



**THE CORPORATION OF THE CITY OF WINDSOR
OFFICE OF THE CITY SOLICITOR**

ALEX VUCINIC
Manager of Purchasing

Elaine Castellan
Purchasing Supervisor

(519) 255-6272
TELEPHONE NUMBER

**ADDENDUM NO. 1
TENDER NO. 31-19
MATTHEW BRADY BOULEVARD REHABILITATION**

April 26, 2019

This addendum amends and forms part of the Tender Documents. The bidder shall insert the addendum behind the cover page of the Tender Documents.

CLARIFICATION:

Storm sewer manholes: the 450mm sump is to be measured from the 200mm pipe.

REVISED AND ATTACHED:

Special Provisions, 23 pages

Except for the contents of this addendum, all other terms and conditions of this tender remain the same.

END OF ADDENDUM NO. 1

Yours truly,

THE CORPORATION OF THE CITY OF WINDSOR

Elaine Castellan

Elaine Castellan
Purchasing Supervisor

EC/jm

**ADDENDUM NO. 1
TENDER NO. 31-19
MATTHEW BRADY BOULEVARD REHABILITATION**

April 26, 2019

I hereby acknowledge receipt of Addendum No. 1 to the Tender No. 31-19 (25 pages).

The information contained therein is hereby noted and account of same will be taken in our tender cost.

This information was received on the _____ day of _____, 20_____.

Signature

Name (Printed)

Company Name

***NOTE: You are required to acknowledge this addendum with your TENDER submission.**

**PLEASE FAX BACK TO (519) 255-9891 OR E-MAIL @ purchasing@citywindsor.ca SIGNED
ACKNOWLEDGEMENT SHEET ASAP**

Attn: Purchasing Department

CITY OF WINDSOR
SPECIAL PROVISIONS

INDEX

| NO. | DESCRIPTION | PAGE |
|------------|--|------------------|
| 1. | FULL DEPTH PAVEMENT REMOVAL..... | 2 |
| 2. | CATCHBASIN REMOVAL INCLUDING LEADS | 2 |
| 3. | NUMBER OF PRIVATE DRAIN CONNECTIONS | 2 |
| 4. | CONCRETE CONSTRUCTION..... | 3 |
| 5. | TEMPORARY PVC TEE | 3 |
| 6. | ASBESTOS CEMENT PIPE..... | 3 |
| 7. | PROJECT SCHEDULING | 4 |
| 8. | TREE TRIMMING..... | 4 |
| 9. | WATERING IN BOULEVARD..... | 5 |
| 10. | BOULEVARD AREAS AFFECTED BY BOTH ROAD RECONSTRUCTION AND PITS FOR PRIVATE DRAIN CONNECTIONS AND PRIVATE WATER SERVICES | 5 |
| 11. | HAND WORK..... | 5 |
| 12. | HOT MIX, HOT LAID, ASPHALTIC CONCRETE..... | 5 |
| 13. | LAYOUT | 6 |
| 14. | ENCROACHMENTS | 6 |
| 15. | SIGNAGE..... | 7 |
| 16. | MINISTRY OF THE ENVIRONMENT APPROVAL..... | 7 |
| 17. | EXISTING WATERMAINS AND WATER SERVICE LINES..... | 7 |
| 18. | REUSE OF MH 6R4529 | 9 |
| 19. | SITE INSPECTIONS | 9 |
| 20. | GROUT | 9 |
| 21. | STANDARD LEAN GROUT/BENTONITE PLUG..... | 9 |
| 22. | SANITARY CONNECTIONS THROUGH TRENCH | 9 |
| 23. | GEOTEXTILE (FILTER FABRIC)..... | 10 |
| 24. | PERFORATED PIPE..... | 10 |
| 25. | WATERMAIN REHABILITATION | 10 |
| 26. | WATERPROOFING SANITARY MANHOLES | 15 |
| 27. | STREETLIGHTING INFRASTRUCTURE..... | 15 |
| * 28. | <u>REQUIRED SUBMISSIONS</u> | <u>23</u> |

CITY OF WINDSOR SPECIAL PROVISIONS

The Contractor shall note that the following are the Specific Contract Provisions, which will be indicated in Column 1 of the Schedule of Quantities.

1. FULL DEPTH PAVEMENT REMOVAL

Scope of Work

The Contractor shall remove and dispose of all existing pavements, including asphalt pavement with concrete base, including curb and gutter, as shown on the Contract Drawings. (Borehole logs are provided in the contract drawings, and the Geotechnical Investigation Report is available at 350 City Hall Square West, Room 302, for reference.)

Measurement

Full depth pavement removal shall be measured in square metres, regardless of the pavement composition which is encountered.

Payment

Payment shall be made at the Unit Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment, and materials required to carry out this work, including removal and disposal. No payment shall be made for sawcutting.

2. CATCHBASIN REMOVAL INCLUDING LEADS

Scope of Work

The Contractor will be required to remove and dispose of existing catchbasins and leads at the locations shown on the Contract Drawings. Excavations shall be backfilled with Granular “A” material, compacted to 100 percent Standard Proctor Dry Density in maximum 300mm lifts. Capping of the tee at the existing main shall be completed where required. Leads located within boulevard shall be cut, capped, and grouted.

Measurement

Catchbasin and lead removal shall be measured on an each basis.

Payment

Payment shall be made at the Unit Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment, and materials required to remove and dispose of existing catchbasins and catchbasin leads, including backfill and compaction with Granular “A” material.

