

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

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
Electrical & Electronics Products Division
11 Laurier St./11, rue Laurier
6B1, Place du Portage, Phase III
Gatineau, Québec K1A 0S5

Title - Sujet IN CAR VIDEO SYSTEM	
Solicitation No. - N° de l'invitation M7594-130273/A	Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client M7594-130273	Date 2012-07-03
GETS Reference No. - N° de référence de SEAG PW-\$\$HN-461-60769	
File No. - N° de dossier hn461.M7594-130273	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-07-23	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
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: Picco, Patti	Buyer Id - Id de l'acheteur hn461
Telephone No. - N° de téléphone (819) 956-7390 ()	FAX No. - N° de FAX (819) 953-4944
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 No. - N° de l'invitation

M7594-130273/A

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

M7594-130273

Amd. No. - N° de la modif.

001

File No. - N° du dossier

hn461M7594-130273

Buyer ID - Id de l'acheteur

hn461

CCC No./N° CCC - FMS No/ N° VME

Amd 001 issued to reformat the table of technical requirements to fit on an 8.5 x 11 page.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED

**REQUEST FOR INFORMATION (RFI)
IN-CAR-DIGITAL VIDEO SYSTEM (ICDVS)
FOR PUBLIC WORKS AND GOVERNMENT SERVICES (PWGSC) CLIENTS
JUNE 2012**

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SECTION "A"

OBJECTIVES AND BACKGROUND

A1.0 PURPOSE

Canada is in the preliminary planning stage for a competitive Request For Standing Offer (RFSO) for the provision of In-Car-Digital Video Systems (ICDVS) for use by the Royal Canadian Mounted Police. The ICDVS is required for operations in low threat, and tactical areas such as patrolling, special operations and peacekeeping. The purpose of the ICDVS is to capture audio and video, of activities inside and in front of police vehicles to which they are attached. The ICDVS footage is to provide evidence of interaction of members with stopped vehicles and occupants as well as with prisoners while occupying the back seat of the police vehicle.

Goods will be provided to RCMP locations across Canada.

A2.0 OBJECTIVES OF THE RFI PROCESS

The purpose of this Request for Information (RFI) process is to provide information to industry regarding the Requirement and to request interested parties to participate in consultation on the breadth and depth of the requirement.

The intent of the consultation process will be to share working draft documents with representatives from industry for input and/or for information purposes. Canada will consult with industry stakeholders regarding the following:

- ability to meet the Evaluation criteria and the technical specifications;
- capacity to provide warranty services on a national basis during the timelines required; and,
- the method of evaluation and selection.

To that end, a list of questions has been provided at Section "C", for your response. Note that the data requested is for information purposes only, and will allow Canada to determine the requirement based on supplier capability now and in the future. Quality of goods and services, cost-effectiveness and efficiency are critical to the success of the requirement.

A3.0 REQUIREMENTS DEFINITION

The information provided by Canada in this RFI is preliminary and may change. This RFI is not a bid solicitation nor will it be used to pre-qualify or otherwise restrict participation in the future RFSO. A contract will not result from this RFI.

A4.0 DEFINITIONS

Call-up Against a Standing Offer	An order issued under the authority of a duly authorized user against a particular standing offer. Communication of a call-up against a standing offer to the offeror constitutes acceptance of the standing offer to the extent of the goods, services, or both, being ordered and causes a contract to come into effect. The parties to the contract that comes into effect when a call-up against a standing offer is made are Canada and the Offeror.
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National Individual Standing Offer (NISO)	A National Individual Standing Offer is for the use of one department or agency throughout Canada.
Offeror	In contracts, the party that makes the offer and looks for acceptance from the offeree.
Request for a Standing Offer (RFSO)	An RFSO is a bid solicitation document used by the contracting authority to solicit offers for standing offers. As with any other bid solicitation document, it must clearly state the requirement, the bid evaluation method and selection criteria, the call-up procedures, the ranking methodologies whenever applicable to be used for making call-ups against the authorized standing offer(s) and all terms and conditions applicable to the contract brought into effect as a result of any such call-up.
Request for Information (RFI)	Request for Information (RFI) is used when the buyer is interested in receiving feedback from suppliers and may re-open or re-issue an opportunity as an open tender at a later day. RFIs may include attached documents.
Respondents	Respondents are any individual or entity that elects to provide a response to the Request for Information.
Standing Offer	<i>A Standing Offer is not a contract.</i> It is an offer from a supplier to provide goods and/or services to clients at prearranged prices or pricing basis and under set terms and conditions for a specified period on an as-and-when requested basis. A separate contract is entered into each time a call-up is made against a Standing Offer. When a call-up is made, the terms and conditions are already in place and acceptance by Canada of the supplier's offer is unconditional. Canada's liability shall be limited to the actual value of the call-ups made within the period specified in the Standing Offer. There is no guarantee of work under the standing offer method of supply.

SECTION "B"
SUPPLIER SUBMISSION REQUIREMENTS

B1.0 SUBMISSION OF RESPONSES

B1.1 Number of Copies

Responses may be submitted in either electronic version (MS Word) or in hard copy (**3 copies**).

B1.2 Location

Responses are not considered bids but, for expediency purposes, the PWGSC Bid Receiving Unit is the designated location where written responses shall be sent. However, electronic submissions are also acceptable and may be sent by email to the PWGSC Contracting Authority listed herein at Article B2.0.

Bid Receiving Unit
Public Works and Government Services Canada
Place du Portage
Level 0A1, Phase III
11 Laurier Street,
Gatineau, Québec K1A 1C9
Telephone: (819) 956-3370 Fax: (819) 997-9776

The Respondent's name, return address, RFI number and closing date should be clearly visible on the response. Responses to this RFI will not be returned.

B2.0 AUTHORITIES

B2.1 RFI Authority

The Public Works Government Services Canada (PWGSC) Standing Offer Authority (or delegated representative) is responsible for the management of the procurement and RFI process.

Patti Picco
Supply Team Leader
Electrical and Electronic Products Division
Acquisitions Branch, PWGSC
Place du Portage, Phase III, 7B3
11 Laurier Street
Gatineau, Québec K1A 0S5
Telephone: (819) 956-7390 Fax: (819) 953-4944
E-mail address: patti.picco@tpsgc-pwgsc.gc.ca

B3.0 INDUSTRY RESPONSES

B3.1 Response Format

For ease of use and in order that the greatest value be gained from responses, Canada requests Respondents to follow the structure as detailed at Section "C" herein. There is no page limit on the information to be provided. Respondents are further requested to respond to the questions posted at Section "C", attached hereto.

B3.2 Language of Response

Responses may be in English or French, at the preference of the Respondent.

B3.3 Response Parameters

Respondents are reminded that this is an RFI and not an RFSO and, in that regard, Respondents should feel free to provide their comments and/or concerns with their responses.

Canada reserves the right to seek clarifications from a Respondent for any information provided in response to this RFI, either by telephone, in writing or in person.

B3.4 Response Confidentiality

Respondents are requested to clearly identify those portions of their response that are proprietary. The confidentiality of each Respondent's response will be maintained. Items that are 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 respondent do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all interested parties.

