



City of Saint John

**2022-631001T
TRAFFIC MATERIALS**

Sealed tenders hand delivered or couriered and addressed to Monic MacVicar, CCLP, CPPB Supply Chain Management, 1st Floor – 175 Rothesay Avenue, Saint John, N.B., E2J 2B4 and marked on the envelope:

"TENDER No. 2022-631001T – TRAFFIC MATERIALS"

will be received until 2:30:00 p.m., Tuesday, May 17th, 2022 for the supply of various traffic materials as per the enclosed specifications, terms and conditions.

Tenders will be opened by the Tender Opening Committee, in the first floor boardroom, 175 Rothesay Avenue, Municipal Operations Complex, immediately following the tender closing time.

The lowest or any tender not necessarily accepted.

**Monic MacVicar, CCLP, CPPB
Procurement Specialist
(506) 658-2930**

Issue Date: Friday, April 29th, 2022



City of Saint John

**TENDER
2022-631001T
TRAFFIC MATERIALS**

This tender is to establish sources of supply for the enclosed list of traffic materials required by the City of Saint John. The term of the agreement(s) will be for a one (1) year period following award. The agreement(s) may be extended for an additional one (1) year period pending mutual agreement of both applicable parties.

The quantities listed herein are annual estimated quantities only. The City does not guarantee to purchase any specific quantities but reserves the right to order more of or less than the quantities stated herein.

Prices bid will remain firm for each respective year of the agreement(s).

GENERAL TERMS AND CONDITIONS:

1. SUBMISSION INSTRUCTIONS

Sealed tenders hand delivered or couriered and addressed to Monic MacVicar, CCLP, CPPB Supply Chain Management, 1st Floor – 175 Rothesay Avenue, Saint John, N.B., E2J 2B4 and marked on the envelope:

"TENDER No. 2022-631001T – TRAFFIC MATERIALS"

will be received until 2:30:00 p.m., Tuesday, May 17th, 2022 for the supply of various traffic materials as per the enclosed specifications, terms and conditions.

2. QUOTATION/TENDER TO BE SUBMITTED ON PRESCRIBED FORM

Bidders are to submit their tender on the prescribed form contained in this document. Failure to submit on this form may result in the disqualification of the tender.

3. ENQUIRIES

Bidders shall promptly examine the bid documents and report any errors, omissions or ambiguities and may direct enquiries or seek additional information in writing by email before the deadline for enquiries to the Authorized Enquiries Contact as set out below. No such communications are to be directed to anyone other than the Authorized Enquiries Contact.

4. AUTHORIZED ENQUIRIES CONTACT

Monic MacVicar, CCLP, CPPB
Supply Chain Management
City of Saint John
Email: supplychainmanagement@saintjohn.ca

It is the Bidder's responsibility to seek clarification from the City on any matter it considers unclear. The City shall not be responsible for any misunderstanding on the part of the Bidder concerning this bid document or its process.

The City intends to confirm receipt of a bidder's communication by way of an email or facsimile in reply. If a bidder has not received a reply, the bidder may wish to resend its communication as the lack of reply may have resulted from a technical problem. The City is under no obligation to respond to enquiries or provide additional information but may do so at its sole discretion.

Responses to inquiries may be distributed to all bidders on the invitation list as having received the bid documents as of the date the response is prepared. The source of the question will not be identified in the response. Verbal information shall not be binding upon the City. Inquiries received after the deadline for enquiries will not receive a response.

All inquiries regarding this Tender shall be submitted in writing, before 4:00:00p.m., local time, on Monday, May 9th, 2022.

5. ADDENDA

Periodically, the City of Saint John is required to issue notification of changes or corrections to a bid document by way of addenda. Normally these notifications will have direct bearing on the cost of a project and will influence the way you bid. Therefore, it is important that the City have assurances that you in-fact received the notification.

Proponents are responsible for obtaining all addenda issued by the City. Addenda may be obtained from the City's website (www.saintjohn.ca) under the menu option "Tender and Proposals".

Bidders are required to sign and include all addenda with their bid submission.

Failure to include a copy of all signed addenda with the bid submission, may result in rejection of your bid regardless whether the changes noted in the addendum are included in the bid submission or not.

6. ADVISORY NOTICE

Periodically, the City of Saint John is required to issue clarification notices to a bid document in the form of an Advisory Notice. Normally these notifications will not have direct bearing on the cost of a project and will not influence the way you bid.

Proponents are responsible for obtaining all advisory notice(s) issued by the City. Advisory Notice(s) may be obtained from the City's website (www.saintjohn.ca) under the menu option "Tender and Proposals".

Bidders are instructed to sign the Advisory Notice and return it either by fax to (506) 658-4742 or email to supplychainmanagement@saintjohn.ca prior to the closing date. Failure to comply with the instructions on an advisory may result in rejection of your bid.

7. GOVERNING LAW, TRADE TREATIES AND POLICIES

This procurement will be in accordance with the laws of the province of New Brunswick and the federal laws of Canada.

This procurement is also subject to the following Policies, Legislation and Internal Trade Agreement(s) including:

- New Brunswick Procurement Act and Regulation 2014-93
- City of Saint John Policy for the Procurement of Goods, Services and Construction

8. SCHEDULE FOR THE BID PROCESS

Issue Date	Friday, April 29th, 2022
Deadline for Enquiries	Monday, May 9th, 2022 at 4:00:00 PM Atlantic Time
Deadline for Issuing Addenda	Tuesday, May 10th, 2022 at 4:00:00 PM Atlantic Time
Submission Deadline	Tuesday, May 17th, 2022 at 2:30:00 PM Atlantic Time
Date of Award (if applicable)	June 1st, 2022

The Schedule for the bid process is tentative only and may be changed by the City in its sole discretion.

