

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des
soumissions - 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**

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet HIGH SPEED CAMERA IN SUPPORT OF THE	
Solicitation No. - N° de l'invitation W6399-13EA49/B	Date 2012-11-21
Client Reference No. - N° de référence du client W6399-13EA49	
GETS Reference No. - N° de référence de SEAG PW-\$\$PV-941-61577	
File No. - N° de dossier pv941.W6399-13EA49	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-01-04	
Time Zone Fuseau horaire Eastern Standard Time EST	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Martins, Christina	Buyer Id - Id de l'acheteur pv941
Telephone No. - N° de téléphone (819) 956-6911 ()	FAX No. - N° de FAX (819) 956-3814
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE ATTN BLDG 14 SUPPLY 8355 FRANKTOWN RD RICHMOND Ontario K0A2Z0 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

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

Delivery Required - Livraison exigée See Herein	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



Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
2	HIGH SPEED CAMERA IN SUPPORT OF THE DND One (1) High Speed Camera and components in accordance with the Mandatory Technical requirements listed in Annex A. Shipping and one (1) manual included.	W3048	W6399	1	LOT	\$	See Herein	

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The Requirement is detailed under the "Line Item Detail".

3. Debriefings

After contract award, bidders may request a debriefing on the results of the bid solicitation. Bidders should make the request to the Contracting Authority within 15 working days of receipt of notification that their bid was unsuccessful. The debriefing may be provided in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2012-11-19) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete:	sixty (60) days
Insert:	ninety (90) days

1.1 SACC Manual Clauses

B1000T

Condition of Material

2007/11/30

2. Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not

be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

4. Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of Ontario, Canada.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

- Section I: Technical Bid (two (2) copies)
- Section II: Financial Bid (one (1) copy)
- Section III: Certifications (one (1) copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement.

(<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and/or containing minimum 30% recycled content; and

- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

1.1 Section I: Technical Bid

The following applies to the Requirement and bidders must provide the following information in the bid where applicable:

1.1.1 Manuals

One (1) complete set of user documentation in both English and French must be supplied with the High Speed camera and components.

1.1.2 Service (BIDDER TO COMPLETE)

Purchase of the High Speed Camera and components must include: regional technical support; technical phone support; support via the internet; and support via a fax-back document system.

Response for service must be within 24 hours or less.

Also, provide the following with your bid (for information purposes only):

- a) Location of available service facilities (after sales service and repair). List the service facilities closest to the destination.

- b) Locations of available replacement parts from consumables to major components.

- c) Response time re: service calls, and escalation schedule, i.e. (how many days with no resolution to a problem until a more experienced person is called in, and from which location).

- d) List the frequency of routine maintenance visits provided by a qualified service technician during the warranty period, if applicable and included in the price.

1.1.3 Product(s) Offered (BIDDER TO COMPLETE)

The Bidder must indicate the make and model number of the products offered (identify specific components which make up the system):

Name of Manufacturer: _____

Model/Part Number: _____

Literature attached: Yes (_____) No (_____) _____

1.1.4 Point of Manufacture/Shipping (BIDDER TO COMPLETE)

The Bidder must state the point of manufacture/shipping of goods is to be performed:

Location: _____

Postal Code: _____

1.1.5 Delivery (BIDDER TO COMPLETE)

While delivery must be received on or before than 31 March 2013, the best delivery that could be offered by the Bidder is _____.

1.1.6 Contacts

Bidders are requested to provide the following: Information pertaining to Article 5.4 Contractor Representatives under Part 6, Resulting Contract Clauses.

1.2 Section II: Financial Bid

The bidder must quote a firm lot price all inclusive of supply and manuals, DDP (Richmond, Ontario), the Goods and Services Tax (GST) and/or the Harmonized Sales Tax (HST) extra, as applicable. Freight charges to destination and all applicable Customs duties and Excise taxes must be included.

1.2.1 Exchange Rate Fluctuation

C3011T

Exchange Rate Fluctuation

2010/01/11

1.3 Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

All proposals submitted must be completed in full and provide all of the information requested in the Request for Proposal (RFP) package to enable a full and complete evaluation. If the requirement is not addressed in the bidder's proposal, the proposal will be considered incomplete or non-responsive and will be rejected. The onus is on the bidder to provide all the information necessary to ensure a complete and accurate assessment.

Factors for Evaluation

1. **PRICING BASIS (MANDATORY):** Prices must be firm, DDP Delivered Duty Paid.
2. **ABILITY TO MEET THE TECHNICAL REQUIREMENT (MANDATORY):**
 - a) For Items Defined by Specifications:

The bidder is requested to cross reference the mandatory technical criteria contained herein to their supporting technical documentation.
 - b) Provision of Supporting Technical Documentation:

Supporting technical documentation for the stores offered must be provided with the bid at time of bid closing.

