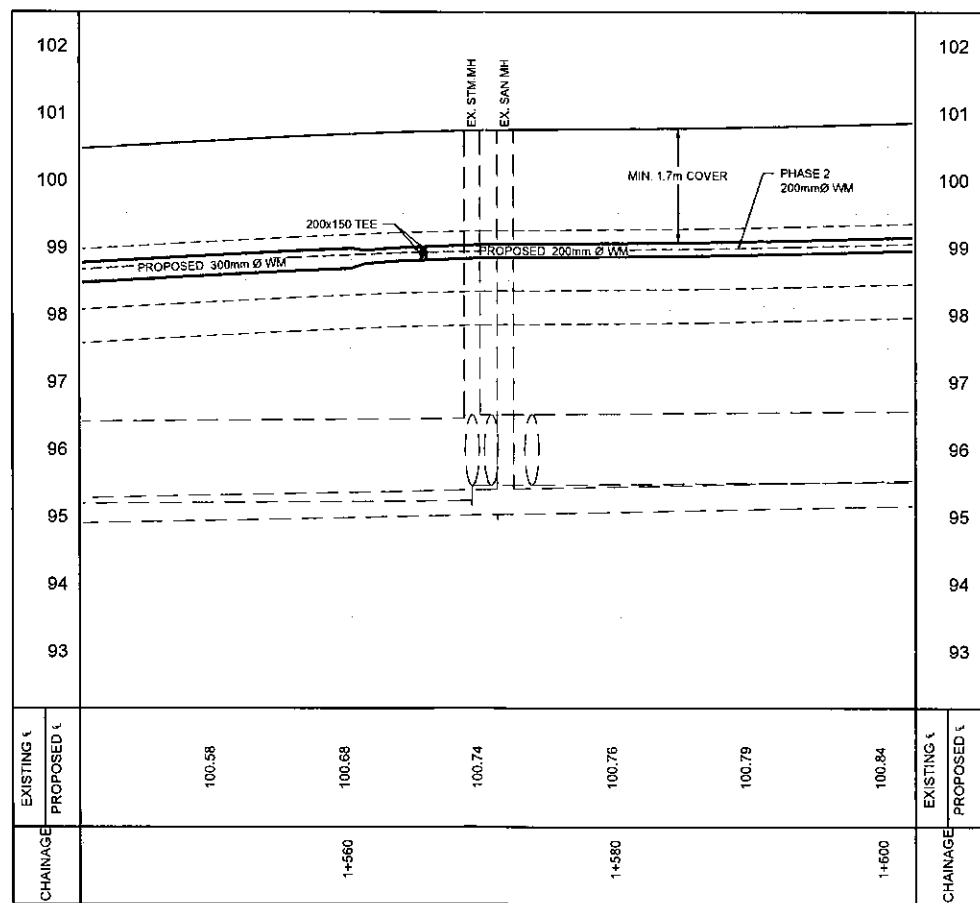
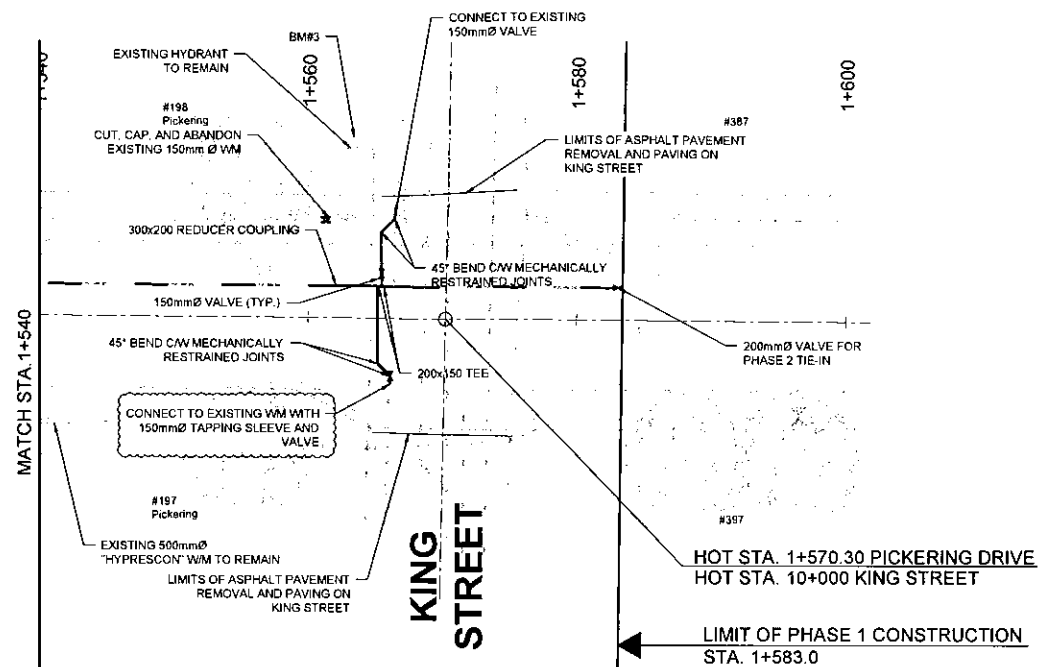
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TOWN OF AMHERSTBURG
271 SANDWICH STREET SOUTH
AMHERSTBURG, ONTARIO
N0Y 2A5

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PICKERING DRIVE



FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
0	80% DESIGN SUBMISSION	2016-09-06	JEA
1	90% DESIGN SUBMISSION	2017-05-01	JEA
2	100% DESIGN SUBMISSION	2017-06-12	JEA
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4	ADDENDUM #1	2017-06-29	JEA
5	ISSUED FOR CONSTRUCTION	2017-07-10	JEA