SECTION "C"

QUESTIONS

Canada is seeking industry's comments on the attached draft Evaluation Strategy and Technical Requirements Table. Specifically, industry should address the following questions, as appropriate, in their submission.

Evaluation Strategy and Basis of Selection

1. Is the proposed evaluation strategy and basis of selection effective? Are the concepts clear and well presented?
2. Is the basis of selection fair and reasonable?
3. Do you understand the methodology?
4. Will you be able to supply a sample for testing by the RCMP. Are you able to accommodate demonstrating the Technical requirements to the RCMP at your location ?
5. Will your firm be able to meet all of the mandatory requirements? Are the mandatory requirements too restrictive?
6. If yes, what areas are problematic?
7. Does the evaluation criteria appear to evaluate fairly the substantive elements of any potential proposal? Are there other criteria that you believe should be added?

Basis of Payment / Financial Presentation

1. Please provide an example of your pricing basis.
2. Could volume discounts form part of your proposal? At which quantities would this occur ?
3. Is it reasonable to include transportation costs (DDP Destination) ? If not, what do you propose ?
4. Is there another method for calculating the pricing?

Basis of Selection

1. Is the basis of selection fair and reasonable?
2. Do you understand the methodology?

Technical Requirements

1. Are the requirements as stated in the Technical Requirements Table clear?
2. Are there missing elements / components to the Technical Requirements ? Please identify.
3. Are the Technical Requirements and definitions clearly understood?
4. Please identify in a table format whether or not you are able to provide the technical requirements detailed in Annex A.
5. What training is required for the product being offered?
 - a. Are training packages available. If yes, what does it include?
 - b. For each form of training required please provide an estimate on the number of days required to train an individual.
 - c. Can the training be offered to a group setting? What is the maximum number of individuals you can train at 1 time.
 - d. Are you able to certify RCMP staff in the training required in order to enable them to train and certify other RCMP staff?
 - e. Are the training packages available in English and in French?

6. What is the typical warranty period for this product offering? What does the warranty include? Please be specific.
7. The following warranty clauses will be included in the RFSO. Please provide feedback.

RCMP Proposed Warranty Terms:

- a. Despite inspection and acceptance of the Work by or on behalf of Canada and without restricting any provisions of the Contract or any condition, warranty or provision imposed by law, All ICDVS components and ancillary devices must include an Express Pick Up and Delivery Warranty for a period of 3 years commencing after the equipment has been accepted by the RCMP
- b. Express Pickup and Delivery Warranty must include as a minimum, the provision of all parts and labour, transportation costs, travel, living and any other related charges incurred to fulfill the express pickup and delivery warranty requirements for all Default System(s), System Upgrades or warranty period, regardless of the RCMP location or the location from which the warranty services are provided
- c. All part supplied in performing any warranty services must be new. The Offeror guarantees that parts and technical materials required for warranty services of the proposed Default System(s), System Upgrades or System Components will be made available for the duration of the warranty period.
- d. To maintain the confidentiality of information which may be recorded on removable solid state storage media incorporated into a Default System or System Component requiring replacement, the removable solid state storage media, or the System/System Component if the media cannot be removed, must remain in the possession of the RCMP. For Express Pick Up and Delivery Warranty services, all removable solid state storage media, or the System Component containing the media that required replacement to correct the problem must be returned to the RCMP with the repaired system.
- e. No additional charges for time, materiel or other related costs such as for transportation to and from the Offeror's maintenance facility where pickup and delivery service is required, must be made during the warranty period
- f. Software items must be the latest version released, unless otherwise specified, and must be provided with the normal manufacturer's warranty. The Offeror must specify the duration and level of coverage of the Software Manufacturer's standard warranty.
- g. Express Pick Up and Delivery Warranty services must be provided during the Principal Period of Maintenance
- h. The express pickup and delivery warranty response time must not exceed twenty-four (24) hours from the time the Offeror has been notified by the RCMP, regardless of the location from which the warranty services are provided. Response time measurements do not include Saturdays, Sundays or Statutory holidays. The Offeror must calculate the response time from the time the Offeror has been notified by the RCMP to the time of arrival at the location where the warranty services are provided.
- i. Upon receipt of notification from the RCMP of the requirement for warranty services, the Offeror must arrange for pick up, which includes safe packaging, shipping and handling, at the client's site within Canada for delivery to an Offeror-authorized service/repair depot. Following the repair, the Offeror must arrange for delivery, which includes safe packaging, shipping and handling, to the client-designated location within Canada.
- j. The Offeror must repair and return the defective Default System(s), System Upgrades or System Components within two (2) working days after arrival at the authorized service/repair depot
- k. If after arrival at the authorized service/repair depot, it is determined that the Offeror cannot repair the defective Default System(s), System Upgrades or System Components within two (2) working days, the Offeror must provide a loaner/substitute unit, similarly equipped as the Default System(s), System Upgrades or System Components being repaired, at no charge, within twenty-four (24) hours of such determination by the Offeror's personnel (but no later than forty-eight (48) hours after initial pick-up of the equipment being serviced, excluding Saturdays, Sundays and statutory holidays). The

RCMP must keep the loaner unit(s) until the original defective unit(s) is repaired and returned in working condition to the RCMP.

8. Please provide a technical specification of your Base Model Product Offering and itemize those features that are optional.
9. Is the product specification detailed in Annex A, a commercially available off the shelf product or would your product offering need to be customized to meet the specification of Annex A.
10. If an RCMP office were to procure a base model product offering and wish to upgrade it at a later time (12 months later), what are the restrictions that should be considered?
11. Should a unit require repair, while under warranty, what is the typical timeline that the RCMP should reasonably expect to have the repaired equipment returned to them. Is a 48 hour turnaround time from when the unit is received by the Offeror an acceptable request? If not, please indicate what the service turnaround times are for your company.
12. Is maintenance and calibration part of your product offering? If yes, please provide the standard maintenance and calibration schedule. How is this service priced ?
13. What parts do you recommend the RCMP procure as spares?
14. Does your company offer online Technical Support such as frequently asked questions with posted responses, or troubleshooting suggestions etc. Please provide the details of the technical support.
15. What type of instruction manuals and internet based training is available (internet, web, printed material, CD, etc.)
16. Please identify any technical requirements listed in the table that you are unable to offer and identify other potential solutions to meet the requirements requested.
17. With regards to Technical Requirement 30b) in the attached table found at Annex A, please identify if industry has other means to protect confidentiality without encrypting.
18. Please identify if the COTS system currently available is capable of delivering the technical requirements listed in 30c), and if not, would industry be willing to develop this capability within a 30 day window ?

Transportation

1. Will your firm be able to meet the stated transportation requirements for delivery across Canada?
2. Do you have the necessary business relationships to ensure transportation requirements are met?
3. For products under warranty requiring repair, will your firm be able to provide collection and transportation from all locations (including rural) across the country?