3. NUMBER OF PRIVATE DRAIN CONNECTIONS

The estimated number of private drain connections to be reconstructed / constructed is as follows:

Part “A” - Sanitary Sewers 57 Part “B” - Storm Sewer 20

The intent of this specification is to aid the Contractor in preparing his bid. No claim for an extra will be made by the Contractor on the basis of a variation in the number of connections. In the event that an existing / proposed private drain connection is in conflict with the location of an existing tree, the Contractor's attention is brought to City of Windsor Standard Specification S-36 (July 2012), "Preservation of Trees".

The intent of this contract is to not construct any new storm connections. Storm connections shall only be provided to infill lots or where storm connections have been confirmed on site to be existing storm connections. Therefore, items 3 & 4 in Part B of the Unit Pricing Schedule are provisional. CCTV reports were completed in February 2019 and are available upon request.

4. CONCRETE CONSTRUCTION

When constructing concrete curbs and gutters, driveways, sidewalks and or lead walks the Contractor will be prohibited from working on both sides of the road at the same time.

The Contractor will be required to complete all concrete work on one side of the road. Once this work has reached its 7-day strength, the Contractor will be permitted to shift his activities to the other side of the road.

NO EXCEPTIONS TO THE ABOVE WILL BE PERMITTED.

The Contractor will also be required to maintain a travel lane through the work area for emergency vehicles at all times. If direct access for emergency vehicles cannot be maintained, the Contractor shall coordinate an alternate access plan with all emergency response units.

5. TEMPORARY PVC TEE

As part of this item, the Contractor is required to continue positive roadside drainage to allow for the installation of the proposed watermain and storm sewer. The temporary PVC Tee must be maintained and in working order for the duration of the construction, which will be directed by the Engineer. Any and all labour or materials required for the intended purpose of the temporary PVC Tee shall be included in the Unit Price.

6. ASBESTOS CEMENT PIPE

In accordance with the requirements of Section 30(1) of the OHSA, the Bidder is hereby advised that asbestos cement pipe (Designated Substance under the OHSA) will or may be present on the site and within the limits of this contract.

Any person(s) performing works on sewers suspected of containing Asbestos Cement (AC) material must follow methods and procedures established under the OHSA and the Environmental Protection Act, and shall comply with the governing Ministry of Labour Regulations respecting protection of workers, removal, handling, and disposition of any asbestos encountered in carrying out this work.

All costs associated with the training of staff, removal, and disposal of the Asbestos Cement shall be included in the appropriate tender item. No extras will be paid for this item.

7. PROJECT SCHEDULING

An estimated start date of **June 2019** should be considered as a requirement for this project, and no payment will be made for, material storage costs or additional mobilization costs. The successful Bidder must ensure that unit prices reflect this proposed construction schedule.

Bidders are advised to inform their Sub-Contractors of the above requirement.

Any materials placed in cold weather that are either not properly protected (for concrete work) or are unable to be properly compacted (for granular materials and asphalt) will be rejected by the Engineer. In such cases, the Contractor's attention is brought to Clause G.C.5.03 of the General Conditions.

Furthermore, when, in the opinion of the Engineer, it becomes evident that the Contractor's construction methods in conjunction with weather conditions are likely to result in unnecessary hardship and inconvenience to the residents and motoring public, the Corporation reserves the right to dictate the construction methods used, and/or stop work on the project.

It should be noted that based on the design, the Contractor cannot proceed with any sewer construction prior to the completion of the watermain, or unless otherwise directed by the Engineer.

8. TREE TRIMMING

The Contractor is required to hire one of the following endorsed companies to perform tree trimming for the project. The chosen company, Contractor, and City Forestry representative are to meet on site prior to trimming, and confirm trimming method.

Approved Tree Care Companies for City of Windsor Engineering Tenders

The City of Windsor's Park Department (Forestry Division) endorses the following companies to perform 'Construction Tree Trimming' as required for City of Windsor Engineering Contracts.

| Company | Contact | Street Address | City | Phone Number |
|---|----------------|-----------------------|-------------|---------------------|
| Dan's Tree Service | Dan Landgraff | 1508 Rossini Blvd. | Windsor | 519.990.1627. |
| Dominion Tree Service Inc. | Rob Laliberty | 911 Lakeshore Park | Belle River | 519.739.1378. |
| Forest Glade Tree Experts | Steve Haskell | 3458 Faust St. | Windsor | 519.944.2633. |
| Green Tree Professional Tree Service Inc. | Erik Amonite | 2892 Lakeshore Rd 223 | Lakeshore | 519.872.5314. |

| Company | Contact | Street Address | City | Phone Number |
|---------------------------------------|-------------------|--------------------|---------|---------------|
| Neuheimer Tree Care & Consulting Inc. | Michael Neuheimer | 2666 Princess Ave. | Windsor | 519.980.2607. |

Any damage to a tree or tree roots determined to be a threat to the life of the tree will result in a monetary fine against the Contractor.

9. WATERING IN BOULEVARD

The City Inspector is to be notified when the Contractor (or Subcontractor) is watering on site. Payment will be made as per the Inspector’s review of submitted water tickets.

10. BOULEVARD AREAS AFFECTED BY BOTH ROAD RECONSTRUCTION AND PITS FOR PRIVATE DRAIN CONNECTIONS AND PRIVATE WATER SERVICES

It is anticipated that surface restoration of boulevard areas affected by road reconstruction will overlap surface restoration of pits for private drain connections and private water services located on the public right-of-way. Hence, payment for surface restoration for the pits for private drain connections and private water services shall be made in accordance with the respective items for boulevard restoration due to road construction in Part “C” of the Unit Pricing Schedule.

