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**REVISION 005 TO A
INVITATION TO TENDER**

**RÉVISION 005 À UNE
INVITATION À SOUMISSIONNER**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Offer remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'offre demeurent les mêmes.

Issuing Office - Bureau de distribution :

**Parks Canada Agency
National Contracting Services
30 Victoria Street
Gatineau, Québec, J8X 0B3**

Title - Sujet : Warsaw Road Swing Bridge Rehabilitation, Trent-Severn Waterway National Historic Site	
Solicitation No. - N° de l'invitation : 5P201-20-0003/A	Date: May 28, 2020
Amendment No. - N° de modification : 005	
Client Reference No. - N° de référence du client : 859.12	
GETS Reference No. N° de référence de SEAG : PW-20-00912217	

Solicitation Closes - L'invitation prend fin : At - à : 2 :00 PM On - le : June 2, 2020	Time Zone - Fuseau horaire HAE - EDT
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F.O.B. - F.A.B. : Plant - Usine : <input type="checkbox"/> Destination : <input checked="" type="checkbox"/> Other - Autre : <input type="checkbox"/>		
Address Enquiries to - Adresser toutes demande de renseignements à : Christine Piché		
Telephone No. - N° de telephone : 873-355-8841	Fax No. -N° de télécopieur : N/A	Email Address – Courriel : christine.piche2@canada.ca
Destination of Goods, Services, and Construction - Destination des biens, services, et construction : See Herein – Voir aux présentes		

TO BE COMPLETED BY THE BIDDER - À REMPLIR PAR LE SOUMISSIONNAIRE

Vendor/ Firm Name - Nom du fournisseur/ de l'entrepreneur :	
Address - Adresse :	
Telephone No. - N° de telephone :	Fax No. - N° de télécopieur :
Name of person authorized to sign on behalf of the Vendor/Firm Nom de la personne autorisée a signer au nom du fournisseur/ de l'entrepreneur	
Signature :	Date :

Solicitation No. - N° de l'invitation :
5P201-20-0003/A

Amd. No. - N° de la modif. :
005

Contracting Authority - Autorité contractante :
Christine Piché

Client Ref. No. - N° de réf. du client :
859.12

Title – Titre :
Warsaw Road Swing Bridge Rehabilitation, Trent-Severn Waterway National Historic Site

AMENDMENT 005

This amendment is raised to:

- A. Answer questions from bidders;

A. QUESTIONS AND ANSWERS

- Q1.** There are a few discrepancies between the Spec and the SLD.
Is Arc Resistant MCC required? Spec asks for 15"D Sections - NOT available with Arc Res.:
- A1.** The Sections cannot be greater than 15" deep to accommodate the working clearance in the room.
- Q2.** The SPD is shown externally mounted on the SLD - yet the Spec reads to be Integral, in the incoming section - along with a Power Meter - that is NOT shown on the SLD.???
- A2.** No power meter is required and install the Surge Protector Device on the exterior as shown on drawing E2, Power Distribution Schematic. (It is assumed that SLD is referring to drawing E2, Power Distribution Schematic? If this assumption is not correct please resubmit and clarify.)
- Q3.** Also - the wiring diagrams provided - are not for the MCC - they appear to be for an external control cabinet or PLC.
- A3.** The external control cabinet is shown on drawing E8.
- Q4.** I am not seeing that any control devices are to be installed integral to the MCC as they are all remote.
- A4.** The external control cabinet is shown on drawing E8 and the controls are to be wired to the MCC power distribution equipment.
- Q5.** The Front Elevation shows (2) Spares..... Spare WHAT?
- A5.** Equipped space for future use. The label is to read 'spare' so it is understood that those sections are not in use.
- Q6.** The customer only allows 24" for the Panelboard LP-1 our design is 36" minimum.
- A6.** The Rockwell Automation Publication 2100-SG003B-EN-P indicates a vertical 2.0 space factor (26") is available, however if their manufacturer is recommending a vertical 3.0 space factor (39") this is acceptable. The HPU 1 bucket can be relocated to the 'spare' location to allow the lighting panel section to be increased in size vertically.
- Q7.** Questions related to locking lift mechanism on drawings E06 and E07.
- Does the locking mechanism hold the cover open, or does it hold the plate that the buttons are mounted to open? Are you able to provide the manufacturer of the console shown on the drawings?
- A7.** The control console is based upon the following, with modification as shown:
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Saginaw Control and Engineering
95 Midland Road, Saginaw, MI 48638-5770
(800) 234-6871 - Fax: (989) 799-4524
SCE@SaginawControl.com
Part Number: SCE-402516SDCSS6
Description: S.S. Console, Single Access Single Door

