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1713 Bedford Row
Halifax, N.S./Halifax,(N.E.)
Halifax
Nova Scotia
B3J 1T3
Bid Fax: (902) 496-5016

**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
Atlantic Region Acquisitions/Région de l'Atlantique
Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.E.)
Halifax
Nova Scot
B3J 1T3

Title - Sujet Stereolithographic 3D Printer	
Solicitation No. - N° de l'invitation W010V-20D022/A	Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client W010V-20-D022	Date 2019-11-13
GETS Reference No. - N° de référence de SEAG PW-SPWA-104-5940	
File No. - N° de dossier PWA-9-82049 (104)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-11-21	Time Zone Fuseau horaire Atlantic Standard Time AST
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 questions à: Nowakowski, Leanne	Buyer Id - Id de l'acheteur pwa104
Telephone No. - N° de téléphone (902) 403-7112 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

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

Solicitation Amendment 001 is being issued to provide the questions and answers to date, as well as to provide the updated Statement of Requirement.

1. At Annex A Requirement:

Delete: in its entirety

Insert: Annex A Requirement – Revision 1

2. Questions:

1) Reading the details of the document, we could see in the Annex A, page 10, in the “Purpose” section that you are looking for an SLA printer. On the other hand, in the “g. Build Material” section, it is mentioned that it “Must be able to print multiple materials simultaneously.” Those two criteria cannot be combined. SLA printers cannot print “multiple materials simultaneously”. Would it be possible to have precision on the type of printer you are looking for?

a. The printer type does not have to exclusively be resin. A polymer jet printer would also be acceptable. The SOR will be amended to reflect this clarification.

2) I noticed that **Annex A – Requirement** does not clearly state that there is a requirement for support removal equipment to accompany the 3D printers. Parts produced by the referenced 3D printer have support material attached to them that must be removed before the parts are fully usable. The recommended support cleaning apparatus is a water jetting system and is not automatically included with the 3D printer in quotations, unless explicitly requested. The specified system is especially designed to provide the right amount of water pressure and flow to effectively remove support material from 3D printed parts, without damaging them.

Please let me know if the intent is to procure the printers without the support cleaning apparatus or was is simply an omission and will be added to the request for Bid. Each printer needs one water jet support removal system.

a. The requirement includes necessary support removal systems. The SOR will be amended to reflect this clarification.

3) Is it mandatory for the 3d printer to be SLA (resin based) the particular SLA 3d printer that this tender is based upon is toxic to the environment and humans. Would a ‘Multi Jet Fusion’ full colour printer be accepted with the following criteria?

Printable build size 580/540 Printers:	up to 7.5 x 13.1 x 9.8 inches (190 mm x 332 mm x 248 mm)
Printable build size 380/340 Printers:	up to 7.5 x 10 x 9.8 inches (190 mm x 254 mm x 248 mm)
Layer thickness:	0.08mm
Productivity:	Full bucket with 52 parts in about 15 hours, as many as 5 parts in around four hours
Printer dimensions:	Printer dimensions: 61.6 x 37.6 x 59.3 inches (1565mm x 955mm x 1,505mm) Rear module can be temporarily removed to fit through a 36-inch (900mm) door

- a. SLA/resin printing is not mandatory. Polymer jet printing is also acceptable. The printer must be capable of printing using non-toxic materials. A printer that can print using both non-toxic and toxic materials would still meet the requirements. The SOR will be amended to reflect this clarification.

- 4) I wanted to reach out and ask if size of the printer is a factor, would you consider having printer located in a 'Climate Controlled Storage Container' this would keep the printer out of any harmful elements and allow it to be contained and operated in the Climate Controlled Storage Container', this would eliminate the issue of a 3d printer not fitting through a standard doorway.
 - a. Use of an external storage container would not be an acceptable solution. Some basic disassembly/reassembly is acceptable if no special tools or technical training is required.

STATEMENT OF WORK

Purpose

To establish a contract for the provision, installation and functional demonstration of two polymer jet 3D printers and required post processing support material systems in Esquimalt (x1) and Halifax (x1).

Background

Naval Training Development Centres Atlantic and Pacific are producing increasingly complex and detailed 3D printed training aids using standard fused deposition printers. Additional resolution, accuracy and material versatility is desired to generate more functional training models.

Requirement

a. Operation

- 3D Printer must be capable of unattended operation once system is started.

b. Build Size (XYZ)

- 3D Printer must be capable of maximum build size of at least 255 x 252 x 200mm/10.0 x 9.9 x 7.9”.

c. Build Resolution

- Must be capable of build resolution of:
 - X Axis : 600 dpi
 - Y Axis : 600 dpi
 - Z Axis: 1600 dpi

d. Layer thickness

- Must be capable of producing a layer thickness options of at least 16 to 30 microns in the Z Axis.

e. Accuracy

- Must build to a maximum accuracy of at least 200 microns.

f. Colour

- Must be able to print full spectrum of colours.
- Must be able to print color directly into 3D model/parts.
- Must be able to print transparent to opaque and to tint 3D model/parts.

g. Build Material

- Must be capable of producing 3D models/parts with the properties of ABS, Rubber, and Polypropylene.
- Must be able to print multiple materials simultaneously (within the same build cycle without operator intervention).
- Must be able to print both flexible to rigid materials in the same build.
- Must be capable of producing coloured 3D models/parts within the varying “Shore A Hardness Values” 27 - 95.

- Build materials must be able to be fully cured within 3D printer and not require secondary process with external equipment.
- Capable of using build/support materials that are environmental friendly and do not require hazardous storage facilities or specialized PPE to handle.

h. Warranty Support

- 1 year manufacturer's warranty to include parts and labour

i. Customer Support

- 1 year telephone/email customer support for operational/troubleshooting issues (24 hour response time during Mon-Fri work week)

Supplied by DND

DND will supply the required electrical power and access to the installation location.

Security

N/A

Limitations or Constraints

a. Power

- Must use standard office 115V/60Hz/15A Canadian CSA approved receptacle.

b. Physical Dimensions

- Must be capable of fitting through door opening (876.3 x 1930.4mm/34.5 x 76") (Width x Height), without requiring specialized disassembly by certified technician.

c. Weight

- Total/individual weight must not exceed 1000kg.

d. Environmental

- 3D printer and support equipment must be capable to operate in an office environment and not require specialized environmental considerations such as external ventilation, air/liquid heating/cooling, and noise isolation.

e. Network Communication

- 3D Printer must support standard LAN – TCP/IP configurability.

f. Operational Environment

- Must be capable of operating within 18°C – 25°C temperatures.

Technical Authority

Technical Authority for this requirement is Lt(N) Oleg Lyubenko, oleg.lyubenko2@forces.gc.ca, (902) 721-8762.

Delivery/Installation Instructions

a. Delivery

- Purchase price to include delivery to indicated location/space.
 - o 5391 Longitude Row, Bldg. S-15, 3rd Floor, Rm 331, Halifax, NS.
 - o Nixon Bldg. #1367, Rm 125, Victoria, BC.

b. Installation

- Once delivered, equipment to be unpackaged and certified all contents received by qualified vendor.
- Equipment to be setup/installed, and verified functional through a full demonstration of printer capabilities and features.