The Contractor shall note that this payment provision does not apply to pits for private drain connections and private water services located on private property. In this case, payment for surface restoration shall be included in the price bid for the construction of private drain connections and private water services.

11. HAND WORK

All paving jobs will require a certain amount of handwork, which will be considered incidental to that item; however, a job which is determined by the Engineer to be exclusively handwork will be paid for on an hourly basis.

12. HOT MIX, HOT LAID, ASPHALTIC CONCRETE

NOTE: The following O.P.S. Specifications listed below shall apply to this tender and become part of the contract, replacing the noted City of Windsor Standard Specifications.

| Delete City of Windsor Standard Specifications | Replace with OPSS | Comments |
|--|-------------------|--|
| S-10 (Complete Section) | 310 | Construction Specification for Hot Mix Asphalt |

| Delete City of Windsor Standard Specifications | Replace with OPSS | | Comments |
|--|-------------------|--|--------------------------|
| Hot Mix, Hot Laid, Asphaltic Concrete | 1001 | Material Specification for Aggregates – General | |
| | 1003 | Material Specification for Aggregates – Hot Mix Asphalt | |
| Hot Mix, Hot Laid, Asphaltic Concrete | MUNI.1101 | Material Specification for Performance Graded Asphalt Cement | |
| | 1150 | Material Specification for Hot Mix Asphalt | See following amendments |

AMENDMENTS

Specification OPSS 1150 – Material Specifications for Hot Mix Asphalt

| | |
|-------------------------|--|
| 1150.04.01.01.01 | <p><u>Reclaimed Asphalt Pavement Proportions</u></p> <p>Delete Section and substitute with the following:</p> <p>Mixes shall not exceed more than 15% by mass of RAP (Reclaimed Asphalt Pavement).</p> |
|-------------------------|--|

The Contractor shall provide the Corporation with acceptable Marshall Mix Designs for each type of mix indicated in the Unit Pricing Schedule at least seven (7) calendar days prior to commencement of work.

The mix design shall designate the source of supply and the quality of the mix shall be verified by testing as directed by the Corporation.

13. LAYOUT

The Owner will provide the Contractor with a benchmark and points of reference for setting out. The Contractor is responsible for maintaining these points and using them for locating all structures and grade stakes required for the proper location and installation of the work.

The Contractor shall provide qualified personnel to properly lay out and establish secondary lines and grades necessary for construction. The Contractor shall construct and maintain substantial batter boards, alignment markers, and secondary bench marks as may be required for the proper execution of the Contract.

14. ENCROACHMENTS

The City of Windsor is undertaking the removal of encroachments upon city right of way during road reconstruction projects. If prior to the commencement of construction, these encroachments are legalized by the homeowner, they are to be preserved during construction if possible or removed and replaced as part of the project. If the encroachments have not been legalized, they are to be removed and left on site or disposed

of offsite at the Contractor’s expense. Fences are to be removed to the property line and reconnected to a new or reinstalled end post at the property line.

The encroachments identified on this project are listed below:

| ADDRESS | TYPES OF ENCROACHMENTS | | | |
|-------------------------|------------------------|-------|-------|-------|
| 1290 Matthew Brady Blvd | Landscape | | | |
| 1281 Matthew Brady Blvd | Landscape | Hedge | | |
| 1275 Matthew Brady Blvd | Landscape | | Rocks | Other |
| 1269 Matthew Brady Blvd | Landscape | | | |
| 1256 Matthew Brady Blvd | Landscape | | | |
| 1253 Matthew Brady Blvd | Landscape | | | |
| 1240 Matthew Brady Blvd | Landscape | | | |
| 1234 Matthew Brady Blvd | | Hedge | | |
| 1222 Matthew Brady Blvd | Landscape | | | |
| 1216 Matthew Brady Blvd | | Hedge | | |
| 1215 Matthew Brady Blvd | Landscape | | | |
| 1210 Matthew Brady Blvd | | Hedge | | |
| 1196 Matthew Brady Blvd | Landscape | | | |
| 1193 Matthew Brady Blvd | Landscape | | | |
| 1187 Matthew Brady Blvd | Landscape | | | |
| 1179 Matthew Brady Blvd | Landscape | | | |
| 1182 Matthew Brady Blvd | Landscape | | | |
| 1176 Matthew Brady Blvd | | Hedge | | |
| 1148 Matthew Brady Blvd | Landscape | Hedge | | |
| 1131 Matthew Brady Blvd | Landscape | | | |

Prior to the start of construction, the contractor will be notified by the Engineer as to what steps are to be taken with the above noted encroachments.

15. SIGNAGE

The cost for the City of Windsor signage shall not be included in the tender price, but shall be picked up and installed as per Tender drawings.

16. MINISTRY OF THE ENVIRONMENT APPROVAL

The Contractor shall note that application was made to the Ministry of the Environment (MOE) for approval of the proposed sewer work under this tender in the month of April 2019. Ministry approval is required for this work.

17. EXISTING WATERMANS AND WATER SERVICE LINES

.1 Requests for Locations of Watermains and Water Service Lines

The Contractor is responsible for obtaining from the Windsor Utilities Commission, information regarding the locations of watermains and service lines in advance of the work. The Windsor Utilities Commission requires that requests for locations be made five days before required to permit efficient scheduling of

work forces. In the absence of visible valve or curb boxes, locations given can only be approximate and the Contractor must use due care in excavating as he will be charged with all repair and damage costs resulting from his negligence. It is the responsibility of the contractor to hand or vacuum excavate to locate, expose and protect the existing water mains and services from damage. Any damage to the existing water service lines will result in full water service replacement from the existing watermain to the curb box at the Contractors expense. Under no circumstances will the City of Windsor or Windsor Utilities Commission accept any claims related to locates.