Reporting

1. Will your firm be able to meet the reporting requirements ?
2. If not, what areas are problematic ?

In-Car Digital Video System (ICDVS) Functional and Technical Specifications

I - Introduction

1. The in-car digital video system (ICDVS) is used to gather evidence for criminal prosecutions and to meet Canada's security and defence commitments. The ICDVS is required for operations in low threat, and tactical areas such as patrolling, special operations and peacekeeping. The ICDVS will be required progressively in various RCMP vehicles and deployed across Canada. The RCMP's audio and video policy is mandatory to retain all data for a minimum of two years¹ subsequent to its original capture.
2. The purpose of the ICDVS is to capture audio and video of activities inside and in front of police vehicles to which they are attached. The ICDVS footage is to provide evidence of interaction of members with stopped vehicles and occupants as well as with prisoners while occupying the back seat of the police vehicle. ICDVS consists of a recording device linked to two cameras and two microphones. ICDVS audio/video footage is *exported* from the unit physically to a *removable solid state storage media* or wirelessly to an *Active Storage* or *Archival Storage* system. The *removable solid state storage media* is handled as the original from which copies in suitable *format(s)* are made as required. If an *Active Storage* or *Archival Storage* system is used, an original and copies in suitable *format(s)* are made as required.
3. The police vehicles are consistently shrinking in size while their drivers are becoming busier with equipment with increased complexity and comprising a multitude of components. To address this situation, the RCMP is working towards establishing a suitable integrated solution for all in-car digital equipment.

II - Functional and Technical Requirements

1. The ICDVS functional and technical requirements presented in this document aim at defining the minimum performance criteria for the equipment while taking into consideration the best evidence criteria set by the courts, the privacy concerns, as well as the health and safety of the vehicle occupants.
2. For the purpose of this specification, the definition of mandatory requirements shall be that all requirements prefaced by the words "shall", "must" and/or "is to" shall be mandatory and must be met in order for the bid to be considered technically compliant.
3. All proposed ICDVS must be in current production and generally available on the market (no beta test components will be considered).

¹ Section 4. (1) Privacy Regulations SOR/83-508: Personal information concerning an individual that has been used by a government institution for an administrative purpose shall be retained by the institution (a) for at least two years following the last time the personal information was used for an administrative purpose unless the individual consents to its disposal; and (b) where a request for access to the information has been received, until such time as the individual has had the opportunity to exercise all his rights under the (Privacy) Act.

"Administrative purpose" is defined as: in relation to the use of personal information about an individual, means the use of that information in a decision making process that directly affects that individual (Privacy Regulations SOR/83-508)

4. This specification addresses four configurations, basic, enhanced, wired/wireless and live wireless video streaming. The basic configuration includes cameras, recorder, microphones, monitor, controller, all necessary ancillary components, including *solid state removable storage media*, and video management software. The enhanced configuration includes cameras, recorder, microphones, all necessary ancillary components, including *removable solid state storage media* and video management software, without monitor and without controller but with an interface with the vehicle Mobile Data Terminal (MDT) (also called the Mobile Workstation System - MWS) to perform the ICDVS monitoring and controlling functions. The wired/wireless configuration is the same as the enhanced configuration but with wired/wireless export capability. The live wireless video streaming configuration is the same as the basic configuration but with live wireless video streaming capability.
5. The ICDVS must be upgradable from basic to enhanced configuration and to wired/wireless using the same cameras, recorder, microphones and ancillary equipment. The wired/wireless capability may be included in the basic configuration and/or in the enhanced configuration. The live wireless video streaming must operate using the same cameras, microphones and ancillary equipment.

III – Definitions

In this document, the terms in italic are defined as follow:

Active storage: means a location or device (e.g. server) to which *DME* is *copied* from the in-vehicle recorder using any method

Archival storage: means a location or device to which the *DME* is moved after a designated amount of time and where it resides for an extended period of time

Audio monitor: device for listening to live and recorded audio

Authentication: means (1) the (Court) process of affirming that the data fairly and accurately represents what it purports to show; (2,a) a security measure designed to protect a communications system against acceptance of a fraudulent transmission or simulation by establishing the validity of a transmission, message or originator; (2,b) a means of identifying individuals and verifying their eligibility to receive specific categories of information; (2,c) evidence by proper signature or seal that a document is genuine and official; (2,d) in evasion and recovery operations, the process whereby the identity of an evader is confirmed; (2,e) a means of proving the origin of the evidence and that it has not subsequently been altered (or, where alteration has occurred, that such alterations are properly identified); (2,f) the process of determining whether a recording or image is original, continuous, and free from unexplained alterations.

Capture: means the process of producing or recording the *DME* from a natural event

Codec: means a device/program capable of encoding and/or decoding digital data; codecs encode a stream or signal for transmission, storage or *encryption*, and decode it for viewing and listening

Conversion: means the change of data format used to represent *DME*

Converted *DME*: means the *DME* in a different data format than the original *format*

Copy: means an accurate reproduction of information

Digital recorder: means any device used to *record DME*

DME: means Digital Multi Media Evidence; data representing audio *essence*, video *essence*, metadata and any other information attached to a digital file; see converted *DME*, *original DME*

Duplicate: means an acceptably accurate and complete reproduction of all data objects independent of the physical media

Encryption: means the process of coding data so that a specific code or key is required to restore the original data

Essence: means sound and/or picture information, not including metadata

Export: means to copy or move information from within a device or system to a physical or logical location outside that device or system. ICDVS export is first performed to acquire the *DME* recording on *removable solid state storage media* or wirelessly on Active Storage server. A subsequent export is performed to make digital bit-for-bit or converted working copy(ies). Other export operations occur when *DME* is copied/moved between the Active Storage and the Archival Storage server.

Field of view (FOV): means the horizontal angular extent of a scene imaged by the video camera; FOV depends on the focal length of the camera lens and the size of the camera's imager chip

Format: means the specific structure for the data in a file

Hash function: means a mathematical formula that generates a unique number based on the data in a file; the hash function is used to verify the data's integrity

In-car digital video security system (ICDVS): means a system for recording DME to document events in and around a law enforcement vehicle

Industry standard file *formats*: means *formats* that are viewable and playable without the need for *proprietary* codecs, players or viewers available from the ICDVS manufacturer

Integrity: means (1) the *reliability* and accuracy of DME throughout its lifecycle; (2) the degree to which a system or component prevents degradation of, unauthorized access to or modification of the DME

Live wireless video streaming: means the wireless and real time communication of views captured by ICDVS cameras and sound captured by the ICDVS microphones

Manufacturer's Documentation Review: means that the technical requirements identified in the table found at Annex A will be verified through the means of an official document from the ICDVS manufacturer and, where the requirements refer to a standard, a test report from an accredited laboratory or licensed professional engineer as applicable

Metadata: means data embedded within or associated with a file that describes information about, or related to, the file or its directory; this may include, but is limited to, locations where the content is stored, dates, times, application-specific information and permissions. It is data about data

Native file format: means the original form of a file; this usually refers to a file format associated with, and unique to, a specific software application program

Non-removable *recording media*: means any data storage housed within a device that cannot be removed from said device without its disassembly

Operators: means, in relation to the ICDVS in-vehicle equipment, the vehicle drivers or occupants normally activating/deactivating the equipment

Original DME: means data recorded and retrieved to media in its *native file format* (i.e. first usable form)

Passive mode: means an operating condition of the remote wireless microphone and transmitter when paired with the rest of the base unit but not transmitting audio data