9. INVOICING REQUIREMENTS

All invoices submitted under the agreement resulting from this procurement shall bear the corresponding Request for Goods and Services number and/or Purchase order number. Invoices not bearing the applicable number(s) may not be paid. The City's payment terms as detailed in this document will not take effect until such time as the invoice(s) is/are received bearing the applicable number(s).

10. PAYMENT

Payment shall be based on Net 45 Days from date of invoice or receipt of goods, whichever is later. Invoices can either be mailed to: City of Saint John, Accounts Payable Department, P.O. Box 1971, Saint John, NB, E2L 4L1, or by email to the Accounts Payable department (accountspayable@saintjohn.ca). Vendors are to ensure invoices are not sent both ways.

11. AWARD

The City does not bind itself to accept the lowest or any tender submitted, but reserves the right to accept any tender deemed to be in its best interest. The City also reserves the right to split this contract between two or more bidders based upon the overall best value to the City.

12. VERBAL AGREEMENT

No verbal agreement or conversation with any officer, agent or employee of the owner either before or after execution of the contract shall effect or modify any of the terms or obligations contained in any of the documents comprising the said contract.

13. FAX TENDERS

Tenders received by fax **WILL NOT** be accepted.

14. LATE BIDS

Bids received after the time and date as shown on the request for quotation shall not be considered.

15. TAXES

The City of Saint John is not exempt from the 15% harmonized sales tax. Prices are to be all taxes extra. The City of Saint John shall be invoiced for and pay all applicable taxes related to this bid.

16. MANDATORY REQUIREMENTS

Each submission will be evaluated to ensure that it complies with the mandatory requirements and may be rejected if it does not comply. The evaluation of mandatory requirements will confirm that:

- the submission was received prior to the applicable Submission Deadline;
- the bid submission is signed;
- the bid submission is legible;
- the bid submission does not contain a substantive qualification or conditions that are contrary to the terms of the bid document;
- the bid submission does not contain a change in price that was not initialled by the person who signed the submission;
- the bid submission is in English;

17. CANCELATION CLAUSE

In the event that the successful bidder does not comply with the specifications and terms and conditions of this tender, at any time throughout the duration of the contract, the City of Saint John reserves the right to cancel the contract in its entirety.

18. VALIDITY PERIOD

The bid submission constitutes an offer which shall remain open and irrevocable until 90 days after the submission deadline.

19. ORDERING INSTRUCTIONS

Goods and/or services ordered under the agreement resulting from this procurement shall be ordered using one or more of the following methods: Request for Goods and Services Form, Purchase Order and/or Mastercard. Vendors found to be providing goods and/or services without proper documentation may not be remunerated accordingly.

20. DELIVERY

Please BID your net price on each of the above commodities or services, F.O.B. Saint John, NB, prepaid.

21. QUOTE

Please quote your net price on each of the listed goods or services. Shipping will be extra. A rate table for shipping cost must be provided with the bid.

22. SUBSTITUTES

Substitute products will be considered unless otherwise noted. However, the decision as to the equivalency of a substitute product will be left solely with the user department of the City of Saint John. Descriptive literature must accompany the bid for substitute products. Failure to supply this literature may be grounds for rejection of the bid.

23. ACCEPTANCE, REVOCATION AND REJECTION OF TENDERS

The bidder agrees that his tender is a firm offer to supply the goods and/or services specified herein at the quoted price, and in accordance with the terms and conditions herein contained. The bidder may revoke his tender at any time prior to the time fixed for tender opening by delivering, or causing to be delivered, written notice of revocation to the designated official at the City of Saint John. Revocation will take effect from the time the notice is actually received. A notice of revocation will not be accepted after the time fixed for tender opening.

The bid shall not be restricted by a statement added to the Tender Form, or by a covering letter, or by alterations to the tender form as supplied, unless otherwise provided herein and further, a tender form that has been altered in any way may be deemed to be a non-confirming bid and, therefore, rejected. Bidders shall be allowed to attach descriptive literature, whose sole purpose is to amplify the bid.

24. REGIONAL MUNICIPALITIES AND TRI-CITY JOINT PROCUREMENT:

As a condition of award, the successful vendor(s) agree(s) that Regional Municipalities shall have the advantage of the discounts and prices accepted by the City. Regional Municipalities will be considered to be any community that is in the boundaries of the Fundy Regional Service Commission as well as the municipalities of Moncton and Fredericton. This in no way commits these municipalities to accepting this quotation, but provides them with the opportunity to take advantage of the City's volume purchasing discounts.

The City is not responsible for payment for products or services supplied to any Regional Municipality.

The vendor(s) shall invoice Regional Municipalities directly for any product or services supplied to them under this quotation.

Failure to comply with the above terms and conditions of this quotation will result in the immediate cancellation of the contract, without further notice.

25. RESERVED RIGHTS

The City reserves the right to:

- a) Reject an unbalanced Tender. For the purpose of this section, an unbalanced tender is a tender containing a unit price which deviates substantially from, or does not fairly represent reasonable

and proper compensation for the unit of work bid or one that contains prices which appear to be so unbalanced as to adversely affect the interests of the City. The City reserves the right to use tenders submitted in response to this Request for Tender or for other like or similar work as a guideline in determining if a bid is unbalanced.