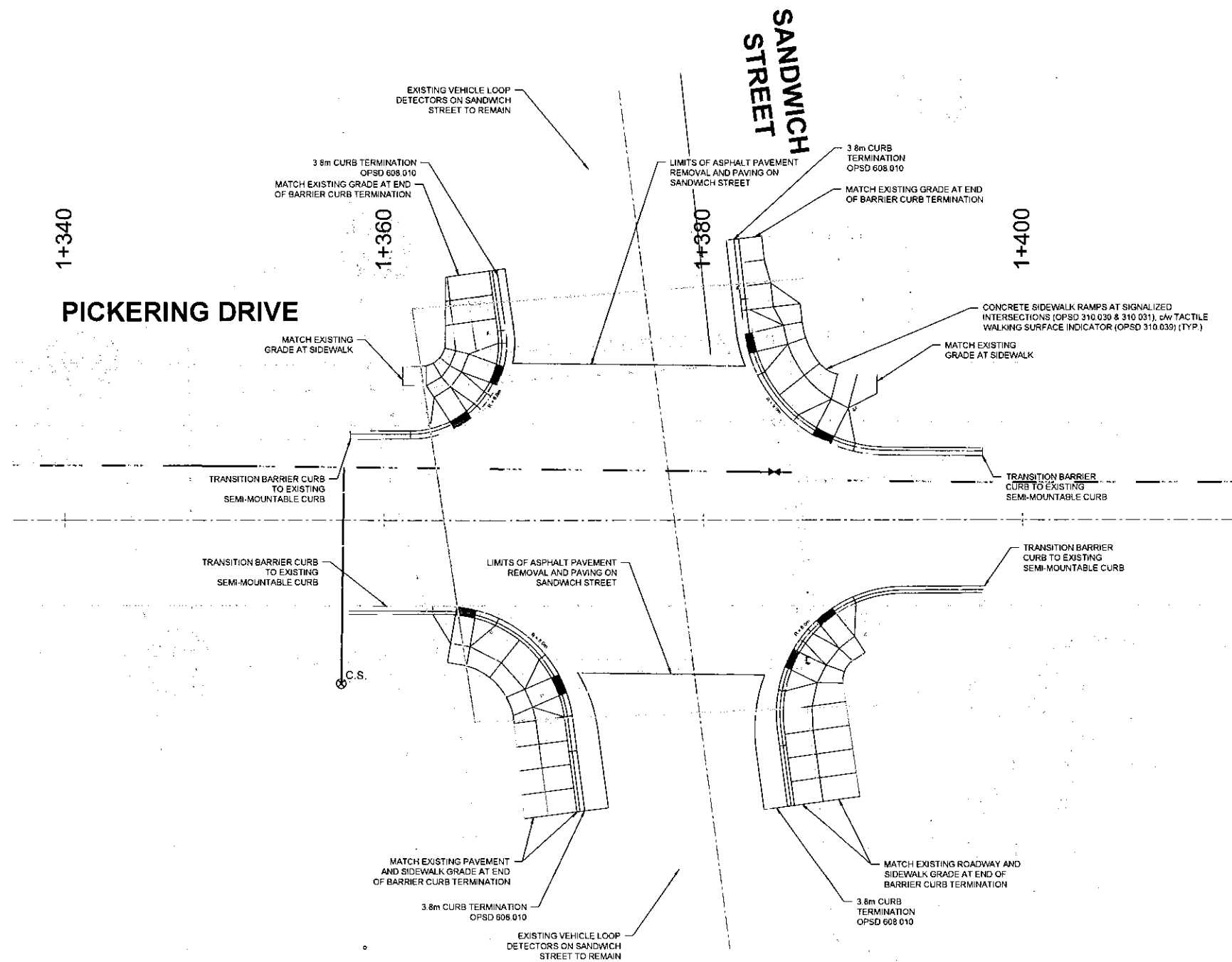


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 BM#3 FH TOP NUT ON KING ST ELEV = 101.77 STA = 1+583.27 OS = 12.65m LT

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 271 SANDWICH STREET SOUTH AMHERSTBURG, ONTARIO N0Y 2A5

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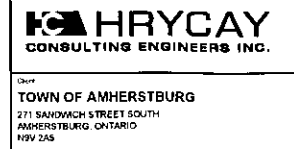
No	Issue / Revision	Date	Auth.
0	50% DESIGN SUBMISSION	2018-09-06	JEA
1	90% DESIGN SUBMISSION	2017-06-01	JEA
2	100% DESIGN SUBMISSION	2017-06-12	JEA
3	ISSUED FOR TENDER	2017-06-18	JEA
4	ISSUED FOR CONSTRUCTION	2017-07-10	JEA



NOTE
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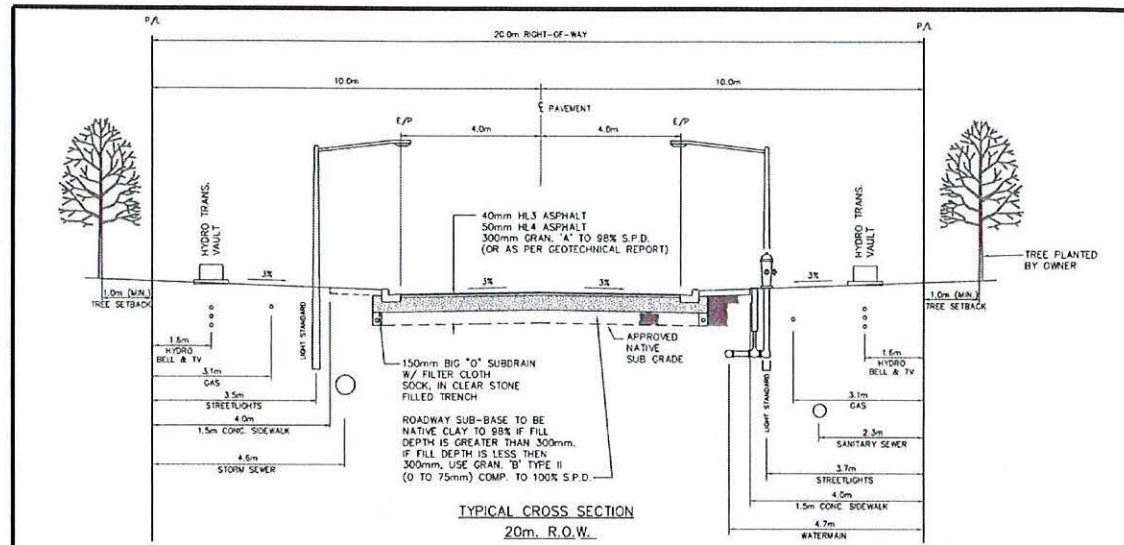
BENCHMARKS:

BM#1 FH TOP NUT ON PICKERING DR ELEV = 100.00 STA = 1+106.88 OS = 7.84m RT	BM#3 FH TOP NUT ON KING ST ELEV = 101.77 STA = 1+563.27 OS = 12.85m LT
BM#2 FH TOP NUT ON SANDWICH ST ELEV = 100.92 STA = 1+328.12 OS = 18.14m LT	



Drawing Title:
 PICKERING DRIVE WATERMAIN REPLACEMENT - PWD-WM-2015-011 / T04-2017-04 - PHASE 1
 PICKERING DRIVE & SANDWICH STREET INTERSECTION
 PLAN AND PROFILE
 STA 1+340 TO STA 1+420

Drawn	Checked	Designed	Checked	Date	Drawing No.
SCR	CB	CB	JEA	2017-07-10	C-005
Scale:	Sheet No.:	Project No.:	Revision No.:		
H 1:50	M411		4		



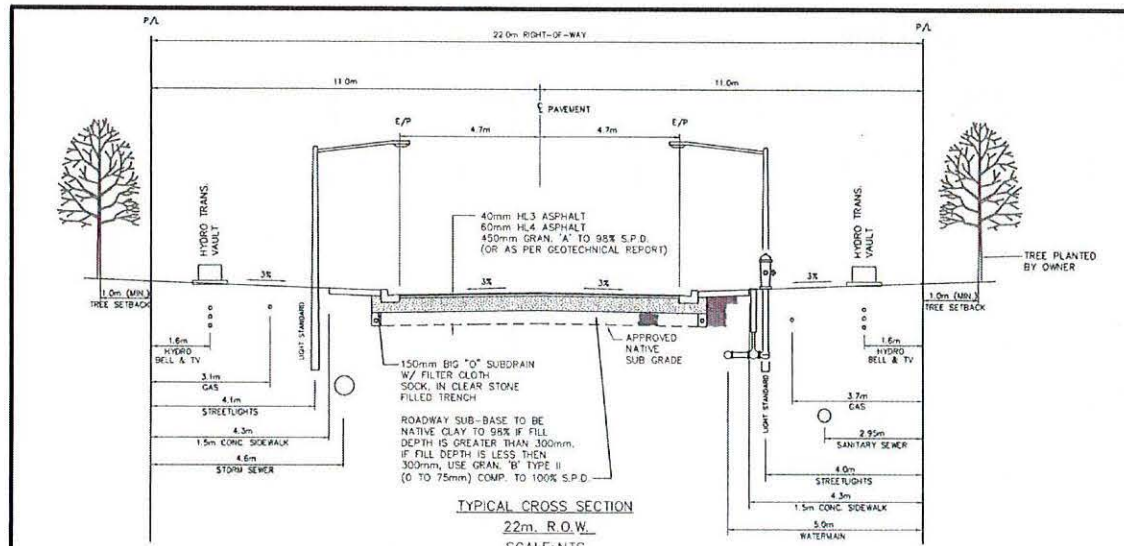
NOTES:

- SIDEWALK WHEELCHAIR RAMPS AND ONE SIDEWALK PANEL (IN EACH DIRECTION WHERE FUTURE SIDEWALKS WILL BE EXTENDED) WILL BE CONSTRUCTED PRIOR TO THE MAINTENANCE PERIOD COMMENCING.
- REMAINING SIDEWALKS WILL BE COMPLETED ONE (1) YEAR AFTER THE WHEELCHAIR RAMPS HAVE BEEN CONSTRUCTED (EXCLUSIVE OF MAINTENANCE PERIOD).
- APPLICANTS (OR APPLICANT'S HOUSE BUILDER) WILL BE RESPONSIBLE TO UPGRADE EXISTING SIDEWALK FROM 125mm THICKNESS TO 150mm THICKNESS AT TIME OF DRIVEWAY CONSTRUCTION AS WELL AS REPLACE ANY DAMAGED SIDEWALK PANELS.
- SIDEWALKS WILL EXTEND STRAIGHT THROUGH AN ASPHALT, PAVING STONE OR COLOURED CONCRETE DRIVEWAYS (EXISTING OR NEW). FOR NON-COLOURED CONCRETE DRIVEWAYS, THE APPLICANT (OR APPLICANT'S HOUSE BUILDER) WILL DEFINE SIDEWALK ACROSS THE DRIVEWAY USING EXPANSION JOINT, DUMMY JOINT OR SAWCUT.
- SURFACE COURSE ASPHALT WILL BE PLACED WITHIN ONE YEAR OF INITIAL ACCEPTANCE OF UNDERGROUND WORKS, BASE ASPHALT AND CURB AND GUTTER AFTER THE START OF THE MAINTENANCE OR AS APPROVED BY THE MANAGER OF PUBLIC WORKS.

TOWN OF AMHERSTBURG Date **08 25 2004**

TYPICAL CROSS-SECTION FOR LOCAL ROADS 20m RIGHT-OF-WAY Drawing No. **R1**

Last Revision **05 12 2009**



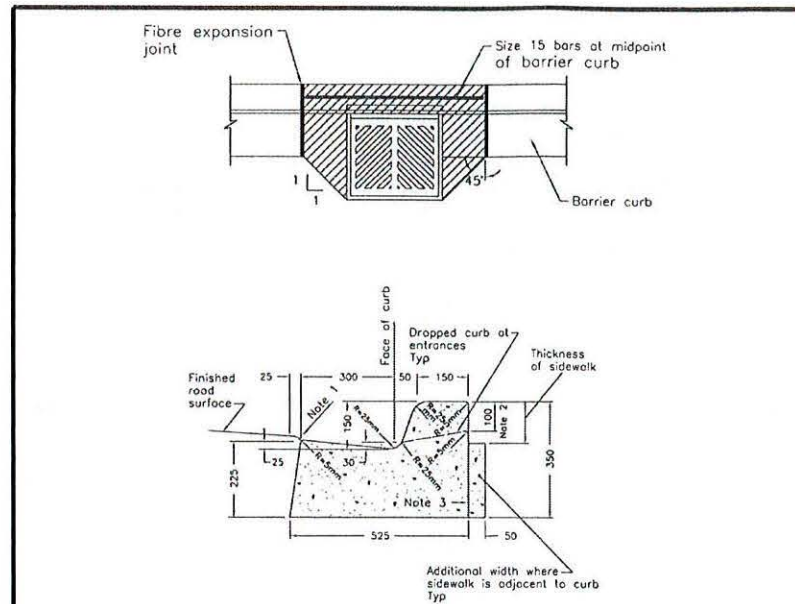
NOTES:

- SIDEWALK WHEELCHAIR RAMPS AND ONE SIDEWALK PANEL (IN EACH DIRECTION WHERE FUTURE SIDEWALKS WILL BE EXTENDED) WILL BE CONSTRUCTED PRIOR TO THE MAINTENANCE PERIOD COMMENCING.
- REMAINING SIDEWALKS WILL BE COMPLETED ONE (1) YEAR AFTER THE WHEELCHAIR RAMPS HAVE BEEN CONSTRUCTED (EXCLUSIVE OF MAINTENANCE PERIOD).
- APPLICANTS (OR APPLICANT'S HOUSE BUILDER) WILL BE RESPONSIBLE TO UPGRADE EXISTING SIDEWALK FROM 125mm THICKNESS TO 150mm THICKNESS AT TIME OF DRIVEWAY CONSTRUCTION AS WELL AS REPLACE ANY DAMAGED SIDEWALK PANELS.
- SIDEWALKS WILL EXTEND STRAIGHT THROUGH AN ASPHALT, PAVING STONE OR COLOURED CONCRETE DRIVEWAYS (EXISTING OR NEW). FOR NON-COLOURED CONCRETE DRIVEWAYS, THE APPLICANT (OR APPLICANT'S HOUSE BUILDER) WILL DEFINE SIDEWALK ACROSS THE DRIVEWAY USING EXPANSION JOINT, DUMMY JOINT OR SAWCUT.
- SURFACE COURSE ASPHALT WILL BE PLACED WITHIN ONE YEAR OF INITIAL ACCEPTANCE OF UNDERGROUND WORKS, BASE ASPHALT AND CURB AND GUTTER AFTER THE START OF THE MAINTENANCE OR AS APPROVED BY THE MANAGER OF PUBLIC WORKS.

TOWN OF AMHERSTBURG Date **08 25 2004**

TYPICAL CROSS-SECTION FOR COLLECTOR ROAD 22m RIGHT-OF-WAY Drawing No. **R2**

Last Revision **05 12 2009**



LEGEND:
S - Rate of pavement superelevation in percent, %

NOTES:

- Flexible pavement shall be 5mm above the adjacent edge of gutter.
- Where sidewalk is continuously adjacent, reduce the dropped curb at entrances to 75mm.
- For slipforming procedure, a 5% batter is acceptable.
A Treatment at entrances shall conform with OPSD-351.01.
B Outlet treatment shall conform with OPSD-610 Series.
C The length of transition from one curb type to another shall be 3.0m, except in conjunction with guide rail, it shall conform to OPSD-900 Series.
- All dimensions are in millimetres unless otherwise shown.

TOWN OF AMHERSTBURG Date **08 25 2004**

CONCRETE BARRIER CURB WITH STANDARD GUTTER FOR FLEXIBLE PAVEMENT Drawing No. **R5**

Last Revision **08 25 2004**

FOR CONSTRUCTION

No	Issue / Revision	Date	Auth
0	50% DESIGN SUBMISSION	2016-09-06	JEA
1	90% DESIGN SUBMISSION	2017-05-01	JEA
2	100% DESIGN SUBMISSION	2017-06-12	JEA
3	ISSUED FOR TENDER	2017-06-16	JEA
4	ISSUED FOR CONSTRUCTION	2017-07-10	JEA



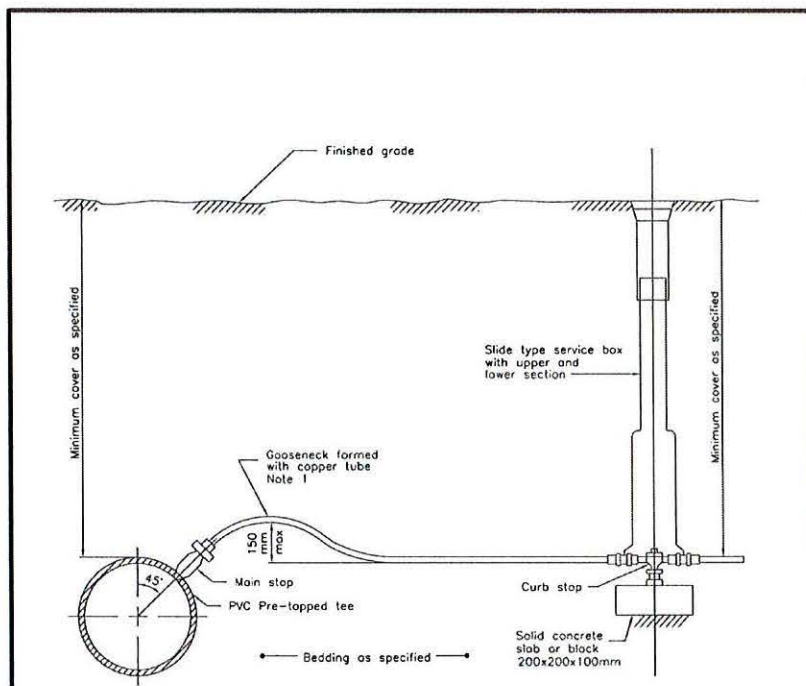
NOTE:
THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE THEY ARE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED BEFORE STARTING WORK. THE CONTRACTOR SHALL ASCERTAIN THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGES TO THEM.

HRYCAY CONSULTING ENGINEERS INC.