Technical brochures or technical data MUST be provided to verify compliancy to the technical mandatory specifications.
3. **COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS REQUEST FOR PROPOSAL (MANDATORY)**
4. **FOR CANADIAN SUPPLIERS ONLY:** Please note that the requirements of the Federal Contractors Program for Employment Equity may apply - see herein. (MANDATORY if applicable)

1.2 Financial Evaluation

The lowest evaluated price will be established using the following criteria:

a) prices will be evaluated in Canadian Funds including any applicable Taxes and Canadian Customs Duty (if applicable) and excluding the Goods and Services Tax (GST) or Harmonized Sales Tax (HST). For evaluation purposes, bids received in a foreign currency will be converted to Canadian funds using the appropriate rate of exchange using the rate quoted by the Bank of Canada as being in effect on date of bid closing.

b) prices will be evaluated on a DDP (Richmond, Ontario)

2. Basis of Selection

A0069T

Basis of Selection

2007-05-25

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications to be awarded a contract. Canada will declare a bid non-responsive if the required certifications are not completed and submitted as requested.

Compliance with the certifications bidders provide to Canada is subject to verification by Canada during the bid evaluation period (before award of a contract) and after award of a contract. The Contracting Authority will have the right to ask for additional information to verify bidders' compliance with the certifications before award of a contract. The bid will be declared non-responsive if any certification made by the Bidder is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

5. Mandatory Certifications Required Precedent to Contract Award

5.1 Code of Conduct and Certifications - Related documentation

- 5.1.1 By submitting a bid, the Bidder certifies, for himself and his affiliates, to be in compliance with the Code of Conduct and Certifications clause of the Standard instructions. The related documentation hereinafter mentioned will help Canada in confirming that the certifications are true. By submitting a bid, the Bidder certifies that it is aware, and that its affiliates are aware, that Canada may request additional information, certifications, consent forms and other evidentiary elements proving identity or eligibility. Canada may also verify the information provided by the Bidder, including the information relating to the acts or convictions specified herein, through independent research, use of any government resources or by contacting third parties. Canada will declare non-responsive any bid in respect of which the information requested is missing or inaccurate, or in respect of which the information contained in the certifications is found to be untrue, in any respect, by Canada. The Bidder and any of the Bidder's affiliates, will also be required to remain free and clear of any acts or convictions specified herein during the period of any contract arising from this bid solicitation.

Bidders who are incorporated, including those bidding as a joint venture, must provide with their bid or promptly thereafter a complete list of names of all individuals who are currently directors of the Bidder. Bidders bidding as sole proprietorship, including those bidding as a joint venture, must provide the name of the owner with their bid or promptly thereafter. Bidders bidding as

societies, firms, partnerships or associations of persons do not need to provide lists of names. If the required names have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award.

Canada may, at any time, request that a Bidder provide properly completed and Signed Consent Forms (Consent to a Criminal Record Verification form- PWGSC-TPSGC 229) (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>) for any or all individuals aforementioned within the time specified. Failure to provide such Consent Forms within the time period provided will result in the bid being declared non-responsive.

5.2 Additional Certifications Required with the Bid

Bidders must submit the following duly completed certifications with their bid.

5.2.1 Federal Contractors Program - over \$25,000 and below \$200,000

Suppliers who are subject to the Federal Contractors Program (FCP) and have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive federal government contracts over the threshold for solicitation of bids as set out in the Government Contracts Regulations. Suppliers may be declared ineligible contractors either as a result of a finding of non-compliance by HRSDC, or following their voluntary withdrawal from the FCP for a reason other than the reduction of their workforce to less than 100 employees. Any bids from ineligible contractors, including a bid from a joint venture that has a member who is an ineligible contractor, will be declared non-responsive.

The Bidder, or, if the Bidder is a joint venture the member of the joint venture, certifies its status with the FCP, as follows:

The Bidder or the member of the joint venture

a.() is not subject to the FCP, having a workforce of less than 100 full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada;

b.() is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c. 44;

c.() is subject to the requirements of the FCP, having a workforce of 100 or more full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC, having not bid on requirements of \$200,000 or more;

d.() has not been declared an ineligible contractor by HRSDC, and has a valid certificate number as follows: _____ .

Further information on the FCP is available on the HRSDC Web site.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The Requirement is detailed under the "Line Item Detail".

2.1 Manuals

One (1) complete set of user documentation in both English and French must be supplied with the High Speed camera and components.