Pixel: means a picture element

Primary camera: means the ICDVS camera and lens assembly intended to be forward facing

Primary microphone: means the ICDVS wireless microphone, transmitter, battery and accessories (e.g. cords) intended to be worn by an officer

Proprietary: means a characteristic of a technique, technology or device owned and controlled by a company or other party and thereby only usable or adaptable as allowed by that party

RCMP Lab Testing: means that the system's performance/operation in the basic configuration, the enhanced configuration, the wireless configuration and the video streaming configuration identified in the table found at Annex A will be verified in a RCMP lab

environment as well as in an actual RCMP police car set up in Ottawa (Ontario). RCMP Lab Testing will be conducted only after an offeror is found to be compliant once the technical requirements requiring Manufacturer Documentation Review and Witnessing System Operation has been evaluated

Record: means the process of writing DME to *recording media*

Recording media: means any object to which DME is written and can be retrieved

Reliability: means the extent to which a process can repeatedly produce the same effective output, with a central tendency and an acceptable dispersion, for consistent input settings; information from such a system is said to be reliable

Removable solid state storage media: means any portable data storage device made from silicon microchips designed for removal from a system without disassembly of the system or the storage device; removable solid state storage such as memory cards (USB flash drives or thumb drives) stores data electronically instead of magnetically, as spinning hard drives or magnetic oxide tape do.

Resolution: means the measure of the output quality of an image; capability of distinguishing between two adjacent elements of an image such as lines (refer to as *spatial resolution*) or *pixels* (referred to as *pixel resolution*)

Secondary camera: means ICDVS camera and lens assembly intended to be rear facing (i.e. to *capture* activities of the interior of the vehicle) when installed

Secondary microphone: means ICDVS microphone intended to be installed within the passenger compartment of a law enforcement vehicle

System audit log: means a list of events used to track system events, such as boot up, diagnostic failures or status changes (the *DME Audit Log* and System Audit Log are separate lists)

Verification: means the process of confirming the accuracy of any copy of the DME compared to the *original DME*; this process normally includes the application of a type of *hash function*

Video monitor: means device for viewing live and recorded video

Witnessing System Operation: means that the technical requirements identified in the table found at Annex A will be witnessed by an RCMP representative to verify their performance at a location identified by the Offeror

IV – Acronyms

In this document, the acronyms in *italic* are defined as follow:

CIF: "Common Intermediate Format."

DME: Digital Multimedia Evidence

FCC: Federal Communications Commission

FMVSS: Federal Motor Vehicle Safety Standards

FOV: Field of View

HF: High Frequency

IACP: International Association of Chiefs of Police

IEC: International Electrotechnical Commission

ICDVS: In Car Digital Video System

MDT/MWS: Mobile Data Terminal

MWS: Mobile workstation system

NIJ: National Institute of Justice

UHF: Ultra High Frequency

UL: Underwriter Laboratories Inc

VHF: Very High frequency

In-Car-Digital Video System (ICDVS)		Compliance Verification Method			Offeror can provide Y/N
Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
1. The ICDVS must be capable of being assembled into 4 different configurations (basic, enhanced, wired/wireless and video streaming) and of being upgradable from one configuration to the other without changing the cameras, microphones, recorder and ancillary equipment.	a. The ICDVS basic configuration must consist of one primary camera, one secondary camera, one primary microphone (wireless), one secondary microphone (wired), one controller, one digital recorder, one video monitor, one audio monitor with all the necessary ancillary components including the video management software, and.	X			
	1) The video monitor, the audio monitor and the controller may be combined into a single component	X			
	2) The secondary camera and the secondary microphone can be combined in a single device	X			
	3) The ICDVS basic configuration must provide audio/video recordings on removable solid state storage media	X			
	4) The ICDVS basic configuration must be capable of operating a third camera facing the rear of the vehicle	X			
	5) The ICDVS must accommodate a second wireless microphone and its docking station	X			
	6) The ICDVS video monitor must be a color monitor having a display area that must be a minimum of 3 inches ± 2% measured diagonally and not larger than 4 inches ± 2% measured diagonally	X			
	7) The ICDVS must be capable of recording a minimum of three video streams and a minimum of two audio streams. The primary and rear-facing camera video streams are to be associated with the audio streams from the primary microphones and the related metadata. The secondary camera video stream is to be associated with the audio stream from the secondary microphone and the related metadata.	X			
	8) The ICDVS must be capable of having the secondary camera recording being activated by external mechanical switch(es)	X			
	9) Any upgrade/update of the ICDVS software must be backward compatible	X		X	
	10) The ICDVS must be capable of live wireless streaming of captured camera views and sound	X		X	
	b. The ICDVS enhanced configuration must consist of all the components and capabilities of the ICDVS basic configuration but without controller and without monitor, and.	X			
	1) The ICDVS enhanced configuration must include a Graphical User Interface (GUI) to operate with the vehicle MDT/MWS to provide the full ICDVS control and viewing capability	X			
2) The ICDVS Graphical User Interface (GUI) must be capable of operating on a wide range of computers including Panasonic Toughbook and General Dynamics Gobook equipped with Windows XP SP3 with Pentium 4m processor and 1024 MB RAM; Windows XP SP3 with Intel Core i5-2520M CPU @ 2.50GHZ with 4 GB RAM; and Windows 7 capable Pentium processor.	X				
3) The ICDVS Graphical User Interface (GUI) must also be capable of operating on Rockwell Collins iForce product. To this end, the Offeror shall work with Rockwell Collins to ensure that the Offeror's ICDVS properly interfaces with Rockwell Collins iForce equipment used by the RCMP	X		X		
c. The ICDVS wired/wireless configuration must consist of all the components and capabilities of the ICDVS enhanced configuration and must have the capability to wire/wirelessly export DME from the vehicle to the Active or Archival Storage server.	X				

In-Car-Digital Video System (ICDVS)		Compliance Verification Method			Offeror can provide Y/N
Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
				X	
	1) The capability to wire/wirelessly export audio/video from the vehicle may be included in the basic configuration and/or in the enhanced configuration	X			
	2) The ICDVS must be interoperable with the following operating system standards: Windows 2008 R2 SP1 64 bit, Red Hat Linux 6.x and Novell SUSE Linux 11	X			
	d. The ICDVS must be upgradable from basic configuration to enhanced configuration and from enhanced configuration to wired/wireless configuration using the same cameras, recorder, microphones and ancillary equipment.	X			
	e. The live wireless streaming configuration must consist of all components and capability of the basic configuration outlined in 1 a	X	X		
2. The ICDVS must be able to record without the image being displayed or the sound being heard	a. The ICDVS monitor must be capable of displaying a live picture from the system cameras when the system is on (even if recording is not in progress).	X	X		
	b. The ICDVS audio/video monitor must include a system speaker to provide monitoring of live audio from the wireless microphone as well as of recorded sounds during the playback mode. The ICDVS must contain a readily accessible control to adjust the volume and enable and disable monitoring of live audio.	X	X		
3. ICDVS must be capable of creating an audit trail of the system usage and of DME recordings	a. The ICDVS must be capable of allowing operators to input information required for the DME Audit Log and System Audit Log not otherwise automatically captured by the system.	X	X		
	b. The ICDVS must be capable of exporting the System Audit Log and the DME Audit Log in a readable format.	X	X		
	c. When DME is exported, the ICDVS DME Audit Log must contain: - identification of person performing the export - identification of person or system receiving the export - time and date of the export - verification check performed and logged to validate the DME immediately prior to the DME is exported - hash or other verification computed for the exported DME using an industry-standard method defined and provided with the exported DME - the calculated hash of the exported data to be recorded as part of the audit log, as well as the hash of the original file when the target file format is different - identification of the source of the DME, including the vehicle identification, CPU, hardware ID, etc. - frame rate.	X	X		
	d. When exporting the DME involves compression for decreasing the transmission bandwidth requirement, industry-standard lossless compression must be used.	X			

