Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

Part - Partie 1 of - de 2
See Part 2 for Clauses and Conditions
Voir Partie 2 pour Clauses et Conditions

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
HELICOPTER PROJECT (DFO)

Solicitation No. - N° de l'invitation	**Date**
F7013-120014/F	2014-02-21

Client Reference No. - N° de référence du client
F7013-120014

GETS Reference No. - N° de référence de SEAG
PW-$CAG-003-24343

File No. - N° de dossier	**CCC No./N° CCC - FMS No./N° VME**
003cag.F7013-120014	

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM
on - le 2014-05-27

Time Zone
Fuseau horaire
Eastern Daylight Saving Time EDT

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☑ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à:	**Buyer Id - Id de l'acheteur**
MacNeil, Michael	003cag

Telephone No. - N° de téléphone	**FAX No. - N° de FAX**
(819) 956-0078 ( )	(819) 997-0437

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:
DEPARTMENT OF FISHERIES AND OCEANS
CCG/VESSEL PROCURE/HELICOPTER PROJ
200 ELGIN ST
OTTAWA
Ontario
K2P1L5
Canada

Instructions: See Herein

Instructions: Voir aux présentes

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

Delivery Required - Livraison exigée	**Delivery Offered - Livraison proposée**
See Herein	

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**

Issuing Office - Bureau de distribution
Civilian Aircraft Division/Division des Avions Civils
Portage III 8C1 - 50
11 Laurier St./11 reu Laurier
Gatineau
Québec
K1A 0S5

Canada

The solictation and related annexes are found in the associated documentation attached.

Please ensure all accompanied documents are downloaded in order to respond to the soliciatiation.

CANADIAN COAST GUARD MEDIUM HELICOPTER PROCUREMENT

The purpose of this requirement is to procure Commercial Off-The-Shelf (COTS) medium-lift helicopters to support CCG functions and to support programs of the Department of Fisheries & Oceans and other government departments across the country.

All contract awards are subject to Canada's internal approval process, which includes a requirement to approve funding in the amount of any proposed contract. Notwithstanding that a Bidder may have been recommended for contract award, issuance of any contract will be contingent upon internal approval in accordance with Canada's policies. If such approval is not given, no contract will be awarded. The Bidder will have no claim for damages, compensation, loss of profit, or allowance arising out of the preparation of its bid or the internal approval process conducted by Canada.

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List of Annexes:

PART 1 - GENERAL INFORMATION

1 Introduction

1.1 Organization of This Document

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

Part 1 General Information: provides a general description of the requirement;

Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;

Part 3 Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;

Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;

Part 5 Certifications: includes the certifications to be provided;

Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by bidders; and

Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

This Request for Proposal includes the following documents:

- Annex A Statement of Work
  - Appendix A Baseline Statement of Requirements Document
    - Attachment 1 Structural Components to be Transported (photo)
    - Attachment 2 Minimum Load Composition
    - Attachment 3 Wooden Helipad (photo)
  - Appendix B Summary Project <Milestones and Schedule
  - Appendix C Project Deliverables
  - Appendix D Data Requirements and Deliverables in Support of the Development of a Full Flight Simulator
- Annex B Basis of Payment
- Annex C Industrial and Regional Benefits Model Terms and Conditions
- Annex D Financial Bid proposal
- Annex E Bid Evaluation Plan
  - Appendix A Medium Helicopter Operational Evaluation Test Plan
    - Attachment 1 Cooper Harper Rating Scale
    - Attachment 2 Bedford Workload Assessment Rating Scale
    - Attachment 3 Mandatory Pre-Mission Safety Briefing
    - Attachment 4 Pre-Test Acknowledgement Forms

Attachment 5 Post -Test Acknowledgement Form
Attachment 6 Operational Evaluation Test Log
Appendix B Medium Helicopter Logistics Plan for Operational Evaluation Test
Appendix C Mandatory Technical Requirements
Appendix D Rated Technical Requirements
Appendix E Bidder's Project and Maintenance Management Evaluation Matrices
Appendix F Calculation of Operation and Maintenance Cost
Annex F Mission Profiles
Annex G Bid Evaluation Score Sheet
Annex H Industrial and Regional Benefits Evaluation Plan

1.2 Who Can Respond

Bidders must be the Original Equipment Manufacturer (OEM) for the helicopters to be proposed.

2. Summary

On behalf of the Department Fisheries and Oceans, the Canadian Coast Guard (CCG) has a requirement to replace its current helicopter fleet. This requirement is to purchase between four (4) and eight (8) Commercial Off-The-Shelf (COTS) medium-lift helicopters, initial sparing, ground support equipment, optional equipment and training, as and when requested support services, and simulator design support. The award date for the contract is forecasted for fall 2014 with helicopter deliveries beginning eighteen (18) months after contract award.

These helicopters will support a number of CCG programs, including Aids to Navigation, Icebreaking services, Marine Communication Traffic Services, Environmental Response and Search and Rescue, as well as the programs of the Department of Fisheries and Oceans and other government departments. Consequently, they will support activities such as ice reconnaissance, maintenance and construction of aids to navigation and telecommunications equipment, personnel and cargo transfer between ship and shore, and support to science and fisheries enforcement. CCG helicopters are required to operate in all areas of Canada, including the east and west coasts, the Arctic, Great Lakes and St. Lawrence Seaway, as well as inland waterways and Canada's north.

The Aircraft Services Directorate (ASD) of Transport Canada is responsible for operating and maintaining the CCG Helicopter fleet, as well as the development of any associated operational procedures and training programs. The Aircraft Services Directorate is an Air Operator certified under Canadian Aviation Regulations and delivers services to CCG through its National Headquarters in Ottawa, adjacent to MacDonald Cartier Airport and its nine regional bases located in Prince Rupert and Victoria, British Columbia; Parry Sound, Ontario; Quebec City, Quebec; Shearwater, Nova Scotia; Charlottetown, Prince Edward Island; Saint John, New Brunswick; Stephenville and St. John's, Newfoundland and Labrador.

The national security exceptions provided for in the trade agreements have been invoked; therefore, this procurement is excluded from all of the obligations of all the trade agreements.

There is a Federal Contractors Program (FCP) for employment equity requirement associated with this procurement; see Part 5 - Certifications, Part 7 - Resulting Contract Clauses and the annex named Federal Contractors Program for Employment Equity - Certification."

3. Debriefings

After contract award, respondents may request a debriefing on the results of the RFP. Respondents should make the request to the Contracting Authority within fifteen (15) calendar days of receipt of notification that their response was unsuccessful. The debriefing, at Canada's discretion, 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 2013-06-01 Standard Instructions - Goods or Services - Competitive Requirements are incorporated by reference into and form part of the bid solicitation.

Section 05, Submission of Bids, paragraph 4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, bid validity is amended as follows:

Delete: sixty (60) days
Insert: two hundred forty (240) days

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.

Requests for extensions to the bid solicitation period will ultimately be based on the reasonableness and merits of the request, including an analysis of the justification regarding why additional time is required and compared against the overall impact to Canada and the eligible bidders. The final decision on whether or not a bid extension will be granted will be made by the Assistant Deputy Ministers Integrated Steering Committee (ADM ISC).

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

3. Inquiries - Bid Solicitation

All inquiries must be submitted in writing to the Contracting Authority no later than fifteen (15) calendar days before the bid closing date. Inquiries 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 inquiry 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 inquiries 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 inquiry 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 inquiry can be answered with copies to all bidders. Inquiries 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 Ontario.

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.

5. Language

Any documents and supporting information submitted in response to this RFP shall be submitted in either English or French, Canada's two official languages. Should there be discrepancy between the wording of the English and French RFP documentation, the English documentation shall take precedence.

Respondents are requested to identify, in writing to the Contract Authority specified on Page 1 of this RFP, which of Canada's two official languages should be used for future communications from Canada. This is to be provided to Canada within fourteen (14) calendar days after the RFP is posted on GETS**.**

6. Best Value

On February 5 the government announced its Defense Procurement Strategy (DPS). This includes an objective of improving economic outcomes from Defense procurement through use of a weighted and rated value proposition.

The details of ratings and evaluation parameters for value propositions will be done in a procurement by procurement basis and will involve industry consultations. The effective coming into force date of this new regime for military procurement is later this Spring, although specific procurements may be identified prior to that date for inclusion of a value proposition. Again, industry/potential bidders will be consulted.

Should this procurement be selected for inclusion of a value proposition, bidders will be notified via an amendment to this RFP.

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, one (1) master hard copy and six (6) hard copies, and two (2) soft copies on CD, DVD or USB key.

Section II: Financial Bid, one (1) master hard copy and one (1) hard copy, and two (2) soft copies on CD, DVD or USB key.

Section III: Certifications identified in Part 5, two (2) hard copies.

Section IV: Industrial and Regional Benefits, see GENERAL INSTRUCTIONS in Section IV of Part 3.

If there is a discrepancy between the wording of the soft and hard copies and the master hard copy, the wording of the master hard copy will have priority over the wording of the soft and hard copies.

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

(a) financial information that is necessary for responding to IRB Bid Requirements and Evaluation is to be included in the IRB Bid only.

(b) the cost per flight hour price is to be provided in the bidder's technical proposal as a separate sealed attachment. PWGSC will provide this information to the Technical Authority only at the end of the technical evaluation, save and except when evaluating the Operation and Maintenance (O&M) costs.

The bidders are requested to 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; and
(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 are encouraged to:

(a) use paper containing fibre certified as originating from a sustainably-managed forest and/or containing minimum 30% recycled content; and

(b) 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.

Section I: Technical Bid

In their technical bid, bidders must demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders must demonstrate their capability and describe their approach to satisfy CCG's requirement for medium-lift helicopters in a thorough, concise and clear manner for carrying out the work.

Section II: Financial Bid

1.1 Bidders must submit their financial bid in accordance with the Financial Bid Proposal pricing tables found in Annex D - Financial Bid Proposal. The total amount of Goods and Services Tax or Harmonized Sales Tax must be shown separately, if applicable.

1.2 Exchange Rate Fluctuation Risk Mitigation (C3010T, 2013-11-06)

1. The Bidder may request Canada to assume the risks and benefits of exchange rate fluctuations. If the Bidder claims for an exchange rate adjustment, this request must be clearly indicated in the bid at time of bidding. The Bidder must submit form PWGSC-TPSGC 450, Claim for Exchange Rate Adjustments with its bid, indicating the Foreign Currency Component (FCC) in Canadian dollars for each line item for which an exchange rate adjustment is required.
2. The FCC is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuations. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.
3. The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provision in the contract. The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease).
4. At time of bidding, the Bidder must complete columns (1) to (4) on form PWGSC-TPSGC 450, for each line item where they want to invoke the exchange rate fluctuation provision. Where bids are evaluated in Canadian dollars, the dollar values provided in column (3) should also be in Canadian dollars, so that the adjustment amount is in the same currency as the payment.
5. Alternate rates or calculations proposed by the Bidder will not be accepted for the purposes of this exchange rate fluctuation provision.

1.3 Exchange Rate Fluctuation Adjustment

1. The foreign currency component (FCC) is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuation. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.
2. For each line item where a FCC is identified, Canada assumes the risks and benefits for exchange rate fluctuation, as shown in the Basis of Payment. For such items, the exchange rate fluctuation amount is determined in accordance with the provision of this clause.
3. The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provisions in the contract. The exchange rate adjustment amount will be calculated in accordance with the following formula:
   Adjustment = FCC x Qty x (i_1 - i_0) / i_0 where formula variables correspond to:

   FCC Foreign Currency Component (per unit)
   i_0 Initial exchange rate (CAN$ per unit of foreign currency [e.g. US$1])
   i_1 exchange rate for adjustments (CAN$ per unit of foreign currency [e.g. US$1])
   Qty quantity of units

4. The initial exchange rate is typically set as the noon rate as published by the Bank of Canada on the solicitation closing date.
5. For goods, the exchange rate for adjustment will be the noon rate as published by the Bank of Canada on the date the goods were delivered. For services, the exchange rate for adjustment will be the noon rate on the last business day of the month for which the services were performed. For advance payments, the exchange rate for adjustment will be the noon rate on the date the payment was due. The most recent noon rate will be used for non-business days.
6. The Contractor must indicate the total exchange rate adjustment amount (either upward, downward or no change) as a separate item on each invoice or claim for payment submitted under the Contract. Where an adjustment applies, the Contractor must submit with their invoice form PWGSC-TPSGC 450, Claim for Exchange Rate Adjustments.
7. The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease), calculated in accordance with column 8 of form PWGSC-TPSGC 450 (i.e. [i_1 - i_0) / i_0]).
8. Canada reserves the right to audit any revision to costs and prices under this clause.

Section III: Certifications

Detailed information in Part 5.

Section IV: Industrial and Regional Benefits (IRB) Bidder's Instructions

Detailed information is provided in Appendix C - Industrial and Regional Benefits Terms and Conditions and in Appendix H - Industrial and Regional Benefits Evaluation Plan.

Industrial and regional benefits (IRBS): Instructions to bidders

Table of Contents

1. INTRODUCTION

1.1. It is the intent of the Canadian Government, (referred to herein as "Canada") that this Project provide Industrial and Regional Benefits (IRB) that will contribute to the continuing viability of Canadian companies' capabilities in advanced technology manufacturing and services and to improve their ability to compete in both domestic and international markets.

1.2. Canada's objectives recognize the importance of IRB in procurement and therefore they will be a factor to be evaluated in the awarding of the Contract.

1.3. Bidders must submit an acceptable IRB Proposal at bid closing. The IRB Proposal will be deemed acceptable by the IRB Authority if it i) meets the IRB Mandatory Requirements outlined in Section 5; and, ii) achieves minimum points during Evaluation as outlined in Section 3 of the IRB Evaluation Plan.

1.4. IRB Evaluation results will be conveyed to the PWGSC Contracting Authority, who will then integrate them on a pass/fail basis into the overall bid evaluation results.

1.5. It is the responsibility of the IRB Authority, in cooperation with the Regional Development Agencies, to ensure that IRB Proposals are evaluated as outlined in the IRB Evaluation Plan.

2. GENERAL INSTRUCTIONS

2.1. In preparing its IRB Proposal, the Bidder should be guided by these IRB Bidder Instructions, as well as by the IRB Evaluation Plan and the IRB Terms and Conditions. All three documents provide important guidance, definitions and/or contractual provisions related to the IRB Policy.

2.2. The IRB Proposal should be submitted in a separate, self-contained volume. Only the IRB Proposal is reviewed during the IRB evaluation. In order to facilitate the IRB evaluation process, any material contained in another section of the bid but relevant to the IRB Proposal should be repeated in the IRB Proposal.

2.3. Six (6) hard copies and one electronic copy of the IRB Proposal are required.

2.4. The Bidder's IRB Proposal and its receipt, storage and protection by the IRB Authority is governed by applicable federal laws and processes.

3. CANADA'S INDUSTRIAL AND REGIONAL BENEFITS OBJECTIVES

3.1. The Bidder's IRB Proposal should clearly indicate how the proposed business activities will be achieved if it wins this Contract. The optimum IRB Proposal will result in the long-term creation and exploitation of capabilities, knowledge, advanced technologies and markets of lasting impact on Canadian industry.

3.2. Proposed IRB activities with a Canadian Company should result in the enhancement of Canadian capability to undertake other work of a similar nature. They should make a positive contribution to the continuing viability, growth, innovation, export growth and overall development of the Canadian IRB recipient.

3.3. The regional development objectives of Canada are to encourage long term quality improvements to the capability, capacity, international competitiveness and growth potential of Canadian firms in those regions where Canada has established specific initiatives to promote economic growth and diversification through procurement. These Designated Regions of Canada, as defined in the IRB Terms and Conditions, include: Atlantic; Quebec; Northern Ontario; Southern Ontario; West; and, North. Canadian industry in all the Designated Regions of Canada should have the opportunity to participate in the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters. IRB Transactions proposed by the Bidder in support of regional development will be assessed on this Project.

It is an objective of Canada to encourage the participation of Canadian Small and Medium Businesses (SMB) as suppliers on major federal procurements and to increase their competitiveness and export market access. Canadian SMB should have the opportunity to participate in the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters. IRB Transactions proposed by the Bidder in support of SMB supplier development and subcontracting will be assessed on this Project.

3.4. Canadian industry should have the opportunity to participate in, when possible, the maximum high quality, low risk, Direct IRB activities associated with the delivery of the Work on this Project.

3.5. In addition, Canadian industry should have the opportunity to participate in high quality, low risk, Indirect IRB activities, generally at the same level of technology or higher as the Work on this Project.

4. IRB TRANSACTIONS

4.1. The business activities proposed in support of the IRB Objectives outlined above must be in the form of specific IRB Transactions. A Proposed IRB Transaction is a work package that would become a contractual obligation of the Contractor in any ensuing Contract.

4.2. An IRB Transaction proposed for the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters cannot be the same or substantially similar to a proposed or existing IRB Transaction associated with an IRB obligation on another project.

4.3. There are two types of IRB Transactions: Direct IRB Transactions and Indirect IRB Transactions.

4.3.1. Direct IRB Transactions

4.3.1.1. Direct IRB Transactions are those achieved through the provision of the goods and services required to deliver the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters

4.3.1.2. Canadian resources should be utilized to the maximum extent possible to develop, produce, integrate and deliver the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters.

4.3.2. Indirect IRB Transactions

4.3.2.1. Indirect IRB Transactions are those achieved through business activities not related to the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters**.**

4.3.2.2. Indirect Transactions proposed by the Bidder should involve advanced technology products, services and activities that are generally at the same level of technology, or higher, as the Work on this Project.

4.3.2.3. Indirect IRB Transactions must have a Canadian Content Value (CCV) of no less than 30 percent of the total value of a given activity.

4.3.3. Global Value Chain (GVC)

4.3.3.1. GVC Transactions are Indirect IRB Transactions which may be counted towards fulfilling a Direct IRB Commitment, if the activities are related to the provision of goods and services on an eligible GVC Platform.

4.3.3.2. A GVC Platform is a vehicle/craft or Tier 1 major sub-system, used for a particular purpose or which performs a specific mission. It has various stages in the supply chain which are

connected by the division of production and aftermarket support among many global firms, leveraging each partner's core competencies.

4.3.3.3. To be an eligible GVC Platform for IRB purposes, the platform must:

4.3.3.3.1. be the same or similar in nature and complexity to the platform being proposed for Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters

4.3.3.3.2. have the same or greater market potential, measured by estimated market value, size and/or timeframe, as the platform proposed for Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters

4.3.3.4. GVC Platforms should also offer significant opportunities for:

4.3.3.4.1. technological advancement and growth in the level of system integration

4.3.3.4.2. regional and SMB participation; and,

4.3.3.4.3. high-value and long-term activities related to acquisition and/or in-service support

4.3.3.5. Bidders should clearly describe in their IRB Proposals how their proposed GVC platform(s) meets the criteria above. Bidders are asked to provide details and documentation in support of GVC platform eligibility in their IRB Proposals submitted at bid closing.

4.3.3.6. Activities associated with GVC platforms may include, but are not limited to: pre-commercialization activities (e.g. collaborative technology development and demonstration projects); production activities (e.g. definition, design, and manufacturing); and, In-Service Support (ISS) activities.

4.3.3.7. Bidders should note that even though a GVC Transaction may be counted towards meeting a Direct IRB requirement, this does not negate the need for the GVC Transaction to meet all of the IRB Eligibility Criteria, including those related to Causality and Incrementality.

4.3.4. <u>IRB Eligibility Criteria</u>

4.3.4.1. Any business activity proposed as an IRB Transaction in support of Canada's IRB Objectives must meet the Eligibility Criteria for IRB Transactions outlined in the IRB Terms and Conditions. These criteria will be used in evaluating the Bidder's IRB Proposal submitted at bid closing and will form the basis for IRB Transaction eligibility under any ensuing Contract. Bidders are asked to provide complete details and documentation in support of IRB Transaction eligibility within their IRB Proposals submitted at bid closing.

4.3.5. <u>Validating IRB Transactions</u>

4.3.5.1. The IRB Authority reserves the right to validate, within one year of Contract award, the eligibility of any proposed IRB Transaction included in the Bidder's IRB Proposal. This validation could involve the IRB Eligibility Criteria, or the additional criteria associated with Global Value Chain (GVC) and Enhanced Priority Technology List (EPTL). Validation details are outlined in the IRB Terms and Conditions.

5. IRB MANDATORY REQUIREMENTS

5.1. There are seven (7) mandatory requirements that the Bidder must meet with its IRB Proposal. The omission of any part of the following seven (7) requirements will result in the Bidder's IRB Proposal being deemed not acceptable:

5.1.1. Requirement One: The Bidder's IRB Proposal must commit to achieving IRB activities, measured in Canadian Content Value (CCV), valued at 100% of the Contract value (including any Contract options), to be achieved within the period beginning August 20, 2012 and ending 7 years after the Effective Date of Contract. For the winning Bidder, their 100% IRB Commitment will become an IRB obligation which must be achieved under Article 2 of the pursuant Contract.

5.1.2. Requirement Two: In its IRB Proposal due at bid closing, the Bidder must:

5.1.2.1. specify its bid price (for evaluation purposes, the Bidder must use the bid price based on 4 helicopters as identified in Item Number 001a of Table 1 of Annex D (Financial Bid Proposal) of the RFP), not including taxes and rounded to the nearest dollar;

5.1.2.2. identify eligible IRB Transactions which are detailed, fully described and equal in total to not less than 30% of the bid price (for evaluation purposes, the Bidder must use the bid price based on 4 helicopters as identified in Item Number 001a of Table 1 of Annex D (Financial Bid Proposal) of the RFP) without options, measured in CCV;

5.1.2.3. commit to identifying, one (1) year after the Effective Date of the Contract, additional eligible IRB Transactions which are detailed, fully described and bring the cumulative total of identified eligible IRB Transactions to not less than 60% of the Contract value, measured in CCV;

5.1.2.4. commit to identifying, three (3) years after the Effective Date of the Contract, additional eligible IRB Transactions which are detailed, fully described and bring the cumulative total of identified eligible IRB Transactions to 100% of the Contract value, measured in CCV.

5.1.3. Requirement Three: The Bidder must commit to achieving not less than 20% of the Contract value in Direct IRB Transactions, measured in CCV.

5.1.4. Requirement Four: The Bidder must commit to achieving not less than 15% of the Contract value in Small and Medium Business IRB Transactions, measured in CCV.

5.1.5. Requirement Five: The Bidder must accept and agree to the terms associated with Performance Guarantees (Holdbacks and/or Liquidated Damages).

5.1.6. Requirement Six: The Bidder must accept all of the IRB Terms and Conditions.

5.1.7. Requirement Seven: The Bidder's IRB Proposal must contain the following components:

5.1.7.1. Executive Summary of IRB Commitments;
5.1.7.2. Company Business Plan;
5.1.7.3. IRB Management Plan;
5.1.7.4. Regional Development Plan;
5.1.7.5. Small and Medium Business Development Plan;
5.1.7.6. Detailed IRB Transaction Sheets, accompanied by a summary chart of all IRB Transactions; and,
5.1.7.7. Mandatory IRB Requirements Certificate, signed by a duly authorized company official. See Annex A.

6. STATEMENT OF IRB WORK

The following sections detail the requested content of each of the IRB Proposal mandatory components referred to above in Section 5.1.7. Bidders are strongly encouraged to thoroughly review and respond to the instructions listed below. Failure to adequately respond to the instructions may result in the Plan or Transaction receiving a poor score or being rejected as ineligible.