.2 **Existing Water Service Lines**

The Contractor shall at all times work around and protect the existing water services. Under no circumstances shall water services be cut to increase production. Water service disconnection will only be permitted if the water services are spaced in such a manner that would make sewer installation unsafe.

.3 **Temporary Disconnection of Water Service Lines**

The Contractor may submit request to the Windsor Utilities Commission to have the water service lines crossing the proposed trench temporarily shut off and removed to allow the sewer work to proceed safely. All costs associated with this work will be at the contractor's expense and should be applied to the bid cost per meter of sewer installation. In this case, the Contractor shall strictly adhere to the following procedure:

- .1 Contact the Windsor Utilities Commission area supervisor and arrange to have a representative to oversee all work on the potable system. **Per the Safe Drinking Water Act 2000 c.32, Section 12(1) "No person shall operate a municipal drinking water system or a regulated non-municipal drinking water system unless the person holds a valid operator's certificate issued in accordance with the regulations 2002, c.32, s.12(1).** Failure to comply will result in issuance of a Boil Water Advisory at the contractor's expense.
- .2 All residents to be notified of the pending construction and permission for temporary house-to-house water service connection to be obtained if necessary.
- .3 Expose the water service crossing the proposed trench.
- .4 Shut off the service line at the property line by turning the shut off on one side of the trench and by shutting the Corporation stop at the watermain or freezing on the other side.
- .5 With the residence receiving water from a temporary service such as a house-to-house connection, and the water service having been shut off on each side of the trenchline, the service pipe can be carefully cut, capped and cleared of the sewer work to be performed.
- .6 Prior to backfilling the sewer trench, the previously disconnected water service shall be flushed and temporarily reconnected.

- .7 After all sewer work has been completed, the Contractor shall install a permanent, new long water service from the existing corporation stop at the watermain to the curb box to serve the residence affected and the temporary service disconnected.
- .8 All costs for the temporary/permanent water system work to be at the contractor's expense.

18. REUSE OF MH 6R4529

Contractor to reuse existing MH 6R4527 and use it for MH 6R4529. The existing maintenance hole has no U-fill around the pipe, and has one 600mm sewer opening. The work to connect the new storm sewers to this manhole shall be included in the manhole price. The contractor is reminded of their requirements to maintain positive flow within the sewer at all times, any damaged caused is the responsibility of the contractor.

19. SITE INSPECTIONS

The Contractor is responsible for the inspection of the site throughout the maintenance period, to ensure it is in a reasonable state of repair. Inspection requirements include, but are not limited to, identifying and repairing ramping, cracking, and potholes present at the site. All deficiencies identified, whether by the Contractor's inspection, or by the City, are to be repaired by the Contractor as soon as practicable.

20. GROUT

Due to the configuration of the new sewers compared to the existing, the Contractor is required to properly grout the existing sewers, PDC, & manholes with 0.7MPA unshrinkable fill, any and all work, equipment, apparatuses, or additional materials needed to properly grout the existing infrastructure to the approval of the City Engineer, shall be paid by the cubic metre. Included in this cubic metre price is any masonry work or materials to properly cap the voids in the sewers, all of which is to be outside the future roadway.

21. STANDARD LEAN GROUT/BENTONITE PLUG

Private Drain Connections

All private drain connections that pass into or through the storm sewer trench must have a standard lean grout / bentonite plug (As per AS-526A) on the outside trench wall. This is to ensure the water connected in the system stays within the trench. The plug must not impact the geotextile and clearstone in the storm trench.

Manholes

All storm sewer runs must have a standard lean grout / bentonite plug at the downstream manhole. This is to ensure that the water connected in that run stays within that trench.

22. SANITARY CONNECTIONS THROUGH TRENCH

The Contractor must ensure that no sanitary PDC joints cross through the storm trench. All joints in the connection must be outside the trench walls. No extras will be paid.

23. GEOTEXTILE (FILTER FABRIC)

The Contractor shall supply and install a woven monofilament or a needle punched non-woven geotextile material:

- For the perforated pipe systems, along all excavated walls between native material and proposed aggregate prior to placing washed clear stone bedding in accordance with contract drawings;

The geotextile shall be placed in order to prevent the migration of fine materials through the mentioned interfaces, in addition to those applications as specified herein.

Geotextile material shall be placed smooth and free of tension stress, folds, wrinkles, and creases. Each successive strip of geotextile shall overlap the previously overlapped by 600mm. This material shall conform to the material specifications in OPSS 1860 Class II geotextile fabrics (i.e. Terrafix 270R or Agency approved equivalent).

For the selection of geotextile fabric, the following criteria shall be followed:

Apparent Opening Size (AOS) OR Percent Open Area (POA):

For fine grained soils, the $AOS \leq 0.3\text{mm}$ (non-woven fabrics) and $POA \geq 4\text{per cent}$ (woven fabrics)

Hydraulic Conductivity (k, in cm/sec)

$k(\text{fabric}) > k(\text{soil})$

Permittivity $\{k(\text{fabric}) / \text{thickness}(\text{fabric})\}$ (in sec-1)

For fine-grained soil, the permittivity shall be 0.1 sec-1.

The installed geotextile shall be protected from displacement, damage, or deterioration before, during, and after placement of material layers. The Contractor shall replace any damaged or deteriorated geotextile to the approval of the Engineer.