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Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
	<p>e. The ICDVS System Audit Log must record system-level details and events at least each time status changes. System-level details must include:</p> <ul style="list-style-type: none"> - date and time of event - vehicle identification - officer identification - product label information - recording device information including manufacturer and model number - hardware identification including manufacturer and model number - software version <p>System status change (e.g. boot up, power on)</p> <ul style="list-style-type: none"> - component status change indicators (e.g. recording full, camera failure, component ready). 	X	X		
4. ICDVS in-vehicle removable solid state storage media must be protected against unauthorized removal from the recorder	<p>a. The ICDVS in-vehicle removable solid state storage media must be secured using a mechanism that prevents unauthorized removal of the media from the recorder.</p>	X	X		
5. ICDVS in-vehicle removable solid state storage media must be non-proprietary with write-protect features	<p>a. The ICDVS in-vehicle removable solid state storage media must be a commercially-available product of a non-proprietary format.</p> <p>b. The ICDVS in-vehicle removable solid state storage media must include a write-protect mechanism</p>	X	X		
6. ICDVS recorder must be protected against unauthorized removal.	<p>a. The ICDVS recording device must be capable of being physically mounted in the vehicle, following the ICDVS manufacturer's recommendations, to prevent removal without tools and deter theft of the device.</p> <p>b. The ICDVS recording device must be mountable in the vehicle cockpit (in a ceiling console or in a console between front seats) and in the trunk.</p> <p>c. The ICDVS recording device must not exceed the following dimensions: width: 20.3 cm (8 inches), height: 8.25 cm (3.25 inch); depth: 12.7 cm (5 inches)</p>	X	X		
		X	X		

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Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
7. In-vehicle ICDVS audio/video data must be protected against unauthorized disclosure pending export/removal	a. The in-vehicle ICDVS audio/video data must be protected against unauthorized disclosure pending export/removal by encryption, special coding or other means	X			
8. Once installed, ICDVS must not be a hazard during a reasonably foreseeable crash.	a. ICDVS items installed or located in the interior of the vehicle per the manufacturer's installation instructions and supplied hardware must remain in place during a reasonably foreseeable crash. b. Any ICDVS items installed in the interior of the vehicle must meet the requirements stated in Federal Motor Vehicle Safety Standard 201 (October 1, 2002) Occupant Protection in Interior Impact.	X			
9. In-vehicle ICDVS components must not be a potential for injury to vehicle occupants	a. ICDVS exposed surfaces, comers, fasteners and controls that could be contacted by an occupant during a collision must be of a design that minimizes the potential for injury. b. No ICDVS or components must be installed in any original vehicle manufacturer's designated airbag deployment zone. c. ICDVS manufacturers must provide the necessary brackets, mounting hardware and installation instructions that if followed properly, will ensure the vendor's equipment is installed in accordance with all appropriate Federal Motor Vehicle Safety Standard (FMVSS). d. If the ICDVS is to be mounted overhead, the mounting bracket for the control panel must not require any holes or cuts to the interior headliner e. If the ICDVS is to be mounted overhead, the ICDVS manufacturer must specify equipment-mounting locations in the installer's guide or owner's manual, or to provide a list of vehicles for which the vendor's systems will meet this specification.	X X X X			
10. All in-vehicle ICDVS controls and components must minimize driver distraction and fatigue.	a. All ICDVS controls and components must be located and designed to minimize driver distraction. b. The ICDVS primary (front-facing) camera must be mounted in front of the rear view mirror without obstruction of driver's vision. c. ICDVS control graphical user interface (GUI) must be designed and organized to minimize officer workload. d. The ICDVS control graphical user interface (GUI) must control cameras, microphones and recorder fully and individually. e. ICDVS record button on the control graphical user interface (GUI) must be readily identifiable by size, color, location and/or other design features. f. ICDVS record button on the controller must activate even if officers are wearing gloves. g. ICDVS equipment must be located to minimize interference with the view of the driver. h. ICDVS equipment must be located to minimize interference with the view of the front-seat passenger.	X X X X X X X X	X X X X X		

In-Car-Digital Video System (ICDVS)		Compliance Verification Method			Offeror can provide Y/N
Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
	<p>i. ICDVS components must be illuminated for ready identification during period of darkness. Backlit controls are preferred. The illumination level must be controllable from bright to dark. The operator must have the ability to blackout the system on demand.</p> <p>a. The in car video system must be compatible with all electronic systems of the RCMP vehicles (i.e. siren controller, two way radio etc).</p> <p>b. The ICDVS system must maintain consistent audio/visual recording quality while subject to interference from the following sources:</p> <ol style="list-style-type: none"> 1. High-powered radio frequency transmissions 2. Other radio frequency interference (including UHF, VHF, and HF transmitters) 3. Automobile alternator, ignition and electrical systems 4. Fan motors from automobile heaters and air conditioners 5. Other patrol vehicle electrical systems to include radios, emergency lights, sirens, mobile data computers, and speed measuring devices 6. High-voltage power line, traffic signals, neon signs, etc. <p>c. When in operation, the ICDVS must not generate electromagnetic interference or radiation that interferes with communications or other electronic equipment found within RCMP police vehicle.</p> <p>d. The police radio communications system is critical to RCMP operations, public and police officer safety. As such, it is imperative that any electronic devices installed or utilized in a police vehicle be designed such that any effects of radio frequency disturbances are eliminated or controlled so as not to interfere with police two-way radios or other sensitive electronic devices.</p> <p>Protection must be provided within the following Industry Canada radio frequency bands used for two-way radio communications:</p> <ul style="list-style-type: none"> IC SRSP 500: 138 to 144 MHz and 148 to 174 MHz bands IC SRSP 501: 406 to 430 MHz and 450 to 470 MHz bands IC SRSP 502: 806 to 824 MHz and 851 to 869 MHz bands IC SRSP 511: 768 to 776 MHz and 798 to 806 MHz bands <p>e. RCMP police vehicles utilize high powered mobile two-way radio transmitters as well as other transmitting communications devices. This high level of electromagnetic radio frequency energy has been known to affect the operation of electronics not designed with sufficient protection against external transmitting sources.</p> <p>a. The ICDV must be capable of recording the target vehicle and the patrol car speeds captured by the following speed measuring devices used by the RCMP:</p> <ol style="list-style-type: none"> 1. Stalker II SDR 2. Stalker SDR 3. Kustom Signals Eagle. 	X	X		
11. The in-vehicle ICDVS equipment, and any upgrade, must not adversely affect, or be adversely affected by, any other in vehicle RCMP electric and/or electronic system or component		X	X		X
12. The in-vehicle ICDVS must be compatible with the existing RCMP traffic radar units		X	X		X

