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TPSGC  
11 Laurier St./ 11 rue, Laurier  
Place du Portage, Phase III  
Core 0A1 / Noyau 0A1  
Gatineau, Québec K1A 0S5  
Bid Fax: (819) 997-9776

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

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

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

**Comments - Commentaires**

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du**  
**fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
Scientific, Medical and Photographic Division /  
Division de l'équipement scientifique, des produits  
photographiques et pharmaceutiques  
11 Laurier St./ 11 rue, Laurier  
6B1, Place du Portage  
Gatineau, Québec K1A 0S5

<b>Title - Sujet</b> IR Camera	
<b>Solicitation No. - N° de l'invitation</b> W6369-140068/A	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> W6369-140068	<b>Date</b> 2013-11-29
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$PV-940-63872	
<b>File No. - N° de dossier</b> pv940.W6369-140068	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2013-12-23</b>	
<b>Time Zone</b> Fuseau horaire Eastern Standard Time EST	
<b>F.O.B. - F.A.B.</b> Specified Herein - Précisé dans les présentes <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input checked="" type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Hooper, Marlyn	<b>Buyer Id - Id de l'acheteur</b> pv940
<b>Telephone No. - N° de téléphone</b> (819) 956-2702 ( )	<b>FAX No. - N° de FAX</b> (819) 956-3814
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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This amendment is raised to publish the questions and answer received as of November 27, 2013 and to modify Mandatory Specifications 1.18.3, 2.16, 2.19.3 and to add one Mandatory Specification 1.18.3 at Annex A.

- Q.1** In Annex B 2.16 and 2.17, it is asked to provide a TFOV lens with the same f/# as the camera, and it is asked to provide an f/2 camera. In section 2.18, it is asked that the TFOV focal lengths required are 50 or 60, 150 or 180 and 500mm. There are commercially available f/4 lenses that meet this requirement, but to our knowledge, there are no commercially available f/2 lenses that meet this requirement. So my question is the following. Is it acceptable to deliver a f/4 solution for the LWIR camera and lens? Otherwise, a custom f/2 lens will have a delivery time that is not compatible with a March 31<sup>st</sup> 2014 delivery date, and the price will not be reasonable compared to the f/4 solution.
- A.1** Yes, it is acceptable to deliver a f/4 solution for both camera and lens in order to meet the 31st March deadline. However, both F/# must be the same.
- Q.2** While most of the project can be completed and delivered by March 31, 2014, there is one item that it will be very difficult to do so – the TFOV lens for the LWIR camera. This lens will be custom made to conform as closely as possible to net field of view specifications for the existing MWIR TFOV system. Due to the length of time needed to design, manufacture and test such a lens, we would normally require 18 weeks delivery time. Would it be possible to allow delivery of this lens after March 31?
- A.2** No. All items have to be delivered by 31st March. Given that we have relaxed the requirement based on comment of question 1, there should not be any manufacturing requirement for the TFOV lens.
- Q.3** Lens control for the LWIR TFOV lens. Please provide some clarification – remote focus, remote switching, manual, etc. What is needed?
- A.3** Lens control. Switching and focusing of the lenses in the TFOV lens shall be done using the computer based portable rack mounted high speed data recorder on which the camera data collection operating software would be installed.
- Q.4** Sea salt – maritime environment. The current MWIR TFOV lens to which the MWIR camera must attach is not designed for this environment. Therefore it doesn't make sense that the other components must do so. Systems that are expressly designed for harsh environments are provided in a fully sealed, nitrogen purged enclosure, such as our RS6702 systems. Provision of this type of enclosure is not consistent with the requirement of matching up to existing equipment. Could you remove, relax or clarify this requirement?
- A.4** We were under the impression that it was compliant with these requirements. Given the information, the weather requirement can be relaxed to meet the same weather specifications as the MWIR TFOV lens we are currently using.

**Q.5** I presume the intention is to match the field of view of the LWIR camera with TFOV lens to the MWIR camera with existing TFOV lens. Our optics engineer has done some calculations and has come up with this:

Roughly, 40/120/320mm for 16um 640x512 LW would give equivalent FOV (and IFOV) to 60/180/500 for 25um 640x512 MW. If the keep the same focal length for MW and LW they will have a hard time getting the target in the frame for both cameras as LW will be much smaller FOV.

**A.5** Presumption is correct. That would be the ideal scenario. We already have the issue of not having the same field of view with the cameras we are currently using. The aim of specifying the focal lengths was to look for already commercially available options or something close to it. If the suggested focal lengths in TFOV lens are commercially available and can be delivered by 31st March, than proposed 40/120/320 mm for 16 um 640x512 LW TFOV lens will be accepted.

### **Mandatory Specifications**

#### **Delete**

Specification 1.18.3 in it's entirety

Maritime environments that contain sea salt aerosol.

Specification 2.16

Must be an F/2 camera in it's entirety

Specification 2.19.3 in it's entirety

Maritime environments that contain sea salt aerosol

### **Mandatory Specifications**

#### **Add**

Specification 1.18.3

Must meet the same Maritime weather specifications as the Phoenix F/4 MWIR TFOV lens currently being used.

Specification 2.16

Must be  $\leq$ F/4 acceptable for commercially available TFOV lenses

Solicitation No. - N° de l'invitation

W6369-140068/A

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

W6369-140068

Amd. No. - N° de la modif.

001

File No. - N° du dossier

pv940W6369-140068

Buyer ID - Id de l'acheteur

pv940

CCC No./N° CCC - FMS No/ N° VME

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### Specification 2.19.3

Must meet the same Maritime weather specifications as the Phoenix F/4 MWIR TFOV lens currently being used.

### Specification 2.18.3

40mm, 120mm, and 320mm focal lengths if LWIR detector of 16um pixel pitch

All other terms and conditions remain unchanged