Client: **TOWN OF AMHERSTBURG**
271 SANDWICH STREET SOUTH
AMHERSTBURG, ONTARIO
N0V 2A5

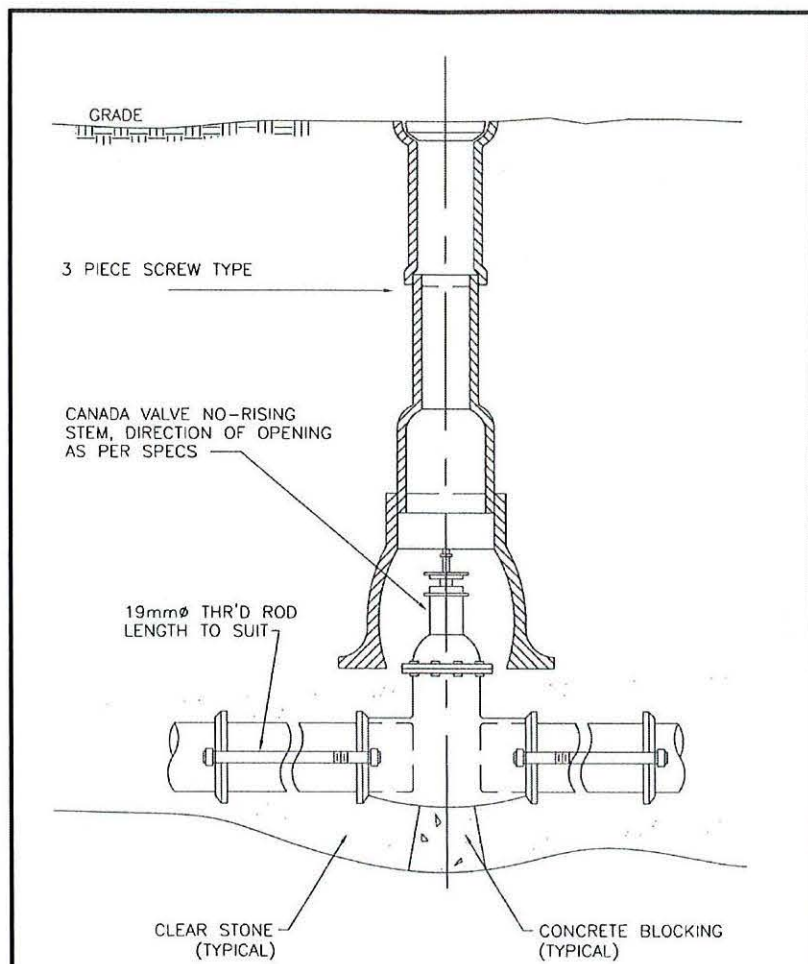
Drawn	Checked	Designed	Created	Date	Drawing No.
SCR	CB	CB	JEA	2017-07-10	C-601
Scale: N.T.S.	Project No: M411	Revision No: 4			

Drawing Title: **PICKERING DRIVE WATERMAIN REPLACEMENT - PWD-WM-2015-011 / T04-2017-04 - PHASE 1**
STANDARD DETAILS I

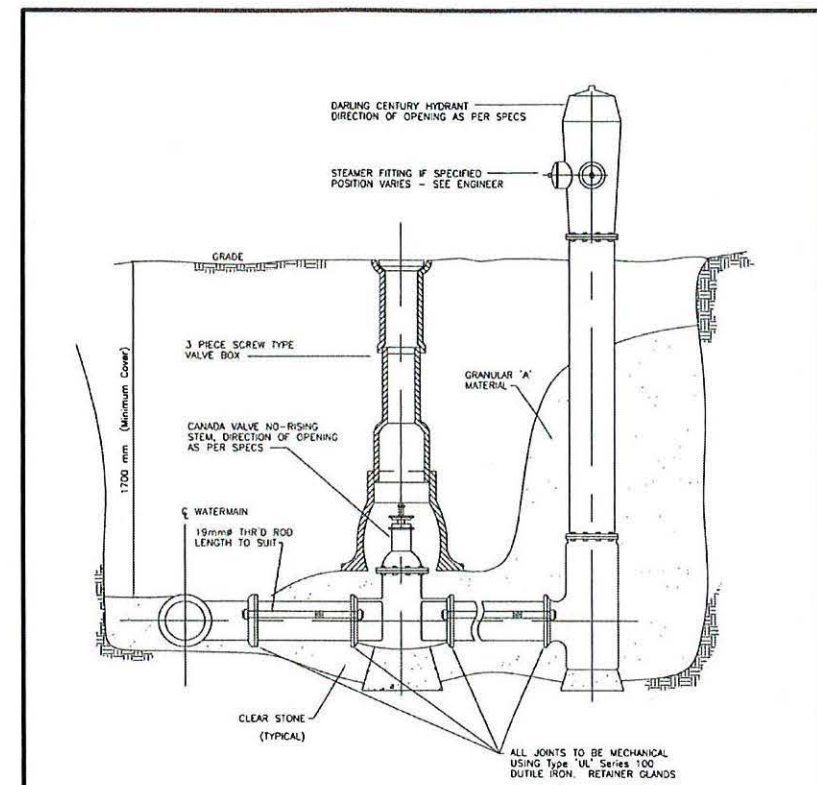


NOTES:
 A Service connections to plastic watermains PVC Pre-tapped Tees.
 B For any junction made in the service pipe, between main stop and curb stop, couplings will not be permitted unless the service length exceeds 20m.
 C All water services to be installed 90° to the longitudinal axis of the watermain.
 D All dimensions are in millimetres or metres unless otherwise shown.

	TOWN OF AMHERSTBURG	Date	08 25 2004
	TYPICAL WATER SERVICE INSTALLATION	Drawing No.	W1
		Last Revision	08 25 2004



	TOWN OF AMHERSTBURG	Date	08 25 2004
	TYPICAL VALVE SETTING	Drawing No.	W4
		Last Revision	08 25 2004



NOTES:
 A Bolts for buried flange to flange connections are to be stainless steel.
 B All dimensions are in millimetres unless otherwise shown.

	TOWN OF AMHERSTBURG	Date	08 25 2004
	HYDRANT INSTALLATION	Drawing No.	W5
		Last Revision	08 25 2004

FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
0	50% DESIGN SUBMISSION	2016-09-06	JEA
1	90% DESIGN SUBMISSION	2017-05-01	JEA
2	100% DESIGN SUBMISSION	2017-06-12	JEA
3	ISSUED FOR TENDER	2017-06-16	JEA
4	ISSUED FOR CONSTRUCTION	2017-07-10	JEA



NOTE:
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HRYCAY
 CONSULTING ENGINEERS INC.
 211 SANDMICH STREET SOUTH
 AMHERSTBURG, ONTARIO
 N5V 2A5

Drawing Title PICKERING DRIVE WATERMAIN REPLACEMENT - PWD-WM-2015-011 / T04-2017-04 - PHASE 1					
Drawing No. W5					
Last Revision 08 25 2004					
Drawn SCR	Checked CB	Designed CB	Checked JEA	Date 2017-07-10	Drawing No. C-602
Scale N.T.S.	Project No. M411	Revision No. 4			

PIPE LINES CROSSING TRENCH

PIPE LINES PARALLEL TO TRENCH

COLUMN DETAILS

NOTE:
 150mm x 100mm timber beam required beneath all 20mm to 150mm pipe. No supports required for pipe when spans are 1830mm or under. Columns to be maximum 1830mm centre to centre.