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual(<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2012-11-19) General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All deliverables must be received on or before 31 March 2013.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Christina Martins
Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Commercial and Consumer Products Directorate
Place du Portage III, 6A2
11 Laurier St. Gatineau, Quebec
K1A 0S5
Telephone: (819) 956-6911
Facsimile: (819) 956-3814
Christina.martins@tpsgc-pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

5.2 Technical Authority (to be filled in only at contract award)

The Technical Authority for the Contract is:

Name: _____
 Telephone: (____) _____
 Facsimile: (____) _____
 E-mail address: _____

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

5.3 DND Procurement Authority (to be filled in only at contract award)

The DND Procurement Authority for the Contract is:

Name: _____
 Telephone: (____) _____
 Facsimile: (____) _____
 E-mail address: _____

The DND Procurement Authority is responsible for the DND contract management and for the authorization of all work against this contract.

5.4 Contractor's Representative (BIDDER TO COMPLETE)

The telephone number of the person responsible for :

General Enquiries	Delivery Follow-up
Name: _____	Name: _____
Telephone No. _____	Telephone No. _____
Facsimile No. _____	Facsimile No. _____
E-mail address: _____	E-mail address: _____

6. Payment

6.1 Basis of Payment - Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price, as specified in the contract for a cost of **\$to be filled in only at contract award**. Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.2 SACC Manual Clauses

H1000C Single Payment

08/05/12

7. Invoicing Instructions

7.1 The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is Completed.

7.2 Invoices must be distributed as follows:

- (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
- (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
- (c) One (1) copy must be forwarded to the consignee.

8. Certifications

Compliance with the certifications provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the entire contract period. If the Contractor does not comply with any certification or it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario, Canada.

10. Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) 2010A (2012-11-19) General Conditions - Goods (Medium Complexity);
- (c) Annex A, Mandatory Technical Requirements; and
- (d) The Contractor's bid dated _____ ("bid date" to be inserted at time of contract award).

11. SACC Manual Clauses

A9006C	Defence Contract	2008/05/12
D5545C	ISO 9001:2008 - Quality Management Systems - Requirements (QAC C)	2010/08/16

12. Shipping Instructions - Delivery at Destination

1. Goods must be consigned to the destination specified in the Contract and delivered:

DDP Delivered Duty Paid (Richmond, Ontario) Incoterms 2000 for shipments from a commercial contractor.
2. The Contractor is responsible for all delivery charges, administration, costs and risks of transport and customs clearance, including the payment of customs duties and taxes.

ANNEX A
MANDATORY TECHNICAL REQUIREMENTS
HIGH SPEED CAMERA AND COMPONENTS

The **HIGH SPEED CAMERA and COMPONENTS MUST** meet **ALL** of the following criteria in order to be deemed compliant:

Vendors must cross reference the mandatory technical criteria in a concise format by using page, paragraph(s) & sub-paragraphs as applicable to their supporting technical documentation.

Design:

The High Speed Camera must be specifically designed for high speed imagery in the following applications as a minimum:

- (a) Ballistics;

Reference in Bidders Proposal: _____

- (b) Materials research;

Reference in Bidders Proposal: _____

- (c) Combustion and explosive analysis; and

Reference in Bidders Proposal: _____

- (d) Fluid dynamics.

Reference in Bidders Proposal: _____

Environmental Specifications:

The High Speed Camera must operate fully in the following environmental conditions:

- (a) Temperature: 0 to 40°C (32 to 104°F); and

Reference in Bidders Proposal: _____

- (b) Relative Humidity: up to 85% (no condensation).

Reference in Bidders Proposal: _____

Weight/Size

The High Speed Camera must have a weight and size that permits portability and is compatible with existing operating jigs and carrying cases:

(a) Have a maximum body size (excluding protrusions) as follows:

i. Length: 25 cm (9.8 in);

Reference in Bidders Proposal: _____

ii. Width: 17 cm (6.7 in); and

Reference in Bidders Proposal: _____

iii. Height: 17 cm (6.7 in);

Reference in Bidders Proposal: _____

(b) Have a weight (including batteries) of no more than 7 kg (15.4 pounds).

Reference in Bidders Proposal: _____

Power:

The High Speed Camera must:

(a) Have an on/off switch;

Reference in Bidders Proposal: _____

(b) Be compatible with the following power sources (via external adapter(s)):

i. AC Voltage: 100-240 VAC at 50-60 Hz; and

Reference in Bidders Proposal: _____

ii. DC Voltage: 18-36 VDC;

Reference in Bidders Proposal: _____

(c) Have an internal or external battery to permit operation and retention of data during loss of AC power.