In-Car-Digital Video System (ICDVS)		Compliance Verification Method			Offeror can provide Y/N
Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
13. The in-vehicle ICDVS equipment and components must operate under all the expected environmental conditions throughout Canada	<p>a. The ICDVS must operate within the range of temperatures between -30 and +50 degrees Celsius without the use of environmental control housing.</p> <p>b. The ICDVS must comply with environment requirements as specified in SAE J1455, Recommended Environmental Practices for Electronic Equipment Designed in Heavy Duty Vehicle Applications, June 2006.</p> <p>c. All components of the ICDVS must meet or exceed MIL-STD 810-G specifications. Test procedures from an accredited test laboratory or an accredited engineer demonstrating compliance to the 810-G described herein must be submitted with the technical proposal for the following environmental conditions:</p> <ol style="list-style-type: none"> 1. Low pressure 2. Temperature (high and low) 3. Temperature shock 4. Solar radiation 5. Rain * 6. Humidity 7. Salt fog 8. Dust * 9. Vibration 10. Shock and drop <p>*In addition, exposure to rain and dust must meet or exceed the International Protection Rating IP 54</p>	X			
14. The in-vehicle ICDVS components must be designed and installed in a manner that minimizes the potential for shock, fire hazards and damage from electrical power	<p>a. The ICDVS must operate on a filtered power source, regulated, and short-circuit protected. The voltage supplied to the system must meet the manufacturer's specifications and not to vary with fluctuations of the system's electrical system voltage between 8.5 and 18 volts. The ICDVS must draw no more than 2 amps.</p> <p>b. ICDVS equipment must be properly fused to minimize shock and fire hazard.</p> <p>c. The ICDVS must comply with safety requirements as specified in IEC 600065-7:2001, Audio, Video and Similar Electronic Apparatus - safety Requirements.</p> <p>d. The ICDVS must comply with safety requirements as specified in IEC 60950-1, Information Technology Equipment - Safety - Part 1: General requirements, second edition, including revisions through March 27, 2007.</p> <p>e. All ICDVS wiring must meet applicable industry standards.</p> <p>f. All ICDVS must be properly grounded using the same industry standards as above and, if necessary due to the presence of hazardous voltage or amperage levels, must be equipped with ground fault interrupters to prevent shock and electrocution hazards</p> <p>g. ICDVS manufacturers must provide information in their installer's guides or owners' manuals that specifies the proper wiring, fuses, connectors, and connection points with the vehicle electrical system and grounding points.</p> <p>h. The ICDVS must be protected from damage due to input of voltage, reverse polarity and electrical transients that may be encountered.</p>	X			

In-Car-Digital Video System (ICDVS)		Compliance Verification Method			Offeror can provide Y/N
Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
	<p>i. Loss of operating power or disconnection from the vehicle battery up to 60 hours must not result in the ICDVS requiring programming. Sudden ICDVS loss of power must not cause loss of any DME not yet exported from the ICDVS.</p> <p>a. ICDVS primary and rear-facing cameras (including the lens) must not exceed 500 grams in weight and must not exceed the following dimensions: 2 inches in width, 2 inches in height and 4 inches in depth.</p> <p>b. ICDVS recordings from the primary and rear-facing cameras must be capable of ensuring the legibility of license plates at a minimum of 16 feet from the cameras.</p> <p>c. ICDVS primary and rear-facing cameras must be capable of providing a usable image with a minimum illumination of 1 lux</p> <p>d. The ICDVS primary and rear-facing cameras and lens must be equipped with autofocus, re-focus, automatic exposure, and automatic white balance.</p> <p>e. The ICDVS primary and rear-facing cameras must provide both automatic and manual focus capabilities which are operator selectable.</p> <p>f. The ICDVS primary and rear-facing cameras must default to autofocus at system start-up.</p> <p>g. ICDVS primary and rear-facing cameras must have a backlight setting that reduces glare and bleed over from outside lighting.</p> <p>h. ICDVS primary and rear-facing cameras lens must have a minimum of 10X optical zoom lens and 4X digital zoom.</p> <p>a. The ICDVS primary and rear-facing cameras must provide a minimum <i>field of view</i> of at least 40° with all optional zoom settings at the full wide angle view.</p>	X			
15. The ICDVS primary and rear-facing cameras must be small in size and capture colour images under most street/highway lighting conditions		X			
16. The ICDVS primary and rear-facing cameras must capture interaction between the officer and the driver and occupants inside or near a stopped vehicle located in front of the car/camera		X			
17. The ICDVS primary and rear-facing camera direction must be manually adjustable	a. The ICDVS primary and rear-facing cameras must be capable of being rotated 360° on their mounts in a horizontal plane or 180° in either direction from its forward-facing position without having to loosen any screws or knobs. The camera position is not to shift position without intentional intervention from the operator.	X	X		
18. The ICDVS	a. The ICDVS secondary camera must be able to provide a focused image with a field of view of 50 inches at an object distance of 30 inches with infrared capabilities.	X	X		

In-Car-Digital Video System (ICDVS)		Technical requirements	Compliance Verification Method			Offeror can provide Y/N
			Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
Functional Requirements	secondary camera must cover sufficient field of view to capture activities in the back-seat area	b. The ICDVS secondary camera must have a signal-to-noise ratio of at least 46db.	X			
	19. The ICDVS components must be designed in a manner to minimize injury to the operator	<p>a. Each ICDVS primary and secondary battery must comply with UL 1642, Lithium Batteries and/or UL 2054, Household and Commercial Batteries</p> <p>b. Any ICDVS component carried on the officer's person must meet Underwriters Laboratories Standards for shock/electrocution and burn prevention.</p> <p>c. Any ICDVS component worn or carried by the officer must be smooth construction properly rounded or chamfered to minimize the possibility of injury. The ICDVS components must be free of sharp points or edges that could cause injury during a fight, slip, fall, or other type of incident. In addition, all ICDVS clips and retention devices must be designed to minimize the possibility of pinch points that could cause injury.</p> <p>d. ICDVS parts that can come into contact with human skin must not be allowed to reach a temperature capable of causing a burn injury. Items carried on the officer's person or uniform must not pose an undue risk of injury.</p> <p>e. The wireless microphones must be equipped with a clip to allow the microphone to be placed anywhere on the officer's uniform.</p> <p>f. The ICDVS must incorporate as the <i>primary microphones</i> remote wireless microphone and transmitter in a device to be worn by the officer.</p> <p>g. Each wireless microphone transmitter must be equipped with an in-vehicle docking station which synchronized the operating transmitter frequency to the mobile video system and recharge the wireless microphone batteries. Once programmed the receiver must only accept audio from that transmitter without any manual configuration by the operator.</p> <p>h. The ICDVS <i>primary microphones</i> must contain a memory-free rechargeable battery that may be replaced by the operator with commonly accessible tools. The rechargeable battery must have a minimum battery-life of 15 hours (<i>passive mode</i>) and a talk time of 3.5 hours (<i>active mode</i>).</p> <p>i. The ICDVS wireless microphone and transmitter assembly must transmit within frequency bands approved by Industry Canada (Spectrum Management)</p> <p>j. The ICDVS wireless microphone and transmitter assembly must transmit intelligible audio to the vehicle-mounted recorder and monitor at a range of 300 meters (1,000 feet), line of sight under unobstructed conditions and with no interference.</p> <p>k. The ICDVS wireless microphone and transmitter assembly must be able to activate audio and video recording from the remote transmitter.</p> <p>l. The ICDVS <i>primary microphone</i> transmitter must contain an internal antenna.</p>	X			
20. The ICDVS wireless microphones must ensure remote recording operation while the members are interacting with conductors/occupants of stopped vehicles during a normal shift			X	X		