NOTE:
 Vertical columns to be a maximum 1830mm centre to centre. Side braces to be spaced as follows:
 20mm to 75mm - 35mm centre to centre
 150mm to 300mm - 50mm centre to centre

PIPE SIZE	COLUMN LENGTH	OVER 30m
20mm TO 150mm	100mm x 100mm	150mm x 150mm
20mm TO 300mm	2-100mm x 100mm OR 1-150mm x 150mm	2-150mm x 150mm OR 1-200mm x 200mm

GENERAL NOTES:
 1- Additional supports will be required at mechanical loadings or valves.
 2- Pipe coating to be protected from supports & strapping by a piece of rubber tire or equivalent.
 3- The above designs are suggestions only and the utility assumes no responsibility for workmanship, variable soil conditions or live loads.

TOWN OF AMHERSTBURG
SUPPORT OF UTILITIES OVER EXCAVATIONS
 Date: 08 25 2004
 Drawing No: W7
 Last Revision: 08 25 2004

MOUNTABLE CURB WITH GUTTER

BARRIER AND SEMI-MOUNTABLE CURB WITH GUTTER

NOTES:
 1 Slope shall match existing shoulder.
 A This drawing shall be read in conjunction with OPSD 600 series curb with gutter drawings.
 B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
 Nov 2012 Rev 2
METHOD OF TERMINATION FOR CONCRETE CURB WITH GUTTER
 OPSD 608.010

DOUBLE RAMP WITHOUT BOULEVARD

DOUBLE RAMP WITH BOULEVARD

RAMP PLAN

RAMP ELEVATION

RAMP SECTION

NOTES:
 1 Slope of ramp shall not exceed 8%.
 2 Cross slope of ramp shall not exceed 2% in either direction.
 3 Cross slope of flared side of ramp shall not exceed 6%.
 4 Dropped curb at ramp shall be modified to eliminate 30 mm step at gutter line.
 5 Accessible pedestrian signal to have tactile arrow that aligns with direction of crosswalk.
 6 Minimum thickness of ramp is 200mm. Minimum thickness of sidewalk and flared sides adjacent to ramp is 150mm.
 A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
 Nov 2015 Rev 0
CONCRETE SIDEWALK RAMP AT SIGNALIZED INTERSECTIONS WITH INTERSECTING CROSSWALKS
 OPSD 310.031

DOUBLE RAMP WITHOUT BOULEVARD

DOUBLE RAMP WITH BOULEVARD

RAMP PLAN

RAMP ELEVATION

RAMP SECTION

NOTES:
 1 Slope of ramp shall not exceed 8%.
 2 Cross slope of ramp shall not exceed 2% in either direction.
 3 Cross slope of flared side of ramp shall not exceed 6%.
 4 Dropped curb at ramp shall be modified to eliminate 30 mm step at gutter.
 5 Accessible pedestrian signal to have tactile arrow that aligns with direction of crosswalk.
 6 Minimum thickness of ramp is 200mm. Minimum thickness of sidewalk and flared sides adjacent to ramp is 150mm.
 A Where only one crosswalk is present at an intersection, only one curb ramp is required.
 B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
 Nov 2015 Rev 1
CONCRETE SIDEWALK RAMP AT SIGNALIZED INTERSECTIONS
 OPSD 310.030

TANGENT

SUPERELEVATED

LEGEND:
 S - Rate of pavement super-elevation in percent, %.

NOTES:
 1 When curb and gutter is adjacent to concrete pavement or base, this drawing shall be used in conjunction with OPSD 552.010 and 552.020.
 2 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.
 3 For slipforming procedure a 5% batter is acceptable.
 A Treatment at entrances shall be according to OPSD 351.010.
 B Outlet treatment shall be according to the OPSD 610 Series.
 C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.
 D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
 Nov 2012 Rev 2
CONCRETE SEMI-MOUNTABLE CURB WITH STANDARD GUTTER
 OPSD 600.060

PLAN

ELEVATION

DETAIL A TRUNCATED DOMES PLAN

SECTION A-A

NOTES:
 1 Vents shall be as specified by the manufacturer.
 2 Length of plate may be increased to suit the curb depression width.
 A Adjacent cast iron plates shall be permanently connected using a locking mechanism and any hardware shall be hot dipped galvanized.
 B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
 Nov 2015 Rev 0
CONCRETE SIDEWALK RAMP TACTILE WALKING SURFACE INDICATORS COMPONENT
 OPSD 310.039

FOR CONSTRUCTION

No.	Issue / Revision	Date	Auth.
0	50% DESIGN SUBMISSION	2016/09/06	JEA
1	90% DESIGN SUBMISSION	2017/05/01	JEA
2	100% DESIGN SUBMISSION	2017/06/12	JEA
3	ISSUED FOR TENDER	2017/06/16	JEA
4	ISSUED FOR CONSTRUCTION	2017/07/10	JEA



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HRYCAY CONSULTING ENGINEERS INC.