Measurement and Basis of Payment

Measurement for payment will be in square metres of geotextile placed and will be calculated by multiplying the length by the width of the area where fabric is placed. No allowance will be made for seams and overlaps. Payment at the Contract price shall be full compensation for all labour, equipment, and material to do the work. The Contractor must supply receipts, which clearly identify the product type prior to issuances of payment.

24. PERFORATED PIPE

Under the proposed storm sewer, a perforated 200mm diameter gasketed pipe is required. The cost for this item shall include the pipe, PVC cap with gasket, and installation. All excavation and trench backfill shall be paid for under the installation of the storm sewer. Manholes must include openings for this perforated pipe at no additional costs.

The pipe and installation methods shall meet all ASTM (D2729 & D3034), CSA (B182.1 B182.2) and City standards and certifications. Perforations within the DR35 pipe must consist of 2 rows of 12.7mm holes spaced every 125mm, with the rows separated by 120 degrees.

25. WATERMAIN REHABILITATION

The following Special Provisions are applicable to items contained in Part 'E' of the Unit Pricing Schedule, unless otherwise noted.

i.) Scope of Work

The work to be done under this Contract is to construct new watermains and services at the following locations:

a) New 200mm PVC watermain on Matthew Brady Boulevard from Edgar Street southerly to Tranby Avenue.

The work to be done consists of the construction of new watermains, complete with appurtenances, as shown on the contract drawings and as detailed in the specifications.

ii.) Work Done by EnWin

EnWin shall flush, pressure test and disinfect the new watermains in accordance with the procedures established by the Ministry of the Environment and Climate Change (MOECC). Contractor shall note that EnWin has established criteria for sampling background bacteria over and above the regulations established by the MOECC. The Threshold for background count has been set at 200 CFU/100mL. As a guideline, the following examples are outlined:

| Background Count Guideline | | |
|----------------------------|--------|--|
| Set # 1 | Set #2 | Comments |
| 0 to < 200 | ≤ 200 | Flush extensively prior to starting service transfers. |
| 0 to < 200 | > 200 | Flush and collect Set #3. The collection of Set #4 to be determined on case-by-case basis. |
| > 200 | > 200 | Flush and collect Set #3 and Set #4. |
| > 200 | ≤ 200 | Flush and collect Set #3. The collection of Set #4 to be determined on case-by-case basis. |

The Presence of E. Coli or Coliforms will result in re-chlorination.

iii.) Drawings and Specifications

The work shall be carried out in accordance with the dimensions, lines, levels and grades as shown on the Drawings and as called for in the Specifications. The Drawings shall form part of the Specifications and Contract documents.

The Contractor shall be governed by figured dimensions as shown on the Drawings and, where such dimensions are not shown, he shall obtain them from the Engineer prior to the construction of any work to which they refer. In all cases, detailed Drawings shall take precedence over general Drawings. The Contractor is in no way to construe the Drawings as being absolute or exact. The Engineer shall not be liable for any errors or omissions.

Should a Bidder find discrepancies in, or omissions from, the Drawings or Contract documents, or should he be in doubt as to their meaning, he should notify the Water Engineering Director, who may send a written instruction to all Bidders.

The Drawings are as follows:

Water Construction Drawings - S-2073, Sheets 7-9

NOTE: Standard Watermain Drawings and Specifications can be found in the Windsor Utilities Commission Water Division Specifications Book, and are not included in the Tender Documents. They can be examined at the Engineer's office, or by obtaining a copy from the Windsor Utilities Commission website at:

<http://www.enwin.com/downloads/2016/design-guidelines-and-specifications-october-2016.pdf>

iv.) **Watermain Alignment**

The Contractor shall note that the watermain alignment has been reviewed and acknowledged by all local utility agencies and subsequently approved by the City of Windsor. Under no circumstances shall the Contractor alter the alignment without the written consent of the EnWin Director, Water Engineering and the City of Windsor.

v.) **Utilities**

The Contractor's attention is drawn to the presence of existing utilities on this project. The locations of underground and overhead utilities shown on the Contract Drawings are for the Owner's use only and are not guaranteed by the Owner. It is the Contractor's responsibility to contact the Utility Companies for further information in regard to these utilities, and to exercise the necessary care in construction operations or to take other precautions to safeguard the Utility Company from damage. The cost of all damages to utilities both overhead and underground caused by the Contractor's operations shall be borne by the Contractor. No claims will be accepted for any additional costs incurred by the Contractor resulting from delays in obtaining locates, or damage as a result of improper or missed locates.

vi.) **Watermain Scheduling**

Contractor shall be responsible for scheduling testing such that the main is not permitted to stagnate while other project work continues. It is expected that after testing is completed the backflow preventer will be removed and services will commence within 3 business days. If this does not take place, one of the following options will occur (determined by EnWin) entirely at the contractor's expense.

- A) New watermain will be allowed to go stagnant and EnWin will resample prior to putting the main in service.
- B) EnWin will flush the main on a routine basis (2 to 3 times a week) to ensure water stagnation does not take place.

Schedule of tie-ins is to be coordinated by WUC with the respective businesses and completed in a mutually agreed upon time. Under special circumstances, tie-ins may need to be completed beyond standard working hours (premium time). The Contractor shall price the work accordingly. The Contractor will be responsible for completing all watermain connections **INCLUDING ALL TAPS** to the potable system on this project. The Contractor shall assume a tie-in production rate of two tie-ins per day. The Contractor must also allow for a two hour watermain shutdown time for each tie-in.