In-Car-Digital Video System (ICDVS)		Compliance Verification Method			Offeror can provide Y/N
Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
	<p>i. The omnidirectional ICDVS wireless microphones must be capable of capturing sounds greater than or equal to 50 dB sound pressure level at a distance of one meter within the frequency range of 200 to 4,000 Hz to the minus six dB points while at the same time the audio recording must not be overdriven by the operator's speech. The audio recording must be in an uncompressed <i>format</i> (minimum 8 bit μ-law, 8 KHz sampling).</p> <p>j. The wireless microphones must be able to automatically turn on when the recording device is activated and off when the recording device is deactivated.</p> <p>k. When recording, the audio from the primary microphone(s) must be synchronized with the video from the primary camera and from the rear facing camera if installed</p> <p>l. The audio transmitted from the wireless microphones must be through secure transmission meeting the criteria of section 30 b</p>	X			
		X	X		
		X	X		X
		X	X		
21. The ICDVS must include a wired microphone to ensure in-vehicle recording operation while the back seat is occupied	<p>a. The ICDVS must incorporate, as the <i>secondary microphone</i>, a wired microphone intended to be mounted in the vehicle.</p> <p>b. The audio from the secondary microphone must be synchronized with the video from the secondary camera</p> <p>c. The ICDVS secondary microphone must be capable of capturing sounds greater than or equal to 50 dB sound pressure level at a distance of one meter within the frequency range of 200 to 4,000 Hz to the minus six dB points while at the same time the audio recording must not be overdriven by the monitored persons' speech. The audio recording must be in an uncompressed <i>format</i> (minimum 8 bit μ-law, 8 KHz sampling).</p>	X	X		X
22. The in-vehicle ICDVS must provide adequate controls and indicators	<p>e. The ICDVS must provide the following controls:</p> <ol style="list-style-type: none"> 1. Power on/off 2. Play 3. Record start 4. Fast forward 5. Rewind 6. Stop 7. Pause 8. Zoom in/out 9. Autofocus 10. Backlight compensation 11. Manual focus 12. Camera selection 13. Wireless microphone reception 14. Wireless microphone <i>record</i> activation status. 	X	X		

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	<p>f. The ICDVS must provide the following indicators:</p> <ol style="list-style-type: none"> 1. System Power on 2. Microphone on 3. Media inserted and operational with remaining capacity/time available 4. Recording 5. Fast forward 6. Rewind 7. Stop 8. Time counter 9. Diagnostic display showing results (see item d below). 	X	X		
	<p>g. ICDVS must have an illuminated <i>record</i> indicator for the purpose of indicating to the operator that the system is actively recording while the operator is outside the vehicle; the illuminated record indicator must be visible at a minimum distance of 35 feet. This indicator light must be capable of being disabled by the operator.</p>	X	X		
	<p>d. The ICDVS must perform a diagnostic to detect malfunction or loss of functionality of the recorder, camera displays and microphones. The diagnostic must be performed on system start up and at least every 60 seconds thereafter. Any malfunction or loss of functionality must be documented in the <i>system audit log</i> and indicated to the operator immediately</p>	X	X		
	<p>e. The ICDVS must be able to monitor itself while in operation. When an ICDVS component fail while in operation, the ICDVS must immediately notify the operator of the failure.</p>	X	X		
	<p>f. The ICDVS must immediately notify the operator of camera failures and microphone failures.</p>	X	X		
	<p>g. The ICDVS must provide the following minimum media diagnostics:</p> <ol style="list-style-type: none"> 1. Indicate the amount of storage space remaining on the media; and 2. Send a notification to the operator (audible/visual) that storage is reaching its maximum capacity. 	X	X		
23. The in-vehicle ICDVS monitor must display system-relevant information	<p>a. The ICDVS Monitor must have the capability to selectively display during playback: date/time of DME creation, operator identification information, emergency light indication, siren indication, brake indicator, crash indication and system status indicators (video recording on/off, microphone(s) on/off), target and patrol speeds from RCMP radar systems, <i>System Audit log</i> display and <i>DME Audit log</i>. These items must be <i>captured</i> for each video frame in the <i>metadata</i> and not superimposed onto, added to, or be embedded in the video stored on the recording and must not overwrite image information.</p>	X	X		
24. The in-vehicle ICDVS must be capable of pre-event and post event recording	<p>a. The recorder must be capable of storing up to 3 minutes of pre-event video prior to being activated.</p> <p>b. The extent of duration of the pre-event video prior to being activated must be programmable by the system administrator</p> <p>c. The ICDVS must have the capability of disabling the pre-event and post event audio <i>capture</i> capability while continuing to <i>capture</i> the remaining <i>DME</i> items.</p>	X	X		

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Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
25. The in-vehicle ICDVS must have automatic recording triggers	a. The ICDVS recording functions must be activated by any of the following methods: 1. Operator pushes the "record" button 2. Activation of the emergency lights and/or sirens 3. Operator activates the "record" button on the wireless microphone transmitter. 4. Activation of brake lights.	X	X		
26. The in-vehicle ICDVS must include adequate controls to ensure integrity of DME from capture to storage	b. System must provide automatic crash activation function that is not tied into any of the vehicle systems (i.e. air bags).	X			
	a. The ICDVS must have the capability to restrict access to the critical programming functions (such as time/date features) to the system administrator.	X	X		
	b. The ICDVS must have the capability of preventing the operator from erasing, altering, and/or recording over previously recorded information from in-vehicle ICDVS components.	X	X		
	c. The ICDVS user interfaces must prevent the input of invalid data that exceeds the systems expected ranges.	X	X		
	d. The ICDVS must provide a mechanism to capture the time and date of DME creation.	X	X		
	e. Date/time generator must be self-adjusting for daylight saving time and leap years variance.	X	X		
	f. The recorder must provide a time stamp on each frame and the sequential frame numbers.	X	X		
	g. Time stamping of the ICDVS DME elements (video, audio, metadata) must be consistent within all system components.	X	X		
	h. The ICDVS must automatically set the correct time and date following interruption of power.	X	X		
	i. The ICDVS must incorporate an automatic trigger to stop recording when previously recorded DME will be overwritten and immediately notify the operator.	X	X		
	j. All elements of the ICDVS DME must remain accurate with respect of the recording as it was captured.	X	X		
	k. An integrity check must validate that the DME in the active storage is an exact duplicate of any data on the removable solid state storage media prior to clearing the data on the removable solid state storage media.	X	X		
	l. The ICDVS DME Audit Log must contain the following items when the DME on the removable solid state storage media is exported to Active Storage: 1. Name or ID (badge number or employee number) of officer or person submitting digital asset for export 2. The verification check validating that the DME exported to the Active Storage is an exact duplicate prior to any clearing of data on the removable solid state storage media 3. Active Storage retention period for the DME.	X	X		
m. The ICDVS recording device must indicate when removable solid state storage media is not inserted into the recorder.	X	X			
n. The ICDVS Recorder, the Active Storage, and Archival Storage Systems clocks must be capable of being synchronized to an external time reference.	X	X			
o. Recorders must have backup power to maintain time/date in power loss for a minimum period of 30 days.	X	X			
p. Recorders must have programmable daylight/standard time and leap years adjustments.	X	X			
q. The ICDVS DME Audit Log and DME metadata must indicate when time synchronization to the external time reference was not available.	X	X			