- b) Amend or modify the scope of the Work, and/or cancel or suspend the Tender award, at any time for any reason;
- c) Require Tenderers to provide additional information after the Tender Closing to support or clarify their Tender;
- d) Not accept any or all Tenders;
- e) Not accept a Tender from a Tenderer who is itself, or whose principals, owners or directors are also principals, owners or directors of another entity which is, involved in litigation, arbitration or any other similar proceeding against the City;
- f) Reject any or all Tenders without any obligation, compensation or reimbursement to any Tenderer or any of its team members;
- g) Withdraw this Request for Tender and cancel or suspend the Tendering Process;
- h) Extend, from time to time, any date, any time period or deadline provided in this Tender (including, without limitation, the Tender Closing), upon written notice to all Tenderers;
- i) Assess and reject a Tender on the basis of:
 - (i) information provided by references;
 - (ii) the Tenderer's past performance on previous contracts;
 - (iii) the information provided by a Tenderer pursuant to the City exercising its clarification rights under this Tendering Process;
 - (iv) the Tenderer's experience with performing the type and scope of work specified;
 - (v) other relevant information that arises during this Tendering Process;
- j) Waive formalities and accept Tenders which substantially comply with the requirements of this Request for Tender;
- k) Verify with any Tenderer or with a third party any information set out in a Tender;
- l) Disqualify any Tenderer whose Tender contains misrepresentations or any other inaccurate or misleading information;
- m) Disqualify any Tenderer who has engaged in conduct prohibited by the Tender Documents;
- n) Make changes, including substantial changes, to the Tender Documents provided that those changes are issued by way of addenda in the manner set out in these Instructions to Tenderers;
- o) Select any Tenderer other than the Tenderer whose Tender reflects the lowest cost to the City;
- p) Cancel this Tendering Process at any stage, for any reason;
- q) Cancel this Tendering Process at any stage and issue a new Request for Tender for the same or similar deliverables;

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- r) Accept any Tender in whole or in part;
 - s) Waive minor non-compliance with the mandatory requirements of the Tender Documents and accept the Tender; or
 - t) Accept a Tender which contains the following errors:
 - (i) error in mathematics – whether this involves the extension of a unit price or an error in addition, the mistake will be corrected and the correct total will be used for evaluation purposes and will be binding on the Tenderer.
 - (ii) conflict between the written and numerical bid prices. In all cases, the total bid price will be corrected to reflect the written bid price, whether lump sum or unit price.
 - (iii) failure to include the contingency allowance in the total Tender Price. If the contingency allowance was not included in the addition, the Tender Price shall be corrected to reflect its inclusion.

and these reserved rights are in addition to any other express rights or any other rights which may be implied in the circumstances and the City shall not be liable for any expenses, costs, losses or any direct or indirect damages incurred or suffered by any Tenderer or any third party resulting from the City exercising any of its express or implied rights under this Request for Tender.

By submitting a Tender, the Tenderer authorizes the collection by the City of the information set out at paragraph i) in the manner contemplated in that subparagraph.

26. LIMITATION OF LIABILITY AND WAIVER

Each Tenderer, by submitting a Tender, agrees that:

- a) Neither the City nor any of its employees, agents, advisors or representatives will be liable, under any circumstances, for any Claim arising out of this Tendering Process including but not limited to costs of preparation of the Tender, loss of profits, loss of opportunity or for any other Claim; and
- b) The Tenderer waives any Claim for any compensation of any kind whatsoever, including Claims for cost of preparation of the Tender, loss of profit or loss of opportunity by reason of the City's decision to not accept the Tender submitted by the Tenderer, to award a Contract to any other Tenderer or to cancel this Tendering Process, and the Tenderer shall be deemed to have agreed to waive such right or Claim.

REQUIRED PRODUCTS AND SPECIFICATIONS:

Item #	Estimated Yearly Quantity	Description
1	3	Six (6) Channel NEMA enhanced conflict monitor <ul style="list-style-type: none"> • with LCD display 9 fault memory and RS-232 cable assembly
2	3	Twelve (12) Channel NEMA enhanced conflict monitor <ul style="list-style-type: none"> • with LCD display 9 fault memory and RS-232 cable assembly
3	5	NEMA 204 Signal Flasher or approved equivalent
4	1	<p>Mid Block Controller The controller shall be housed in an aluminum weather-proof cabinet finished in grey measuring approximately 205mm x 261mm x 400mm, complete with stainless steel pole mounting hardware.</p> <p>The pedestrian signal controller shall operate two (2) distinct phases - (1) attributed to vehicular traffic controlled by green, amber and red adjustable intervals and (2) attributed to pedestrian traffic and consisting of adjustable walk and pedestrian clear intervals. The pedestrian movement shall be actuated by a push button system. Conflict monitoring shall comprise the surveillance of each phase via the green and/or walk display. The cabinet must be able to accept two NEMA load switches and one NEMA solid state two pole flasher.</p> <p>Pedestrian Signal Controller & Cabinet: Electromega MCA-250 Controller and CAB-200 cabinet or approved equal. Controller and cabinet to be pole mounted.</p>
5	16	<p>Three-section traffic signal head</p> <ul style="list-style-type: none"> • Vertical housing shall be ultraviolet, heat stabilized black polycarbonate: Please reference Econolight Model or approved equal. • The housings shall have weather and dust tight gasket doors. The doors shall be properly hinged and shall provide a suitable latching device. • Stainless steel reinforcing plate(s) must be provided on the top of the Red signal housing. • All hinges, latching mechanisms, screws, retainer clips and washers shall be stainless steel. Screws used for visor attachment and LED module retainer clips shall have Robertson type screw heads. • Housing section shall be mounted together with a minimum of 4 bolts around the perimeter of each section. <u>Central mounting ring/nut not acceptable.</u> • Lenses shall be 300mm diameter and shall be convex prismatic of the UV stabilized polycarbonate type. The lens shall fit into a specially designed, slotted, extruded and bonded full-circle silicone lens gasket designed to fit the housing door in such a manner so as to exclude moisture, dust and road film. The lens and gasket shall be secured to the door with four aluminum lens clips and stainless steel screws. • Each lens shall be provided with a removable polycarbonate cutaway visor. The visor shall be molded polycarbonate with minimum thickness of 2mm. Each visor shall be securely attached to the door by stainless steel screws. Snap fit visors are not acceptable. Color of visor is to be flat black to match the head housing. • All LED traffic signal modules shall conform to the latest version of the ITE "Vehicle Traffic Control Signal Heads (VTCSH) - Light Emitting Diode (LED) Circular Signal