The metal cover is essentially a box that is lockable to prevent access by pedestrians or vandals. The cover is hinged at the back and locked in the front to prevent access to the console top. When locked the cover cannot be raised. This is a custom modification to the enclosure as called out.

The console top plate with the pushbuttons has a linkage that allows the top to be raised and held in place while working on the console top. This is separate from the lockable cover.

- Q8. Part 3.4.2 of specs section 07 19 00 states to apply concrete coating to "the exterior edge of the curbs along the full length of the bridge". The curb on the bridge appears to be poured against the girders G1 and G2, and cannot be coated. Please clarify.
- A8. Coat all exposed surfaces of curb.
- Q9. On drawing C01 the west abutment and surrounding area is hatched. Is all this area to be cleared and grubbed? Is any clearing and grubbing required for this project?
- A9. Hatched area is proposed work area. Clearing and grubbing not required for this project.
- Q10. Are these missing drawings in the Structure Package S03, S04, S06-S09? If the drawings are missing can you please send them in a zip file.
- A10. Drawings are not missing from the structure package and align with the listed drawings on the cover page.
- Q11. On E1, note 139.11.3 references interlock bypass switches. Are you asking for trapped key style keyed interlock switches, or standard key switches?
- A11. Trapped in the on position, removable in the off position.
- Q12. Section 26 24 21, 2.2.6, indicates that the 800T lights shall be glass, are plastic lens an acceptable alternative as the 800T units aren't available with glass lenses.
- A12. Plastic is acceptable.
- Q13. What is to be priced in Unit Price table item 1 Substructure Demolition?
- A13. Concrete repairs to the existing abutment and piers as indicated in details 6/S19, 11/S19 and 12/S19 are to be priced under the Unit Price table item 1.
- Q14. Is detail 6/S19, 11/S19 and 12/S19 required? If yes, should unit price quantities be provided?
- A14. Yes, detail 6/S19, 11/S19 and 12/S19 are required. Yes, unit price quantities are provided as indicated under specification Section 01 29 00 1.11.2.