6.1. Executive Summary of IRB Commitments

6.1.1. The Executive Summary should summarize how the Bidder will address Canada's IRB Objectives in Section 3 and how each of these Objectives will be achieved through the proposed IRB Plans and Transactions.

6.1.2. The Executive Summary should constitute an integrated overview of the complete IRB Proposal. The information in the Executive Summary should only summarize and/or be drawn from content in other sections in the IRB Proposal.

6.2. Company Business Plan

6.2.1. The purpose of the Company Business Plan is to demonstrate the ability of the Bidder to assemble, plan and describe its proposed team to complete the Work on the Project. The Plan should also demonstrate the bidding team's ability to meet the IRB Objectives.

6.2.2. The Bidder's Company Business Plan should outline the structure, conduct and performance of the business operations of the Bidder and each of its Eligible Parties/major sub-contractors that are performing Work on the Project.

6.2.3. The Plan should outline, in detailed text or graphic format, the proposed role of each company (Bidder, Eligible Party and major sub-contractors) in delivering all elements of the Project and

the proposed location of that Work. It should also include an organizational chart identifying the key personnel in each company who would be responsible to manage and deliver the Project.

6.2.4. The Plan should include a description of the long-term impact of the Work on each company's business operations, in Canada and abroad.

6.2.5. The Plan should include the following information, both on the Bidder and each of its Eligible Parties:

6.2.5.1. a description of the decision-making process for establishing product and services responsibilities and market mandates within the company;

6.2.5.2. a description of the management and oversight of company functions, including but not limited to future planning, research and development and marketing, including the identification and location of these responsibility centres;

6.2.5.3. an outline of worldwide corporate operations, including a narrative description and hierarchically ordered chart which describes the present corporate family structure, including parent and subsidiary relationships;

6.2.5.4. a detailed description of any existing Canadian facilities, which includes: the location, date of establishment, nature of operations, number of employees, identification of key personnel, corporate structure and functional interrelationship with the worldwide corporate structure.

6.3. <u>IRB Management Plan</u>

6.3.1. The purpose of the IRB Management Plan is to demonstrate the Bidder's ability to develop, implement, manage and report on the proposed IRB program. It is also the place for Bidder to detail and document its proposed Eligible Parties and proposed GVC Platforms.

6.3.2. The IRB Management Plan should provide a detailed overview of all of the IRB management functions and associated organization required by the Bidder to execute a successful IRB program, in a level of detail sufficient to demonstrate that the Bidder understands its IRB Commitment and is prepared to respond to requirements associated with it for the full duration of the IRB Achievement Period.

6.3.3. The IRB Management Plan should include a list of the Bidder's proposed Eligible Parties, with details and documentation justifying how each one meets the Eligible Party criteria outlined in the IRB Terms and Conditions.

6.3.3.1. All proposed Eligible Parties are subject to review and approval by the IRB Authority during evaluation.

6.3.3.2. Bidders are strongly encouraged to demonstrate in the Plan that each of its proposed Eligible Parties that are Canadian Companies with less than 500 employees have the capacity to undertake IRB Obligations. Capacity is assessed in areas such as company size, product offerings, market conditions, corporate ownership, IRB management processes, level of Canadian content, etc.

6.3.3.3. Any proposed Eligible Party which is found not to meet the criteria will be excluded from the List of Eligible Parties in the ensuing Contract. In addition, any IRB Transaction with an excluded Eligible Party as the IRB Donor will be rejected as not meeting the IRB Eligibility Criteria.

6.3.4. The IRB Management Plan should include the following information on the Bidder and each of its Eligible Parties:

6.3.4.1. the name and contact information of each company's IRB official(s) assigned to the Project;

6.3.4.2. job descriptions for each company's IRB official(s) and biographical information about their work experience and education;

6.3.4.3. a description of each company's corporate and project-specific resources assigned to execute the management of the IRB program;

6.3.4.4. a description and explanation of each company's internal processes for IRB organization, advocacy and awareness, both specific to this project and in general. Bidders should include a description of how IRB considerations will be factored into the company's broader decision making processes, along with how these decisions will be documented and tracked;

6.3.4.5. a description of the methods, processes and procedures that each company will use to identify, submit, track, record keep and report IRB activities;

6.3.4.6. a description of any previous IRB/offset programs that have been undertaken over the past ten (10) years, in Canada and elsewhere, along with a brief overview of the achievement status of each project.

6.3.5. The plan should include a list of the Bidder's proposed GVC Platforms, along with details and documentation justifying how each meets GVC Platform eligibility.

6.3.5.1. All proposed GVC Platforms are subject to review and approval by the IRB Authority during evaluation. Any proposed GVC Platform which is found not to meet the criteria will be excluded from the List of GVC Platforms in the ensuing Contract. Any IRB Transaction associated with an excluded GVC platform will still be reviewed and considered for IRB Transaction eligibility during evaluation as an Indirect Transaction.

6.3.6. The IRB Management Plan should include a forecast plan for the Tranche 2 and Tranche 3 IRB Transactions, due one (1) and three (3) years following the Effective Date of the Contract, respectively. The forecast plan should include such information as, but not limited to: an overview of the processes and plans in place to identify and submit transactions; any planned supplier development activities; a list of Canadian firms being considered; and/or, the specific capabilities being sought from Canadian suppliers.

6.4. Regional Development Plan

6.4.1. The purpose of the Regional Development Plan is to demonstrate the Bidder's commitment to providing opportunities and assistance for businesses in the Designated Regions of Canada.

6.4.2. The Regional Development Plan should identify and describe the Bidder's proposed IRB activities in the Designated Regions, which will become IRB obligations to be achieved under Article 2 of the ensuing Contract. The Plan should also identify any regional commitment targets to which the Bidder is prepared to commit contractually.

6.4.3. The Regional Development Plan should provide, in as much detail as possible, the following information on the Bidder and each of its Eligible Parties:

6.4.3.1. a description of the activities undertaken and the approaches to date of each company, along with the business rationale, that have resulted in the proposed distribution of IRB activities to the Designated Regions;

6.4.3.2. a description of the activities that will be undertaken and the approaches of each company that will be followed after Contract award until the end of the IRB Achievement Period, along with the business rationale, to improve the IRB opportunities available to the Designated Regions;

6.4.3.3. a description of whether and how regional considerations are factored into each company's procurement/IRB decision making processes;

6.4.3.4. a description of the economic impact of the proposed IRB activities on the regional IRB Recipients' current operations and areas of business, as well as on their capability to pursue and undertake new business activities.

6.5. Small and Medium Business (SMB) Development Plan

6.5.1. The purpose of the SMB Development Plan is to demonstrate the Bidder's commitment to providing opportunities, assistance and encouragement to SMB in Canada.

6.5.2. The SMB Development Plan should identify and describe the Bidder's proposed IRB activities involving SMB in Canada, which will become an IRB obligation to be achieved under the ensuing Contract.

6.5.3. The SMB Development Plan should provide, in as much detail as possible, the following information on the Bidder and each of its Eligible Parties:

6.5.3.1. a description of the activities undertaken and the approaches followed to date by each company, along with the business rationale, that have resulted in the proposed distribution of IRB to SMB;

6.5.3.2. a description of the activities undertaken and the approaches that will be followed by each company, after Contract award until the end of the IRB Achievement Period, to improve the IRB opportunities available to SMB;

6.5.3.3. a description of whether and how SMB consideration are factored into each company's IRB decision-making processes;

6.5.3.4. a description of the economic impact of the proposed IRB activities on the SMBs' current operations and areas of business, as well as on their capability to pursue and undertake new business activities; and,

6.5.3.5. a description of any initiatives, assistance and/or encouragement (at a broad corporate level or specific to this IRB program) that would be provided to SMB to help stimulate and promote them, both as potential suppliers to the project and for their general development. Examples could include financing, special payment provisions, mentoring programs, etc.

6.6. Detailed IRB Transaction Sheets

6.6.1. The Bidder's IRB Proposal must provide detailed information on each IRB Transaction that the Bidder proposes to provide to Canada and for which it is prepared to commit contractually. A separate transaction sheet is to be completed for each Proposed IRB Transaction. The IRB Transactions will form the basis for the IRB Commitments to be specified in Article 2 of the ensuing Contract.

6.6.2. In addition to the individual transaction sheets, the Bidder must include a summary of all of its proposed IRB Transactions in a tabular/chart format. The tabular/chart summary should clearly identify each IRB Transaction and provide a breakdown (with appropriate sub-totals and percentages) by: Direct, Indirect, Regional, SMB, EPTL and Unidentified.

6.6.3. A template of the IRB transaction sheet is attached as Annex C of the IRB Model Terms and Conditions. Bidders are encouraged to use this template, to promote administrative consistency and ease.

6.6.4. Bidders are strongly encouraged to fully complete each section of the IRB transaction sheet, as outlined below, so that the IRB Transaction can be properly evaluated. Failure to adequately describe any portion of the proposed IRB Transaction may result in it being rejected.

6.6.4.1. Obligor Contact Information (information regarding the proposed Contractor on the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters)

6.6.4.2. Transaction Details

6.6.4.2.1. Transaction Title (provide a brief title identifying the activity);

6.6.4.2.2. Transaction Number (assign a unique number, in simple, sequential order, for reference purposes)

6.6.4.2.3. Date Transaction Submitted

6.6.4.2.4. Tranche (the IRB bid Proposal is Tranche 1)

6.6.4.2.5. IRB Transaction Type (direct or indirect)

6.6.4.2.6. IRB Activity Type (purchase, investment, etc)

6.6.4.2.7. Business Activity Type (electronics, manufacturing, etc);

6.6.4.2.8. Federal Supply Class (FSC) Code (website reference provided on template)

6.6.4.2.9. GVC and platform (if applicable)

6.6.4.2.10. EPTL/SADTL and details (if applicable)

6.6.4.2.11. Description of IRB Transaction (provide a detailed description of the proposed IRB activity, so that it is clear: the nature of the work; the location of the work in Canada, the estimated quantities and timelines; any end-use market, platform or program; that it is different from other similar Transactions; and, other relevant information);

6.6.4.2.12. Canadian Government Assistance (describe the date and details of any assistance provided -- either to the specific activity, the Donor, or the Recipient -- from any level of government in Canada);

6.6.4.3. Donor information: Note that the Donor must be an Eligible Party);

6.6.4.4. Recipient information Notes: i) the company description should include locations, business history and core capabilities; ii) each Transaction sheet should contain only one Recipient company, unless it is a Grouped Transaction; and iii) government organizations cannot be IRB Recipients, unless it is a Public Research Institution);

6.6.4.5. Consortium Member (if applicable);

6.6.4.6. Eligibility Criteria (be as specific and detailed as possible in addressing how the proposed transaction meets each Eligibility Criteria, which are outlined in the IRB Terms and Conditions. Include all details and supporting documentation in the IRB Proposal);

6.6.4.7. Quality of Transaction (detail the quality of the proposed Transaction and how it meets the IRB Objectives, including factors such as scope of innovation, increases in capability or employment, global export potential, long-term relationship, etc)

6.6.4.8. List of Supporting Documentation

6.6.4.9. Valuation and Time Phasing (specify the overall values as applicable, plus the detailed commitment schedule broken out by 12 month periods, which mirror the IRB Reporting Periods detailed in the IRB Terms and Conditions)

6.7. Mandatory IRB Requirements Certificate

6.7.1. Bidders must submit with their IRB Proposal the Mandatory IRB Requirements Compliancy Certificate (Annex A), completed with their company name and bid price, and signed and dated by a company official duly authorized to bind the company. Beyond adding their name, bid price, signature and date, Bidders shall not make any other changes to the template provided in Annex A.

7. BANKING

7.1. Bidders may use Banked IRB Transactions as part of their IRB Proposal.

7.2. Bidders submitting a Banked IRB Transaction in their IRB Proposal should include and attach the following:

7.2.1. a copy of the exact and latest version of the Banked Transaction sheet which was approved by the IRB Banker; and,

7.2.2. a copy of the signed letter of approval from the IRB Banker with respect to that Banked Transaction sheet.

7.3. If a Banked IRB Transaction is used as part of a Bidder's Proposal, the IRB Evaluation Committee will consider the Transaction as accepted for meeting the IRB Eligibility Criteria. However, the Transaction will be evaluated for quality and risk, as outlined in the IRB Evaluation Plan.

7.4. Bidders may submit Banked IRB Transactions of any value in their IRB Proposal. However, not less than 15% of the cumulative value of the Bidders's eligible Transactions submitted in their IRB Proposal must be non-banked Transactions.

7.5. The entire CCV of a Banked IRB Transaction, not portions thereof, must be submitted as a single IRB Transaction in the IRB Proposal.

8. INVESTMENT FRAMEWORK (IF)

8.1. An *IF* Transaction should only be included in the Bidder's IRB Proposal submitted at bid closing if it has already been fully reviewed and approved by the IRB Authority as a Banked Transaction.

8.2. Any *IF* activity which has not been fully reviewed and approved by the IRB Authority as a Banked Transaction, yet included in a Bidder's IRB Proposal submitted at bid closing, will be counted as zero for the purposes of evaluation.

Annex A

Mandatory IRB Requirements Certificate

The Bidder, _____, declares and certifies that through this IRB Proposal for the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters, the Bidder:

1. Commits to achieving IRB activities valued at 100% of the Contract value (including any Contract options), measured in Canadian Content Value (CCV), to be achieved within the period beginning August 20, 2012 and ending 7 years after the Effective Date of Contract.

2. Identifies its bid price (not including taxes and rounded to the nearest dollar) as (for evaluation purposes, the Bidder must use the bid price based on 4 helicopters as identified in Item Number 001a of Table 1 of Annex D (Financial Bid Proposal) of the RFP): $_____

2(a). Identifies eligible IRB Transactions equal in total to not less than 30% of its bid price (for evaluation purposes, the Bidder must use the bid price based on 4 helicopters as identified in Item Number 001a of Table 1 of Annex D (Financial Bid Proposal) of the RFP) without options, measured in CCV

2(b). Commits to identifying, one (1) year after the Effective Date of the Contract, additional eligible IRB Transactions which bring the cumulative total of identified eligible IRB Transactions to not less than 60% of the Contract value (including any options), measured in CCV

2(c). Commits to identifying, three (3) years after the Effective Date of the Contract, additional eligible IRB Transactions which bring the cumulative total of identified eligible IRB Transactions to 100% of the Contract value (including any options), measured in CCV

3. Commits to achieving not less than 20% of the Contract value in Direct IRB Transactions, measured in CCV.

4. Commits to achieving not less than 15% of the Contract value in Small and Medium Business IRB Transactions, measured in CCV.

5. Accepts and agrees to the terms associated with Performance Guarantees (Holdbacks and/or Liquidated Damages).

6. Accepts all of the IRB Terms and Conditions.

7. Has submitted all the required components of an IRB Proposal:

   - Executive Summary of IRB Commitments
   - Company Business Plan
   - IRB Management Plan
   - Regional Development Plan

- Small and Medium Business Development Plan
- Detailed IRB Transaction Sheets, accompanied by a summary chart of all IRB Transactions, and
- This Mandatory Requirements Certificate, duly completed, signed and dated.

IN WITNESS THEREOF THIS MANDATORY REQUIREMENTS CERTIFICATE HAS BEEN SIGNED THIS _____ DAY OF _____ BY A SENIOR COMPANY OFFICIAL WHO IS DULY AUTHORIZED TO BIND THE COMPANY.

_____
SIGNATURE

_____
NAME AND TITLE OF SENIOR COMPANY OFFICIAL

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 demonstrated, technical, IRB and financial evaluation criteria.

(b) An evaluation team composed of representatives of Canada will evaluate the bids. Conklin and de Decker have been hired by Canada to validate the calculation of Operations and Maintenance Costs submitted by bidders. Canada may hire any independent consultant or use any Government resources to evaluate any bid.

(c) This solicitation contains mandatory requirements. Where a requirement of this RFP is mandatory, it will be identified specifically with the word "Mandatory", an "(M)", or with a statement covering a section of this document. The words "shall" and "must", in the RFP are also to be interpreted as mandatory requirements.

(d) Proposals must comply with each and every mandatory requirement. Any proposal which fails to meet any of the Mandatory Requirements will be deemed non-responsive and will not be given further consideration. Each requirement must be addressed separately.

(e) Bids will be evaluated solely on the information provided in each Bidder's submission.

(f) It is the responsibility of the Bidder to obtain, from the Contracting Authority identified, any clarification of the requirement contained in the RFP prior to submitting its bid.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

To facilitate bid preparation and bid evaluation, Bidders must prepare and submit evidence of compliance with Mandatory Requirements using the information and template provided in the Bid Evaluation Plan.

1.1.2 Operational Evaluation Test

Bidders will visit a facility designated by Canada, with the proposed aircraft to have the helicopter capabilities demonstrated in accordance with operational evaluation test plans included in the Bid Evaluation Plan. Given that the initial analysis of these tasks will take place prior to contract award, bidders may provide a representative aircraft in lieu of the proposed aircraft for this evaluation. The definition of representative aircraft can be found in Operational Evaluation Test Plan.

1.1.2.1 Personal Injuries

The Bidder agrees that Canada will not be liable to the Bidder or any of its subcontractors for claims in respect of death, disease, illness, injury or disability which may arise in carrying out the operational

evaluation test requirements as defined in the evaluation test plans. The Bidder agrees not to make any claims against Canada in respect of any of the foregoing.

1.1.2.2 Liability

The Bidder agrees that it is liable for any damage caused by the Bidder, its employees, subcontractors, or agents to Canada or any third party. Canada is liable for any damage caused by Canada, its employees or agents to the Bidder or any third party. Damage includes any injury to persons (including injury resulting in death) or loss of or damage to property (including real property) caused as a result of or during the operational evaluation testing.

1.1.3 Point Rated Technical Criteria

To facilitate bid preparation and bid evaluation, Bidders should prepare and submit evidence of compliance with Point Rated Requirements using the information and template provided in the Bid Evaluation Plan.

1.2 Financial Evaluation

Bidders must submit their financial bid in accordance with the requirements detailed within information of ANNEX "D" - Financial Bid Proposal.

2. Basis of Selection - Highest Combined Rating of Technical Merit and Price

1. To be declared responsive, a bid must:

   (a) comply with all the requirements of the bid solicitation; and

   (b) meet all mandatory criteria.

2. Bids not meeting "1(a) or 1(b) " will be declared non-responsive.

3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 50% for the technical merit and 50% for the price.

4. For each responsive bid, the technical merit score and the pricing score will be calculated in accordance with ANNEX E - Bid Evaluation Plan to determine its combined rating.

5. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

6. If two (2) bids are tied, and provided that the bid selected would still be considered the most advantageous to Canada, preference will be given to the Bidder who is evaluated the highest technical score.

3. Evaluation of Price (A0220T, 2013-04-25)

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included. Delivered Duty Paid (DDP), Incoterms 2010.

4. Industrial and Regional Benefits Evaluation Plan

Bidders must submit their Industrial and Regional Benefits bid in accordance with the requirements detailed within information of ANNEX C - Industrial and Regional Benefits Model Contract and ANNEX H - Industrial and Regional Benefits Evaluation Plan .

PART 5 – CERTIFICATIONS

Bidders must provide the required certifications and documentation to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default, if any certification made by the Bidder is found to be untrue whether during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with this request will also render the bid non-responsive or will constitute a default under the Contract.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications – Contract

1. The Contractor agrees to comply with the *Code of Conduct for Procurement* and to be bound by its terms. In addition to complying with the *Code of Conduct for Procurement*, the Contractor must also comply with the terms set out in this section.
2. The Contractor further understands that, to ensure fairness, openness and transparency in the procurement process, the commission of certain acts or offences may result in a termination for default under the Contract. If the Contractor made a false declaration in its bid, makes a false declaration under the Contract, fails to diligently maintain up to date the information herein requested, or if the Contractor or any of the Contractor's affiliates fail to remain free and clear of any acts or convictions specified herein during the period of the Contract, such false declaration or failure to comply may result in a termination for default under the Contract. The Contractor understands that a termination for default will not restrict Canada's right to exercise any other remedies that may be available against the Contractor and agrees to immediately return any advance payments.
3. For the purpose of this section, everyone, including but not limited to organizations, bodies corporate, societies, companies, firms, partnerships, associations of persons, parent companies and subsidiaries, whether partly or wholly-owned, as well as individuals and directors, are Contractor's affiliates if:
    a. directly or indirectly either one controls or has the power to control the other, or
    b. a third party has the power to control both.

    Indicia of control, include, but are not limited to, interlocking management or ownership, identity of interests among family members, shared facilities and equipment, common use of employees, or a business entity created following the acts or convictions specified in this section which has the same or similar management, ownership, or principal employees, as the case may be.

4. The Contractor must diligently maintain an up-to-date list of names by informing Canada in writing of any change occurring during the period of the contract. The Contractor must also, when so requested, provide Canada with the corresponding Consent Forms.
5. The Contractor certifies that it is aware, and that its affiliates are aware, that Canada may verify the information provided by the Contractor, including the information relating to the acts or

convictions specified herein through independent research, use of any government resources or by contacting third parties.

6. The Contractor certifies that neither the Contractor nor any of the Contractor's affiliates have directly or indirectly, paid or agreed to pay, and will not, directly or indirectly, pay a contingency fee to any individual for the solicitation, negotiation or obtaining of the Contract if the payment of the fee would require the individual to file a return under section 5 of the *Lobbying Act*.
7. The Contractor certifies that no one convicted under any of the provisions under a) or b) are to receive any benefit under the contract. In addition, the Contractor certifies that except for those offences where a criminal pardon or a record suspension has been obtained or capacities restored by the Governor in Council, neither the Contractor nor any of the Contractor's affiliates has ever been convicted of an offence under any of the following provisions:
    a. paragraph 80(1)(d) (*False entry, certificate or return*), subsection 80(2) (*Fraud against Her Majesty*) or section 154.01 (*Fraud against Her Majesty*) of the *Financial Administration Act*, or
    b. section 121 (*Frauds on the government and Contractor subscribing to election fund*), section 124 (*Selling or Purchasing Office*), section 380 (*Fraud*) for fraud committed against Her Majesty or section 418 (*Selling defective stores to Her Majesty*) of the *Criminal Code* of Canada, or
    c. section 462.31 (*Laundering proceeds of crime*) or sections 467.11 to 467.13 (*Participation in activities of criminal organization*) of the *Criminal Code* of Canada, or
    d. section 45 (*Conspiracies, agreements or arrangements between competitors*), 46 (*Foreign directives*) 47 (*Bid rigging*), 49 (*Agreements or arrangements of federal financial institutions*), 52 (*False or misleading representation*), 53 (*Deceptive notice of winning a prize*) under the *Competition Act*, or
    e. section 239 (*False or deceptive statements*) of the *Income Tax Act*, or
    f. section 327 (*False or deceptive statements*) of the *Excise Tax Act*, or
    g. section 3 (*Bribing a foreign public official*) of the *Corruption of Foreign Public Officials Act*, or
    h. section 5 (*Trafficking in substance*), section 6 (*Importing and exporting*), or section 7 (*Production of substance*) of the *Controlled Drugs and Substance Act*.

1.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Human Resources and Skills Development Canada (HRSDC) - Labour's website

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

2. Additional Certifications Precedent to Contract Award

The certification listed below should be completed and submitted with the bid but may be submitted up to sixty (60) days after bid closing. If this required certification is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid-non responsive.