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	<p>r. The ICDVS recorder clock and <i>active storage</i> system clock must either maintain synchronization to, or be synchronized periodically with, a known external reference (e.g. Canada Standard of Time). If synchronization is continually maintained to an external reference, it must be maintained to that reference within 33 milliseconds. If time clock synchronization is initiated periodically (such as via interface with an <i>archival storage</i> device), the system recorder clock and <i>active storage</i> system clock must not demonstrate a drift from the external time reference in excess of one second over a 24 hour time period.</p>	X			
27. The ICDVS in-vehicle audio/video recording device must have sufficient storage capacity to meet operational requirements	<p>a. The ICDVS must be capable of minimum recording 12 uninterrupted hours. The recorder must have a maximum <i>compression</i> rate of 1.1 Mbps (5 Kb/frame). The recorder must have a minimum frame rate of 30 ± 2% frames per second per camera.</p>	X			
28. The ICDVS recording device/software must allow case management	<p>a. The ICDVS program must allow the recording device to store all data relevant to each incident together:</p> <ol style="list-style-type: none"> 1) An incident must be defined as the period between the start and the stop recording 2) Data must be filed in a Windows-readable directory structure 3) Incidents must be stored in separate files or directories 4) Long recordings must be playable as one continuous footage 5) File names must comprise the serial number of the unit and the date and time of the recording 6) Metadata must comprise unit serial number, date and time, and must be displayed on the screen in a legible but unobtrusive manner or in a operator defined position 7) Data must be stored on a <i>removable solid state storage media</i> and to be <i>wirelessly</i> exportable to active storage . 	X	X		
	<p>b. The ICDVS program must allow case management on Active Storage and on Archival storage on small, medium and large computers</p>	X			
	<p>c. The case management program must allow for:</p> <ol style="list-style-type: none"> 1. Indexing/searching by officer ID (or car ID), time and date, case file/occurrence number 2. assigning/modifying and monitoring purge due date 3. automatically purging records reaching due date 	X	X		
29. The ICDVS recording file	<p>a. The ICDVS must provide the <i>original DME</i> files. The file must include all <i>metadata</i> in an accessible <i>format</i>.</p>	X	X		

In-Car-Digital Video System (ICDVS)		Compliance Verification Method			Offeror can provide Y/N
Functional Requirements	Technical requirements	Manufacturer Documentation Review	Witnessing System Operation	RCMP Lab Testing	
formats must be suitable for evidence and post processing by the RCMP	<p>b. The ICDVS case management software must provide two interoperable formats of the DME (images, sounds, metadata and DME Audit Log): original (non-converted) DME and converted DME. The converted DME must be in a Windows Media Player compatible format that is viewable and playable without the need for <i>proprietary codecs</i>, players, or viewers available from only the system manufacturer.</p> <p>c. The ICDVS case management software must provide audio only in a Windows Media Player compatible format to allow transcription.</p> <p>d. The ICDVS conversion mechanism must provide an accurate representation of the images, sounds and metadata recorded.</p> <p>e. The ICDVS <i>non-converted DME</i> file must be the exact copy of the <i>original DME</i>.</p> <p>f. All electronic export of the <i>original ICDVS DME</i> must have an automated verification mechanism. Using a 256-bit or greater Federal Information Processing Standards (FIPS) 140-2-compliant hash algorithm, the resulting hash must be attached to the <i>original DME</i>. The automated mechanism must not introduce any visible or audible artefacts into the DME.</p> <p>g. A verification report must be included with the <i>original ICDVS DME export</i> stating the calculated value of the DME hash.</p>	X	X		
30. The ICDVS must include adequate controls to ensure authentication and integrity of DME during wire/wireless data export	<p>a. During a wire/wireless data export, an <i>integrity</i> check must validate that the DME on the ICDVS Active Storage is an exact duplicate to any data on the recorder prior to the information being deleted from the recorder.</p> <p>b. A wire/wireless network used to export the DME from the ICDVS recorder to Active Storage must create a secure connection for the DME to be exported using the following security standards:</p> <ol style="list-style-type: none"> 1. Customized network name 2. Disabled SSID/ESSID (Network name) broadcast; 3. WPA2 AES 256 encryption 4. Authentication PSK (Pre Shared Key) 5. IEEE - 802.1G <p>c. The ICDVS DME Audit Log must contain the following items when wire/wireless DME export from the recorder to Active Storage is used:</p> <ol style="list-style-type: none"> 1. An indication that a successful wireless connection with the recorder was completed 2. Time/date of export 3. Active Storage retention period for the DME 4. The verification check validating that the DME exported to the server is an exact duplicate prior to any clearing of data on the recorder storage medium. 	X	X		
31. The updating/upgrading of ICDVS to be user-friendly	<p>a. The updating/upgrading of ICDVS must not require a connection to Internet</p> <p>b. The updating/upgrading of ICDVS must be intuitive and achievable by system operators having minimal computer knowledge</p>	X	X		

In-Car-Digital Video System (ICDVS)		Compliance Verification Method			Offeror can provide Y/N
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32. User guide and installation manuals must be supplied	<ul style="list-style-type: none"> a. User guide and installation manuals must be supplied with each ICDVS b. All manuals supplied must be professionally written and produced c. All manual supplied must be of commercial print quality d. All manuals are in digital format, either online or on removable media e. All manuals shall be provided in English 	X			
33. Operator training package must be provided	<ul style="list-style-type: none"> a. A minimum of 4 hour on-site train-the trainer operation/maintenance training package, suitable for a maximum of eight (8) person group, must be provided. b. The operation/maintenance training package must contain at least, but not limited to, basic operating procedures, basic hardware/software trouble shooting procedures, including the use of any diagnostic tool, and major ICDVS component replacement c. Individual training packages must be provided in each of the four (4) RCMP locations of Ottawa, Edmonton, Halifax and Chilliwack, at RCMP agreeable times and dates 	X			
34. Individual ICDVS components must be available for purchase	<ul style="list-style-type: none"> a. ICDVS components that are used or operated as separate units must be individually available for purchase. Such components include: <ul style="list-style-type: none"> 1. primary/rear-facing cameras 2. secondary cameras 3. primary microphones and docking stations 4. secondary microphones (if not built in the secondary cameras) 5. controllers 6. monitors 7. recorders 8. removable solid state storage media 	X			