Item #	Estimated Yearly Quantity	Description
		<p>Supplement and Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement”. Modules shall be of the color and orientation specified in the Contract Documents:</p> <ul style="list-style-type: none"> • All LED modules must be operationally compatible with traffic controller assemblies, conflict monitors, flashers, and load switches meeting the NEMA Standards publications TS1 and TS2. No further circuit modifications shall be required for system operation. • All traffic signal modules shall be LED type providing a high efficiency and long-life LED source. LED modules shall provide a high efficiency, be ultra-bright type rated and shall be rated for a minimum service period of 72 months of continuous operation from -40°C to +74°C. • All arrow modules shall be omni-directional, suitable for installation in any direction. Bi-modal arrows shall comply with both “green” and “amber” ITE specification requirements. • All LED modules shall be CSA or equivalent approved. The appropriate certification stickers shall be attached to each LED module.
6	10	<p>Four-section traffic signal head</p> <ul style="list-style-type: none"> • Vertical housing shall be ultraviolet, heat stabilized black polycarbonate: Please reference Econolight Model or approved equal. The bottom section shall incorporate a bi-model head. • Same specifications as Item #19 (3-section head) <p>NOTE: Housing section shall be mounted together with a minimum of 4 bolts around the perimeter of each section. <u>Central mounting ring/nut not acceptable.</u></p>
7	2	<p>Two-section traffic signal head</p> <ul style="list-style-type: none"> • Vertical housing shall be ultraviolet, heat stabilized yellow polycarbonate: Please reference Econolight Model or approved equal. • Both LED modules are to be amber in color • Same specifications as Item #19 (3-section head) <p>NOTE: Either 4 bolt design or central ring/nut mount is acceptable for the Two Section Traffic Signal head.</p>
8	6	<p>300 mm red solid LED's</p> <ul style="list-style-type: none"> • All LED traffic signal modules shall conform to the latest version of the ITE “Vehicle Traffic Control Signal Heads (VTCSH) - Light Emitting Diode (LED) Circular Signal Supplement and Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement”. Modules shall be of the color and orientation specified in the Contract Documents: • All LED modules must be operationally compatible with traffic controller assemblies, conflict monitors, flashers, and load switches meeting the NEMA Standards publications TS1 and TS2. No further circuit modifications shall be required for system operation. • All traffic signal modules shall be LED type providing a high efficiency and long-life LED source. LED modules shall provide a high efficiency, be ultra-bright type rated and shall be rated for a minimum service period of 72 months of continuous operation from -40°C to +74°C. • All LED modules shall be CSA or equivalent approved. The appropriate certification stickers shall be attached to each LED module.

Item #	Estimated Yearly Quantity	Description
9	6	<p>300 mm amber solid LED's</p> <ul style="list-style-type: none"> • All LED traffic signal modules shall conform to the latest version of the ITE "Vehicle Traffic Control Signal Heads (VTCSH) - Light Emitting Diode (LED) Circular Signal Supplement and Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement". Modules shall be of the color and orientation specified in the Contract Documents: • All LED modules must be operationally compatible with traffic controller assemblies, conflict monitors, flashers, and load switches meeting the NEMA Standards publications TS1 and TS2. No further circuit modifications shall be required for system operation. • All traffic signal modules shall be LED type providing a high efficiency and long-life LED source. LED modules shall provide a high efficiency, be ultra-bright type rated and shall be rated for a minimum service period of 72 months of continuous operation from -40°C to +74°C. • All LED modules shall be CSA or equivalent approved. The appropriate certification stickers shall be attached to each LED module.
10	15	<p>300 mm green solid LED's</p> <ul style="list-style-type: none"> • All LED traffic signal modules shall conform to the latest version of the ITE "Vehicle Traffic Control Signal Heads (VTCSH) - Light Emitting Diode (LED) Circular Signal Supplement and Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement". Modules shall be of the color and orientation specified in the Contract Documents: • All LED modules must be operationally compatible with traffic controller assemblies, conflict monitors, flashers, and load switches meeting the NEMA Standards publications TS1 and TS2. No further circuit modifications shall be required for system operation. • All traffic signal modules shall be LED type providing a high efficiency and long-life LED source. LED modules shall provide a high efficiency, be ultra-bright type rated and shall be rated for a minimum service period of 72 months of continuous operation from -40°C to +74°C. • All LED modules shall be CSA or equivalent approved. The appropriate certification stickers shall be attached to each LED module.
11	5	<p>300 mm Amber/green arrow LED's</p> <ul style="list-style-type: none"> • All LED traffic signal modules shall conform to the latest version of the ITE "Vehicle Traffic Control Signal Heads (VTCSH) - Light Emitting Diode (LED) Circular Signal Supplement and Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement". Modules shall be of the color and orientation specified in the Contract Documents: • All LED modules must be operationally compatible with traffic controller assemblies, conflict monitors, flashers, and load switches meeting the NEMA Standards publications TS1 and TS2. No further circuit modifications shall be required for system operation. • All traffic signal modules shall be LED type providing a high efficiency and long-life LED source. LED modules shall provide a high efficiency, be ultra-bright type rated and shall be rated for a minimum service period of 72 months of continuous operation from -40°C to +74°C. • All arrow modules shall be omni-directional, suitable for installation in any direction. All arrows shall be bi-modal and comply with both "green" and "amber"

