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Bid Receiving Public Works and Government
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publics et Services gouvernementaux Canada
800 Burrard Street, Room 219
800, rue Burrard, pièce 219
Vancouver, BC V6Z 0B9
Bid Fax: (604) 775-7526

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
Public Works and Government Services Canada -
Pacific Region
219 - 800 Burrard Street
800, rue Burrard, pièce 219
Vancouver, BC V6Z 0B9

Title - Sujet 3D Printer	
Solicitation No. - N° de l'invitation 31019-141111/A	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client 31019-141111	Date 2015-03-05
GETS Reference No. - N° de référence de SEAG PW-\$VAN-580-7438	
File No. - N° de dossier VAN-4-37285 (580)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-03-11	Time Zone Fuseau horaire Pacific Daylight Saving Time PDT
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: Navarro-Ocampo, Maria	Buyer Id - Id de l'acheteur van580
Telephone No. - N° de téléphone (604) 775-9911 ()	FAX No. - N° de FAX (604) 775-7526
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

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002

Buyer ID - Id de l'acheteur

van580

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

31019-141111

File No. - N° du dossier

VAN-4-37285

CCC No./N° CCC - FMS No/ N° VME

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Please see attached.**

This Amendment 002 is being raised to extend the Solicitation until March 11, 2015; publish answers to questions; and to revise the Solicitation document.

A. QUESTIONS & ANSWERS

1) Deposition of fluidic materials must have a minimum drop size range of 1 to 10 picolitres.

Q: What type of fluidic materials? Ink? Binder? Resin? Wax?

Answer 1: Carbon based catalyst suspension.

2) Printed patterns must be created and printed on substrates in various sizes: minimum of 0.787×0.787 inches up to 8×11×0.04 inches.

Q: These dimensions do not make sense. A 3D printer prints in 3 dimensions; 0.787 x 0.787 is 2-dimensional.

Answer 2: Printed patterns must be created and printed on substrates in various sizes up to 8×11 inches and > 0.04 inches thick.

3) The printer head must contain a minimum of 16 nozzles.

Q: Are nozzles the same as jets? The ProJet 260C has 604 jets.

Answer 3: Yes.

4) Nozzles must be spaced 200 to 300 microns apart and must have a nozzle diameter of 20 (+/- 5) microns.

Q: Why? Would it be allowable if the nozzles were spaced 50 microns apart and have a diameter of 10 microns?

Answer 4: No, this is not compliant. See section B, Revisions.

5) The printer head must spray inks with a particle size of 150 to 250 nanometers and a viscosity of 10 to 12 centipoises.

Q: Why? If the ink is dye based, there are no particles. Inks with particles are suspensions, not dyes, and many 3D printers are dye based.

Answer 5: See answer 1.

6) The printer must use a disposable piezoelectric inkjet cartridge with a minimum cartridge volume of 1.5 ml.

Q: Why does it have to be piezoelectric? What about thermal, like Canon's bubble jet technology?

Answer 6: The analysis of jet printers, used for the deposition of carbon-based catalyst suspensions on supports shows the use of piezoelectric inkjet cartridge.

7) The printer must be Windows 7 compliant.

Q: Do you mean Windows 7 compatible?

Answer 7: Yes.

B. REVISIONS

1. *On Page 5 of 15, after 6.2 Requirement:*

INSERT:

6.2.1 Optional Requirement – Warranty

The Contractor grants to Canada the irrevocable option to extend the term of the Warranty by up to 5 years under the same terms and conditions. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option within 12 months of contract award by sending a written notice to the Contractor.

2. *On Page 9 of 15, section 2 Technical Requirements:*

DELETE this section in its entirety.

INSERT the following:

2. Technical Requirements

The printer must meet the following Mandatory Criteria:

Line no.	Mandatory Criteria
1	Deposition of fluidic materials must have a minimum drop size range of 1 to 10 picolitres.
2	Substrates must be secured on a vacuum platen and must heat up to at minimum of 60°C.
3	The printer must have a fiducial camera which must allow inspection and image capture of patterns and drops.
4	Printed patterns must be created and printed on substrates in various sizes up to of 8×11inches and >0.04 inches thick.
5	The printer head must contain a minimum of 16 nozzles.
6	Nozzles must be spaced at least 50 microns apart and must have a nozzle diameter of 20 (+/- 5) microns.
7	The printer head must spray inks with a particle size of 150 to 250 nanometres and a viscosity of 10 to 12 centipoises.
8	The printer must use a disposable piezoelectric inkjet cartridge with a minimum cartridge volume of 1.5 ml.
9	The printer must have the ability to print a layer 5 cm ² with 625×2000 pixel resolution.
10	The printer must have a waveform editor and a drop-watch camera system for the manipulation of the electronic pulses to the piezo jetting device, for optimization of drop characteristics.
11	The printer must have a pattern editor program for a variety of patterns, and include a perpetual license.
12	The printer must be Windows 7 compatible.
13	The printer must have a power requirement of 110V.

3. Extended Warranty

The Contractor grants to Canada the irrevocable option to extend the term of the Warranty by up to 5 years under the same terms and conditions. The Contractor agrees that, during the extended period

of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

3. *On Page 10 of 15, Annex B – Basis of Payment*
INSERT the following:

B.3 Option for Extended Warranty

Line No.	Description	Price
1.	One year extended warranty	\$ _____
2.	Two year extended warranty	\$ _____
3.	Three year extended warranty	\$ _____
4.	Four year extended warranty	\$ _____
5.	Five year extended warranty	\$ _____

4. *On Page 11 of 15, Annex C – Compliance and Compatibility Testing*

INSERT the following below the title:

The NRC is not required to complete the Compliance and Compatibility Testing.

5. *On Pages 14 to 15 of 15, Form A – Substantiation of Technical Compliance Form*

DELETE Form A in its entirety.

INSERT the following:

FORM A

SUBSTANTIATION OF TECHNICAL COMPLIANCE FORM

The printer must meet the following mandatory requirements:

Line no.	Mandatory Criteria	Comply (Yes/No)	Substantiate	Reference
1	Deposition of fluidic materials must have a minimum drop size range of 1 to 10 picolitres.			
2	Substrates must be secured on a vacuum platen and must heat up to at minimum of 60°C.			
3	The printer must have a fiducial camera which must allow inspection and image			

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	capture of patterns and drops.			
4	Printed patterns must be created and printed on substrates in various sizes up of 8×11 inches and >0.04 inches thick.			
5	The printer head must contain a minimum of 16 nozzles.			
6	Nozzles must be spaced at least 50 microns apart and must have a nozzle diameter of 20 (+/- 5) microns.			
7	The printer head must spray inks with a particle size of 150 to 250 nanometres and a viscosity of 10 to 12 centipoises.			
8	The printer must use a disposable piezoelectric inkjet cartridge with a minimum cartridge volume of 1.5 ml.			
9	The printer must have the ability to print a layer 5 cm ² with 625×2000 pixel resolution.			
10	The printer must have a waveform editor and a drop-watch camera system for the manipulation of the electronic pulses to the piezo jetting device, for optimization of drop characteristics.			
11	The printer must have a pattern editor program for a variety of patterns, and include a perpetual license.			
12	The printer must be Windows 7 compatible.			
13	The printer must have a power requirement of 110V.			

All other terms and conditions remain unchanged.