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- Q15. Is the Track Support at Trough as shown on drawing M13 required at only one location?
- A15. Yes. In addition, the general location of the existing beam that spans the trough is noted on drawing M6.
- Q16. Is the drain pipe under the concrete deck as shown on A/S41 metal or plastic pipe?
- A16. Drainage outlet and pipe shown on S41 to be of similar construction to OPSD 3340.153 drawing, refer to S34, unless otherwise noted on the tender package drawings.
- Q17. Drawing M13 and E10 appear to show the existing trough connected to the gate house under the proposed 150 slab on grade as shown on drawing S20. Please advise if new HPU utility Trench / trough is required. If yes, approximate quantity in m. Is the proposed 150 slab on grade as shown on drawing S20 partially over the existing trough?
- A17. Utility trench is alongside 150mm slab on grade as shown in plan view on S20, not over top of utility trench. Utility trench is required. The existing trough adjacent to the existing gate house will be modified to accept a new slab (HPU foundation) and new trench, as shown on drawing S20, to accept the new HPU and enclosure. Drawing S20 shows the general details of the new slab and new trench, however, final details will need to be developed by the Contractor after adequate coordination with the HPU and enclosure suppliers. This approach will allow for proper sizing of slab, determination of extent of new trench and proper coordination (penetrations and/or conduit runs) for electrical cabling and hydraulic tubing.
- Q18. In the specification section 05 12 33 Page 8, Part 2 - Products, Note 2.1.2 *the Girders, Floor beams and stringers shall be fracture critical members* but as shown on drawing sheet S01, (Structural steel note #1) the list of steel grade is not showing any FCM members. Could you clarify if the Girders, Floor beams and stringers should be fracture critical members as per specifications?
- A18. Confirmed, girders, floor beams and stringers shall be considered fracture critical members.
- Q19. On drawing sheet S01, the Structural steel notes 6 and 8 seem to be contradictives. Could you clarify if we should use note 6 or note 8 if the weld detail is not shown?
- A19. If weld detail is not shown all welds shall be complete penetration welds (structural steel note 6). Structural steel note 8 is intended for minimum fillet weld sizes.
- Q20. On drawing sheet S32, Section - Angle Banded Edge, Note *Grating to be edged with angle section sized and stiffened as required to support live loading*. Could you provide the detail and location for those stiffeners?
- A20. Edge banding and stiffening detail and locations to be provided by grating supplier (or contractor) to support live loading.
- Q21. In the specification section 01 45 00 Page 3, 1.11 Test Assembly, Note .3 *Test assembly of new span off site to test approximate span balance prior to delivery to site*. Could you define which element of the bridge will be required to perform the test assembly off site?
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- R21. It is the contractor's responsibility to develop a procedure to test the assembly, level and balance of the new bridge, off-site prior to delivery to site. Submit procedure to Engineer for approval.

Off-site shop assembly of bridge steel superstructure to test balance and camber will, at a minimum, include longitudinal girders, pivot girders, counterweight boxes, floorbeams, floorbeam brackets, stringers, curb beams, sidewalk stringers, and steel grating. Include lateral bracing in the shop assembly, however, use undersize bolts for fastening lateral bracing. Perform and record as-built measurements of the shop assembled leaf to an established set of dimensional control points. Match mark for re-assembly in the field.

Test the assembly, level and balance of the new bridge off-site prior to delivery to site. Account for any components that are not part of assembly such as counterweight concrete by span balance calculation or other method approved by the Engineer. Utilize off-site balance results for counterweight adjustment as per notes on drawing S43 "Transverse Beam B1 Details". Submit proposed adjustments to Engineer for approval.

Refer to 29 05 00 3.12 SPAN BALANCE for final balancing procedure requirements.

- Q22. On drawing E1 "Scope of Work" note #4 it states;

ELECTRICAL MACHINERY. THE BRIDGE SHALL BE HYDRAULICALLY OPERATED, AND THE HYDRAULIC POWER UNIT SHALL BE PROVIDED WITH REDUNDANT 25 HP MOTORS. THE HYDRAULIC POWER UNIT SHALL BE PROVIDED WITH SOLENOID AND PROPORTIONAL VALVES, OIL LEVEL AND TEMPERATURE SENSORS, AND IMMERSION TANK OIL HEATERS.

It appears that the electrical trade is supplying Hydraulic equipment? Is this correct?

- A22. The Contract does not assign a specific trade or subcontractor to supply the hydraulic power units. The Contract indicates the required qualifications and interdisciplinary requirements for the project.

The contractor is directed to project specification DIVISION 24 – HYDRAULICS, Section 24 05 00 – HYDRAULIC WORKS, which includes the following:

1.1 MANUFACTURE OF HYDRAULIC EQUIPMENT

“1 The supply of new components of the hydraulic system shall be the responsibility of one (1) company only. This company shall be a recognized manufacturer of high-pressure oil-hydraulic systems and shall be acceptable as such to the Departmental Representative.”

1.2 SUPPLIER QUALIFICATIONS

“1 Fabrication of the power units shall be done in a qualified shop with successful prior experience in the design and manufacture of hydraulic systems for the movable bridge industry or similar.”