TOWN OF AMHERSTBURG
 271 SANDWICH STREET SOUTH
 AMHERSTBURG, ONTARIO
 N6V 2A5

PICKERING DRIVE WATERMAIN REPLACEMENT - PWD-WM-2015-011 / T04-2017-04 - PHASE 1
PICKERING DRIVE STANDARD DETAILS III

Drawn	Checked	Designed	Checked	Date	Drawing No.
SCR	CB	CB	JEA	2017/07/10	C-603

Scale: N.T.S. Project No: M411 Revision No: 4

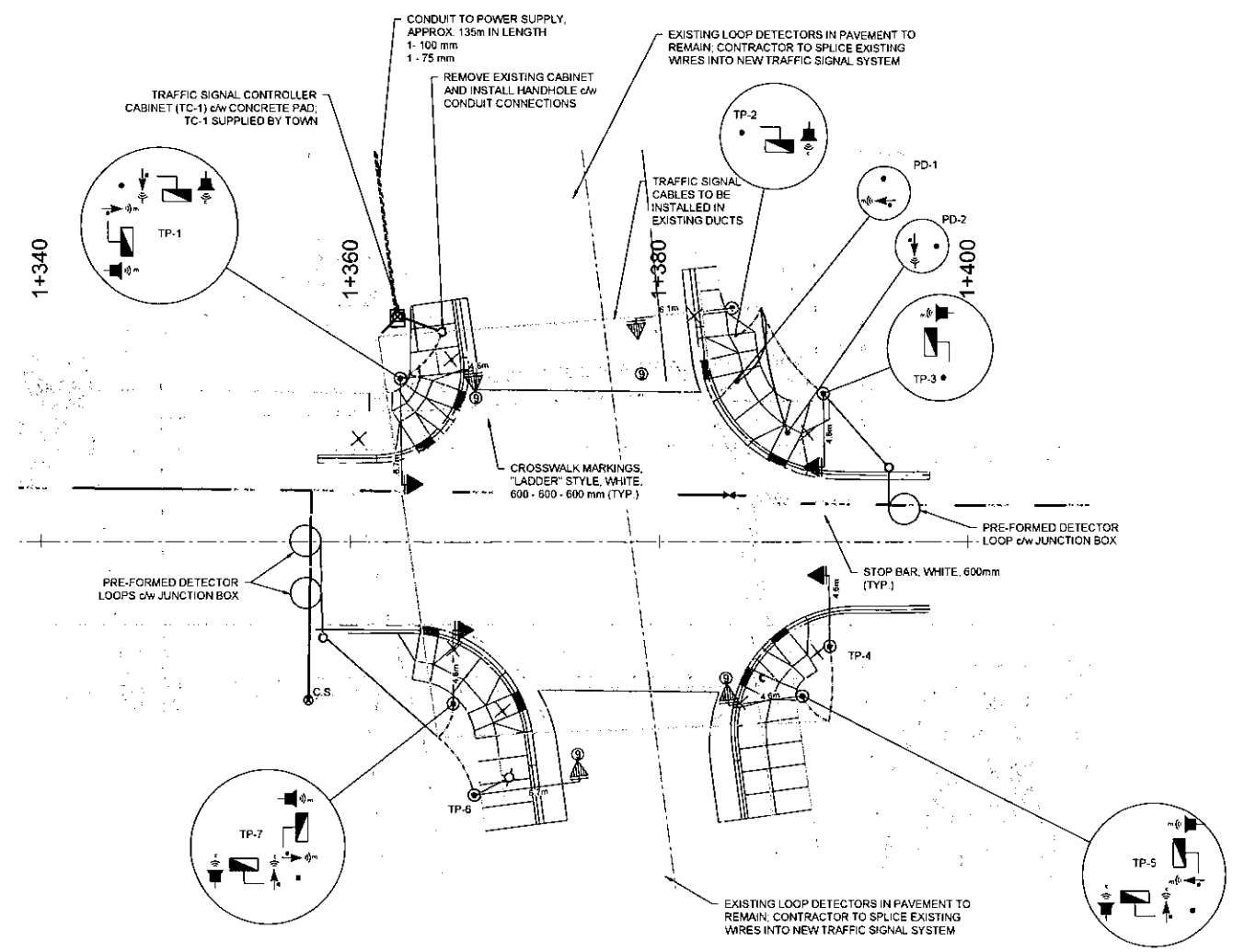


NOTE:
THIS DRAWING IS FOR TRAFFIC SIGNAL INSTALLATION ONLY. CO-ORDINATE INSTALLATION OF ALL UNDERGROUND DUCTWORK WITH ELECTRICAL CONTRACTOR.