2.1 Helicopter Type Certificate

The helicopter type, model and variant shall hold a valid type certificate issued in accordance with Part V, subpart 21 of the Canadian Aviation Regulations that meets the Standards of Airworthiness of Chapter 529 of the Airworthiness Manual as applicable.

The certificate provided must be for the aircraft being proposed in response to Appendix 1 to Annex A, Medium Helicopter Baseline Statement of Requirements document.

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

1. Security Requirement

There is no security requirement associated with this procurement.

2. Financial Capability Requirement (A9033T, 2012-07-16)

2.1 The Bidder must have the financial capability to fulfill this requirement. To determine the Bidder's financial capability, the Contracting Authority may, by written notice to the Bidder, require the submission of some or all of the financial information detailed below during the evaluation of bids. The Bidder must provide the following information to the Contracting Authority within fifteen (15) working days of the request or as specified by the Contracting Authority in the notice:

(a) Audited financial statements, if available, or the unaudited financial statements (prepared by the Bidder's outside accounting firm, if available, or prepared in-house if no external statements have been prepared) for the Bidder's last three fiscal years, or for the years that the Bidder has been in business if this is less than three years (including, as a minimum, the Balance Sheet, the Statement of Retained Earnings, the Income Statement and any notes to the statements).

(b) If the date of the financial statements in (a) above is more than five months before the date of the request for information by the Contracting Authority, the Bidder must also provide, unless this is prohibited by legislation for public companies, the last quarterly financial statements (consisting of a Balance Sheet and a year-to-date Income Statement), as of two months before the date on which the Contracting Authority requests this information.

(c) If the Bidder has not been in business for at least one full fiscal year, the following must be provided:

i. the opening Balance Sheet on commencement of business (in the case of a corporation, the date of incorporation); and

ii. the last quarterly financial statements (consisting of a Balance Sheet and a year-to-date Income Statement) as of two months before the date on which the Contracting Authority requests this information.

(d) A certification from the Chief Financial Officer or an authorized signing officer of the Bidder that the financial information provided is complete and accurate.

(e) A confirmation letter from all of the financial institution(s) that have provided short-term financing to the Bidder outlining the total of lines of credit granted to the Bidder and the amount of credit that remains available and not drawn upon as of one month prior to the date on which the Contracting Authority requests this information.

(f) A detailed monthly Cash Flow Statement covering all the Bidder's activities (including the requirement) for the first two years of the requirement that is the subject of the bid solicitation, unless this is prohibited by legislation. This statement must detail the Bidder's major sources and amounts of cash and the major items of cash expenditures on a monthly basis, for all the Bidder's activities. All assumptions made should be explained as well as details of how cash shortfalls will be financed.

(g) A detailed monthly Project Cash Flow Statement covering the first two years of the requirement that is the subject of the bid solicitation, unless this is prohibited by legislation. This statement must detail the Bidder's major sources and amounts of cash and the major items of cash expenditures, for the requirement, on a monthly basis. All assumptions made should be explained as well as details of how cash shortfalls will be financed.

2.2 If the Bidder is a joint venture, the financial information required by the Contracting Authority must be provided by each member of the joint venture.

2.3 If the Bidder is a subsidiary of another company, then any financial information in 2.1. (a) to (f) above required by the Contracting Authority must be provided by the ultimate parent company. Provision of parent company financial information does not by itself satisfy the requirement for the provision of the financial information of the Bidder, and the financial capability of a parent cannot be substituted for the financial capability of the Bidder itself unless an agreement by the parent company to sign a Parental Guarantee, as drawn up by Public Works and Government Services Canada (PWGSC), is provided with the required information.

2.4 **Financial Information Already Provided to PWGSC:** The Bidder is not required to resubmit any financial information requested by the Contracting Authority that is already on file at PWGSC with the Contract Cost Analysis, Audit and Policy Directorate of the Policy, Risk, Integrity and Strategic Management Sector, provided that within the above-noted time frame:

(a) the Bidder identifies to the Contracting Authority in writing the specific information that is on file and the requirement for which this information was provided; and

(b) the Bidder authorizes the use of the information for this requirement.

It is the Bidder's responsibility to confirm with the Contracting Authority that this information is still on file with PWGSC.

2.5 **Other Information:** Canada reserves the right to request from the Bidder any other information that Canada requires to conduct a complete financial capability assessment of the Bidder.

2.6 **Confidentiality**: If the Bidder provides the information required above to Canada in confidence while indicating that the disclosed information is confidential, then Canada will treat the information in a confidential manner as permitted by the Access to Information Act, R.S., 1985, c.c. A-1, Section 20(1) (b) and (c).

2.7 **Security**: In determining the Bidder's financial capability to fulfill this requirement, Canada may consider any security the Bidder is capable of providing, at the Bidder's sole expense (for example, an irrevocable letter of credit from a registered financial institution drawn in favour of Canada, a performance guarantee from a third party or some other form of security, as determined by Canada).

PART 7 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation

1. Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A".

1.1 Statement of Work

This Contract is for the acquisition of Commercial Off-The-Shelf (COTS) medium-lift helicopters in accordance with the Statement of Work attached as Annex "A". The Contractor agrees to supply to Canada the goods and services described in the Contract, including the Statement of Work, in accordance with, and at the prices set out in the Contract. This includes the following:

1.1.1 The initial acquisition quantity of at least four (4), and as many as eight (8), Commercial Off-The-Shelf (COTS) medium-lift helicopters.

1.1.2 Where the initial acquisition quantity is something less than eight, the Contractor grants to Canada the irrevocable option to acquire the remaining quantity of helicopters under the same terms and conditions and at the prices stated in the Contract. The unit price for the quantity of helicopters acquired pursuant to this option will not exceed the unit price derived from the lot price bid for the total quantity (i.e. the initial quantity plus the optional quantity) of helicopters acquired by Canada. The option may only be exercised by the Contracting Authority by notice in writing and will be evidenced, for administrative purposes only, through a contract amendment. The Contracting Authority may exercise the option at any time within three (3) years after Contract award, by sending written notice to the Contractor.

1.1.3 In consideration of the prices paid to acquire the medium-lift helicopters the Contractor agrees to support Canada's Approved Maintenance Organization to maintain aircraft serviceability for a period up to 30 years by providing:

1.1.3.1 An Aircraft on Ground (A.O.G.) parts supply with shipping of required parts to locations in Canada such as Prince Rupert, BC, Stephenville, NL, Parry Sound, ON, etc. within 24 hours;

1.1.3.2 A Product Support and Field Service Representative who shall be available 24 hours per day, 7 days per week through a toll free telephone service;

1.1.3.3 Sufficient North American inventory to support CCG's operations;

1.1.3.4 Meet agreed Turn-around-Times (TAT) on repair and overhaul of components;

1.1.3.5 Availability of exchange components;

1.1.3.6 Availability of rental components; and

1.1.3.7 Release of Service Bulletins and Advisory Materials.

1.1.4 The Contractor also agrees that for the prices paid to acquire the medium-lift helicopters, the Contractor will do the following:

1.1.4.1 Simulator Design Support - The Contractor shall provide support to any third party Simulator Manufacturer engaged by Canada in the development and commissioning of the flight simulator(s). The Contractor shall also provide Canada with all design data and deliverables required to support the development, by a third party contractor, of a "Level D" Full Flight Simulator as outlined in Appendix D of Annex A, and shall grant to Canada all necessary licenses to facilitate the development and operation of the simulator(s).

1.1.4.2 Delivery Ceremony - The Contractor agrees to host a Contract Award and a "Delivery Ceremony(s)", as directed by Canada, at the Contractor's facility for handover of the first Helicopter. The ceremony may include Government of Canada personnel, dignitaries and media.

1.1.4.3 Photographs - The Contractor agrees to take photographs, as directed by Canada, at its facility during the delivery phases of each aircraft.

1.1.4.4 Aircraft Model - The Contractor shall deliver twelve (12) scale model helicopters approximately 1:40 scale. The models must be replicas of the helicopters being procured by Canada.

1.1.4.5 Site Access - The Contractor shall make available to Canada, with 48 hours notice, access to its facility to conduct a site visit during regular working hours. A site visit at the Contractor's facility may be initiated at the sole discretion of Canada.

Visits may be scheduled for the following reasons:

(a) Determine production progress;
(b) Conduct an audit; and
(c) VIP visit from the Government of Canada.

With reasonable notice, Canada reserves the right to have the company take photographs for Canada of designated CCG aircraft during production.

The Contractor shall be responsible to provide Canada with the necessary training, safety briefings and equipment required to visit its production site. The Contractor shall make available three (3) parking spaces to accommodate visits from Canada.

1.2 Optional Goods and Services

1.2.1 The Contractor grants to Canada the irrevocable option to acquire the goods (optional items, spare parts or ground support equipment) or services (optional factory training or courses) described in the Contract under the same terms and conditions and at the prices stated in the Contract. The option may only be exercised by the Contracting Authority by notice in writing and will be evidenced, for administrative purposes only, through a contract amendment.

1.2.2 The Contracting Authority may exercise the option at any time within three (3) years of contract award by sending a written notice to the Contractor.

1.3 As-and-when-requested Task Authorizations

1.3.1 The Contractor will provide the services of an "On-Site Field Service Representative", at rates on an as-and-when-requested basis using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract. The Contractor must not commence work until an authorized TA has been received by the Contractor. The Contractor acknowledges that any work performed before an authorized TA has been received will be done at the Contractor's own risk.

1.4 Industrial and Regional Benefits (IRB)

The IRB Terms and Conditions attached hereto as Annex C, which contain the Contractor's proposal for IRBs dated _____, shall form part of this contract.

2. 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.

2.1 General Conditions

2030, 2013-06-27, General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

1031-2, 2012-07-16, General Conditions - Contract Cost Principles (applicable if only one bidder is found compliant).

3. Period of the Contract

3.1 Period of the Contract (A9022C, 2007-05-25)

The period of the Contract is from date of Contract Award to (date to be inserted) inclusive**.**
(seven years following contract award for IRB purposes)

3.2 Delivery Date

The first helicopter shall be delivered on or before eighteen (18) months after contract award with each subsequent helicopter being delivered at a rate of one every three (3) months thereafter. All helicopters must be received on or before _____ (date dependant on number of helicopters contracted).

4. Authorities

4.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Michael MacNeil

Organization: Public Works and Government Services Canada
Acquisitions Branch
Civilian Aircraft Division

Address: Place du Portage, Phase 3, 8C1
11 Laurier Street
Gatineau, Quebec, K1A 0S5

Telephone: 819-956-0078
Facsimile: 819-997-0437
E-mail: michael.macneil@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.

4.2 Technical Authority

The Technical Authority for the Contract is:

Name:

Organization: Canadian Coast Guard
Address: 3rd Floor
200 Elgin Street,
Ottawa, Ontario
K1A 0E6

Telephone:
E-mail:

The Technical Authority 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.

4.3 Industrial and Regional Benefits Authority

Industrial and Regional Benefits (IRB) Authority

The IRB Authority is:

Name: Dennis Kean
Organization: Industry Canada

Address: IRB Directorate
235 Queen Street, 7th floor east
Ottawa, Ontario K1A 0H5
Attention: Dennis Kean

Telephone: (613) 941-1132
Email: Dennis.Kean@ic.gc.ca

The IRB Authority is responsible for all matters concerning the IRB requirements in the Contract. IRB matters should be discussed with the IRB Authority. However, changes to the Contract can only be made through a Contract Amendment issued by the Contracting Authority.

4.4 Contractor's Representative

Name:
Title:
Company:
Address:
Telephone:
E-mail address:

5. Payment

5.1 Basis of Payment

5.1.1 Basis of Payment - Limitation of Expenditure C0206C (2013-04-25)

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work, as determined in accordance with the Basis of Payment in Annex B, to a limitation of

expenditure of $_____ (insert the amount at contract award). Customs duties are included and Applicable Taxes are extra.

5.1.2 Limitation of Price (C6000C, 2011-05-16)

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.

5.1.3 Milestone Payments (H3009C, 2010-01-11)

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract, up to 100 percent of the amount claimed and approved by Canada if:

(a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Milestone Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

(b) the total amount for all milestone payments paid by Canada does not exceed 100 percent of the total amount to be paid under the Contract;

(c) all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives; and

(d) all work associated with the milestone and, as applicable, any deliverable required have been completed and accepted by Canada.

5.1.4 Task Authorization - Limitation of Expenditures C0204C (2013-04-25)

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work specified in the authorized Task Authorization (TA), detailed below, to the limitation of expenditure specified in the authorized TA.

Canada's liability to the Contractor under the authorized TA must not exceed the limitation of expenditure specified in the authorized TA. Customs duties are included and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized TA resulting from any design changes, modifications or interpretations of the Work will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

5.1.5 Standard Pricing Spares Parts List

Material shall be quoted using Contractors most recent Catalogue list price discounted at Government Rate of_____%.

5.1.6 Travel and Living

The Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and administrative overhead, in accordance with the Contractor's travel directives, for meal, private vehicle and incidental expenses not to exceed the costs provided in Appendices B, C and D of the *National Joint Council Travel Directive* and with the other provisions of the directive referring to "travellers", rather than those referring to "employees".

http://www.tbs-sct.gc.ca/pubs_pol/hrpubs/tbm_113/menu-travel-voyage-eng.asp

All travel must have the prior authorization of the Technical Authority.

All payments are subject to government audit.

5.2 Taxes - Foreign-based Contractor (C2000C, 2007-11-30)

Unless specified otherwise in the Contract, the price includes no amount for any federal excise tax, state or local sales or use tax, or any other tax of a similar nature, or any Canadian tax whatsoever. The price, however, includes all other taxes. If the Work is normally subject to federal excise tax, Canada will, upon request, provide the Contractor a certificate of exemption from such federal excise tax in the form prescribed by the federal regulations.

Canada will provide the Contractor evidence of export that may be requested by the tax authorities. If, as a result of Canada's failure to do so, the Contractor has to pay federal excise tax, Canada will reimburse the Contractor if the Contractor takes such steps as Canada may require to recover any payment made by the Contractor. The Contractor must refund to Canada any amount so recovered.

6. Invoicing Instructions Milestone Payment Claim

1. The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111, Claim for Milestone Payment. Each claim must show:

   (a) all information required on form PWGSC-TPSGC 1111;

   (b) all applicable information detailed under the section entitled "Invoice Submission" of the general conditions; and

   (c) the description and value of the milestone claimed as detailed in the Contract.

2. The Goods and Services Tax or Harmonized Sales Tax (GST/HST), as applicable, must be calculated on the total amount of the claim.

3. The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Technical Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place.

4. The Technical Authority will then forward the original and one (1) copy of the claim to the Contracting Authority for certification and onward submission to the Payment Office for the remaining certification and payment action.

5. The Contractor must not submit claims prior to delivery of the materiel or until all work identified in the claim is completed. Payment will only be made on receipt of satisfactory invoices duly supported by specified release documents and/or other documents called for under the contract.

7. Certifications

1. 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 term of the Contract. 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.

2. The helicopter type, model and variant shall hold a valid type certificate issued in accordance with Part V, subpart 21 of the Canadian Aviation Regulations that meets the Standards of Airworthiness of Chapter 529 of the Airworthiness Manual as applicable.

8. Applicable Laws

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

9. Priority of Documents

If there is a discrepancy between the wordings 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) the General Conditions 2030, 2013-06-27
(c) the Contract Cost Principles 1031-2, 2012-07-16 (applicable if only one compliant bidder)
(d) Annex A, Statement of Work
(e) Annex B, Basis of Payment
(f) Annex C, Industrial Regional Benefits Model Contract
(g) The Contractor's proposal dated _____

10. Insurance (G1005C, 2008-05-12)

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by

the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

11. Personal Injuries

It is understood and agreed that Canada will not be liable to the Contractor or any of its subcontractors for claims in respect of death, disease, illness, injury or disability which may arise in carrying out the services as defined herein. The Contractor agrees not to make any claims against Canada in respect of any of the foregoing.

12. Limitation of Liability (N0001C, 2008-05-12)

1. This section applies despite any other provision of the Contract and replaces the section of the general conditions entitled "Liability". Any reference in this section to damages caused by the Contractor also includes damages caused by its employees, as well as its subcontractors, agents, and representatives, and any of their employees.

2. Whether the claim is based in contract, tort, or another cause of action, the Contractor's liability for all damages suffered by Canada caused by the Contractor's performance of or failure to perform the Contract is limited to $ *contract value* . This limitation of the Contractor's liability does not apply to:

(a) any infringement of intellectual property rights; or
(b) any breach of warranty obligations.

3. Each Party agrees that it is fully liable for any damages that it causes to any third party in connection with the Contract, regardless of whether the third party makes its claim against Canada or the Contractor. If Canada is required, as a result of joint and several liability, to pay a third party in respect of damages caused by the Contractor, the Contractor must reimburse Canada for that amount.

13. Loss or Damage to Aircraft Prior to Delivery

Should an aircraft be damaged prior to the title transfer and delivery, the Contractor shall be responsible for repairing the aircraft or if an aircraft is damaged beyond repair, for replacing damaged aircraft.

14. Aircraft Acceptance

The Contractor shall provide fourteen (14) calendar days notice to the Contract Authority before the aircraft will be ready for aircraft acceptance.

1. Inspection will be carried out by the Technical Authority or his/her representative at time of acceptance. All Work completed on each aircraft shall be inspected in compliance with the requirements of the Canadian Aviation Regulations and is subject to final verification by the Technical Authority or his/her representative.

2. Acceptance procedures are described in Annex A, Statement of Work.

3. The Contractor shall provide reasonable office space, equipment and access to clerical assistance to the inspection personnel to aid in the acceptance and delivery process.

4. Any items not accompanying the completed aircraft shall be delivered in accordance with Incoterms 2010, DDP (Delivered Duty Paid) to Transport Canada, 200 Comet Private, Ottawa , Ontario.

15. Aircraft Delivery

Inspection and acceptance shall be carried out by and to the satisfaction of Canada at destination. The Contractor shall demonstrate to the satisfaction of the Technical Authority or his/her representative, that the equipment meets the specification as detailed under the Annex A. Any defects or damages noted during delivery inspection shall be documented. The Contractor shall be responsible for and assume all costs to repair any such defects or damages. Should the work or any portion thereof not be in accordance with the requirements of any resultant contract, the Technical Authority, or his/her representative, shall have the right to reject it or to require its correction. Provided that the aircraft is free from defects and damages, Canada will assume ownership of the aircraft. The transfer of the aircraft title to Canada shall constitute delivery of the aircraft to Canada.

Any formal communication with the Contractor regarding the quality of the work shall be undertaken by the Technical Authority through the Contracting Authority.

16. Conditions for transfer of each individual aircraft

1. Subject to the remaining provisions of this Article, title to individual aircraft shall transfer from the Contractor to Canada and vest in and be accepted by Canada in accordance with Article 15, **Aircraft Delivery**.

2. Subject to Article 15, **Aircraft Delivery ,** title and risk of loss in and to the individual aircraft shall transfer from the Contractor to Canada and be accepted by Canada from the Contractor with transfer of the aircraft title, subject to the provisions of Article 15 **Aircraft Delivery**.

3. Canada's obligation to take delivery, possession and risk of loss in and to each aircraft on the applicable Final Delivery Date hereunder from the Contractor shall be subject to the occurrence of the following events and the receipt by Canada of the following documents on the applicable Final Delivery Date (save and except if the Canada expressly waives occurrence or receipt of same):

(a) a current standard Certificate of Airworthiness in the transport category issued by Transport Canada for each completed aircraft;

(b) an assignment of warranties for each completed aircraft in the form of Annex "A" attached hereto, executed by the Contractor in favor of Canada;

(c) that each completed aircraft conform to the description set forth in Annex "A" attached hereto; and

(d) Canada having satisfactorily completed the inspection of each completed aircraft and the Contractor having made all corrections to deficiencies and non-conformities to each.

17. Industrial and Regional Benefits (IRB) Bid

Detailed information is within ANNEX "C" - Industrial and Regional Benefits Requirements

18. Notice of Labour Disputes (Xbf104, 1997-12-22)

Whenever the Contractor has knowledge that any actual or potential labour dispute is delaying or threatens to delay the timely performance of this Contract, the Contractor shall immediately give notice thereof, including all relevant information with respect thereto, to the Contracting Authority

19. Liens - Section 427 of the Bank Act (H4500C, 2010-01-11)

1. If any lien under section 427 of the Bank Act exists in respect to any materials, parts, work-in-process, or finished work for which the Contractor intends to claim payment, the Contractor agrees to inform the Contracting Authority without delay and agrees, unless otherwise instructed by the Contracting Authority, either:

(a) to cause the bank to remove such lien and to furnish the Contracting Authority, with written confirmation from the bank; or

(b) to furnish or cause to be furnished to the Contracting Authority an undertaking from the bank to the Contracting Authority that the bank will not make any claim under section 427 of the Bank Act on materials, parts, work-in-process, or finished work in respect of which payment is made to the Contractor under this Contract.

2. Failure to inform the Contracting Authority of such lien or failure to implement paragraph 1(a) or (b) above shall constitute default under the clause entitled "Default by Contractor" in the General Conditions of the Contract and shall entitle Canada to terminate the Contract.

20. Shipping Instructions - Delivery at Destination (D4001C, 2008-12-12)

Goods must be consigned to the destination specified in the Contract and Delivered Duty Paid (DDP) to Transport Canada, 200 Comet Private, Ottawa, Ontario, Canada, Incoterms 2010 for all shipments from a commercial contractor.

21. Rights to Reproduce Documentation

Where documentation deliverables provided by the Contractor as described in the attached Statement of Work represents or contains intellectual property owned by the Contractor shall ensure that the Canada shall have the right to reproduce and translate such documentation provided that such reproductions and translations shall be solely for the use of the Canada and that reproductions and translations shall be subject to the same restrictions on use and disclosure as may apply to the Contractor-owned documentation. Canada is not obligated to provide any translated copy to the Contractor.

22. Communications Notification

The successful bidder shall notify the Contracting Authority a minimum of ten (10) calendar days in advance of any public announcement, related to the award of this contract.

23. Warranty Period

The warranty period shall be as a minimum 24 months from date of delivery.

General Conditions 2030-22 (2013-06-27). Sub-section 7 of the Warranty clause shall not form part of this contract.

Section 1. of general conditions 2030-22 is amended by replacing the period of twelve (12) months by twenty-four (24) months.

All other provisions of the warranty section remain in effect.

24. Spare Parts and Ground Support Equipment

The Contractor shall provide the initial provisioning of spare parts and Ground Support Equipment (GSE) as per the contract.

25. Preservation/Packaging/Packing/Marking (Z0402C, 1992-04-01)

Preservation, packaging, packing and marking shall be in accordance with the Contractor's standard domestic commercial practice to ensure safe delivery at destination.

26. Task Authorization (B9054C, 2011-05-16)

A portion of Work to be performed under the Contract may be on an as and when requested basis using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract.

1. The Technical Authority will provide the Contractor with a description of the task using a Task Authorization form.

2. The Task Authorization (TA) will contain the details of the activities to be performed, a description of the deliverables, and a schedule indicating completion dates for the major activities or submission dates for the deliverables. The TA will also include the applicable basis and methods of payment as specified in the Contract.

3. The Contractor must provide the Technical Authority, within 14 calendar days of its receipt, the proposed total estimated cost for performing the task and a breakdown of that cost, established in accordance with the Basis of Payment specified in the Contract.

4. The Contractor must not commence work until a TA authorized by the Technical Authority has been received by the Contractor. The Contractor acknowledges that any work performed before a TA has been received will be done at the Contractor's own risk.