Item #	Estimated Yearly Quantity	Description
		ITE specification requirements. <ul style="list-style-type: none"> All LED modules shall be CSA or equivalent approved. The appropriate certification stickers shall be attached to each LED module.
12	2	200 mm red solid LED's <ul style="list-style-type: none"> Same specifications as item #8 (300 mm LED's) except 200 mm diameter
13	1	200 mm amber solid LED's <ul style="list-style-type: none"> Same specifications as item #9 (300 mm LED's) except 200 mm diameter
14	1	200 mm green solid LED's <ul style="list-style-type: none"> Same specifications as item #10 (300 mm LED's) except 200 mm diameter
15	10	300 mm X 300 mm Pedestrian Lights w/o housing <ul style="list-style-type: none"> Duralight JXM200-VIHM CAD or approved equivalent without housing. (As per Appendix B)
16	3	300 mm X 300 mm Pedestrian Lights with housing – <ul style="list-style-type: none"> Duralight JXM200-VIHM CAD or approved equivalent with black housing (As per Appendix B)
17	2	Two-Way Elbow Mounting Kit <ul style="list-style-type: none"> These kits are to be used primarily to attach 2 two-section traffic signal heads (see item #21) facing opposite directions side mounted on traffic poles as part of an RA-5 crosswalk system Also called an "Upper & Lower "T" Tubular Mounting Bracket" See Appendix A for sketch and individual pieces
18	12	Pedestrian Combination Timers c/w housing <ul style="list-style-type: none"> The pedestrian head assemblies shall conform to the latest version of the ITE "Standards on Pedestrian Traffic Control Signal Indicators: Light Emitting Diode (LED) Signal Modules" and Transportation Association of Canada Guidelines. The signal heads shall use the international symbols (Canadian design - lunar white walking pedestrian and orange Portland hand). The "walking pedestrian" and "Portland hand" symbols and colours shall be in accordance with the Manual of Uniform Traffic Control Devices for Canada. LED traffic signal modules shall be overlay type with countdown (407mm x 480mm): Duralight JXM-400VIECAD or approved equal. (As per Appendix C) The UV stabilized polycarbonate pedestrian signal housing and visors shall be black in colour. The LED housing shall be a one-piece injection-molded section with hinge lugs, screw slots and openings at each end.
19	6	Pedestrian Replacement LED Light Only <ul style="list-style-type: none"> The LED shall use the international symbols (Canadian design - lunar white walking pedestrian and orange Portland hand). The "walking pedestrian" and "Portland hand" symbols and colours shall be in accordance with the Manual of Uniform

Item #	Estimated Yearly Quantity	Description
		Traffic Control Devices for Canada. LED traffic signal modules shall be overlay type with countdown (407mm x 480mm): Duralight JXM-400VIECAD or approved equal. (As per Appendix C)
20	1 roll	<p>(26) Conductor I.M.S.A. 19-1 rated stranded traffic cable</p> <ul style="list-style-type: none"> • Tracers to be permanently marked or embedded into insulation not printed. • Cable outside diameter not to exceed (1) one inch, 600 volt ac rating. • #10 stranded plain copper A.W.G green. • #14 stranded plain copper A.W.G as follows: <ul style="list-style-type: none"> ○ Red: Solid, with (1) white tracer, Red with (2) white tracers, Red with (3) white tracers. ○ Orange: Solid, with (1) white tracer, orange with (2) white tracers, orange with (3) white tracers. ○ Blue: Solid, with (1) white tracer, blue with (2) white tracers, blue with (3) white tracers. ○ Black: Solid, with (1) white tracer, black with (2) white tracers, black with (3) white tracers. ○ Yellow: Solid, with (1) white tracer, yellow with (2) white tracers, yellow with (3) white tracers. ○ Brown: Solid, with (1) white tracer, brown with (2) white tracers, brown with (3) white tracers. ○ White: Solid • Wire rolls to be approximately 300 meters per roll.
21	5 rolls	<p>(7) Conductor I.M.S.A. 19-1 rated stranded traffic cable.</p> <ul style="list-style-type: none"> • 600 volt ac rating • #14 stranded plain copper A.W.G as follows: • Red: Solid • Orange: Solid • Brown: Solid • Black: Solid. • Yellow: Solid • Blue: Solid • White: Solid • Wire rolls to be approximately 150 meters per roll.
22	30	<p>Elbow Mounting Kit</p> <ul style="list-style-type: none"> • Pelco SP5419-PNC with 16 inch tube arms or approved equivalent.
23	4	<p>Aluminum 1-Way Post Top Mounting Kit</p> <ul style="list-style-type: none"> • (Fortran BRK931 or approved equivalent)
24	6	<p>Pole Plates</p> <ul style="list-style-type: none"> • Pelco SE-4071-M3 or approved equivalent