Price appropriate item accordingly. The Contractor's attention is drawn to section 30.32.01 of watermain specification which will be strictly adhered to.

vii.) Water Service Locates and Connections

The Contractor must meet, on-site, with the EnWin locator or designate an EnWin assigned project Inspector and review the water service locate markings prior to any excavation working being done, and sign off that locates have been completed. The EnWin Inspector will assist the Contractor upon request by taking photos or locate measurements in advance of construction, when requested by the Contractor. Each new water service must be reviewed with the EnWin Site Inspector to choose an alignment that will minimize breakage and best suit the site-specific conditions, including separation from trees, landscaping, sewers and other utilities.

The Contractor must hand or vacuum excavate to locate, expose and protect all watermains and services from breakage or contamination. Under no circumstances shall an existing water service be cut or reconnected without a Certified Drinking Water Operator present. No businesses or homeowners shall be without water for more than one (1) hour, unless otherwise approved by the EnWin Site Inspector. In situations where new installation requires time extended beyond this limit, EnWin Water Operations forces must be called in to complete a temporary house-to-house hook-up connection.

Any damages and cost resulting from the neglect of following any of the above procedures will be at the Contractor's expense, including all costs associated with the necessity of calling a Boiled Water Advisory, as noted in the latest schedule of WUC Miscellaneous Charges.

viii.) Directional Boring

The Contractor shall construct new watermains where indicated on the Drawings by Directional Bore Trenchless Installation Method of Construction using WUC approved PVC watermain pipe designed specifically for "pull in place" application.

Directional Boring must be carried out by WUC approved Contractors/Sub-Contractors who are trained, equipped, and experienced in doing this type of work.

The Contractor must first submit to the EnWin Engineer a detailed Progress Schedule for his approval prior to starting any boring, indicating preliminary investigations, work pits, methods, etc.

As part of the Preliminary Investigation Work, the Contractor will be required to verify the locations and elevations of ALL underground utilities in the path of the bores including one (1) storm, one (1) sanitary and one (1) water service connection for each house, by vacuum excavation to assure that no conflicts or damages will occur. All costs associated with preliminary investigations, or damages resulting from insufficient investigation work will be at the Contractors expense.

Contractors Tender Price for Directional Boring shall be inclusive, including all investigation work, daylighting, entry pits, exit pits, connection pits, mobilization, demobilization, etc.

ix.) Surface Site Protection

The Contractor shall examine and become familiar with the condition of the existing road pavements. It is the responsibility of the Contractor to size all of his equipment accordingly to minimize site damages to the existing utilities, pavements, curbs, sidewalks, driveways, trees, landscaped areas and grass areas. The Contractor must limit new construction activities to only those areas requiring excavation work. Adjacent areas must be fully protected with road plates, tarps, equipment mats, and/or plywood, particularly if stockpiling of materials is necessary.

Cost of site protection shall be included in the Tender Unit Prices for watermain and water service installations, and all damages beyond the necessary excavation areas will be repaired at the Contractors expense.

The Contractor shall be responsible for protecting all catch basins on this project as per City Specs. Failure to do so will result in prompt clean-up by City of Windsor forces with all costs billed to the Contractor.

Contractor will be required to sweep the site and control dust and debris on a regular basis. All costs to be included in bid cost per meter watermain construction. Dust control will be paid for under the appropriate item in Section ‘A’ of the Unit Pricing Schedule.

x.) Tree Trimming

Trimming of overhead branches shall be coordinated by the Contractor and will be undertaken by a certified tree trimming Contractor approved by the City of Windsor Forester prior to the commencement of watermain construction. Cost for this work will be paid under the appropriate tender item for tree trimming.

xi.) Construction Water & Hydrant Usage

Contractor shall note that construction water is not being provided to the Contractor by EnWin. Costs for all water used for trench compaction, road base compaction, water jetting, lawn watering, etc. shall be included in the appropriate tender items. Water for dust control will be paid by cubic meter in the schedule of items under dust control.

Hydrant usage is not permitted. Contractors will be required to obtain water from a Windsor Utilities bulk water filling station or from their own yard.

For more detail and procedure, please see link below:

<http://www.wuc.on.ca/information/distribution.infrastructure.cfm>

xii.) Sewer Cleaning / Camera Inspection and PDC Sewer Lateral Locating

EnWin may request that the Contractor sub-contract lateral launch camera work and any associated sewer cleaning on the street segments where directional boring is required and where sewer PDC information is not available. This work will be done in advance of directional boring.

This work shall be performed by a City of Windsor qualified sub-contractor with lateral launch camera equipment and approved by the City of Windsor.

Payment for this work will be under the appropriate tender items for sewer cleaning and lateral launching. All water use for this work to be incorporated into the items. This item also includes the submission of a CCTV report and video.

xiii.) Enwin Approved Plumbers

Plumbers currently approved by EnWin are as follows:

1. RW FOWLER
2. NORTHSTAR MECHANICAL
3. HALLER MECHANICAL
4. FARHALL MECHANICAL
5. VOLLMER MECHANICAL
6. ENCORE MECHANICAL

26. WATERPROOFING SANITARY MANHOLES

All Sanitary manholes will require Mel-Rol (or approved equal) wrapping at all exterior joints including interlocking adjustment units. The waterproof membrane must be a minimum of 300mm in width. All corners (or ledges on the exterior of the manhole) must also use Mel-Rol detail strip (or approved equal) with the Mel-Rol membrane overtop. Pointing Mastic (or approved equal) must be used to seal the edge between the frame and riser ring. One continuous bead of Butyl sealant shall be used on both sides of the rubber gasket at all manholes joints.

Successful bidder is to use W.R. Meadows products or an equivalent product that meets the same specifications and requirements as determined by the City Engineer.

All material and labour for installation to be included in the unit price bid for sanitary sewers.