27. Task Authorization Limit (C9011C, 2013-04-25)

The Technical Authority may authorize individual task authorizations up to a limit of $25,000.00, Applicable Taxes included, inclusive of any revisions.

Any task authorization to be issued in excess of that limit must be authorized by the Technical Authority and Contracting Authority before issuance.

ANNEX A

STATEMENT OF WORK

(insert attached Annex A here)

ANNEX B

BASIS OF PAYMENT

ANNEX B

BASIS OF PAYMENT

Contract Line Item Number	Description	% of bidder's lot price	Amount
001	Agreement by Canada that the Contractor has completed Project Initiation Meeting	1%	TBD
002	Agreement by Canada that the Contractor has completed Preliminary Design Review	1%	TBD
003	Agreement by Canada that the Contractor has completed Critical Design Review	2%	TBD
004	Agreement by Canada for procurement of long-lead items, such as: engines, transmissions, and rotor components	3%	TBD
005	Helicopter #1 - Factory training for pilots (8 personnel)		
006	Helicopter #1 - Factory training for maintenance (7 personnel)		
007	Final Aircraft Acceptance of helicopter # 1 IAW the SOW by Canada at the Contractors' facility. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
008	Delivery Inspection of helicopter # 1 IAW the SOW after delivery by the Contractor. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
009	Final Aircraft Acceptance of helicopter # 2 IAW the SOW by Canada at the Contractor's facility. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
010	Delivery Inspection of helicopter # 2 IAW the SOW after delivery by the Contractor. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD

011	Final Aircraft Acceptance of helicopter # 3 IAW the SOW by Canada at the Contractor's facility. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
012	Delivery Inspection of helicopter # 3 IAW the SOW after delivery by the Contractor. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
013	Final Aircraft Acceptance of helicopter # 4 IAW the SOW by Canada at the Contractor's facility. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
014	Delivery Inspection of helicopter # 4 IAW the SOW after delivery by the Contractor. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
015	Final Aircraft Acceptance of helicopter # 5 IAW the SOW by Canada at the Contractor's facility. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
016	Delivery Inspection of helicopter # 5 IAW the SOW after delivery by the Contractor. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
017	Final Aircraft Acceptance of helicopter # 6 IAW the SOW by Canada at the Contractor's facility. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
018	Delivery Inspection of helicopter # 6 IAW the SOW after delivery by the Contractor. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
019	Final Aircraft Acceptance of helicopter # 7 IAW the SOW by Canada at the contractor's facility. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD

020	Delivery Inspection of helicopter # 7 IAW the SOW after delivery by the Contractor. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
021	Final Aircraft Acceptance of helicopter # 8 IAW the SOW by Canada at the Contractor's facility. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
022	Delivery Inspection of helicopter # 8 IAW the SOW after delivery by the Contractor. All issues identified have been rectified to the satisfaction of Canada.	(90% / # helos) / 2	TBD
023	Final receipt of all deliverables	3%	TBD
	Optional Items	**Quantity**	**Amount**
050	Each additional Factory Training for pilots (up to 4 personnel)	Each	
051	Each additional Factory Aircraft Maintenance Course (up to 4 personnel)	Each	
052	Hourly rate for Field Service Representative on as required basis for the duration of the Contract. (T&L excluded).	Hourly rate	
053	The Contractor shall be paid for reasonable Travel and Living expenses that have been pre-approved by the Technical Authority.	As and when required	
054	For the provision of spare parts listed in Table 2 of Annex D, Financial Bid Proposal, the contractor shall be paid the latest catalogue price, minus the discount percentage rate of _____ for each part purchased for the duration of the Contract.		
055	For the provision of tooling and equipment listed in Table 3 of Annex D, Financial Bid Proposal, the contractor shall be paid the bid		

	price for each purchased.		
056	For the provision of Ground Support Equipment listed in Table 4 of Annex D, Financial Bid Proposal, the Contractor shall be paid the bid price for each purchased.		
057	For Technical Authority approved tasks the Contractor shall be paid the firm price or hourly rate negotiated at tasking approval.	As and when required	
058	The provision of fuel flow control on both collective controls	Price per helicopter	
059	Paperless cockpit including but not limited to VFR/IFR charts, approach plates, flight manuals and company publications	Each	
060	Inside of all access panels and compartments painted white (engine, main rotor transmission, hydraulics)	Price per helicopter	
061	Extendable Seat Belts	Each	
062	External hard Points	Price per helicopter	
063	Auxiliary Fuel tank(s)	Each	
064	Health and usage monitoring system	Price per helicopter	
065	Electrically heated windshield	Price per helicopter	
066	Windshield wipers	Price per helicopter	
067	Helicopter design data, aircraft parts and equipment required to support the development of a "Level D" Full Flight Simulator		

068	Automatically deployable floats	Price per helicopter	
069	Automatically deployable life rafts upon activation of deployable floats	Price per helicopter	
070	Four-Axis Autopilot	Price per helicopter	

ANNEX C

INDUSTRIAL REGIONAL BENEFITS MODEL CONTRACT

(insert attached Annex C here)

ANNEX D

FINANCIAL BID PROPOSAL

ANNEX D

FINANCIAL BID PROPOSAL

1.1 General

1.1.1 This Annex provides instructions regarding the use of the Financial Bid Proposal by the Bidder. It provides a description of how the Financial Bid is to be completed and submitted separately by the Bidder as part of the Bidder's proposal.

1.1.2 All data required to complete the Financial Bid is contained within the Table below.

1.1.3 It is important the Bidder inserts its data into the appropriate Part, as instructed within the Pricing Table.

1.2 Financial Bid Proposal

1.2.1 Bidders shall submit their financial bid in accordance with the details in RFP. Line items from 001a to 001e for the medium helicopter shall be priced as if that line item will be purchased at Contract award. Canada may purchase up to a maximum of 8 medium helicopters (line item 001e). Canada may also make payment for expensive parts and long lead items procured and received provided that the parts have been paid for by the contractor and the ownership of the parts can be transferred to Canada. This will be discussed after contract award.

1.2.2 The prices for the Optional Item Pricing and those listed in Tables 3 and 4 below will have a validity period of 36 months after contract award.

Table 1

Contract Line Item No.	Description	QTY	Unit of Issue	Firm unit or Lot price
001a	For the construction and delivery of four (4) CCG medium helicopters in configuration A including P2, P3, P4, P5, P6 and P7 in accordance with section 2.1.7 of the Bid Evaluation Plan.	4	Lot	
001b	For the construction and delivery of five (5) CCG medium helicopters in configuration A including P2, P3, P4, P5, P6 and P7 in accordance with section 2.1.7 of the Bid Evaluation Plan.	5	Lot	
001c	For the construction and delivery of six (6) CCG medium helicopters in configuration A including P2, P3, P4, P5, P6 and P7 in	6	Lot	

	accordance with section 2.1.7 of the Bid Evaluation Plan.			
001d	For the construction and delivery of seven (7) CCG medium helicopters in configuration A including P2, P3, P4, P5, P6 and P7 in accordance with section 2.1.7 of the Bid Evaluation Plan.	7	Lot	
001e	For the construction and delivery of eight (8) CCG medium helicopters in configuration A including P2, P3, P4, P5, P6 and P7 in accordance with section 2.1.7 of the Bid Evaluation Plan.	8	Lot	
	Optional Item Pricing			
002	Each additional optional Factory Training for pilots (up to 4 personnel)	1	Lot	
003	Each additional optional Factory Aircraft Maintenance Course (4 personnel)	1	Lot	
004	Hourly rate for Field Service Representative on as required basis for three (3) years from Contract Award. (T & L excluded)	1	Hourly Rate	
005	For the provision of spares the Contractor agrees to supply parts at the list price less _____ percent	% less than list price	% less	
006	The provision of fuel flow control on both collective controls	Price per helicopter	Each	
007	Paperless cockpit including but not limited to VFR/IFR charts, approach plates, flight manuals and company publications	Price per helicopter	Each	
008	Inside of all access panels and compartments painted white (engine, main rotor transmission, hydraulics)	Price per helicopter	Each	
009	Extendable Seat Belt extensions	1	Each	
010	External hard Point	Price per helicopter	Each	
011	Auxiliary fuel tank (s)	Price per helicopter	Each	
012	Health and Usage monitoring system	Price per helicopter	Each	
013	Electrically heated windshield	Price per	Each	

		helicopter		
014	Windshield wipers	Price per helicopter	Each	
015	Helicopter design data, aircraft parts and equipment required to support the development of a "Level D" Full Flight Simulator		Each	
016	Automatically deployable floats	Price per helicopter	Each	
017	Automatically deployable life rafts upon activation of deployable floats	Price per helicopter	Each	
018	Four Axis Autopilot	Price per helicopter	Each	

Table 2 - Spare Parts

CLIN #	Description	Manufacturer	Model #	Part #	Quantity	U o I	Firm Unit Price

Table 3 - Tooling and Equipment

CLIN #	Description	Manufacturer	Model #	Part #	Quantity	U o I	Firm Unit Price

Table 4 - Ground Support Equipment

CLIN #	Description	Manufacturer	Model #	Part #	Quantity	U o I	Firm Unit Price

ANNEX E

BID EVALUATION PLAN

(insert attached Annex E here)

ANNEX F

MISSION PROFILES

(insert attached Annex F here)

ANNEX G

BID EVALUATION SCORE SHEET

(insert attached Annex G here)

ANNEX H

INDUSTRIAL AND REGIONAL BENEFITS (IRB) EVALUATION PLAN

(insert attached Annex H here)

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Fisheries and Oceans Canada | Pêches et Océans Canada

Coast Guard | Garde côtière

Canadian Coast Guard

ANNEX A
Statement of Work – Medium Helicopters
CCG Helicopter Project
January 9th, 2014

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Approvals

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Director General, Major Projects	R. Wight	Approved: Date:

TABLE OF CONTENTS

List of Acronyms

ACRONYM	TERM
AD	Airworthiness Directives
AMO	Approved Maintenance Organization
AO	Air Operator
AOC	Air Operator Certificate
AOG	Aircraft on the Ground
ASD	Aircraft Services Directorate
ATP	Acceptance Test Plan
CAMP	Computerized Aircraft Maintenance Program
CARs	Canadian Aviation Regulations
CCG	Canadian Coast Guard
CDR	Critical Design Review
CDUs	Cockpit Control & Display Units
CMP	Configuration and Change Management Plan
ACRONYM	TERM
AD	Airworthiness Directives
AMO	Approved Maintenance Organization
AO	Air Operator
FFS	Full Flight Simulator
FSR	Field Service Representative
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICD	Interface Control Documents
IP	Intellectual Property
MPPR	Monthly Project Progress Reports
MPS	Master Project Schedule
NAA	National Aviation Authority
OEM	Original Equipment Manufacturer
PDR	Preliminary Design Review
PMBOK	Project Management Book of Knowledge
PMP	Project Management Plan
PRM	Progress Review Meeting
PWGSC	Public Works and Government Services Canada
QA	Quality Assurance
QMP	Quality Management Plan

ACRONYM	TERM
QRH	Quick Reference Handbook
RMP	Risk Management Plan
SB	Service Bulletins
STC	Supplemental Type Certification
TA	Technical Authority
TBO	Time Between Overhauls
TC	Transport Canada
UM	Unscheduled Meetings
WBS	Work Breakdown Structure

1 INTRODUCTION

1.1 Background

The Canadian Coast Guard (CCG) has a requirement to procure up to 24 new helicopters to renew its fleet. This procurement will include light helicopters and medium helicopters and may require procuring a third type of helicopter suited to support the *CCGS John G. Diefenbaker.*

These helicopters will support a number of CCG programs, including Aids to Navigation, Icebreaking services, Marine Communication Traffic Services, Environmental Response and Search and Rescue, as well as the programs of the Department of Fisheries and Oceans and other government departments. Consequently, they will support activities such as ice reconnaissance, maintenance and construction of aids to navigation and telecommunications equipment, personnel and cargo transfer between ship and shore, and support to science and fisheries enforcement. CCG helicopters are required to operate in all areas of Canada, including the East and West coasts, the Arctic, Great Lakes and St. Lawrence Seaway, as well as inland waterways and Canada's north.

The Aircraft Services Directorate (ASD) of Transport Canada is responsible for operating and maintaining the CCG Helicopter fleet, as well as the development of any associated operational procedures and training programs. The Aircraft Services Directorate is an Air Operator certified under Canadian Aviation Regulations and delivers services to CCG through its National Headquarters in Ottawa, adjacent to MacDonald Cartier Airport and its nine regional bases located in Prince Rupert and Victoria, British Columbia; Parry Sound, Ontario; Quebec City, Quebec; Shearwater, Nova Scotia; Charlottetown, Prince Edward Island; Saint John, New Brunswick; Stephenville and St. John's, Newfoundland and Labrador.

1.2 Scope

This Statement of Work details the requirements for the activities and deliverables associated with the procurement and delivery of medium helicopters for the Canadian Coast Guard, an agency of the Department of Fisheries and Oceans. The Contractor shall deliver helicopters of a proven design, certified for operation in Canada, in accordance with Canadian Aviation Regulations (CAR).

2 REFERENCE DOCUMENTS

The Contractor shall fulfil the requirements as stipulated in the Canadian Coast Guard Medium Helicopter Baseline Requirements Document Version dated December 12, 2013, which is attached to this Statement of Work (SOW), as APPENDIX A.

The following documents provide further guidance to this Statement of Work:

1) Canadian Aviation Regulations Part V, Subpart 21, Approval of the Type Design or a Change to the Type Design of an Aeronautical Product; Website - http://www.tc.gc.ca/CivilAviation/Regserv/Affairs/cars/Part5/521.htm

2) Canadian Aviation Regulation Part VII, subpart 3, available at Transport Canada Website - http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part7-subpart3-2150.htm

3) Canadian Coast Guard Identification Program Manual(TP 4011), http://ccg-gcc.ncr.dfo-mpo.gc.ca/fleet-flotte_2010/home-accueil/Publications/TP4011_Section_0.pdf

4) Fleet Circular FC-02-2010 – Application of Language in the Marking of CCG Ships and Aircraft, http://ccg-gcc.ncr.dfo-mpo.gc.ca/fleet-flotte_2010/home-accueil/Circulars/5323_2010-02.pdf

5) Fleet Circular FC-08-2007 – Canadian Coast Guard Fleet Identity Colour Standard, http://ccg-gcc.ncr.dfo-mpo.gc.ca/fleet-flotte_2010/home-accueil/Circulars/5323_2007-08.pdf

6) Canadian Aviation Regulations (CARS) Part V - Standard 573 - Approved Maintenance Organizations
Website - http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part5-standards-standard573-1972.htm

7) Transport Canada Staff Instruction 513-003, Acceptance and Approval of Foreign Design Changes, 15 September 2008.
Website - http://www.tc.gc.ca/eng/civilaviation/opssvs/managementservices-referencecentre-documents-500-513-003-968.htm

8) Transport Canada Advisory Circular 603-001, Use of Night Vision Imaging Systems, 3 February 2012.
Website - http://www.tc.gc.ca/eng/civilaviation/opssvs/managementservices-referencecentre-acs-600-603-001-1467.htm

9) Canadian Aviation Regulations (CARS), subpart 521, Supplemental Type Certificates

Canadian Aviation Regulations (CARS) Part V – Airworthiness Subpart 21 - Division V - Supplemental Type Certificates
Website - http://www.tc.gc.ca/CivilAviation/Regserv/Affairs/cars/Part5/521.htm

10) Transport Canada Advisory Circular AC 521-005, 2012-03-16, Supplemental Type Certificates
Website - http://www.tc.gc.ca/eng/civilaviation/opssvs/managementservices-referencecentre-acs-500-521-005-1484.htm

11) Transport Canada Advisory Circular (AC) No. 521-004 - Changes to the Type Design of an Aeronautical Product
Website - http://www.tc.gc.ca/eng/civilaviation/opssvs/managementservices-referencecentre-acs-500-521-004-1495.htm

12) International Air Transport Association (IATA) document "Flight Simulation Training Device Design & Performance Data Requirements" Ref. No: 9019-07, latest revision

13) ICAO–Document 9625, The Manual of Criteria for the Qualification of Flight Simulation Training Devices Volume II, Helicopters

14) Transport Canada, Aeroplane and Rotorcraft Simulator Manual TP9685E, Revision 2
Website - http://www.tc.gc.ca/eng/civilaviation/publications/tp9685-menu-5226.htm

15) Federal Aviation Administration, FAA 14 CFR PART 60—Flight Simulation Training Device Initial and Continuing Qualification and Use
Website - http://www.faa.gov/about/initiatives/nsp/media/consolidated_version.pdf

3 STATEMENT OF WORK

The Contractor shall deliver between four (4) and eight (8) new medium helicopters as specified in the Canadian Coast Guard Medium Helicopter Baseline Requirements Document, provided in APPENDIX A of this SOW.

The Contractor shall satisfy the data requirements for project deliverables as specified in APPENDIX C of this document.

All airframe and components shall be new near zero time and cycles. This takes into account the accumulation of time and cycles for the purpose of flight testing and ferrying the aircraft.

Nothing contained or omitted from this Statement of Work shall affect or otherwise diminish the Contractor's obligation to deliver, at minimum, complete, fully functioning helicopters that are certified for operation in Canada.

3.1 Project Requirements Overview

Following Contract Award, the Contractor shall prepare and deliver the Project Management Plan and associated documents describing the project management methodology to be used in the administration of this project.

The Contractor shall conduct Preliminary Design Reviews and Critical Design Reviews to enable Canada to review all aircraft modification kits and items requiring Supplemental Type Certification (STC), which have been developed to satisfy the requirements of the specified CCG Helicopter "Configuration A".

Prior to delivery of the first aircraft, the Contractor shall deliver the training curriculum, training materials and training courses for both Pilots and Maintenance personnel.

The Contractor shall deliver a detailed maintenance program for the delivered aircraft.

Following the completion of helicopter production, the Contractor shall confirm these STC items and shall verify that the proposed aircraft meets all technical, operational and performance requirements as specified in this Statement of Work. This is to take place during Aircraft Acceptance. All aircraft test and acceptance activities shall be executed at the Contractor's facilities.

Following aircraft acceptance, the Contractor shall deliver all helicopters to Transport Canada, Aircraft Services Directorate, 200 Comet Private, Hangar T-58, Ottawa Airport, Ottawa, Ontario.

Where the Medium Helicopter Baseline Requirements refer to Certification in accordance with Canadian Aviation Regulations, the appropriate documents shall accompany the deliverable item, as proof of compliance.

3.2 Project Management

The Contractor shall assign a Project Manager to the project who shall be given the authority and resources to successfully execute the contract.

The Project Manager shall be the single point of contact for formal communication between the Contractor and Canada.

The Contractor shall provide the necessary personnel, management systems and infrastructure to ensure effective and efficient administration, execution, monitoring, control, reporting and delivery of all aspects of the CCG Medium Helicopter Contract.

3.2.1 Project Management Plan

The Bidder shall supply a preliminary Project Management Plan (PMP) as part of their proposal together with such subordinate plans as are necessary to clearly convey the Bidder's strategy.

The Contractor must use a Project Management system that reflects industry best practices, such as the Project Management Body of Knowledge (PMBOK) or equivalent.

The final PMP shall be delivered to Canada for review and acceptance after Contract Award, as outlined in the Project Schedule in APPENDIX B.

The PMP shall be kept current during the course of the Work. Subsequent amendments to the PMP shall be forwarded to Canada for review and acceptance.

All activities for this project shall be managed in accordance with the accepted PMP.

The PMP shall identify and describe all activities and processes necessary to conduct the project, and the resources that will be allocated to complete the activities. The PMP shall include the following, as a minimum:

a. Master Project Schedule

b. Contractor Communication and Issue Management Plan

c. Risk Management Plan

d. Quality Management Plan

e. Technical Data Management Plan

f. Configuration and Change Management Plan

g. Infrastructure Plan

h. Human Resources Plan

3.2.1.1 Master Project Schedule

As part of the Project Management Plan, the Contractor shall provide a Master Project Schedule (MPS).

The MPS shall establish the baseline for measuring the progress and performance of the Contractor.

The MPS shall clearly identify contractual commitments and milestones in the order of their planned occurrence, in accordance with the schedule requirements, as outlined in APPENDIX B to this document.

The MPS shall outline the project milestones, associated activities and deliverables extending from Contract Award through to the delivery of the final aircraft and project close out activities. This should provide details describing helicopter production and shall, as a minimum:

a. Include a detailed Work Breakdown Structure and the corresponding activity list to at least two levels, in sufficient detail to define and monitor the scope of work.

b. The sequence of events and required timeframes associated with each milestone.

c. Indicate relationships and inter-dependencies between all activities.

d. Provide a corresponding Gantt Chart, highlighting the Contractor's deliverables and significant events and all Critical Path Activities.

e. Include all activities associated with the development and approval of Supplemental Type Certificates (STCs).

f. Indicate activities requiring Canada's participation, such as training, test, acceptance and delivery.

The Contractor shall update the MPS for delivery as part of the Project Progress Report each month.

3.2.1.2 Contractor Communications and Issues Management Plan

The Communications and Issues Management Plan shall describe the policies, procedures and management systems for communications with Canada, and for the management of project issues and action items.

The Communications and Issue Management Plan shall, as a minimum, involve establishing a **Project Issues Register** to define how responses to technical and scheduling issues will be managed and communicated within the Contractor's organization and to Canada.

3.2.1.3 Risk Management Plan

As part of the Project Management Plan, the Contractor shall provide a Project Risk Management Plan (RMP) consistent with PMBOK and industry best practices.

The RMP shall describe the policies, procedures and management systems within the Contractor's organization to manage both foreseen and unforeseen project risks.

The RMP shall also include risk strategies that will be used to avoid, control, mitigate or transfer risks within this project.

The Contractor shall provide and update a Project Risk Register for delivery as part of the Project Progress Report each month.

3.2.1.4 Quality Management Plan

As part of the Project Management Plan, the Contractor shall provide a Project Quality Management Plan (QMP).

The QMP shall describe the policies, procedures and management systems within the Contractor's organization that are used to manage quality assurance and quality control activities.

The Contractor's quality management principles and standards shall comply with ISO 9001:2008 or equivalent.

The Contractor shall permit Canada to audit the Contractor's Quality Management System. Should Canada decide to exercise this right, Canada will provide no less than two weeks written notice.

3.2.1.5 Technical Data Management Plan

The Technical Data Management Plan shall define the system by which the Contractor identifies, tracks and manages the configuration of technical and other data produced as part of this Work. Technical data shall include reports, drawings, books and booklets, design data and other documentation.

As a minimum, the Technical Data Management Plan shall define the Contractor's system for:

a. Managing and verifying the quality of technical documentation

b. Identifying and numbering technical data

c. Managing and controlling versions of data

d. Identifying the process through which technical data is delivered to Canada

e. Notifying Canada of version changes

f. Using a register, index or equivalent system to track in a logically organized, single instance all of the data developed. The register shall be maintained by the contractor, maintained current throughout the work, version controlled and regularly delivered to Canada to ensure an accurate, shared picture of the state of required technical data. The register shall include, but not be limited to, the following information:

- Revision level of document
- Revision date of document
- Revision description
- Record of OPI for each item in the register
- Version and date of the register

3.2.1.6 Configuration and Change Management Plan

As part of the Project Management Plan, the Contractor shall provide a Project Configuration and Change Management Plan (CMP).

The CMP shall describe the policies, procedures and management systems within the Contractor's organization used to define, and manage deviations from the Baseline Requirements of the helicopter during the project.