- HYDRO POLE
 - ⊙ EXISTING TRAFFIC SIGNAL POLE
 - EXISTING ELECTRICAL HANDHOLE, VAULT
 - TP-1 ⊙ SIGNAL POLE AND POLE BASE
 - EH1 ⊙ ELECTRICAL HANDHOLE (EH) OPSD 2112.02
 - M ⊙ ELECTRICAL METERING POST
 - ⊠ PAD MOUNTED CONTROLLER AND CABINET
 - ⊡ POLE MOUNTED CONTROLLER AND CABINET
 - ⊞ PAD MOUNTED POWER SERVICE
 - ⊟ POLE MOUNTED POWER SERVICE
 - ⊘ STREETLIGHT LUMINAIRE
- 1 x 100mm DIA. RIGID DUCT
 ----- 3 x 75mm DIA. RIGID DUCT
 ----- 2 x 75mm DIA. RIGID DUCT
 ----- 1 x 50mm DIA. RIGID DUCT
- EXISTING DUCT
 || REMOVE EXISTING DUCT
 X REMOVE EXISTING MAN-HOLE
 X REMOVE EXISTING POLE
 ~~~~~ CABLES, AERIAL (TEMPORARY SIGNALS)
- PROVIDE ALL NECESSARY 120 VAC AND CONTROL WIRING FOR A COMPLETE TRAFFIC LIGHT SYSTEM.

**LEGEND**

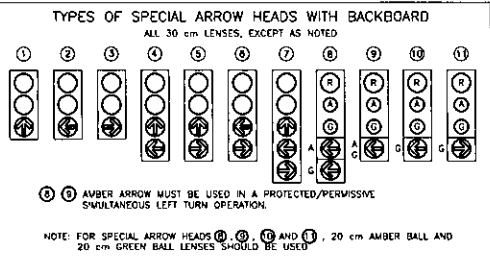
- ▽ HIGHWAY SIGNAL HEAD (30 cm dia) WITH BACKBOARD AND WEST ARW
  - ▽ HIGHWAY SIGNAL HEAD (30 cm dia) WITH BACKBOARD AND OVERHEAD CABLE
  - ▽ HIGHWAY SIGNAL HEAD WITH BACKBOARD AND WEST ARW (ALL 30 cm LENSES)
  - ▽ SPECIAL HEAD WITH ARROW INDICATION AND BACKBOARD (Example shown Type 2 Head)
  - ▽ SPECIAL HEAD WITH BACKBOARD AND ONE OR MORE PROGRAMMABLE LENSES (Example shown Type 2 Head)
  - ▽ STANDARD SIGNAL HEAD WITH BACKBOARD AND WEST ARW (ALL 20 cm LENSES)
  - ▽ STANDARD SIGNAL HEAD WITH WEST ARW WITHOUT BACKBOARD
  - ▽ EXISTING TRAFFIC SIGNAL
  - ▽ DOWNWARD PEDESTRIAN SIGNAL HEAD
  - ▽ EXISTING PEDESTRIAN PUSH BUTTON
- VEHICLE PASSAGE LOOP DETECTOR
  - VEHICLE LOOP DETECTOR
  - DUPLEX LOOP DETECTOR
  - ◇ DIAMOND LOOP DETECTOR
  - ⊙ MICRO-LOOP DETECTOR
  - ⊙ INVERSELY VEHICLE PRE-EMPTION DETECTOR
  - ⊙ MICRO-WAVE DETECTOR
  - ⊙ MAGNETIC VEHICLE DETECTOR
  - ▽ TRAFFIC SIGN WITH FLASHING BEACON
  - || ILLUMINATED TRAFFIC SIGN
  - ➔ ACCESSIBLE PEDESTRIAN PUSHBUTTON AND DIRECTION ARROW (L = left, R = right)
  - ➔ PEDESTRIAN PUSH BUTTON AND DIRECTION ARROW
  - ➔ ACCESSIBLE PEDESTRIAN SPANDER (L = left, R = right)
  - EXISTING PEDESTRIAN SIGNAL HEAD



| TRAFFIC SIGNAL POLE SCHEDULE |       |        |                         |                                                         |
|------------------------------|-------|--------|-------------------------|---------------------------------------------------------|
| POLE NUMBER                  | TYPE  | HEIGHT | BASE                    | STREET LIGHT                                            |
| TP-1                         | Steel | 7.0m   | Concrete w/ Preset Base | None                                                    |
| TP-2                         | Steel | 7.0m   | Concrete w/ Preset Base | None                                                    |
| TP-3                         | Steel | 7.0m   | Concrete w/ Preset Base | None                                                    |
| TP-4                         | Steel | 7.0m   | Concrete w/ Preset Base | None                                                    |
| TP-5                         | Steel | 7.0m   | Concrete w/ Preset Base | None                                                    |
| TP-6                         | Steel | 10.5m  | Concrete w/ Preset Base | L1 - LED 150W Eqv on 2.4m Taper Ellip. Aluminum Bracket |
| TP-7                         | Steel | 7.0m   | Concrete w/ Preset Base | None                                                    |

| PEDESTRIAN PUSH BUTTON POLE SCHEDULE |          |        |                         |
|--------------------------------------|----------|--------|-------------------------|
| POLE NUMBER                          | TYPE     | HEIGHT | BASE                    |
| PD-1                                 | Aluminum | 1.5m   | Concrete w/ Preset Base |
| PD-2                                 | Aluminum | 1.5m   | Concrete w/ Preset Base |

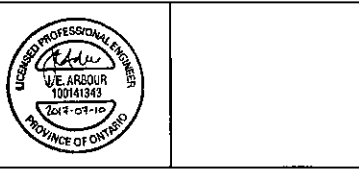
| CLASSIFICATION OF ROADWAY | TRAFFIC SIGNAL HEADS |       | LOCATION  |                                 |
|---------------------------|----------------------|-------|-----------|---------------------------------|
|                           | TYPE                 | SIZE  | BACKBOARD | MOUNTING HT. / OFFSET FROM POLE |
| ROADWAY SANDWICH STREET   | PRIMARY              | 300mm | YES       | 5.0m / 6.1 m NB 6.7 m SB        |
|                           | SECONDARY            | 300mm | YES       | 5.0m / 4.6 m NB 4.6 m SB        |
| MULTILANE SANDWICH STREET | PRIMARY              | 300mm | YES       | 5.0m / 4.6 m NB 6.7 m WB        |
|                           | SECONDARY            | 300mm | YES       | 5.0m / 4.6 m NB 4.6 m WB        |
| ROADWAY PICKERING DRIVE   | PRIMARY              | 300mm | YES       | 5.0m / 4.6 m EB 6.7 m WB        |
|                           | SECONDARY            | 300mm | YES       | 5.0m / 4.6 m EB 4.6 m WB        |
| MULTILANE PICKERING DRIVE | PRIMARY              | 300mm | YES       | 5.0m / 4.6 m EB 6.7 m WB        |
|                           | SECONDARY            | 300mm | YES       | 5.0m / 4.6 m EB 4.6 m WB        |



**NOTE:**  
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048  
THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

|                                                             |                                     |
|-------------------------------------------------------------|-------------------------------------|
| MUNICIPALITY                                                | TOWN OF AMHERSTBURG                 |
| INTERSECTION                                                | SANDWICH STREET AND PICKERING DRIVE |
| DATE                                                        | JUNE 2017                           |
| SCALE                                                       | 1:200                               |
| SIGNAL INSTALLATION APPROVED AS PER SECTION 144. (3) H.T.A. |                                     |
| APPROVAL DATE:                                              |                                     |

| No. | Issue / Revision        | Date       | Auth. |
|-----|-------------------------|------------|-------|
| 0   | 90% DESIGN SUBMISSION   | 2016-09-06 | JEA   |
| 1   | 90% DESIGN SUBMISSION   | 2017-05-01 | JEA   |
| 2   | 100% DESIGN SUBMISSION  | 2017-06-12 | JEA   |
| 3   | ISSUED FOR TENDER       | 2017-06-16 | JEA   |
| 4   | ISSUED FOR CONSTRUCTION | 2017-07-10 | JEA   |



**NOTE:**  
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**BENCHMARKS**  
 BM#1 FH TOP NUT ON PICKERING DR ELEV = 100.00 STA = 1+105.88 OS = 7.84m RT  
 BM#2 FH TOP NUT ON SANDWICH ST ELEV = 100.92 STA = 1+389.12 OS = 18.14m LT

**HRICAY CONSULTING ENGINEERS INC.**  
 TOWN OF AMHERSTBURG  
 271 SANDWICH STREET SOUTH AMHERSTBURG, ONTARIO N0Y 2A8

|                |             |              |            |          |
|----------------|-------------|--------------|------------|----------|
| Drawn by       | Checked     | Designed     | Date       | Drawn by |
| SCR            | CB          | JEA          | 2017/07/10 | TS-001   |
| Scale          | Project No. | Revision No. |            |          |
| H 1:250 V 1:25 | M411        | 4            |            |          |

**FOR CONSTRUCTION**