Item #	Estimated Yearly Quantity	Description
25	5	<p>Prefabricated Detector Loops</p> <ul style="list-style-type: none"> • Prefabricated Loop/Lead-In Assembly: Reno A&E Model PLH or approved equal. • The loop/lead-in assembly shall be designed for applications in which the loop/lead-in assembly will be overlaid with hot asphalt or embedded in concrete. • The wires in the assembly shall be of a length of at least 55 meters to reach either the pull box or the controller without any joints whatsoever. The loop leads (home-run) must not be spliced. • The PLH loops would measure 1.8 meters X 6.0 meters.
26	2	<p>Motion Detector</p> <ul style="list-style-type: none"> • MS SEDCO TC26-B Motion Detector or approved equivalent
27	1	<p>Pull boxes for single runs</p> <p>Synertech Catalog No. S1118HBB0A01 Underground pull box enclosures shall be Synertech polymer composite boxes manufactured Oldcastle Precast, complete with a polymer concrete support ring and cover. Covers shall have electrical identification with the word "Traffic" on it and shall be secured with stainless steel hexagonal head bolts.</p>
28	1	<p>Pull boxes for multiple runs</p> <p>Synertech Catalog No. S1730B18FA. Underground pull box enclosures shall be Synertech polymer composite boxes manufactured Oldcastle Precast, complete with a polymer concrete support ring and cover. Covers shall have electrical identification with the word "Traffic" on it and shall be secured with stainless steel hexagonal head bolts.</p>
29	1	<p>RA-5 Crosswalk Sign</p> <ul style="list-style-type: none"> • Shall be an illuminated face walking man symbol 600mm x 750mm. The walking man symbol shall be white inside a black border complete • Sign housing shall be welded extruded aluminum, finished with yellow polyurethane paint. Type NEMA 4X. • The sign lens shall be Lexan 5 mm thick with MUTCDC Standard Crosswalk Symbol (RA-5R and RA-5L). Lenses shall be replaceable slide in, slide out type. Face illumination shall be a 175 watt metal halide lamp. Down light illumination shall be a 250 watt metal halide lamp. • The supplier shall provide an optional price with LED lighting replacing the metal halide for both or either the face illumination or down lighting. • Electromega Model RA5 970-1270 or approved equal. • Complete sign assembly to be CSA certified. • The top of sign fixture to be reinforced with minimum 7mm aluminum plate to absorb strain of the hanger. • Dual 300mm amber LED traffic signal heads shall be attached to each side of sign, one facing in each direction of traffic

Item #	Estimated Yearly Quantity	Description
30	1	<p>RA-5 Controller & Cabinet</p> <ul style="list-style-type: none"> • Electromega RA-5 Controller and CAB-200 cabinet or approved equal. Controller and cabinet to be pole mounted. Flashing beacons to operate at 50-60 flashes per minute; the ON period should be approximately equal to the OFF period. Controller shall be capable of altering the duration of activation after each call. <u>Shall include a photocell.</u>
31	2	<p>Flasher Controller Cabinet</p> <ul style="list-style-type: none"> • TACEL FP101 cabinet or approved equal. • It is a cabinet similar in size to the midblock controllers that Electromega provide us. It contains a breaker and a socket that accepts a NEMA flasher (EDI 810 or equivalent) as well as a terminal strip for connecting field wiring. We do not have an official drawing.
32	16	<p>APS Push Button System</p> <ul style="list-style-type: none"> • Yellow color, • Remote programming of the audible pedestrian system. • Systems shall be equipped with a pedestrian information sign. • Sounds: As per latest recommendation by the Canadian National Institute for the Blind and Transportation Association of Canada Guidelines. • Shall have a Bilingual countdown and "walk sign is on" option • Sign shall be bilingual or non lingual (picture only). • Buttons shall be Novax Intellicross or approved equivalent.



**FORM OF TENDER (1 OF 5)
2022-631001T
TRAFFIC MATERIALS**

#	DESCRIPTION	UNIT PRICE Year 1	UNIT PRICE Year 2	DELIVERY Charge
1	Six (6) Channel conflict monitor (Specify _____)	\$	\$	\$
2	Twelve (12) Channel conflict monitor (Specify _____)	\$	\$	\$
3	NEMA 204 Flasher (Specify _____)	\$	\$	\$
4	Mid Block Controller (Specify _____)	\$	\$	\$
5	Three-section traffic signal head (Specify _____)	\$	\$	\$
6	Four-section traffic signal head (Specify _____)	\$	\$	\$
7	Two-section traffic signal head (Specify _____)	\$	\$	\$
8	300 mm red solid LED's (Specify _____)	\$	\$	\$
<p>NAME: _____ SIGNATURE: _____</p> <p align="center">(print)</p>				



FORM OF TENDER (2 OF 5)
2022-631001T
TRAFFIC MATERIALS

#	DESCRIPTION	UNIT PRICE Year 1	UNIT PRICE Year 2	DELIVERY CHARGE
9	300 mm amber solid LED's (Specify _____)	\$	\$	\$
10	300 mm green solid LED's (Specify _____)	\$	\$	\$
11	300 mm Amber/green arrow LED's (Specify _____)	\$	\$	\$
12	200 mm red solid LED's (Specify _____)	\$	\$	\$
13	200 mm amber solid LED's (Specify _____)	\$	\$	\$
14	200 mm green solid LED's (Specify _____)	\$	\$	\$
15	300 mm X 300 mm Pedestrian Lights w/o housing (Specify _____)	\$	\$	\$
16	300 mm X 300 mm Pedestrian Lights with housing (Specify _____)	\$	\$	\$
<p>NAME: _____ SIGNATURE: _____</p> <p>(print)</p>				