The CMP shall define the following, as a minimum:

a. The Contractor's plan for monitoring that the CCG Medium Helicopter Baseline Requirements are being met in order to ensure that the delivered helicopter fulfills the requirements of the Contract.

b. A process for seeking approval from Canada to amend the approved requirements (technical and non-technical), including procedures for the initiation and approval of all design change requests and the associated roles and responsibilities for the Contractor and Canada.

c. The physical configuration audit process for confirming that the as-built aircraft configuration reflects the contractual requirements and that all aircraft are identical.

The Configuration and Change Management Plan shall be consistent with ISO 10007:2003 Guidance Document, or equivalent.

3.2.1.7 Infrastructure Management Plan

The Contractor shall deliver an Infrastructure Management Plan outlining the infrastructure, including the production and administrative infrastructure necessary to complete the project as part of the PMP.

3.2.1.8 Human Resources Plan

As part of the PMP, the Contractor shall provide a Human Resources Plan (HRP) to identify its strategy to ensure that it has the required human resource capacity with the right experience, education and qualifications to successfully manage and complete the work.

The Contractor shall provide a list of key management personnel and their resumes, as part of the HRP.

3.2.2 Project Progress Reports

The Contractor shall submit Monthly Project Progress Reports (MPPRs) to the Contracting Authority, no later than the third Thursday of each month, for the duration of the project.

The MPPR shall indicate the progress of the project work, including accomplishments and areas of concern, which shall be supported with a written explanation for each item.

The MPPR shall include the following items, as a minimum:

a. A written assessment of the current status of the project.

b. A qualitative and quantitative explanation of the physical progress of the work for the current monthly reporting period.

c. An updated Master Project Schedule, including project activity and milestone accomplishments, as well as areas of concern for each item identified and an explanation of any plans around work as necessary to maintain project schedule.

d. Identification and explanation of unresolved project, technical and material issues.

e. Photos shall be included, as appropriate, to explain project progress or issues, expected project activities and milestone accomplishments for each of the next three reporting periods.

f. An updated Project Action Item Register, identifying the status of all action items arising from project meetings.

g. An updated Project Issues Register addressing any project, technical or schedule concerns.

h. A Risk Register showing updated risk status and mitigation plans.

3.2.3 Project Meetings

The Contractor shall hold Project Meetings to ensure that Canada is kept current concerning the performance of the Contractor’s contractual obligations and to ensure an exchange of information between the Contractor and Canada.

The Contractor shall provide a suitable representative with decision-making authority at all Project Meetings and teleconferences. The representative (s) shall satisfy that all project requirements are being met and that the project schedule is maintained.

The Contractor shall arrange and provide conference facilities that are adequate to accommodate the attendees for all meetings.

Unless otherwise stated, the Contractor shall provide clerical support for all meetings and shall take minutes and record action items of all meetings. Unless otherwise stated, the Contractor shall provide a draft of all meeting minutes for review and acceptance by Canada a maximum of five (5) working days following the meeting. The final agreed minutes between the parties shall be prepared by the Contractor and forwarded to Canada for acceptance and signature.

The Contractor shall record any action items along with the assigned responsibilities and deadlines identified during all meetings. All action items shall be consolidated after each meeting and provided to Canada with the meeting minutes. A Project Action Item Register consolidating and recording action items identified during all project meetings is also to be maintained. This should provide a description of the assigned responsibilities and deadlines and identify the designated actionee for each item.

Canada may cancel meetings at its discretion. Rescheduling of meetings must be done by mutual agreement between the Contractor and Canada. Meeting requirements can be satisfied through teleconferences, face-to-face, video conferencing or any other method agreed to between the Contractor and Canada.

Project Meetings shall be held during the course of the project as indicated below.

3.2.3.1 Project Initiation Meeting

A Project Initiation Meeting (PIM) shall be hosted by the Contractor at their facility within two (2) weeks following contract award.

The Project Initiation Meeting is the first official meeting between the Contractor and Canada. This meeting introduces the members of the Contractor's Project Team and Canada, and provides the opportunity to discuss the role of each team member. Other ongoing priorities in the project that involve Canada may also be discussed at this meeting (ex. schedule).

3.2.3.2 Project Progress Review Meeting

Project Progress Review Meetings (PRM) shall be held on a monthly basis. Meetings may be held more frequently if requested by the Contractor or Canada.

The PRM shall normally be held at the Contractor's facility and will be chaired by Canada. The purpose of the PRM is to review the progress of the project, including but not limited to any deviations from the work plan, risks and risk mitigation strategies, the Master Project Schedule and the Project Management Plan as a whole.

The Contractor shall prepare and submit a draft PRM agenda to Canada for review and consensus five (5) working days prior to each PRM. The Contractor shall prepare and distribute the final agenda at the PRM.

The status of the Master Project Schedule shall be a standing item on the agenda for the PRM.

PRM action items shall be reviewed during each meeting to provide the status of all items.

3.2.3.3 Ad-Hoc Meetings

Ad-hoc or unscheduled meetings may be required during the course of the project to address issues such as schedule delay, or significant concerns of a technical or contractual nature, which warrant immediate discussion or action. An unscheduled meeting may be initiated by the Contractor or Canada.

3.3 Design and Configuration Control

3.3.1 Configuration Control

The Contractor shall maintain configuration control of all hardware and all software components and units together with the corresponding documentation on requirements and testing in accordance with the requirements of the CMP outlined in Section 3.2.

3.3.2 Design Reviews

3.3.2.1 Preliminary Design Review Meeting

The Preliminary Design Review (PDR) Meeting shall be held at the Contractor's facility on the date specified in the Master Project Schedule. The Contractor shall chair the PDR.

The purpose of the PDR is to present the preliminary helicopter design, corresponding to the CCG Helicopter Configuration A, to Canada and to ascertain that it satisfies the contractual requirements, with acceptable risk and within the project cost and schedule constraints, before proceeding with detailed design. The PDR Meeting shall establish the basis for proceeding with detailed design.

The Contractor shall prepare and submit a draft PDR agenda and all associated draft meeting materials to Canada for review, five (5) working days prior to the meeting.

The Contractor shall prepare the final agenda and all final meeting and presentation materials for distribution at the PDR.

Meeting and presentation materials shall include documentation and drawings identifying the equipment configurations, specifications and interfaces for each proposed aircraft design option and any modification kits requiring Supplemental Type

Certification. This information shall be provided in the form of drawings and data sheets in a format mutually agreed upon between the Contractor and Canada.

During the PDR the Contractor shall present and demonstrate the following:

a. All selected design options and the proposed designs for all aircraft modification kits to be delivered through Supplemental Type Certification (STC) developed specifically to satisfy the requirements of the Contract.
b. Interfaces have been identified, and verification methods are described.
c. All system requirements have been allocated, the requirements are complete, and the flow down is adequate to verify system performance.
d. The design is verifiable and that the risks have been identified, categorized, and mitigated, as appropriate.
e. The proposed design satisfies the specified CCG Medium Helicopter Baseline Statement of Requirements and all contractual requirements.

The PDR will be defined as complete when Canada is satisfied that the proposed aircraft design will fulfill the requirements of the Contract and all outstanding PDR action items are resolved to the satisfaction of Canada.

3.3.2.2 Critical Design Review Meeting

The Critical Design Review (CDR) shall be held at the Contractor's facility. The Contractor shall chair the CDR.

The purpose of the CDR is for the Contractor to demonstrate to Canada that the proposed aircraft design satisfies the contractual requirements and that the maturity of the proposed final helicopter design is sufficient to proceed to aircraft fabrication, assembly and integration. The CDR will address the interfaces between configuration items.

The Contractor shall prepare and submit a draft CDR agenda and all associated draft meeting materials to Canada for review, five (5) working days prior to the meeting. The final agreed upon agenda and meeting materials shall be prepared by the Contractor for distribution at the CDR.

Meeting and presentation materials shall include final design fabrication documentation. This information shall be provided in the form of drawings and data sheets in a format mutually agreed upon between the Contractor and Canada and shall be reviewed by Canada to ensure that the design fulfills contractual requirements.

The CDR documentation package shall include the following information:

a. Final Design Documents, production drawings and schematics for each proposed aircraft design option and any modification kits requiring Supplemental Type Certification

b. The complete aircraft Maintenance Plan

c. Recommended Draft Spares List

During the CDR meeting the Contractor shall demonstrate that the following objectives have been met:

a. The production processes and controls confirm that the design can proceed to the fabrication stage.

b. The planned Quality Assurance (QA) activities have established the requisite verification and screening processes to ensure design integrity.

c. Show that the proposed design satisfies the specified CCG Medium Helicopter Baseline Statement of Requirements.

d. The final design resolves all issues and action items identified during PDR and CDR.

The CDR will be defined as complete when Canada is satisfied that the proposed aircraft design will fulfill the requirements of the Contract, is sufficiently mature to proceed with production, and that all outstanding PDR and CDR action items are resolved to the satisfaction of Canada.

3.4 Aircraft Acceptance

Prior to delivery and title transfer of the aircraft, the Contractor shall conduct an Aircraft Acceptance Test to determine that the helicopter satisfies the requirements of the Contract.

Acceptance and Delivery of the Helicopter by Canada will in no way relieve the Contractor of responsibility for product quality and the responsibility for assuming corrective measures should deficiencies be detected within the warranty period.

3.4.1 Aircraft Acceptance Test Plan

The Bidder shall provide a preliminary Aircraft Acceptance Test Plan (ATP), as part of the proposal.

The final ATP shall be delivered to Canada for review and acceptance as outlined in the Project Schedule in APPENDIX B.

The Aircraft Acceptance Test Plan shall address the following:

a. **Operational Acceptance Testing** - Verification of the aircraft systems and equipment to ensure that processes and procedures are in place to allow the system to be operated and maintained. This can be accomplished through test flights, review of flight test manual and manual supplements, maintenance manual and maintenance manual supplements, maintenance planning and analysis data, as well as ground checks and engine run ups;

b. **Contract Acceptance Testing** - Verification that the aircraft systems and equipment that have been tested against acceptance criteria as documented in the Contract, prior to system and equipment acceptance.

The ATP shall provide for the following items as a minimum:

a. Introduction and Objectives
b. Test Schedule
c. Test Methodology
d. Test Procedures
e. Test Roles and Responsibilities
f. Data Analysis Methodology
g. Test Results and Conclusions
h. Test Report

The Aircraft Test Schedule shall form part of the Master Project Schedule.

The final ATP shall be delivered to Canada in accordance with the requirements of the Project Schedule in APPENDIX B.

3.4.2 Aircraft Acceptance Test

The Aircraft Acceptance Test shall be conducted for each aircraft ordered and witnessed by Canada. The Aircraft Acceptance test shall include a physical configuration audit and test flight. The Contractor shall provide the necessary resources and make available all of the necessary tools to successfully conduct the Aircraft Acceptance Test. The Aircraft Acceptance shall be carried out in accordance with the Acceptance Test Plan.

The Aircraft Acceptance Test shall include but is not limited to:

a. Ground checks: external surfaces, bays and cabin visual inspection, static aircraft system and cockpit checks, engine tests.
b. Operational checks and demonstrations: to confirm that all operational and mission specific requirements and equipment is functioning for its intended purpose.
c. Acceptance flight: checks during flight of all aircraft systems (including cabin systems) and aircraft behaviour.
d. Physical rework or provision of solutions for all technical and quality snags.
e. Production of a deficiencies report, corrective action plan and status report.
f. Completion of technical acceptance: technical acceptance of the aircraft and all associated documents attesting the aircraft's compliance to the type certificate and conformity to the technical specification allowing the issuance of the Canadian Certificate of Airworthiness.

3.4.3 Aircraft Acceptance Test Report

At the conclusion of the Aircraft Acceptance Test, the Contractor shall prepare and present an Aircraft Acceptance Test Report to be provided to Canada within five (5) working days following the test completion.

The report shall contain the test procedures, the test conditions, anticipated test results and the actual test results. The Aircraft Test Report shall document any failures, non-conformities, issues, discrepancies or deficiencies identified during the test. It shall outline corrective action plans and actions taken to resolve outstanding items. This report shall be presented in a format acceptable to Canada. The Report shall be reviewed and accepted by Canada.

The Contractor shall coordinate a meeting with all participants immediately following the Aircraft Acceptance Test to confirm test results.

Where failures or non-conformities, issues, discrepancies or deficiencies are identified in the Aircraft Acceptance Test Report, the Contractor shall take all necessary action to remedy the outstanding items and to ensure aircraft compliance with all contractual requirements.

3.4.4 Aircraft Acceptance

Canada will not accept the aircraft until all issues, discrepancies or deficiencies identified in the Aircraft Acceptance Test Report have been rectified.

Aircraft Acceptance will involve two meetings: a Preliminary Aircraft Acceptance Meeting and a Final Aircraft Acceptance Meeting.

3.4.4.1 Preliminary Aircraft Acceptance Meeting

Subsequent to the Aircraft Acceptance Test and prior to the preliminary acceptance of each aircraft, a Preliminary Aircraft Acceptance Meeting shall be held at the Contractor's facility to address any deficiencies and non-conformities that were identified during aircraft test.

The Preliminary Aircraft Acceptance Meeting shall be chaired by the Contractor.

The meeting shall be used as a forum to engage Canada in a review and acceptance of any proposed Corrective Action Plans. The Contractor shall deliver Preliminary Aircraft Acceptance Meeting minutes and Action Items.

3.4.4.2 Final Aircraft Acceptance Meeting

Subsequent to the Preliminary Aircraft Acceptance meeting and prior to formal acceptance and title transfer of each aircraft, a Final Aircraft Acceptance Meeting will be held at the Contractor's facilities.

The Final Aircraft Acceptance Meeting shall be co-chaired by the Contractor and Canada. The Contractor shall deliver Final Aircraft Acceptance Meeting minutes and action items.

During the Final Aircraft Acceptance meeting the Contractor shall:

a. Demonstrate that corrective action plans have been implemented and the deficiencies and non-conformities of the aircraft have been resolved to the satisfaction of Canada.

b. Transfer the aircraft's technical records, related drawings and manuals including all supplemental instructions for continued airworthiness to Canada.

c. Provide the documents for change of ownership and delivery of the aircraft.

3.5 Aircraft Delivery

The Contractor shall deliver all helicopters to Canada in accordance with the terms and conditions of the Contract.

3.5.1 Aircraft Delivery and Title Transfer

Subsequent to the Final Aircraft Acceptance, the Contractor shall transport the aircraft to Transport Canada, Aircraft Services Directorate (ASD), 200 Comet Private, Ottawa, Canada.

Upon arrival in Ottawa, the Contractor and Canada shall jointly meet to conduct the aircraft delivery inspection to confirm that the aircraft is delivered in the same condition that it was accepted.

Any defects or damages noted during delivery shall be documented in the aircraft delivery check list as part of the meeting minutes and action items.

The Contractor shall repair and assume all costs to repair any defects or damages.

Subject to the aircraft being free from defects and damages, the transfer of the aircraft's title to Canada shall conclude the delivery process.

The Contractor shall deliver Aircraft Delivery Meeting Minutes and Action Items.

3.5.2 Aircraft Delivery Schedule

The Contractor shall deliver the first and subsequent aircraft in accordance with the Project Schedule provided in APPENDIX B. Aircraft delivery shall take place within five (5) working days of Aircraft Acceptance.

3.6 Training

3.6.1 General

The Contractor shall provide training courses for pilots and maintenance personnel in English. These courses shall be delivered at the Contractor's facilities in North America or alternate facilities in North America, as jointly agreed by the Contractor and Canada.

For the purposes of this document, one training course is defined as one continuous training session, having a minimum of two (2) and maximum of eight (8) participants from Canada.

Unless otherwise agreed, the Contractor shall provide a complete set of training materials and manuals to each candidate upon arrival to training. All training materials and manuals shall be provided in hard copy and will be retained by each candidate.

The Contractor shall deliver to Canada a video recording of one complete pilot Aircraft Type Endorsement course and one complete Factory Maintenance course. Video recordings of training will be used for the sole purpose of providing initial and re-current training to CCG personnel.

3.6.2 Training Plan

The Bidder shall supply a preliminary Training Plan, as part of their proposal.

The Training Plan shall include the scheduling and complete course outlines.

The final Training Plan shall be delivered in accordance with the schedule requirements of APPENDIX B.

The Contractor shall provide the following training to CCG:

a. Factory Training for Pilots to obtain Aircraft Type Endorsement

b. Factory Training for Maintenance personnel

3.6.2.1 Pilot Training

The Contractor shall provide Factory Training courses for Pilots to obtain Aircraft Type Endorsement for each aircraft (plus one course for TC training pilots) and agrees to deliver, as and when requested by Canada, up to eight (8) subsequent courses, in accordance with the schedule requirements outlined in APPENDIX B.

The training shall accommodate the following numbers of CCG personnel:

a. First Factory Training Course for Pilots to obtain Aircraft Type Endorsement – 8 personnel

b. Second and Subsequent Factory Training Course for Pilots to obtain Aircraft Type Endorsement– 4 personnel

The Contractor shall provide all program curriculum and materials to Canada for review and comment, four (4) weeks prior to the commencement of the first training course.

The Factory Training for Pilots to obtain Aircraft Type Endorsement shall include but not be limited to:

a. Ground school

b. Avionics systems and electrical systems training

c. Flight training and flight simulator training

The training shall provide the candidate with a thorough knowledge of the aircraft and its installed equipment as well as type endorsement to Transport Canada standards.

The Contractor shall include the following documentation during the delivery of Pilot Training:

a. A complete Pilot Training Program in hard copy and electronic format that is editable and can be used to train pilots in aircraft systems and all other aspects of ground school. This shall include a training and syllabus package for the airframe, operational systems and navigational and automation systems.

b. A Flight Management System (FMS) software package (including EFIS and navigations systems) for use on a desktop computer for the purpose of procedure simulation.

The Contractor shall provide Canada with a written release and any other licence or authorization necessary to permit Canada to update, refine, translate, reproduce and use the Contractor provided training material so that Canada may conduct its own initial and recurrent training.

3.6.2.2 Maintenance Training

The Contractor shall deliverFactory Courses for the Aircraft Maintenance personnel in accordance with the schedule requirements outlined in APPENDIX B with the deliveries scheduled to occur a maximum of eight (8) weeks prior to acceptance and delivery of the first aircraft and each subsequent aircraft.

The training shall accommodate the following numbers of CCG personnel:

a. First Factory Aircraft Maintenance Course - 7 personnel

b. Second Factory Aircraft Maintenance Course - 4 personnel

c. Third and subsequent Factory Aircraft Maintenance Course - 4 personnel per each aircraft delivered

The Maintenance Course curriculum shall include, but need not be limited to:

a. training for airframe and related systems maintenance

b. engine maintenance

c. avionics and electrical systems

d. all equipment selected by Canada

3.7 Maintenance and Product Support

3.7.1 Maintenance Program

As part of the proposal, the Bidder shall provide a detailed Maintenance Program and Schedule detailing daily maintenance requirements, scheduled inspection requirements and major component overhaul schedules and requirements, as a minimum.

The Maintenance Program shall be integrated for the entire aircraft and structured in accordance with the following criteria:

a. The airframe and power plant scheduled Maintenance Program.

b. The Maintenance Program shall permit a minimum of 3500 hours between engine overhauls. However, if the engine is of a modular design and the modules have different times between overhauls (TBO), the TBO must not be less than 3000 hours.

c. The supplied helicopters shall be supportable by at least two vendors other than the Contractor, and are, approved by Transport Canada Civil Aviation for the purpose of repairing or overhauling airframe components and engine assemblies.

d. The delivered helicopters shall be compliant with all applicable Airworthiness Directives (ADs), Original Equipment Manufacturer (OEM) mandatory Service Bulletins (SBs) and Terminating Actions. Furthermore, the OEM shall ensure aircraft compliance to ADs or SBs that arise for the duration of the Contract.

3.7.2 Maintenance Analysis and Planning

The Contractor shall provide the required documentation and data to be uploaded in the Maintenance, Analysis and Planning System (CAMP - Computerized Aircraft Maintenance Program). The Contractor shall provide a build sheet that is comprised of the following information:

a. OEM service bulletins incorporated

b. Airworthiness directives complied with

c. Aircraft status report with the following fields:

- Date
- Aircraft model

- Aircraft serial number
- Aircraft registration
- Registration type
- Flight manual revision
- Total airframe hours
- Total engine hours (for #1 and #2)
- Total torque events
- Last annual inspection
- Total landings
- Engine serial numbers
- Engine Cycles
- Description
- Time at Installation (hours, days)
- Service life (hours, month/days)
- Airframe hours
- Date Installed, Due at (A/F hours, Date)
- Life remaining, (A/F hours, Months/Days)

d. Serialized component list with the following fields:

- Part Number Assembly
- Serial Number Assembly
- Part Description Assembly
- Part Number Component
- Serial Number Component
- Part Description Component

Additionally, the Contractor shall provide a customized listing or any other documentation required to enrol, track and schedule maintenance in accordance with the Rotorcrafts Maintenance Manual, Chapter 4, Airworthiness Limitation Schedule and Chapter 5, Inspection and Component Overhaul Schedule in accordance with the requirements of APPENDIX C.

3.7.3 Maintenance Reliability and Support

The Bidder shall submit a Maintenance Management Plan (MMP) as part of its proposal. The MMP shall describe how it will support the Approved Maintenance Organization (AMO) in maintaining the CCG helicopter fleet for 30 years.

Effective and efficient service and parts delivery is critical to maintaining CCG's level of service. A key factor in CCG's ability to maintain this service is the primary location of the Contractor's parts warehouse. The "Primary Location" is defined as the location with the largest compilation of spare parts and components required to provide optimum support to maintain the Contractor's proposed aircraft. The intent of the primary location is to reduce CCG's risk of increased aircraft downtime during AOGs and in particular customs and other shipping delays.

3.7.3.1 Maintenance Management Plan

The Contractor shall submit a Maintenance Management Plan (MMP) that includes the populated table (Table 1) below to address, as a minimum, the following items for the proposed CCG helicopter fleet:

1. The Contractor's current or planned parts and service organization, including:
    a. Location of major parts depots (Order of preference: Canada, United States, Other).
    b. The quantity of pertinent line items (or SKUs) at each parts depot (we want to understand how far the key spare parts would need to travel)
    c. Web-based order fulfilment (or other plans to minimize expediting of orders).
    d. Delivery method(s) and anticipated delivery time:
        i. For Aircraft on Ground (AOG) situations
        ii. For standard parts inventory replenishment

2. Description of the Contractor's Rental Program
    a. For powertrain
    b. For drivetrain

3. Description of the Contractor's Exchange Program
    a. For powertrain and drivetrain components
    b. For all other components

4. Recommended spare parts list (this item is **not** evaluated)
    a. Shore-based
    b. Ship-based

TABLE 1 – Maintenance Management Plan Details

	Existing Warehouse	**Warehouse in Place for Delivery of First Helicopter**	**Warehouse in Place for Delivery of Last Helicopter**
Primary Warehouse Location (Place the name of city in Canada, United States or other Country in the appropriate column)			
Canada			
United States			
Other Country			
Quantity(%) of Line Items (SKU's) at primary warehouse depot			
Above 80%			
60-79%			
40-59%			
20-39%			
Under 20%			
Parts Rental and Exchange Program			
Parts Rental Program			
Parts Exchange Program			

3.7.3.2 Distribution of CCG Fleet and Annual Flight Hours

For the purposes of the bid evaluation, Bidders may make the following assumptions:

1. Distribution of the CCG Helicopter Fleet in the winter months (October to April)

Location of CCG Base	Number of Medium Helicopters
Stephenville, NL	0
St. John's, NL	1
Shearwater, NS	1
Quebec City, QC	1
Parry Sound, ON	1
Victoria, BC	1
Prince Rupert, BC	1
Shipboard	0
TOTAL	**6**

2. Distribution of the CCG Helicopter Fleet in the summer months (May to September)

Location of CCG Base	Number of Medium Helicopters
Stephenville, NL	0
St. John's, NL	1
Shearwater, NS	1
Quebec City, QC	1
Parry Sound, ON	1
Victoria, BC	1
Prince Rupert, BC	1
Shipboard	0
TOTAL	**6**

3. Average annual flight hours for each helicopter = 250 hours.

3.7.4 On-Site Field Support

The Contractor shall provide a qualified on-site Field Service Representative (FSR), on an as and when requested basis.