27. STREETLIGHTING INFRASTRUCTURE

Codes and Standards

The Contractor shall complete the installation in accordance with the Ontario Electrical Safety Code Latest Edition, including local amendments and by-laws, Federal, Provincial and Municipal Codes, and applicable ULC Standards.

The Contractor shall complete overhead and underground systems in accordance with CAN/CSA-C22.3 (Latest Revision) except where specified otherwise.

Under no circumstances will the application of the referenced codes and standards reduce the standards established by the drawings and specifications herein.

Permits, Fees and Inspection

The Contractor shall note that all street lighting will require Electrical Safety Authority inspection. All fees in coordination with this inspection to be covered by the Contractor.

The Contractor shall submit to the Electrical Safety Authority and Supply Authority the necessary number of drawings and specifications for examination and approval prior to commencement of work and pay associated fees.

The Contractor should note that the Engineer will provide drawings and specifications as required by the Electrical Safety Authority and Supply Authority at no cost.

The Contractor shall notify the Engineer of changes required by the Electrical Safety Authority or Supply Authority prior to making changes.

The Contractor shall arrange for and pay for the timely inspection of the work by authorities having jurisdiction.

The Contractor shall furnish final Certificates of Acceptance from the Electrical Safety Authority having jurisdiction on completion of work to the Engineer and include copies in the Operation and Maintenance Manual.

Scope of Work

The Contractor shall supply and install all street lighting infrastructures in accordance with the Contract Drawings and the requirements of ENWIN Utilities. Refer to drawings for a complete description of all luminaires, poles and accessories.

The Contractor shall supply all underground and above-ground materials including wiring, electrical hook-up, testing, restoration and inspection as required to provide an operational street lighting system as shown on the Contract Drawings and specified herein.

The Contractor shall submit all shop drawings, catalogue cut sheets, etc. for all street lighting equipment as indicated below for approval prior to ordering materials.

Specifics

a. Conduit

OPSS Form 603 shall apply and govern except as amended or extended herein.

The Contractor shall supply and install underground heavy duty rigid PVC Schedule 40 conduit in accordance with CSA Standard C22.2 - No. 211.2 including trenching, excavation, backfilling and including all fittings (bends, couplings, adaptors, end plugs, etc., in accordance with CSA Standard C22.2 - No. 85) and installation of twisted nylon pull wire for installation of wiring. This item shall include conduit drops required on the existing hydro pole at the new power supply locations.

The Contractor shall supply and install polyethylene conduit and fittings to accommodate wiring at each street light pole.

The Contractor is responsible for supplying and installing electrical conduit, in coordination with ENWIN Utilities.

The Contractor shall restore boulevard sections. The Contractor shall reconstruct any sidewalks or alley ways affected to standards as per civil requirements.

Conduits shall be as indicated on the drawings.

Measurement

Measurement shall be made in linear meters for this item.

Payment

Payment shall be made at the Lump Sum Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment and materials required to complete this work.

b. Luminaire Wire – Low Voltage Cables

OPSS Form 604 shall apply and govern except as amended or extended herein.

The Contractor, under this item, shall supply and install all the necessary wire including all accessories required to complete the wiring of the proposed luminaires, as indicated on the drawings, to the service location.

Underground wiring for luminaires shall be single conductor, stranded copper, low voltage cable, rated 600 volts. Low voltage wire shall meet the requirements of OPSS 2406, Type RWU 90 - cross link meeting the requirements of CSA Standard C22.2, No. 38.

All luminaire wire shall be installed in the proposed underground conduit as shown on the Contract Drawings.

All joints in the luminaire wire shall be made in the pole handholes unless otherwise specified. The Contractor shall ensure that all equipment is adequately grounded.

The riser wires inside the poles and in the mast arms shall be included in this item and shall be connected to the external wiring circuit in the underground conduit by means of one single pole waterproof fuse holder Elastimold or Fusetek with one 10 amp midget ferrule fuse, Buss Type “KTK” or approved equal. A fuse holder shall be installed inside the pole and shall be secured to the connector clip supplied in the pole.

The luminaire wire shall be brought back and connected to the circuit breaker at the service location indicated on the Contract Drawings.

Measurement

Measurement shall be made in linear meters for this item.

Payment

Payment shall be made at the Lump Sum Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment and materials required to complete this work.

c. Electrical Road Crossings

OPSS Form 603 shall apply and govern except as amended or extended herein.

The Contractor shall supply and install underground heavy duty rigid PVC Schedule 40 conduit in accordance with CSA Standard C22.2 - No. 211.2 including directional boring, excavation, backfilling and including all fittings (bends, couplings, adaptors, end plugs, etc., in accordance with CSA Standard C22.2 - No. 85) and installation of twisted nylon pull wire for installation of wiring. This item shall include conduit drops required on the existing hydro pole at the new power supply locations.

All road crossings shall be concrete encased and shall include a spare 51mm conduit capped at either end with pull wire. Concrete for road crossing shall be included in this item.

The Contractor is responsible for supplying and installing electrical conduit, in coordination with ENWIN Utilities.

Conduits shall be as indicated on the drawings.

Measurement

Measurement shall be made for this item on an each basis.

Payment

Payment shall be made at the Lump Sum Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment and materials required to complete this work.

d. Grounding

OPSS Form 609 shall apply and govern except as amended or extended herein.

The Contractor shall supply and install all ground wiring including all connections, fittings required in ducts and on poles for a complete installation.

The Contractor shall supply and install ground rods including all connections, fittings required at the supply cabinets and at poles as indicated on the Contract Drawings.

Grounding is subject to inspections by the local authority and ESA, the Contractor shall pay all applicable fees and coordinate.