**FORM OF TENDER (3 OF 5)
2022-631001T
TRAFFIC MATERIALS**

#	DESCRIPTION	UNIT PRICE Year 1	UNIT PRICE Year 2	DELIVERY CHARGE
17	Two-Way Elbow Mounting Kit (Specify _____)	\$	\$	\$
18	Pedestrian Combination Timers c/w housing (Specify _____)	\$	\$	\$
19	Pedestrian Replacement LED Light Only (Specify _____)	\$	\$	\$
20	(26) Conductor IMSA 19-1 rated stranded traffic cable (Specify _____)	\$	\$	\$
21	(7) Conductor IMSA 19-1 rated stranded traffic cable (Specify _____)	\$	\$	\$
22	Elbow Mounting Kit (Specify _____)	\$	\$	\$
23	Aluminum 1-Way Post Top Mounting Kit (Specify _____)	\$	\$	\$
24	Pole Plates (Specify _____)	\$	\$	\$
25	Prefabricated Detector Loops (Specify _____)	\$	\$	\$

NAME: _____
(print)

SIGNATURE: _____



**FORM OF TENDER (4 OF 5)
2022-631001T
TRAFFIC MATERIALS**

26	Motion Detector (Specify _____)	\$	\$	\$
27	Pull boxes for single runs (Specify _____)	\$	\$	\$
28	Pull boxes for multiple runs (Specify _____)	\$	\$	\$
29	RA-5 Crosswalk Sign (Specify _____)	\$	\$	\$
30	RA-5 Controller and Cabinet (Specify _____)	\$	\$	\$
31	Flasher Controller Cabinet (Specify _____)	\$	\$	\$
32	APS 4-Wire Push Button System (Specify _____) System Cost: List of Components: (Please list each component and its cost to replace.)	\$ \$ \$ \$ \$ \$ \$ \$ \$	\$ \$ \$ \$ \$ \$ \$ \$ \$	\$ \$ \$ \$ \$ \$ \$ \$ \$

NAME: _____
(print)

SIGNATURE: _____

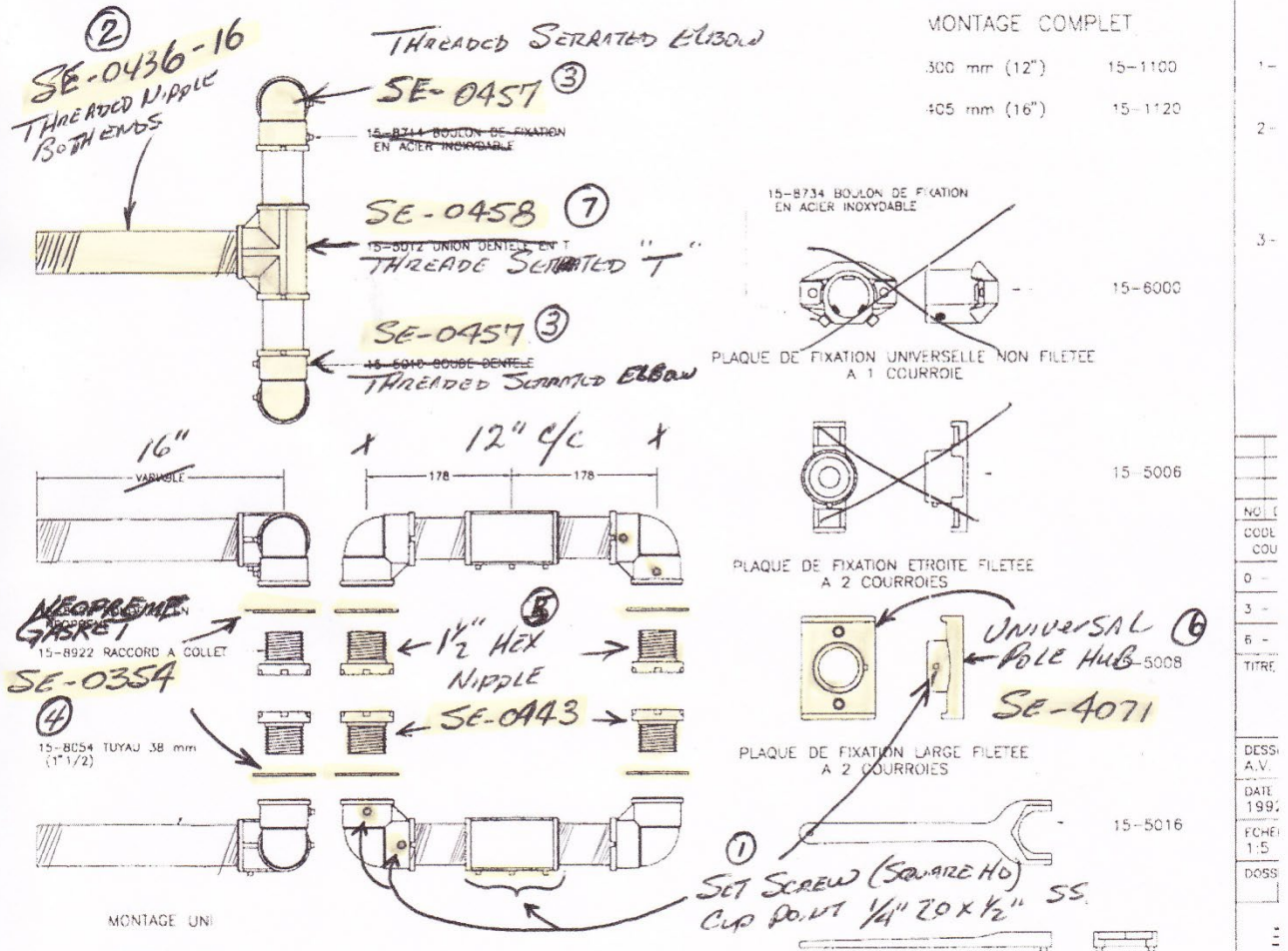


**FORM OF TENDER (5 OF 5)
2022-631001T
TRAFFIC MATERIALS**

COMPANY: E-MAIL:	SIGNATURE: _____ NAME: _____ (print)
DATE:	Tel # Fax #
Remarks:	