The FSR is defined as a member of the Contractor's team who provides technical support to Canada and acts as a communication channel between Canada and the Contractor.

The FSR shall be available to travel to a CCG base of operation to provide technical support to Canada, as required. On-site field support shall be made available for the life of the aircraft.

3.7.5 Spares

As part of the proposal, the Bidder shall provide a preliminary Spares List, including prices to identify recommended sparing for the aircraft.

The Contractor shall provide a final spares list in accordance with the schedule provided in APPENDIX B.

The list shall be provided in MS Excel 2007 format and will be retained by the Approved Maintenance Organization (AMO) to support Canadian Coast Guard flight activities of 250 hours annually and two cycles per flight hour. The recommended spares list shall include recommended sparing for Ground Support Equipment (GSE).

3.7.6 Tooling and Equipment

As part of the proposal, the Bidder shall provide the preliminary tooling and equipment list required for handling, testing, maintenance and overhaul of the aircraft in accordance with Aircraft Maintenance and Overhaul Manuals.

The Contractor shall provide the final tooling and equipment list required for handling, testing, maintenance and overhaul of the aircraft in accordance with the Milestones and Schedule in APPENDIX B. Tooling and Equipment shall be provided in accordance with the provisions found in the Aircraft Maintenance and Overhaul Manuals.

In addition, where kits such as those installed under Supplemental Type Certificates are issued, the Contractor shall provide tooling and equipment required for the maintenance and overhaul of the installed equipment.

3.7.7 Ground Support Equipment

As part of the proposal, the Bidder shall provide a preliminary list of all Ground Support Equipment to perform daily operational maintenance and inspections for each aircraft purchased under this Contract.

The Contractor shall provide the final list of all Ground Support Equipment in accordance with the Milestones and Schedule in APPENDIX B.

3.8 Simulator Design Support

As part of the proposal, the Bidder shall provide a description of how it will support the Simulator Manufacturer in the development and commissioning of flight simulation. Helicopter design data and deliverables required to support the development of a “Level D” Full Flight Simulator are outlined in APPENDIX E.

3.9 Options

3.9.1 Option for Additional Pilot Training

The Contractor shall deliver up to ten (10) additional Factory Training courses for Pilots to obtain Aircraft Type Endorsement. Each course shall accommodate up to four (4) people.

All training shall be conducted in accordance with the existing course curriculum developed for Canada under this SOW.

Canada will notify the Contractor of the requirement for additional training six (6) weeks prior to the course date.

3.9.2 Option for Additional Maintenance Training

The Contractor shall deliver up to ten (10) additional Factory Training courses for Aircraft Maintenance Personnel. Each course shall accommodate up to four (4) people.

All training shall be conducted in accordance with the existing course curriculum developed for Canada under this SOW.

Canada will notify the Contractor of the requirement for additional training six (6) weeks prior to the course date.

3.9.3 Option for additional Equipment

The Contractor shall make available the options to purchase any of the following items under the Terms and Conditions of the Contract:

a. Fuel flow control on both collective controls
b. A paperless cockpit including but not limited to VFR/IFR charts, approach plates, flight manuals, and company publications
c. Interior of all access panels and compartments painted white (engine, main rotor transmission, hydraulics)

d. Seatbelt extensions
e. External hard point suitable to accommodate a weight of at least 100 lbs, for items such as an external camera
f. Auxiliary fuel tank(s)
g. A health and usage monitoring system
h. Electrically heated windshield
i. Windshield wipers
j. Helicopter design data, aircraft parts and equipment required to support the development of a “Level D” Full Flight Simulator as outlined in APPENDIX E;
k. Automatically deployable floats
l. Automatically deployable life rafts upon activation of deployable floats
m. Four axis autopilot

3.9.4 Options for Spares

The Contractor shall provide an option to deliver aircraft spares for each aircraft for the duration of the Contract. This includes referenced in:

- 3.7.5 Aircraft Spares
- 3.7.6 Tooling and Equipment
- 3.7.7.Ground Support Equipment

3.10 Document Management

3.10.1 General

The Contractor shall take a systematic approach to the way that documentation is prepared and provided to Canada. All documents must have sufficient detail to provide the reader with a clear and concise understanding of what is being presented. Documents are to be managed in accordance with the Technical Data Management Plan (3.2.1.5). Technical manuals must provide information on systems and subsystems (as applicable) in greater detail, so that the reader can gain a complete understanding of the systems, design, maintenance and operation.

Canada is not obligated to provide any translated copy to the Contractor or third-party.

3.10.2 Documentation Quality

The Contractor shall provide all documentation in a high grade commercial standard and of quality that is acceptable to Canada.

3.10.3 Language

Unless otherwise stated, the Contractor shall provide all deliverables in English.

3.10.4 Data Deliverables

The Contractor shall deliver data in accordance with the Contract data requirements in APPENDIX C. Data delivered shall be as follows:

a. Documents that already exist and have been produced to commercial standards do not need to be modified in terms of format. Content shall be updated as required.

b. Data submitted as required by Canada to operate and support the helicopters and its operating systems, such as user manuals, shall be provided with wear resistant hard covers.

3.10.5 Documentation Reviews

The review cycles will be agreed upon between Canada and the Contractor unless otherwise specified in the Statement of Work. Where deemed necessary by Canada, additional document reviews shall be held at the discretion of Canada on an as and when requested basis.

The Contractor shall provide any draft documents for review and comment to Canada via email to minimize delays and optimize resources.

3.10.6 Document Formatting

The Contractor may propose documentation layouts as they presently exist. Documents from the Contractor may remain in their existing format, providing that they do not exceed a format of 8.5 x 11 inch (216 mm to 279 mm). All other documents presented by the Contractor shall be delivered as listed in APPENDIX C.

Unless otherwise stated, the Contractor shall provide manuals and copies as listed in APPENDIX C.

All hard copy manuals and other documentation shall be clearly marked and bound in hard cover three ring binders.

Formatting for electronic documents is specified in APPENDIX C.

3.10.7 Aircraft Publications

The Contractor shall provide all Aircraft Publications as listed in APPENDIX C of this document.

3.10.8 Support Publications

The Contractor shall provide documentation and manuals for all Supplemental Type Certificates, including supporting data for all equipment and systems installed, complete with the normally provided amendment service.

3.10.9 Technical Publications

The Contractor shall supply Technical Manuals, including instructions for continuing airworthiness, which are necessary to maintain the airworthiness of the helicopter, as listed in APPENDIX C of this document.

3.10.10 Engineering Data

The Contractor shall provide the following, for all aircraft systems where applicable;

a. All Electrical Drawings not included in the Aircraft Wiring Manual
b. All approved Data and aircraft modification Packages
c. An electrical load analysis, which includes all installed equipment
d. Aircraft Modification Lists and Drawings

3.11 Presentations

3.11.1 Delivery Ceremony

The Contractor shall include provisions to host a Contract Award and a “Delivery Ceremony” at the Contractor facility for handover of the first Helicopter. The ceremony may include Government of Canada personnel, dignitaries and media.

3.11.2 Photographs

The Contractor shall allow Canada to have photographs taken at its facility during the delivery phase of each aircraft.

3.11.3 Aircraft Model

The Contractor shall deliver twelve (12) high quality scale model helicopters (wood or metal). The models shall be replicas of the helicopters being procured by Canada at an approximate scale of 1 to 40”.

3.12 Project Deliverables

Canada will review all Project Deliverables for acceptance in accordance with the terms of the Contract.

Acceptance of the deliverables by Canada will in no way relieve the Contractor of responsibility for product quality and the responsibility for assuming any corrective measures should deficiencies be detected within the warranty period.

The Contractor shall satisfy the Data requirements for project deliverables as specified in APPENDIX C of this document.

During this project, the Contractor shall provide the following project deliverables, as a minimum.

APPENDIX A – Canadian Coast Guard Medium Helicopter Baseline Requirements Document

Attach Document Here

APPENDIX B – Summary Project Milestones and Schedule

The Contractor shall propose a Project schedule and schedule dictionary incorporating the following milestone descriptions. Where indicated in the table below, Contractor compliance with the schedule dates shall be Mandatory. Otherwise the Contractor shall comply with the schedule logic as presented.

Milestone No.	Milestone Description	Mandatory/ Non-Mandatory	Milestone-Maximum Number of Weeks following Contract Award
M-001	Contract Award	**N/A**	CA + 0 weeks
M-002	Contract Award – Announcement and Ceremony at Contractor's facility	**N/A**	CA + 0 weeks
M-003	Project Initiation Meeting		CA + 2 weeks
M-004	Delivery of Final Project Management Plan (PMP)	**Mandatory**	CA + 4 weeks
M-005	Pilot and Maintenance Training Plan	**Mandatory**	CA + 4 weeks
M-006	Delivery of final of spares list	**Mandatory**	CA + 4 weeks
M-007	Delivery of final tooling and equipment list	**Mandatory**	CA + 4 weeks
M-008	Delivery final list of all Ground Support Equipment	**Mandatory**	CA + 4 weeks
M-009	Helicopter Preliminary Design Review	**Non-Mandatory**	CA + **(TBD)**
M-010	Helicopter Critical Design Review	**Non-Mandatory**	CA + **(TBD)**
M-011	Delivery of Pilot Training Curriculum, Materials and Manuals for the First Course	**Mandatory**	CA + 40 weeks
M-012	First Pilot Training Courses	**Mandatory**	CA + 44 weeks
M-013	Delivery of Final Aircraft Acceptance Test Plan (ATP)	**Mandatory**	CA + 68 weeks or 10 weeks prior to first aircraft delivery
M-014	Second Pilot Training Courses	**Mandatory**	CA + 70 weeks or 8 weeks prior to Aircraft delivery

M-015	First Maintenance Training Courses	**Mandatory**	CA + 70 weeks or 8 weeks prior to First Aircraft delivery
	Delivery of base of operations maintenance aircraft publications in accordance with APPENDIX C	**Mandatory**	CA + 60 weeks or 18 weeks prior to First Aircraft delivery
M-016	Delivery of spares	**Mandatory**	CA + 60 weeks or 18 weeks prior to First Aircraft delivery
M-017	Delivery of tooling and equipment	**Mandatory**	CA + 60 weeks or 18 weeks prior to First Aircraft delivery
M-018	Delivery of all Ground Support Equipment	**Mandatory**	CA + 60 weeks or 18 weeks prior to First Aircraft delivery
M-019	Second Maintenance Training Courses	**Mandatory**	CA + 74 weeks or 8 weeks prior to second aircraft delivery
M-020	Third and Subsequent Pilot Training Courses	**Mandatory**	CA + 74 weeks or 8 weeks prior to second aircraft delivery
M-021	First Helicopter Acceptance Test	**Non-Mandatory**	CA + 76 weeks
M-022	First Helicopter Delivery to Ottawa	**Mandatory**	CA + 78 weeks
M-023	End of Warranty Period for First Helicopter	**Mandatory**	CA + **(TBD in accordance with the terms of the contract)**
M-024	Third and Subsequent Maintenance Training Courses	**Mandatory**	CA + 78 weeks or 8 weeks prior to third and subsequent aircraft delivery for up to 8 aircraft
M-025	Second Helicopter Acceptance Test	**Non-Mandatory**	CA + 89 weeks
M-026	Second Helicopter Delivery to Ottawa	**Mandatory**	CA + 91 weeks
M-027	End of Warranty Period for Second Helicopter	**Mandatory**	CA + **(TBD in accordance with the terms of the contract) for Second Aircraft**

APPENDIX C – Project Deliverables

Line Item #	Deliverable	Format	Hard Copy	Soft Copy
1.	Delivery of between four (4) to eight (8) Medium Helicopters Certified for Operation in Canada and in accordance with the Medium Helicopter Baseline Requirements Document (APPENDIX A) to Transport Canada Aircraft Services Ottawa Ontario	N/A	N/A	N/A
2.	Deliver all aircraft Supplemental Type Certificates and applicable documentation packages	MS Word 2007	1	1
3.	Provide Simulator Data, Aircraft Parts and Equipment to support the development of a “Level D” Full Flight Simulator	TBD	TBD	TBD
4.	All Certifications for Proof of Compliance	TBD	TBD	TBD
5.	Final Project Management Plan	PDF	0	1
6.	Final Master Project Schedule	MS Project 2010	0	1
7.	Final Risk Management Plan	PDF	0	1
8.	Final Quality Management Plan	PDF	0	1
9.	Final Configuration and Change Management Plan	PDF	0	1
10.	Final Infrastructure Management Plan	PDF	0	1
11.	Final Technical Data Management Plan	PDF	0	1
12.	Final Human Resources Plan	PDF	0	1

Line Item #	Deliverable	Format	Hard Copy	Soft Copy
13.	Project Action Items Register	PDF	0	1
14.	Monthly Project Progress Review Draft Agenda	PDF	0	1
15.	Monthly Project Progress Review Final Agenda	PDF	0	1
16.	Provide Monthly Project Progress Review Meeting Minutes and Action Items	PDF	0	1
17.	Draft Preliminary Design Review Agenda	PDF	0	1
18.	Final Preliminary Design Review Agenda	PDF	0	1
19.	Preliminary Design Review Documentation Package	Contractor Format	TBD	TBD
20.	Preliminary Design Review Minutes and Action Item	PDF	0	1
21.	Draft Critical Design Review Agenda	PDF	0	1
22.	Final Critical Design Review Agenda	PDF	0	1
23.	Critical Design Review Meeting Documentation Package	Contractor Format	TBD	TBD
24.	Critical Design Review Minutes and Action Items	PDF	0	1
25.	Aircraft Acceptance Test Schedule (part of MPS)	MS Project 2010	0	1
26.	Final Acceptance Test Plan (ATP)	PDF	0	1
27.	Aircraft Acceptance Test Report for each Aircraft to be delivered to Canada	Contractor Format	1	1

Line Item #	Deliverable	Format	Hard Copy	Soft Copy
28.	Delivery of Deficiencies Report, Corrective Action Plan and Status Report for all Helicopters	PDF	0	1
29.	Preliminary Aircraft Acceptance Meeting minutes and Action Items	PDF	0	1
30.	Final Aircraft Acceptance Meeting minutes and Action Items	PDF	0	1
31.	Aircraft Delivery Meeting minutes and Action Items	PDF	0	1
32.	All Aircraft Titles	TBD	TBD	TBD
33.	Final Training Plan	MS Word 2007	0	1
34.	Factory Training courses for Pilots to obtain Aircraft Type Endorsement for each aircraft (plus one course for TC training pilots) in accordance with the schedule requirements outlined in APPENDIX B	N/A	N/A	N/A
35.	Factory Courses for the Aircraft Maintenance personnel in accordance with the schedule requirements outlined in APPENDIX B	N/A	N/A	N/A
36.	Pilot Training curriculum , manuals and course materials for factory training for pilots to obtain aircraft type endorsement	Contractor Format	0	1
37.	Maintenance Training curriculum manuals and course materials for factory aircraft maintenance course	Contractor Format	1	1
38.	A complete Pilot Training Program to train pilots in aircraft systems and all other aspects of ground school (editable)	MS Word 2007	1	1
39.	A Flight Management System (FMS) software package for use on a desktop computer for the purpose of procedure simulation	N/A	N/A	2
40.	Final tooling and equipment list required for handling, testing,	MS Excel 2007	1	1

Line Item #	Deliverable	Format	Hard Copy	Soft Copy
	maintenance and overhaul of the aircraft			
41.	Final list of required Ground Support Equipment for daily operations	MS Excel 2007	1	1
42.	Monthly Progress Reports	PDF	0	1
43.	Delivery of *Written Release* for the use of OEM supplied training materials for Canada's use for ongoing initial and recurrent training	MS Word 2007	1	1
44.	Delivery of *Written Release to allow Canada to Video Record OEM training courses* for Canada's use for ongoing initial and recurrent training	MS Word 2007	1	1
45.	Delivery of documentation and data required for upload into the Computerized Aircraft Maintenance Planning System (CAMP)	PDF or MS Excel 2007	1	1
46.	Delivery of a customized listing in or any other documentation required to enrol, track and schedule maintenance in accordance with the Rotorcrafts Maintenance Manual, Chapter 4, Airworthiness Limitation Schedule and Chapter 5, Inspection and Component Overhaul Schedule	MS Excel 2007	1	1
47.	Delivery of Final Spares list to support the Maintenance Program for Helicopter	MS Excel 2007		1

Line Item #	Deliverable	Hard Copies per Candidate	Soft copies (CD, DVD or USB key)	Additional Copies
	Pilot Training Materials, Manuals and Publications Document Name			
48.	Flight Manuals (8.5 x11)	1	1	10
49.	Manufacturer Training Manuals (8.5 x11)	1	1	10
50.	Manuals for all Installed equipment, such as Navigation Systems, Automation, Weather Radar and HTAWS	1	1	10
51.	Aircraft Checklists Covering Normal and Abnormal Procedures	1	1	10
52.	Procedure trainer in an electronic format for the navigation systems capable of being used on an unlimited number of lap top computers used by Canada for training purposes	N/A	2	N/A
	Maintenance Training Materials, Manuals and Publications Document Name			
53.	Engine Training Manuals	1	1	N/A
54.	Avionics Training Manuals	1	1	N/A
55.	Airframe Training Manuals	1	1	N/A
56.	Manuals for all installed equipment	1	1	N/A

Line Item #	**Deliverable** **Aircraft Publications Document Name**	**Hard Copies per Base of Operations/Maintenance** (Assuming Prince Rupert, Victoria, Parry Sound, Ottawa, Quebec City, Shearwater, St-John's, Stephenville)	**Soft copies per aircraft (CD, DVD or USB key)**	**Access to available Web-based Manuals, Publications and Warranty Information**
57.	Airframe Maintenance Manual(s)	1	1	All Users
58.	Engine Maintenance Manual(s)	1	1	All Users
59.	Avionics Maintenance/Wiring Manual(s)	1	1	All Users
60.	Avionics Installation Drawings for Installed Equipment	1	1	All Users
61.	Vendor Manuals	1	1	All Users
62.	Component Repair and Overhaul Manuals	1(Ottawa only)	1(Ottawa only)	All Users
63.	Illustrated Parts Catalogue for Airframe	1	1	All Users
64.	Illustrated Parts Catalogue for Engine(s)	1	1	All Users
65.	Service Bulletins for the Airframe, Engines and Components	1	1	All Users
66.	Technical Bulletins for the Airframe, Engines and Components (**If applicable**)	1	1	All Users
67.	Service Instructions for the Aircraft, Engines and Components (**If applicable**)	1	1	All Users

68.	Other publications such as but not limited to: (**If applicable**) a. Operations Safety Notices b. Information Letters c. Standard Practices Manual d. Electrical Standard Practices Manual e. Corrosion Control Guide f. Special Tools Illustrated Parts Breakdown	1	1	All Users
69.	Structural Repair Manual	1	1	All Users
70.	Aircraft Flight Manual/Operating Manual	1	1	All Users
71.	Operating Manuals for all installed equipment	1	1	All Users
72.	Approved Aircraft Flight Manual Supplements and Pilot Instructions issued for the equipment and systems installed	1 (+2 additional copies for the Technical Library)	1	All Users

Line Item #	Deliverable	Hard Copy per Aircraft	Soft copy per Aircraft
73.	Aircraft Equipment List(Provide an electronic copy in Microsoft Word or XLS format)	1	1
74.	Electrical Load Analysis (Provide an electronic copy in Microsoft XLS format)	1	1
75.	Weight and Balance Data (Provide an electronic copy in Microsoft XLS format)	1	1
76.	Firmware Level and part number(s) for installed equipment(Provide an electronic copy in Microsoft Word or XLS format)	1	1
77.	Software Level and part number(s) for installed equipment(Provide an electronic copy in Microsoft Word or XLS format)	1	1
78.	Equipment Electronic Configuration Files (Provide an electronic copy in Microsoft Word or XLS format)	1	1
79.	Electrical Drawings (Hard copy in OEM format and electronic copy compatible for use with Auto Cad 2011),	1	1
80.	Data/Approval Package (Hard copy in OEM format and soft copy compatible for use with Auto Cad 2011	1	1
81.	An electrical load analysis, which includes all installed equipment	1	1
82.	General arrangement drawings of installed avionics. (Hard copy in OEM format and soft copy in Auto Cad 2011)	1	1
83.	Aircraft Modification Lists (Hard copy in OEM format and soft copy in MS Excel format).	1	1

The Supplier shall provide where applicable, for all aircraft systems to include the following;

Line Item #	Deliverable Certification and Delivery Documents	Hard Copy per Aircraft
84.	Log Books (Journey Log and Technical Logs)	1
85.	Certificate of Registration	1
86.	Aircraft Certificate of Airworthiness	1
87.	Full Warranty Bill of Sale	1
88.	Assignment of Warranties	1

APPENDIX D - Data Requirements and Deliverables in Support of the Development of a Full Flight Simulator

1. Full Flight Simulator

Canada will engage a Simulator Manufacturer through a separate contract for the development and delivery of a full flight simulator to train pilots for the medium helicopter. The Medium Helicopter Contractor will be required to support the development of the full flight simulator through the delivery of data, aircraft parts and equipment as defined below. In addition, the Contractor will be required to support a Flight Test Program to generate the data necessary to validate the performance and handling characteristics of the simulator. Details of the support required are defined below.

2. Helicopter Simulator Data, Aircraft Parts and Equipment

The Contractor shall deliver a helicopter simulator support package which shall include aircraft parts, data and equipment to be used by a Simulator Manufacturer for the development and commissioning of a level “D” full flight simulator to be delivered to Canada under a separate contract. The support package shall include all Intellectual Property (IP) rights and associated licensing required to use the data and equipment in order to manufacture and operate a Full Flight Simulator (FFS) that will be qualified to Level D by the Canadian Government’s National Aviation Authority (NAA). Data licensing and IP rights will extend to include all other Training Systems such as but not limited to (Flight Training Devices, Cockpit Procedures Trainers, Part Task or Aircraft Systems Trainers). The support package shall be in compliance with the International Air Transport Association (IATA) document “Flight Simulation Training Device Design & Performance Data Requirements” Ref. No: 9019-07, latest revision.