Measurement

Measurement shall be made in linear meters for the grounding wire.

Measurement for the supply and installation of the ground rods shall be made on an each basis.

Payment

Payment shall be made at the Unit Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment and materials required to carry out this work.

e. Roadway Street Light Luminaires

OPSS Form 617 shall apply and govern except as amended or extended herein.

The Contractor shall modify the existing NXT drivers of DSL-1, DSL-2, DSL-3, DSL-4, DSL-5, DSL-6, DSL-7, DSL-8, DSL-9 & DSL-10 from 600mA to 525mA as per the Contract drawings.

The Contractor shall modify the existing NXT driver of RSL-1 from 600mA to 525mA. Fixtures & mast arms to be relocated to new streetlight pole NP-1 as per the Contract drawings.

The Contractor shall not modify the existing NXT drivers of ESL-1 as per the Contract drawings.

Enwin Utilities to relocate the existing fixture (NXT-24S-525mA-219B) from EHP-7 to EHP-1.

Enwin Utilities to relocate the existing fixture (NXT-24S-450mA-219C) from EHP-8 to EHP-6 and to change the driver settings from 450mA to 525mA.

Enwin Utilities to supply and install new 1.8m mast arm for SL-1 & SL-2. Connections for SL-1 & SL-2 will be done by Enwin Utilities.

Enwin Utilities to supply and install SL-11 & SL-12 on existing hydro pole EHP-7 & EHP-8 keeping the existing mast arm as it is. Connections for SL-11 & SL-12 will be done by EnWin Utilities.

The City of Windsor to submit the purchase order (PO) to EnWin Utilities for the connection of new power supply as well as the supply, connection, relocation and installation of SL-1, SL-2, SL-11 and SL-12 along with 2 new 1.8m mast arm.

EnWin Utilities to work on Franklin Street after the Contractor has finished their work on Francois Road.

Measurement

Measurement for the luminaires shall be made on an each basis.

Payment

Payment shall be made at the Unit Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment and materials required to carry out this work.

h. Roadway Street Light Poles

OPSS Form 615 shall apply and govern except as amended or extended herein.

The Contractor shall supply and install one street light pole (NP-1) as indicated in the Contract Drawings.

Pole is to be supplied without luminaries or arms. Relocated mastarm and fixture as per section (e)

Measurement

Measurement shall be made on an each basis.

Payment

Payment shall be made at the Unit Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment and materials required to carry out this work.

i. Street Lighting Power Supply

OPSS Form 614 shall apply and govern except as amended or extended herein.

The Contractor shall supply and install including make connections at all street lighting power supply locations. Power supplies shall be 120 volt circuit breaker panels, service entrance rated R3 metal enclosures complete with 20A-2P circuit breakers, quantity as noted on the Contract Drawings with a 22,000A interrupting rating.

The Contractor shall provide #2AWG wiring coiled above the power supply with a length of 5m for ENWIN Utilities to make connections.

The Contractor shall coordinate the connection of street lights with ENWIN Utilities at the supply locations shown on the Contract Drawings.

The Contractor is to maintain existing lighting on the street. Changeover of fixtures must be completed such that illumination is maintained.

Measurement

Measurement shall be made on an each basis.

Payment

Payment shall be made at the Unit Price bid in the Unit Pricing Schedule and shall be compensation in full for all labour, equipment and materials required to carry out this work.

j. Existing Pole - Removals

The Contractor shall remove the existing pole EP-10 after the installation of new pole NP-1 with existing luminaire and mast arm. The Contractor shall restore the boulevard area after the removal of poles.

Measurement

Measurement shall be made on an each basis.

Payment

Payment shall be made at the Lump Sum Price bid in the Unit Pricing Schedule and shall be compensation in full for all labor, equipment and materials required to complete this work.

k. Existing Streetlight and Power Supply - Removals

The Contractor shall remove existing overhead streetlight connections along with existing power supply after the installation of new underground feed to the poles has been completed. The Contractor shall coordinate with ENWIN utilities for the removals of existing overhead streetlight connections as well as existing power supply.

The Contractor shall maintain existing lighting on the street. Changeover of fixtures must be completed such that illumination is maintained.

Measurement

No measurement shall be made for this item.

Payment

Payment shall be made at the Lump Sum Price bid in the Unit Pricing Schedule and shall be compensation in full for all labor, equipment and materials required to complete this work.

l. New Street lighting Installation

Since the road will be widened and the old streetlight pole locations will be in the new proposed roadway, road cut cannot begin until after the new streetlight installation. The new street lighting shall be installed, inspected, approved and energized prior to the removal of the existing street lighting.

*** ADDENDUM #1**

*** 28. REQUIRED SUBMISSIONS**

The Contractor will provide the Owner with a monthly summary of any and all Equipment on site (as shown on the chart below). This is required at the end of every month prior to the process of the progress certificate. It is the Contractors responsibility to track and submit these values at no cost to the City.

Equipment Information

| Equipment Type | Year | Engine Tier (Tier 0 through 4) | Horsepower | Progress Certificate 1 | | Progress Certificate 2 | | Progress Certificate ... | |
|----------------|------|--------------------------------|------------|------------------------|---------------|------------------------|---------------|--------------------------|---------------|
| | | | | Fuel Used | Hour-run Time | Fuel Used | Hour-run Time | Fuel Used | Hour-run Time |
| Example | | | | | | | | | |
| Excavator | 2018 | Tier 4 | 500 | | | | | | |
| Loader | | | | | | | | | |
| Etc. | | | | | | | | | |
| | | | | | | | | | |