Appendix A: Two-Way Elbow Mounting Kit

UPPER & LOWER "T" TUBULAR MOUNTING BRACKET
 12" C/C. 16" FROM POLE WITH THREADED TUBULAR PIPE



ITEM	PART #	DESCRIPTION	QUANTITY
①	FS-3218SS	SET SCREW, SQUARE HD. CUP POINT 1/4"-20 X 1/2" TYPE 304 STAINLESS.	X16
②	SE-0436-16	NIPPLE, 1 1/2" NPS X 16" ALUMINUM.	X2
③	SE-0457	ELBOW, SERRATED 1 1/2" NPS ALUMINUM	X4
④	SE-0354	GASKET, TO DURO NEOPRENE	X4
⑤	SE-0443	NIPPLE HEX, 1 1/2" NPS ALUMINUM	X4
⑥	SE-4071	HUB PLATE, THREADED W 1 1/2" DIA HOLE ALUMINUM	X2
⑦	SE-0458	"T" THREADED SERRATED W 1 1/2" DIA HOLE ALUMINUM	X1

Appendix B: DURALIGHT JXM200-VIHM CAD



TECHNICAL DATA

Certified by ISO9001 International Quality Control System

Canada Pedestrian Lamps

Features

- Low power consumption & long operating lifetime LEDs
- Retrofit design & UV stabilized lens
- MIL-STD-883 mechanical vibration
- MIL-STD-810F moisture resistant
- Fully compatible with NEMA controllers/conflict monitors
- Even brightness & standard chromatogram

Dimensions

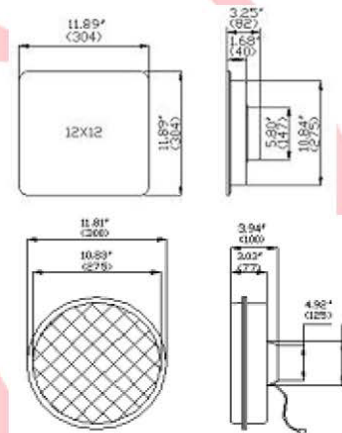


Fig. A



Fig. B



Fig. C



Fig. D

Model Number	Size (inch)	Fig.	Symbol			Voltage (Typical)	Voltage Range	Power (w)	Operation Temp.
			Hand	Man	Countdown				
JXM200-VIHM CADR	12"	A	Outline	Outline	-	120V-60Hz	80v-135v	7/7	-40°F-+165°F
JXM200-VIHM CAD	12"x12"	B	Outline	Outline	-	120V-60Hz	80v-135v	7/7	-40°F-+165°F
JXM200-VIE	12"x12"	C			2 Digits	120V-60Hz	80v-135v	4	-40°F-+165°F
JXM200-VIER	12"	D			2 Digits	120V-60Hz	80v-135v	4	-40°F-+165°F

All characteristics, including chromaticity, moisture and vibration resistance, electronic noise, transient protection, etc., are conformed to standards specified in ITE LED Vehicle Signal Modules.

For additional technical information or sales support regarding these and other LED products, please contact:

Appendix C: DURALIGHT JXM-400 VIECAD



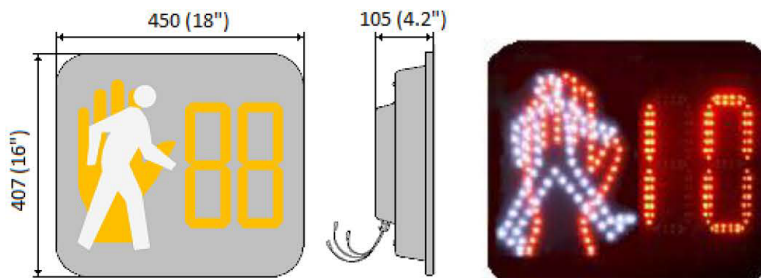
TECHNICAL DATA

Certified by ISO9001 International Quality Control System

JXM-400VIECAD Series Countdown Pedestrian Lamps

Features & Specifications

- Low power consumption & long operating lifetime LEDs
- Retrofit design & UV stabilized lens
- MIL-STD-883 mechanical vibration
- MIL-STD-810F moisture resistant
- Full compatibility with NEMA controllers/conflict monitors



Model Number		JXM-400VIECAD
Size (in)		16" X 18"
Size (mm)		407mm X 450mm
Configuration		Countdown/Outline Hand/Man
Symbol	<i>Hand</i>	Outline
	<i>Man</i>	Outline
	<i>Countdown</i>	2 Digit
Voltage (Typical)		120V - 60hz
Voltage Range		80V - 135V
Power (W) Typical	<i>Hand</i>	7
	<i>Man</i>	7
	<i>Countdown</i>	4

All characteristics, including visual characters, chromaticity, moisture and vibration resistance, electronic noise, transient protection, etc., are conformed to standards specified in ITE LED Vehicle Signal Modules.

For additional technical information or sales support regarding these and other LED products, please contact us at (972) 480-0888 or visit our website at www.trastarusa.com.