(A) Simulator Data Package

The Simulator data package shall include:

1. Operations Manual, Flight Manual, Checklists, QRH and Pilot’s Notes
2. Aircraft Maintenance Manuals and Illustrated Parts Lists (catalogue)
3. Aircraft System Schematics and Wiring Diagrams

4. Where available, 3D CAD model files of the cockpit section, converted to neutral format (STEP or equivalent)
5. Full aircraft configuration list and architecture diagram, including but not limited to:
    a. Cockpit configuration layout diagrams
    b. Avionics architecture block diagrams
6. Aircraft assembly, installation and fabrication drawings of the cockpit section from the cockpit nose bulkhead area to the structures behind the crew seats
7. Mechanical data (geometry and mass) of the rotor and flight control systems
8. Aircraft Systems Specifications (or equivalent)
9. All vendor data and documentation for Electronic Equipment, including all Interface Control Documents (ICD), system manuals, maintenance manuals, system specifications, design data including complete internal logic of electronic controllers, schematics and wiring diagrams and performance videos, including, but not limited to, the following systems:
    a. Aircraft avionics (including autopilot)
    b. Aircraft Instruments
    c. Aircraft Sensors
    d. RADAR
    e. Datalink
10. Full set of colour digital photographs of the aircraft, flight deck and equipment. A detailed list is to be defined once configuration information is analysed by the selected simulator manufacturer.

(B) Airframe Manufacturer Aircraft Parts (Preliminary indicative list only – Detailed list to be defined once configuration information is analysed by the selected simulator manufacturer)

The Simulator aircraft parts package shall include:

a. Cockpit forward shell and doors including window glass
b. Cockpit Structures for Main Instrument Panel, Glare shield (Combing panel), Overhead, and Inter-seat console
c. Primary Flight Controls components from the cockpit floor level upwards (Including Cyclic, Collective and Rudder Pedals assemblies)
d. Engine Control Quadrant
e. Cockpit panel assemblies (Switch panels, annunciator panels, etc.)

f. Crew Seats with harnesses
g. Circuit breaker panels and structures (Bare panels only – No breakers installed or wired)
h. Cockpit lighting components (Dimmers, map lights, dome lights, as applicable)
i. Cockpit emergency equipment
j. Cosmetic covers/linings or equivalent if fitted
k. Cockpit decals, nameplates as applicable

(C) Instruments & Avionics (Preliminary indicative list only – Detailed list to be defined once configuration information is analysed by the selected simulator manufacturer)

The Simulator Instruments and Avionics package shall include:

a. Cockpit Displays
b. Cockpit Control & Display Units (CDUs)
c. Cockpit Mission Display Unit (FLIR or equivalent, where applicable)
d. Data Transfer Device or equivalent, as applicable
e. Flight Management Computers (or equivalent)
f. Nav and Comms control panels
g. Audio Control panels
h. Caution & Advisory Panel and misc warning lights/annunciators
i. Flight, Nav and Engine Instruments (Except when driven by barometric pressure or gyroscopic precession)
j. Joysticks and/or hand controllers, as applicable

3. Flight Test Program

The Contractor shall work in collaboration with the Simulator Manufacturer to conduct the Flight Test Program and gather the Flight Test Data required to validate the performance and handling characteristics of the Level “D” Flight Simulator Training Device. The Simulator Manufacturer will be responsible for development of the Flight Test Program test plan, the assignment of a Test Director along with validation and analysis of all data. The Contractor shall Instrument, Fly and Record all applicable Flight Test Data parameters required for Flight Simulator device design and Performance Data Validation. The Contractor shall be responsible to obtain the required flight permits to fulfil the program.

The minimum data requirements are established by the latest revision of ICAO Manual 9625 Volume II, FAA Part 60 and any other applicable (NAA). Flight Test data complete with Proof of Match, enabling the design and validation of Level D fidelity Aerodynamics, Engines, Autopilot and Flight Control simulation models shall be collected. Sound and Vibration data shall also be gathered as well as any other data deemed necessary. Details of the data required will be provided as part of the Simulator Manufacturer's test plan.

3.1 Contractor Responsibilities for the Flight Test Program

a. Instrumentation and Data Acquisition Equipment

The Contractor is responsible for the provision, installation and removal of the equipment required to conduct the Flight Test Program. The equipment shall meet or exceed the industry standard for this activity. The instrumentation and equipment package shall be reviewed and accepted by the Simulator Manufacturer. Data extraction shall be co-ordinated between the Contractor and the Simulator Manufacturer.

b. Recorded Data Parameters

The required Flight Test parameters and Flight Tests shall be defined by the Simulator Manufacturer.

c. Aircraft Access

The Contractor shall ensure Aircraft access for all of the specified test periods. Depending on the quality and unavailability of some of the provided simulator data package, the Contractor shall provide access to an aircraft for on-ground and in-air data collection/validation purposes.

d. Flight Test Resources

The Contractor shall provide flight crew, aircraft maintenance support and fuel for the duration of the Flight Test Program.

e. Systems Data Gathering

The Contractor, when requested, shall install and position cameras required for Systems Data gathering in the cockpit.

f. Sound and Motion/Vibration data recording

Microphones and accelerometers shall be installed by the Contractor under the direction of the Simulator Manufacturer. The equipment and installation shall be non-intrusive and detachable.

g. Validation Road Map

The Contractor shall assist the Simulator Manufacturer with the Validation Data Roadmap (VDR) document. A VDR document contains guidance material from the aircraft validation data on the best sources of data to be used as validation data in the Regulatory Flight Simulator Qualification Test Guide (QTG). VDR shall include but is **not** limited to; Test Matrix, Test Data Information & Rationale and Statement of Compliance called in the Qualification Test Guide (QTG).

Fisheries and Oceans Canada | Pêches et Océans Canada

Coast Guard | Garde côtière

Canadian Coast Guard

Appendix A to ANNEX A Baseline Statement of Requirements Document – Medium Helicopters CCG Helicopter Project January 8th, 2014

Approvals

Deputy Project Manager	A.M. Sekerka	Approved: Date:
Project Manager	P. Egener	Approved: Date:
Director General, Major Projects	R. Wight	Approved: Date:

TABLE OF CONTENTS

List of Acronyms

ADF	Automatic Direction Finder
ADS-B	Automatic Dependent Surveillance – Broadcast
AF	Automatic Fixed
AHRS	Attitude, Heading Reference System
CCG	Canadian Coast Guard
CDP	Cockpit Display Panel
CMS	Central Maintenance System
CVR	Cockpit Voice Recorder
DFO	Department of Fisheries and Oceans
EICAS	Engine Indicating and Crew Alerting System
ELT	Emergency Locator Transmitter
FAA	Federal Aviation Administration
FDR	Flight Data Recorder
FIPG	Federal Identity Program Guide
GFE	Government Furnished Equipment
GNSS	Global Navigation Satellite System
H-TAWS	Helicopter Terrain Awareness and Warning System
HIGE	Hover In-Ground Effect
HOGE	Hover Out-of-Ground Effect
ICS	Intercom System
IFR	Instrument Flight Rules
ISA	International Standard Atmosphere
LED	Light Emitting Diode
LPV	Localizer Precision with Vertical guidance
MCTOW	Maximum Certified Take-Off Weight
NVFR	Night Visual Flight Rules
NVIS	Night Vision Imaging System
OEI	One Engine Inoperative
PTT	Push To Talk
TAS	Traffic Advisory System
TCAS	Traffic Alert and Collision Avoidance System
TOP	Take-off Power
TAS	Traffic Advisory System
TR	Tail Rotor
TSO	Technical Standard Order
VDC	Voltage Direct Current
VFR	Day Visual Flight Rules
VRO	Vertical Reference Operations
WAAS	Wide Area Augmentation System

1. Purpose

The Helicopter Project seeks to renew the Canadian Coast Guard's existing fleet of helicopters, as announced in the Government of Canada Budget 2012. As part of this project, the Department of Fisheries and Oceans (DFO), Canadian Coast Guard (CCG) has a requirement to acquire up to eight new Medium Helicopters. This document specifies the requirements to which suppliers and manufacturers must adhere in delivering the medium Helicopters for the Canadian Coast Guard.

2. Background

CCG provides maritime services supporting government priorities, contributing to the safety, accessibility, sustainability and security of Canadian waters. In doing so, CCG serves clients in all sectors of the Canadian economy. CCG programs deliver services to Canadians that include:

1. Aids to navigation, icebreaking, search and rescue, pollution response, and marine communications and traffic services to commercial fishers, commercial shippers, ports and recreational boaters.
2. A response to federal maritime priorities and natural or man-made emergencies. The provision of support for various activities mandated under the Federal Emergency Response Plan and involvement, both nationally and internationally, in planning and exercises related to environmental response and search and rescue.
3. Support to DFO programs by providing vessels, helicopters, and maritime professionals to support science activities and to help manage and protect fisheries resources. Internal clients include DFO Fisheries Management, DFO Oceans Management, DFO Science, and DFO Small Craft Harbours.

In addition, CCG supports the non-military activities of other government departments and agencies by providing vessels, aircraft, marine expertise, and other maritime services, including support to maritime security activities. Clients for these services include the following:

1. Department of National Defence
2. Environment Canada
3. Natural Resources Canada
4. Public Safety Canada
5. Royal Canadian Mounted Police
6. Canada Border Services Agency
7. Transport Canada

The overall goal of the CCG Helicopter project is to acquire up to 24 helicopters, possibly up to three different types including a "Light" helicopter, a "Medium" helicopter and a "Polar" helicopter capable of Arctic operations.

Canadian Coast Guard's helicopters are national assets assigned to the Canadian Coast Guard's regions. They support a number of CCG programs such as Aids to Navigation, Icebreaking services, Marine Communication Traffic Services, Search and Rescue and Environmental Response, as well as the programs of the Department of Fisheries and Oceans and other government departments. These helicopters support activities such as ice reconnaissance; maintenance and construction of aids to navigation and telecommunications equipment; personnel and cargo transfer between ship and shore; and support to science and fisheries enforcement. They operate in all areas of Canada, including the East and West Coasts, the Arctic, Great Lakes and St. Lawrence Seaway as well as inland waters and Canada's north.

The missions of the CCG helicopter fleet will include:

1. Shore-based asset support - where helicopters will be required to fly to remote sites in Canada to support construction and maintenance of CCG's communication and aids to navigation infrastructure.
2. Vessel support - where helicopters will require the ability to land on CCG vessels.
3. CCG has an additional requirement for helicopters assigned to the new CCG icebreaker, CCGS John G. Diefenbaker. These helicopters will have capabilities specific for the Arctic winter conditions.

CCG's preference is to minimize the number of helicopter types in an effort to achieve economies of scale and reduced life cycle costs, while ensuring that the requirements for each helicopter type mentioned above can be satisfied.

The Canadian Coast Guard also intends to acquire at least one type of Flight Simulator as part of this project.

To ensure that the CCG operational and program needs are satisfied, the helicopter requirements presented in this document were derived on the following basis:

1. Preservation of the safety and security of the helicopter crew, passengers and helicopter asset is a priority.
2. Lessons learned regarding safety for CCG pilots and crew were to be considered.
3. The requirements must be reasonable and achievable given the technology commercially available in industry.
4. Program delivery for CCG would be maximized.
5. Reducing pilot workload and minimizing pilot fatigue is a priority.
6. Modern technologies that are commercially available in the aviation industry today (i.e. autopilot) were to be considered.

3. Scope

This document outlines the detailed requirements associated with the Medium Helicopter type being procured under the CCG Helicopter Project. Requirements for the Light Helicopter and Polar Helicopter types will be covered in separate Baseline Statement of Requirements documents.

This document has been organized to outline the regulatory and certification requirements, helicopter performance requirements and capability requirements for the medium helicopter. The aircraft equipment requirements in this document have been organized using the Federal Aviation Administration Joint Aircraft System Component Code Table and Definitions document, dated October 2008. For the purpose of this document the term "Not Used" means the ATA Code heading is not applicable to the CCG helicopter requirements definition.

This document does not provide the specifications of any Government Furnished Equipment (GFE).

The helicopter baseline requirements outlined in this document are comprised of Mandatory requirements and Desirable requirements, which are defined as follows:

Mandatory Requirement -	the words "shall" or "must" imply a mandatory requirement and indicate that compliance with the requirement is critical to the system and the system would not be accepted without it.
Desirable Requirement -	the word "should" implies a desirable or permissive requirement and indicates that the requirement is desired, but not so critical that the system would not be accepted without it.

Throughout this document, information presented as Design Guidance is intended to assist with the interpretation of the technical requirements statements. The use of the word "will" is explanatory.

4. Reference Documents

The following documents are referenced throughout this document:

1. Federal Aviation Administration Joint Aircraft System Component Code Table and Definitions document, dated October 2008. Prepared by Federal Aviation Administration Flight Standards Service Regulatory Support Division, Aviation Data Systems Branch, AFS-620, Oklahoma, City, Oklahoma.

2. Canadian Aviation Regulation Part V, subpart 21, Chapter, 529, available at Transport Canada website http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part5-standards-527-preamble-690.htm.

3. Canadian Aviation Regulation Part VII, subpart 3, available at Transport Canada website http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part7-subpart3-2150.htm.

4. Canadian Coast Guard Identification Program Manual(TP 4011), http://ccg-gcc.ncr.dfo-mpo.gc.ca/fleet-flotte_2010/home-accueil/Publications/TP4011_Section_0.pdf

5. Fleet Circular FC-02-2010 – Application of Language in the Marking of CCG Ships and Aircraft, http://ccg-gcc.ncr.dfo-mpo.gc.ca/fleet-flotte_2010/home-accueil/Circulars/5323_2010-02.pdf

6. Fleet Circular FC-08-2007 – Canadian Coast Guard Fleet Identity Colour Standard, http://ccg-gcc.ncr.dfo-mpo.gc.ca/fleet-flotte_2010/home-accueil/Circulars/5323_2007-08.pdf

7. Federal Aviation Administration (FAA) Technical Standard Order (TSO) C91a, Emergency Locator Transmitter (ELT) Equipment, 29 April 1985.

8. Federal Aviation Administration (FAA) Technical Standard Order (TSO) C118C, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS I, 5 August 1988.

9. Federal Aviation Administration (FAA) Technical Standard Order (TSO) C126, 406 MHz Emergency Locator Transmitter (ELT), 23 December 1992.

10. Federal Aviation Administration (FAA) Technical Standard Order (TSO) C124b Flight Data Recorder System 04 October 2007, http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/e040550c3ab32300862572c200113975/$FILE/TSO-C124b.pdf

11. Federal Aviation Administration (FAA) Technical Standard Order (TSO) C123b Cockpit Voice Recorder Equipment June 01 2006 http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/29662c3b5885d29386257180007150b6/$FILE/TSO-C123b.pdf

12. Federal Aviation Administration (FAA) Technical Standard Order (TSO) C194 Helicopter Terrain Awareness and Warning System (HTAWS), 17 Dec 2008, http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/4E324B446BE11B2D8625752300762A36?OpenDocument

13. Federal Aviation Administration (FAA) Technical Standard Order (TSO) C 201 Attitude, Heading Reference System (AHRS), 26 July 2012 , http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/23390e5de1112fea86257a4700640874/$FILE/TSO-C201.pdf

14. Federal Aviation Administration (FAA) Technical Standard Order (TSO) C146c Stand Alone Airborne Navigation Equipment Using the Global Positioning System Augmented by the Satellite Based Augmentation System 02 Sep 2008, http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/623a0cac2a0c3849862574480062d38b/$FILE/TSO-C146c.pdf

15. Transport Canada Staff Instruction 513-11, Acceptance and Approval of Foreign Design Changes, 15 September 2008.

16. Canadian Technical Standard Order CAN TSO C147 Traffic Advisory System (TAS) http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part5-standards-537-sub-b-1782.htm

17. Canadian Standard Technical Order CAN TSO C121a Underwater Locating Devices (Acoustic) (Self-Powered) (07/21/2006), (amended 2007/07/16)
http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/790bac5796606199862579b3004d6efe/$FILE/TSO-C121b.pdf

http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part5-standards-537-sub-b-1782.htm

5. Principle Characteristics

The CCG medium helicopter described by this Statement of Baseline Requirements shall be a twin engine turbine powered helicopter, having a capacity of at least nine passengers and two crew and a useful load capacity of at least 2000 lbs (907 kg) plus the necessary fuel to achieve an endurance of at least 2 hrs plus 20 minutes VFR reserve at a minimum cruise speed of at least 115 knots.. The helicopter type, model and variant shall hold a valid type certificate issued in accordance with Part V, Sub-part 21 of the Canadian Aviation Regulations, that meets the standards of airworthiness of Chapter 529 of the Airworthiness Manual, as applicable. The aircraft shall be equipped to comply with the requirements for Day Visual Flight Rules (VFR), Night Visual Flight Rules (VFR), Instrument Flight Rules (IFR), and Night Vision Imaging System (NVIS) flight operations. The helicopter shall be capable of operating from existing CCG shore based and ship borne infrastructure.

CCG Helicopter "Configuration A"

For the purposes of this document, the CCG Helicopter "Configuration A" is defined as the normal operating arrangement and helicopter construction necessary to fulfill the CCG mission requirements.

The CCG Helicopter "Configuration A" includes all equipment and articles, as specified by the mandatory requirements within this Baseline Statement of Requirements for the CCG medium helicopter, with the exception of the following items:

a) Litter kit – this item is to be delivered with the aircraft as indicated in this Baseline Statement of Requirements

b) Auxiliary fuel tanks – this item is identified as costed option in the Statement of Work - CCG Medium Helicopters

c) Main rotor and tail rotor tie-downs – this item is to be delivered with the aircraft as indicated in this Baseline Statement of Requirements

d) All auxiliary equipment not carried onboard the aircraft

6. REGULATORY AND CERTIFICATION REQUIREMENTS

ID	Mandatory Requirement	Desirable Requirement	Design Guidance
6.1 a.	No later than 60 days after bid closing the bidder shall provide proof of compliance of the following: -The helicopter type, model and variant shall hold a valid type certificate issued in accordance with Part V, subpart 21 of the Canadian Aviation Regulations that meets the Standards of Airworthiness of Chapter 529 of the Airworthiness Manual, as applicable. -The type certified helicopter meets the following mandatory requirements: a) Helicopter Performance requirements as stated in Sections 7.1.1, 7.1.2, and 7.1.4 of the CCG Baseline Statement of Requirements - Medium Helicopters b) Power Plant System requirements as stated in Requirements 7.3.7.2 and 7.3.7.3 of the CCG Baseline Statement of Requirements - Medium Helicopters c) Instruments requirements as stated in requirement 7.3.5.11.1 of the CCG Baseline Statement of Requirements - Medium Helicopters		
6.1 b.	The aircraft shall be equipped, as applicable, to be able to comply with the requirements of Canadian Aviation Regulation Part VII, Subpart 3 & 4 for the following, at the time of aircraft		(CAR Part VII Subpart 4 includes provisions for more than 9 passengers)

	acceptance: a) Day Visual Flight Rules (VFR) b) Night VFR c) Dual pilot Instrument Flight Rules (IFR) d) Night Vision Imaging System (NVIS) flight operations e) All equipment listed in the CCG Baseline Statement of Requirements – Medium Helicopters		
6.2	The helicopter shall be certified for day and night Visual Flight Rules (VFR) operations.		
6.3	The helicopter shall be certified for day and night Instrument Flight Rules (IFR) operations.		
6.4	The helicopter shall be certified for operations and flight in ambient outside air temperatures between -30°C and +40°C.	It is desirable that the helicopter should be certified for operations and flight in ambient outside air temperatures exceeding the minimum acceptable threshold of -30°C, to an extreme temperature of -40°C.	CCG must be able to operate in outside ambient air temperature thresholds of -30°C as a minimum, due to operational requirements and weather conditions in the Arctic, C&A (northern Quebec) and Atlantic regions (e.g. Labrador).
6.5	The helicopter shall be certified and equipped for flight in snow and rain.		The helicopter design incorporates features to prevent engine flame out and excessive rotor blade erosion.
6.6	Where vertical reference operations cannot be performed from the pilot seat, the helicopter shall be certified for single pilot operation from the co-pilot seat.		

6.7	The helicopter shall be certified for Night Vision Imaging System (NVIS) operations.		

7. HELICOPTER REQUIREMENTS

7.1 PERFORMANCE

ID	Mandatory Requirement	Desirable Requirement	Design Guidance
7.1.1	The Helicopter shall be capable of ground level helipad Category "A" take-offs and landings at sea level ISA conditions, with no wind at MCTOW.		Category "A" take- off and landing is the ability to maintain safe single engine performance.
7.1.2	The Helicopter shall have a Hover In-Ground Effect (HIGE) capability at its MCTOW, Take-off Power (TOP) and in ISA conditions of at least 7000 ft (2133 m) pressure altitude.		
7.1.3	The Helicopter shall have a Hover Out-of-Ground Effect (HOGE) capability at its MCTOW, Take-off Power (TOP) and in ISA conditions of at least 5000 ft (1524 m) pressure altitude.		
7.1.4	The Helicopter shall be capable of maintaining a pressure altitude of 5000 ft (1524 m) or greater, at ISA conditions and at MCTOW at Maximum Continuous Power (MCP) with One Engine Inoperative (OEI).		This requirement is part of the CCG mandate. CCG aircraft are required to fly across higher terrain with adequate obstacle clearance. This capability is required in all regions.

7.2 CAPABILITY REQUIREMENTS

ID	Mandatory Requirement	Desirable Requirement	Design Guidance

7.2.1	The helicopter in its Flight Configuration “A”, as defined in Section 5, shall be capable of carrying a minimum useful load of 2000 lbs (907 kg), plus the necessary fuel for at least 2 hrs plus 20 minutes VFR reserve, at a cruise speed of at least 115 knots (213 km/hr).	It is desirable that the helicopter should have a useful load (i.e. crew, passengers, fuel, payload) in its Flight Configuration “A”, as specified in Section 5, in excess of the minimum useful load of 2000 lbs (907 kg), plus the necessary fuel for at least 2 hrs plus 20 minutes VFR reserve, at a cruise speed of at least 115 knots (213 km/hr).	Attachment 2 identifies the minimum load composition to meet the CCG minimum operational requirements in Flight Configuration “A”. Note that the requirement statement allows a buffer of approximately 69.7 lbs between the minimum mandatory CCG weight capacity and the weight identified in Attachment 2.
7.2.2	The helicopter shall be capable of a minimum cruise speed of at least 115 knots True Air Speed (213 km/hr) at Maximum Certified Take-Off Weight (MCTOW) and International Standard Atmosphere (ISA) sea level standard conditions in its Flight Configuration “A” as defined in Section 5.	It is desirable that the aircraft should have a cruise speed in excess of the minimum acceptable 115 knots (213 km/hr) True Air Speed.	
7.2.3	The helicopter shall be capable of a minimum endurance of 2 hours plus 20 minutes VFR reserve (i.e. 2 hours 20 minutes to dry tanks) without the use of auxiliary tanks, at a minimum cruise speed of at least 115 knots True Air Speed, at MCTOW, ISA sea level standard conditions, and its Flight Configuration “A” as defined in Section 5.	It is desirable that the helicopter should be capable of a minimum endurance in excess of 2 hours plus 20 minutes without the use of auxiliary tanks, at a minimum cruise speed of at least 115 knots True Air Speed at MCTOW, ISA sea level standard conditions, and its Flight Configuration “A” as defined in Section 5.	
7.2.4	Not used.		
7.2.5	The helicopter shall be capable of folding the Main Rotor (MR) blades without removing the blades.		All main rotor blades must remain attached to the helicopter main rotor head during the main rotor blade folding and unfolding procedure.
7.2.6	The helicopter shall have a minimum cargo	It is desirable that the helicopter should	The cargo capacity area is described as the area aft of the crew

	capacity of at least 215.4 cubic feet (6.1 cubic metres), including the passenger seating area and exclusive of the crew seating area, as stipulated in 7.3.5.5.1.	exceed the minimum required cargo capacity of at least 215.4 cubic feet (6.1 cubic metres) including the passenger seating area and exclusive of the crew seating area, as stipulated in 7.3.5.5.1.	seating area. This includes the passenger seating area and the baggage compartment. Passenger seating can be removed to meet this requirement.
7.2.7	The helicopter must be capable of landing on unprepared surfaces such as rocky terrain and gravel at its MCTOW.		This requirement could envisage scuff pads, anti-settling devices or anti-wear pads being installed on the helicopter landing gear.
7.2.8	The helicopter must be capable of landing on soft surfaces such as snow, mud and sand at its MCTOW.		The helicopter needs to be prevented from settling into the surface to such an extent that would jeopardize a subsequent safe take-off or cause damage to the aircraft. CCG envisages that Anti-settling devices could be installed on the helicopter landing gear to satisfy this requirement.
7.2.9	The helicopter shall have the capability of landing on slopes of at least 5 degrees fore and aft, and at least 5 degrees side to side.	It is highly desirable that the helicopter should have the capability of landing on slopes in excess of 5 degrees and up to 10 degrees side to side.	
7.2.10	The helicopter shall be capable of using JetA1 fuel in operations and flight in ambient outside air temperatures between -30°C and +40°C.	It is desirable that the helicopter should be capable of using JetA1 fuel during cold weather operations, where the outside ambient air temperature is in excess of -30°C to an extreme of -40°C.	
7.2.11	In order to land aboard CCG ships, the helicopter in its Flight Configuration “A”, as defined in Section 5, must be capable of carrying a minimum useful load of at least 2000 lbs (907 kg), plus the necessary fuel for at least 1 hr plus 20 minutes VFR reserve at the helicopter Maximum Range Speed and shall not exceed		Helicopter maximum weight limitations reflect constraints on existing CCG vessels. The term Maximum Range Speed refers to the speed achieved at the helicopter cruise power setting that maximizes aircraft range while minimizing fuel consumption.