“2 Design review, calculations, preparations of shop drawings, fabrication, shop testing and field testing must be supervised by a Professional Engineer who has been responsible for the design of at least one (1) hydraulic systems to operate a swing bridge and the design of at least two (2) industrial hydraulic systems similar in size...”

An electrical trade subcontractor meeting the above qualifications would be considered qualified to supply the hydraulic power unit.

- Q23. Are the approach slabs the only areas to receive hot rubberized asphalt as per spec section 07 14 13?
- A23. Hot rubberized asphalt to be used for new Approach Slabs and reinstatement of asphalt required to blend the existing roadway and Access Road into the new construction.
- Q24. Part 3.4.2 of specs section 07 19 00 states to apply concrete coating to the crash blocks. Please clarify the location of the crash blocks.
- R24. Delete all reference to concrete coating of crash blocks.
- Q25. Part 3.2.5.7 of spec section 03 30 00 states that the bridge deck shall be finished in accordance with OPSS 904.07.07. Please clarify if the deck shall be finished using a finishing machine as per OPSS 904.07.05.03.
- A25. A finishing machine may not be suitable for this bridge type, Contractor shall submit a proposal detailing a method of finishing to the Contract Administrator for approval.
- Q26. A note on drawing S12 states that the "contractor to selectively demolish a portion of the existing control building foundations and provide the necessary shoring". Are any drawings or information available on the location, depth and type of the existing control building foundations relative to the reconstructed north abutment?
- A26. SNC-Lavalin was not provided with existing drawings, Parks Canada would be better to answer this query.
- Q27. On drawing sheet S47, Elevation - Beam B8, there are 8mm fillet welds shown for Web to flanges weld, but the B8 Beam is shown as a W690x170. Could you confirm that those welds should not be shown on this drawing and the Beam B8 is a W690x170 shape?
- A27. Beam B8 is a built-up beam section. Details of the cross-section are provided on I/S48, the 8mm fillet welds are correct.
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- Q28. On drawing sheet S01, Counterweights note #1, *Adjustable steel counterweights not to exceed 22.7kg (50lbs)*. Is it 100% of the weight shown on drawing S43 (Plan - Girder B1 Bottom Flange) that needs to be provided pieces of 50lbs Max?
- A28. The intention of the 50lbs max weight size is to ensure that they can be lifted and manoeuvred on site by a single person's power within Health and Safety guidelines. If there is a suggestion of variable weight sizes to allow manipulation of the balance of the bridge on site, and over the lifetime of the bridge, this can be proposed and submitted for approval by the engineer
- Q29. On Structural drawings sheet S35, S36, S39, S42, S44, S45, S47 , Note # *Finish mating surfaces requirements at all connection interfaces with mechanical as per notes on Dwg, M1*. Could you confirm that all surfaces shown on Structural Steel drawings, in contact with mechanical components in dotted line with an (#), need to be machined surfaces? If yes, could you confirm that the machining will be from the thickness shown on drawings and no extra thickness needs to be considered
- A29. Yes, contact surfaces denoted on the structural drawings with a '#’ or as otherwise indicated on the structural or mechanical drawings require machined surfaces. Required thickness of the plate shown needs to be maintained, refer to note 7.2 on drawing M1:
- “ALL MACHINERY SUPPORT MOUNTING SURFACES SHALL HAVE A 6.3 MICROMETER FINISH AND BE FLAT WITHIN 0.25 MILLIMETER. THICKNESS OF MOUNTING PLATES TO BE FINISHED ARE GIVEN AFTER FINISHING.” :
- Regarding the W-sections shown on S44 and S45 making up beam B2 and beam B4, the bottom flange of these beams that interface with bolster load plates do not require machining. The load plates and bolsters will be machined.
- Q30. Could you please confirm if finish coating is required in the interior surfaces of Girder B1 and Steel counter weight?
- A30. Yes, the finish coating is required in the interior surfaces of girder B1 where the pockets are for the steel counterweights are for corrosion protection.

ALL OTHER TERMS & CONDITIONS REMAIN UNCHANGED