Reference in Bidders Proposal: _____

General Features:

The High Speed Camera must have the following features:

(a) Sensor:

i. A 12 bit ADC CMOS image sensor with the following specifications:

a. Colour depth: RGB, each 12-bit (Bayer colour filter method); and

Reference in Bidders Proposal: _____

b. Resolution: minimum 20 µm pixels;

Reference in Bidders Proposal: _____

ii. Have adjustable ISO settings up to a minimum of ISO 3200;

Reference in Bidders Proposal: _____

iii. Have an integrated active cooling device;

Reference in Bidders Proposal: _____

iv. Have a low light operations mode equal to or better than ISO sensitivity of 5000 (monochrome) and 1500 (full colour) measured to ISO12232 S sat;

Reference in Bidders Proposal: _____

(b) Resolution:

i. Have a minimum resolution of 1024 x 744 at a frame rate of 10,000 frames per second (fps);

Reference in Bidders Proposal: _____

ii. Permit operation at a frame rate of up to no less than 1,000,000 fps at lower resolution; and

Reference in Bidders Proposal: _____

iii. Operate throughout the range of shutter speeds independent of frame rate;

Reference in Bidders Proposal: _____

(c) Shutter:

i. Have an electric shutter capable of operating at no more than 370 nanoseconds;

Reference in Bidders Proposal: _____

- ii. Have a finger activated trigger that connects to the camera via a BNC cable;

Reference in Bidders Proposal: _____

- iii. Capable of using event markers within an image sequence in real time;

Reference in Bidders Proposal: _____

- iv. Capable of synchronization to a master camera and other external triggering devices (such as a global positioning device) via TTL;

Reference in Bidders Proposal: _____

- v. Have an internal synchronous clock; and

Reference in Bidders Proposal: _____

- vi. Accept external synchronization and signal sources that are IRIG compatible;

Reference in Bidders Proposal: _____

(d) Input/Output:

- i. Have the following inputs (minimum):

Reference in Bidders Proposal: _____

- a. LAN port for interfacing to a Personal Computer;

Reference in Bidders Proposal: _____

- b. I/O Port for external triggering; and

Reference in Bidders Proposal: _____

- c. I/O port for the remote keypad;

Reference in Bidders Proposal: _____

- ii. Have the following outputs (minimum):

Reference in Bidders Proposal: _____

- a. NTSC/PAL video out via BNC connector; and

Reference in Bidders Proposal: _____

- b. HD-SDI video out via BNC connector;

Reference in Bidders Proposal: _____

(e) File Formatting:

- i. Have an uncompressed video native file format;

Reference in Bidders Proposal:

- ii. Permits saving images in various formats including (but not limited to):

- a. Joint Photographic Experts Group;

Reference in Bidders Proposal:

- b. Audio Visual Interleave;

Reference in Bidders Proposal:

- c. Tagged Image File Format;

Reference in Bidders Proposal:

- d. Bitmap;

Reference in Bidders Proposal:

- e. Raw;

Reference in Bidders Proposal:

- f. Portable Network Graphics; and

Reference in Bidders Proposal:

- g. QuickTime Movie File Format;

Reference in Bidders Proposal:

- iii. Store the following metadata for each image:

- a. Frame rate;

Reference in Bidders Proposal:

- b. Shutter speed;

Reference in Bidders Proposal:

- c. Trigger mode;

Reference in Bidders Proposal:

d. Date and time;

Reference in Bidders Proposal:

e. Status;

Reference in Bidders Proposal:

f. Real time

Reference in Bidders Proposal:

g. Frame count; and

Reference in Bidders Proposal:

h. Resolution;

Reference in Bidders Proposal:

iv. Capable of displaying caption information within each frame;

Reference in Bidders Proposal:

(f) Lens Compatibility:

Reference in Bidders Proposal:

i. Compatible with F-mount and C-mount lenses utilizing removable adapters;

Reference in Bidders Proposal:

(g) **Memory:**

i. Have an internal memory of at least 16 Gigabytes, upgradeable to 32 Gigabytes; and

Reference in Bidders Proposal:

ii. Permits partitioning of the memory;

Reference in Bidders Proposal:

(h) **Software:**

i. Compatible with Windows 7 (64 bit).

Reference in Bidders Proposal:

Accessories:

The following accessories must be provided:

(a) One (1) remote keypad as follows:

i. Include an integrated LCD screen of nominal (+/- 3%) 13 cm (5 in) diagonal; and

Reference in Bidders Proposal: _____

ii. Permit operation of the camera functions as well as zoom, pan and tilt within the image;

Reference in Bidders Proposal: _____

(b) One (1) mechanical shutter that permits remote black balance.

Reference in Bidders Proposal: _____