	11,000 lbs (4989.5 kg).		
7.2.12	The helicopter shall have a main rotor diameter of not more than 48 ft (14.63 m).		This maximum main rotor diameter is required in order to safely land aboard CCG vessels.
7.2.13		For Shipboard Operations, the maximum overall length of the helicopter should not exceed 57 ft (17.37 m), the overall helicopter height should not exceed 13 ft 10 inches (4.21 m) with ground handling equipment installed and deployed, and the overall helicopter width, with main rotor blades in the folded position with cradles installed, should not exceed 10 ft 10 inches (3.3 m) with all operational equipment installed per CCG helicopter Configuration “A”.	
7.2.14		It is desirable that the helicopter should be capable of carrying internal to the aircraft, structural components having dimensions equal to or greater than those described in the photograph attached in Attachment 1.	
7.2.15	The helicopter shall be capable of landing at shore-based touchdown locations where there are wooden helipads having the dimensions 16 ft X 16 ft (4.8 m x 4.8 m) and the landing gear point(s) of contact shall be at least 2 ft (60.96 cm) from all edges of the helipad when the aircraft is centered on the pad.		The 2 ft (60.96 cm) from any edge of the helipad is to provide a margin of safety for passenger ingress and egress, movement of cargo and equipment and the positioning of the aircraft.
7.2.16	The helicopter in its Flight Configuration “A”, as defined in Section 5, and carrying a minimum		A sufficient fuel load of at least 2 hrs plus 20 minutes VFR reserve is necessary to meet CCG’s range requirements for this aircraft because

	useful load of at least 2000 lbs (907 kg), plus the necessary fuel for at least 2 hrs plus 20 minutes VFR reserve, shall be capable of landing on wooden helipads where the Maximum Bending Capacity of the member is 1.63 kN-m (1202 lbf-ft) and the Maximum Load Limitation is 4.17 kN (937 lbs) per Point of Contact.		CCG's operational environment may require the helicopters to refuel at selected landing locations. All calculations reflect CCG helipad construction in accordance with the requirements of CAN/CSA-086-01 Engineering Design in Wood, where the tabulated value for timber is 64x286mm (2.5 x 11.2 inches), for planks of pressure treated spruce, grade no. 1/2, measuring 16ft. (4.87 m) in length. The helipad structure is comprised of deck planks placed on 8x8 inch (203 x 203 mm) joists, spaced at intervals of 5.125 ft. (1.56 m) along the length of the structure. These helipads measure 16ft x 16 ft (4.87m). In demonstrating how the proposed solution fulfills this requirement, bidders shall submit all drawings and calculations which clearly indicate the number of points of contact associated with the proposed landing gear configuration and the resulting helicopter loads on the helipad. **Please note, for the purposes of calculation:** 1. The Maximum Bending Capacity equals Maximum Load Limitation times the Length of the spacing interval between the joists, divided by four. *i.e.* $M_{max} = (P \times L) / 4$ M_{max} = *Maximum Bending Capacity* *P = Maximum Load Limitation* *L = Length of the spacing interval between the joists* 2. For the purposes of calculation, a Dynamic Load Factor of 1.5 is applied to the weight of the subject helicopter. 3. The number of Points of Contact corresponds directly to the number of planks that the landing gear touches.
7.2.17	For Shore based Operations, the maximum		The maximum height limitation is required in order to facilitate aircraft

	overall height of the helicopter shall not exceed 18 ft 6 inches (5.6 m) with ground handling equipment installed and deployed and with all operational equipment installed per CCG helicopter Configuration “A”.		handling in CCG shore based hangar facilities.
7.3 AIRCRAFT EQUIPMENT REQUIREMENTS			
7.3.1 PLACARDS AND MARKINGS – NOT USED			
7.3.2 SERVICING – NOT USED			
7.3.3 HARDWARE – NOT USED			
7.3.4 HELICOPTER VIBRATION			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.4.1	Not used.		
7.3.5 AIRFRAME SYSTEMS			
7.3.5.1 AIR CONDITIONING			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.1.1	The helicopter shall be equipped with a cockpit and cabin air conditioning system.		Pilots are required to wear survival suits in accordance with CCG policy. Experience has shown that pilots are uncomfortable wearing suits in cabin temperatures exceeding 20°C.
7.3.5.1.2	The helicopter shall be equipped with a bleed air heater-with windshield defrost capability.		CCG operates in harsh cold weather climates of the Canadian north and northern coastal areas having ambient temperatures of -30°C.
7.3.5.2 AUTO FLIGHT			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.2.1	The helicopter shall be equipped with a three (3) axis coupled digital autopilot system, as minimum, with Flight Director.	It is highly desirable that the helicopter should be equipped with a four (4) axis autopilot.	

7.3.5.3 COMMUNICATIONS			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.3.1	The helicopter shall be equipped with a dual VHF communication system with 8.33 KHz spacing and with a minimum 15 watt transmitter output.		
7.3.5.3.2	The helicopter shall be equipped with a P25 compliant digital FM radio interfaced with the audio system.		
7.3.5.3.3	The helicopter shall be equipped with the latest version of the Iridium satellite based Flight Following System, SkyTrac ISAT (including DVI, CDP, Sat phone, Hardware Installation Support, etc.) and complete with the “Rendezvous” software component, all of which must be fully compatible/backwards compatible with the existing CCG shipboard SkyTrac ISAT-200 Flight Following System currently operating in the CCG fleet.		
7.3.5.3.4	The helicopter Iridium satellite based Flight Following System shall be interfaced to the aircraft audio system.		
7.3.5.3.5	The helicopter shall be equipped with a secondary radio transmit capability for the co-pilot position, in a location other than on the flight controls.		
7.3.5.3.6	The helicopter shall be equipped with an audio		This requirement reflects the current fleet configuration where four

	system consisting of one pilot, one co-pilot and at least one passenger cabin audio control panel, having the following features as a minimum: - Push to talk and voice activated intercom system - High impedance phone output - Pilot position shall be capable of rear cabin and co-pilot isolation - Co-pilot position shall be capable of rear cabin and pilot isolation - Minimum of five transceiver interfaces - Minimum of five receiver interfaces - Two auxiliary audio inputs		existing transceivers are onboard the aircraft and leaves room for additional transceivers to be installed on the new aircraft in future to satisfy evolving CCG requirements.
7.3.5.3.7	The helicopter shall be equipped with a rear cabin audio control panel with radio(s) transmit capabilities from at least one station with an Intercom System/Push To Talk (ICS/PTT) adjustable volume control located on the down lead cord.		
7.3.5.3.8	The helicopter shall be equipped with a rear cabin audio system with adjustable volume, voice activated intercom, complete with radio and side tone monitoring for all passenger stations.		
7.3.5.3.9	The helicopter shall be equipped with a 406 MHz Automatic Fixed (AF) emergency locator transmitter meeting the requirements of FAA-TSO-C91 or FAA-TSO-C91a or FAA-TSO-C126, interfaced to the aircraft Global Navigation Satellite System (GNSS).		
7.3.5.3.10	The helicopter shall be equipped with an Automatic Dependent Surveillance – Broadcast		

	(ADS-B) transponder.		
7.3.5.3.11	The helicopter shall be equipped with a satellite data-link system displaying Canadian aviation weather information, as a minimum, to the flight crew.		Refers to Satellite weather information system such as XM Satellite weather.
7.3.5.3.12	Any belly and tail boom mounted antennas on the helicopter shall permit the use of aircraft ground handling equipment, including dollies.		Ground handling could include tow bars, ground handling wheels, dollies etc.
7.3.5.3.13	The helicopter shall be equipped with an Underwater Locator Beacon that meets CAN TSO C-121a and include the following features as a minimum: - Operating frequency - 37.5 kHz A± 1 kHz - Operating Depth - Surface to 20,000 feet - Pulse Length - Not less than 9 milliseconds - Pulse Repetition Rate - Not less than 0.9 pulse per second - Useful Life - Six years - Operating Life - 30 days (minimum) - Acoustic Output, Initial - 1060 dynes/cm^{2}rms pressure at 1 meter (160.5 dB) - Acoustic Output, After 30 days: 700 dynes/cm^{2}rms pressure at 1 meter (157.0 dB) - Operating Temperature - 28º F to 100º F (-2.2 ºC to + 37.8 ºC)		

	- Actuation - Fresh or salt water, surface to 20,000 feet - Radiation Pattern - Rated output over 80 percent of sphere		
7.3.5.4 ELECTRICAL POWER			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.4.1	The helicopter shall be equipped with a minimum of one 115 VAC 60 Hz outlet in the passenger cabin suitable for the operation of low power audio and video equipment, portable computers and telecommunication equipment.		
7.3.5.4.2	The helicopter shall be equipped with two 28 VDC utility power receptacles (standard 2-Pin connector), with one outlet located in the crew cabin and one outlet located in the passenger cabin on the same side of the aircraft as the fuel filler port.		
7.3.5.4.3	The helicopter shall be equipped with external power provisions capable of being connected to all aircraft electrical equipment including equipment used for engine start.		This external power provision is in accordance with CAR 527.1351.
7.3.5.5 EQUIPMENT AND FURNISHINGS			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.5.1	The helicopter shall be equipped with seating provisions for two (2) crew and at least nine (9) passengers.	It is desirable that the aircraft should be equipped with seating provisions for more than nine (9) passengers.	
7.3.5.5.2	The helicopter shall have cushioned passenger		CCG does not want military style troop seating (ie. pole and canvas

	seating.		construction).
7.3.5.5.3	The helicopter shall be equipped with 4 point safety harnesses, as a minimum, for crew seats.		
7.3.5.5.4	The helicopter shall be equipped with 3 point safety harnesses, as a minimum, for all passenger seats.	It is desirable that the helicopter should be equipped with 4 point safety harnesses for all passenger seats.	
7.3.5.5.5	The helicopter passenger seats shall be detachable and removable from the aircraft without the use of tools.		
7.3.5.5.6		It is desirable that the helicopter should be fitted with cargo and passenger cabin floor and wall protection that does not impede access to cargo restraint hard points, seat anchors, etc. and provides impact protection.	Impact protection refers to installing a means of protection to avoid damaging aircraft structure, electrical components and wiring, interior paneling etc. Based on experience, these floor and wall protectors could be similar to the CNC cut aerospace polycarbonate panels available on the market today from helicopter accessory manufacturers. These panels could be approximately 1/8 inch thick and would be designed to protect against aircraft floor and wall damage from high pressure points created by typical utility aircraft cargo such as heavy metal or wooden boxes, shovels, chain saws etc. The panels could be aircraft type specific and could be designed for easy installation and removal to allow access to airframe cargo restraint and passenger seat hard points.
7.3.5.5.7	The helicopter shall be equipped with an approved litter kit, suitable for transporting one person, fully reclined to the horizontal position, aboard the aircraft, including fixed provisions.		CCG Operational requirement to transport personnel using litter kit.
7.3.5.5.8	The helicopter shall be equipped with flight publications storage located in the crew cabin accessible from both crew positions.		As a minimum, the crew accessible publications storage should be sufficient to accommodate the Aircraft Flight Manual, necessary Pilot Guides for installed equipment, Emergency and Normal checklists,

			Canada Flight Supplement and sufficient CAPs (IFR approach plates) VNCs (VFR Maps), to conduct flight operations for maximum cruise fuel endurance.
7.3.5.5.9	The helicopter shall be equipped with a securely mounted First Aid Kit meeting certification and regulatory requirements.		
7.3.5.5.10	The helicopter shall be equipped with one securely mounted LED flashlight located in the crew cabin, as a minimum.		
7.3.5.5.11	The helicopter shall be equipped with an approved cargo restraint system in the passenger compartment, suitable to restrain a weight equal to the maximum authorized cargo and baggage weight for the aircraft.		CCG currently uses a cargo restraint net, but requires a cargo restraint suitable for carrying small loose item (for example boxed groceries, toolboxes, chainsaws, sledgehammers etc.) The hard point to accommodate the restraint system is identified in requirement 7.3.5.23.1.
7.3.5.5.12	If the helicopter is fitted with a cargo restraint system between the passenger cabin and rear cargo area, it must be removable without the use of tools and designed to restrain the maximum authorized cargo and baggage weight for the cargo area.		This does not necessarily mean a structural bulkhead; cargo restraining nets are generally used as the industry standard.
7.3.5.5.13	The helicopter shall be equipped with externally mounted emergency flotation equipment.		
7.3.5.5.14	The helicopter shall be equipped with externally mounted life raft(s), suitable for the seating capacity of the aircraft.		
7.3.5.6 FIRE PROTECTION			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**

7.3.5.6.1	The helicopter shall be fitted with two (2) securely mounted hand-held fire extinguishers, with one mounted in the cockpit and one mounted in the passenger compartment.		
7.3.5.7 FLIGHT CONTROLS			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.7.1	The helicopter shall be equipped with dual flight controls.	The helicopter dual flight controls should have: • quick removal co-pilot cyclic and collective • quick removal tail rotor pedals; or • pedals that can be disabled	Operational requirement for CCG as helicopters may be required to fly in single pilot configuration.
7.3.5.8 FUEL			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.8.1	The helicopter shall be fitted with provisions for an auxiliary fuel system or additional fuel capacity that shall be capable of extending fuel endurance beyond the basic fuel system configuration by at least 0.5 hours.		
7.3.5.8.2	Not used.		
7.3.5.9 HYDRAULIC POWER – NOT USED			
7.3.5.10 ICE AND RAIN PROTECTION – NOT USED			
7.3.5.11 INSTRUMENTS			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.11.1	The helicopter shall be equipped with an integrated pilot and co-pilot electronic flight instrument system with multi-function display(s). This system shall display, as a minimum, primary	It is desirable that the system should be capable of selecting and displaying external video sources.	Electronic flight deck displays are also widely known as Electronic Flight Instrument Systems (EFIS) or equivalent. External video sources would include items such as externally

	flight and navigation information.		mounted cameras and sensors.
7.3.5.11.2	The helicopter shall be equipped with Engine Indicating and Crew Alerting System (EICAS).		It is envisaged that EICAS would display the typical aircraft system information such as engine and aircraft system parameters including, by not limited to RPMs, temperature values, fuel flow and quantity, oil and fuel pressures etc. It could also display indications of aircraft system or component malfunctions/failures in the form of messages displayed with other EICAS indications.
7.3.5.11.3	The helicopter shall be equipped with dual (pilot & co-pilot) digital chronometers in the instrument consoles for both pilot positions.		
7.3.5.11.4	The helicopter shall be equipped with a Cockpit Voice Recorder (CVR) meeting the requirements of CAN-TSO C124b.		Operational requirement TC-ASD.
7.3.5.11.5	The helicopter shall be equipped with a Flight Data Recorder (FDR) meeting the requirements of CAN-TSO 123.		
7.3.5.12 LANDING GEAR			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.12.1	Not Used.		
7.3.5.13 LIGHTING			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.13.1	The helicopter shall be equipped with a flashing landing light system.		
7.3.5.13.2	The helicopter shall be equipped with a Light Emitting Diode (LED) position light system.		It is intended that there will be a high intensity white strobe integral with the navigation lights and one anti-collision light mounted on the upper portion of the aircraft as required by regulation.

7.3.5.13.3.	The helicopter shall be equipped with a Light Emitting Diode (LED) anti-collision light system.		It is intended that there will be a high intensity white strobe integral with the navigation lights and one anti-collision light mounted on the upper portion of the aircraft as required by regulation.
7.3.5.13.4.	The helicopter shall be equipped with a high intensity white strobe light system that can be selected “OFF” independently of the position and anti-collision light system.		It is intended that there will be a high intensity white strobe integral with the navigation lights and one anti-collision light mounted on the upper portion of the aircraft as required by regulation.
7.3.5.13.5	The helicopter shall be equipped with a two axis, pilot controlled light to be used for landing and search.		Switchable landing/search light capable to support both NVIS and VFR night operations.
7.3.5.14 NAVIGATION			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.14.1	The helicopter shall be equipped with all equipment needed to comply with Night Visual Flight Rules (NVFR).		
7.3.5.14.2	The helicopter shall be equipped with all equipment needed to comply with dual pilot Instrument Flight Rules (IFR).		
7.3.5.14.3	Not used.		
7.3.5.14.4	The helicopter shall be equipped with a dual Attitude, Heading Reference System (AHRS) with a free gyro mode meeting the requirements of FAA TSO-C201.		
7.3.5.14.5	The helicopter shall be equipped with dual digital air data systems.		

7.3.5.14.6	The helicopter shall be equipped with coupled dual IFR certified Global Navigation Satellite System (GNSS) sensor/receivers with Wide Area Augmentation System (WAAS) meeting the requirements of TSO C146 including Localizer Precision with Vertical guidance (LPV) approach capabilities.		
7.3.5.14.7	The helicopter shall be equipped with dual VHF navigation systems capable of being coupled to the auto-pilot.		
7.3.5.14.8	The helicopter shall be equipped with a VFR and IFR moving map display capable of presenting all VFR Navigation Chart (VNC) details in the instrument panel within the pilot's field of view.		It is understood that for dual pilot position this would probably be in the middle.
7.3.5.14.9	The helicopter shall be equipped with an Automatic Direction Finder (ADF) with a bearing indicator displayed on the electronic flight information system.		
7.3.5.14.10	The helicopter shall be equipped with a weather radar with a lowest selectable scale of at least 2.5 nautical miles (4.6 km) and 0.5 nm (0.9 km) range arcs displayed on the electronic flight information system.		Operational requirement necessary allow helicopter to be capable of detecting destination vessel during approach in marginal weather conditions.
7.3.5.14.11	The helicopter shall be equipped with a Traffic Advisory System (TAS) meeting the requirements of CAN TSO-C147, displayed on the electronic flight information system.		
7.3.5.14.12	The helicopter shall be equipped with a		

	Helicopter Terrain Awareness and Warning System (H-TAWS) meeting the requirements of CAN-TSO C194 displayed on the electronic flight information system or elsewhere on the instrument console that is in both the pilot's and co-pilot's field of view.		
7.3.5.14.13	The helicopter shall be equipped with a radar altimeter having data displays for both pilot and co-pilot.		
7.3.5.15 OXYGEN – NOT USED			
7.3.5.16 PNEUMATIC – NOT USED			
7.3.5.17 VACUUM – NOT USED			
7.3.5.18 WATER/WASTE – NOT USED			
7.3.5.19 CENTRAL MAINTENANCE SYSTEM (CMS) – NOT USED			
7.3.5.20 AIRBORNE AUXILIARY POWER – NOT USED			
7.3.5.21 STANDARD PRACTICES/STRUCTURES – NOT USED			
7.3.5.22 DOORS			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.22.1	The helicopter shall provide a method of securing all hinged doors in an open position for ease of entry, exit and loading.		Automatic door openers, such as air pistons to hold the door in the open position, or latches can be used to satisfy this requirement.
7.3.5.22.2	Not used.		
7.3.5.23 FUSELAGE			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.23.1	The helicopter shall be equipped with internal cargo tie-down provisions that are designed to		The cargo down provision is to accommodate the cargo restraint system identified in requirement 7.3.5.5.11.

	restrain the maximum authorized weight of cargo and baggage.		
7.3.5.23.2	Not used.		
7.3.5.23.3	The helicopter shall be equipped with hard points to permit the attachment of body harnesses to safely secure personnel during open door operations, from either side of the aircraft.		CCG missions require open door operations.
7.3.5.23.4	The helicopter shall be fitted with step(s) to permit personnel to access areas of the aircraft for maintenance and pre-flight inspections.		It is envisioned that the aircraft could be fitted with a sufficient number of airframe steps to allow easy access to the main rotor head and engine compartment areas for the purpose of pre-flight inspections and minor maintenance tasks.
7.3.5.23.5	The helicopter shall be equipped with a wire strike protection system.		This is a wire cutting system generally mounted on the forward section of the helicopter fuselage to protect the landing gear and main rotor flight controls among other components.
7.3.5.24 NACELLE/PYLONS – NOT USED			
7.3.5.25 STABILIZERS – NOT USED			
7.3.5.26 WINDOWS			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.5.26.1	The helicopter shall be equipped with emergency egress provisions for passengers and crew.		It is envisaged that emergency egress provisions for passengers and crew could be jettisonable crew doors and push out passenger windows.
7.3.5.27 WINGS – NOT USED			
7.3.6 PROPELLER/ROTOR SYSTEMS			
7.3.6.1 PROPELLERS/PROPULSORS – NOT USED			
7.3.6.2 MAIN ROTOR			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.6.2.1	The helicopter shall be equipped with erosion		CCG operational requirement for marine environment, and sandy and

	protection on the main rotor blades.		dusty areas (Mackenzie river), as well as flying in sudden snow squalls and rain of coastal Maritime areas.(Typically a stainless steel leading edge which help prevent corrosion)
7.3.6.2.2	The helicopter shall be equipped with high visibility main rotor blades.		CCG operational requirement for safety.
7.3.6.3 MAIN ROTOR DRIVE			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.6.3.1	The helicopter shall be equipped with a main rotor brake.		
7.3.6.4 TAIL ROTOR			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.6.4.1	The helicopter shall be equipped with high visibility tail rotor blades, where tail rotor blades are fitted.		
7.3.6.4.2	The helicopter shall be equipped with erosion protection on Tail Rotor (TR) blades, where tail rotor blades are fitted.		
7.3.6.5 TAIL ROTOR DRIVE – NOT USED			
7.3.7 POWERPLANT SYSTEM			
7.3.7.1 POWERPLANT			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.7.1.1	The helicopter shall be equipped with an engine compressor wash kit.		
7.3.7.1.2	The helicopter shall be equipped with an engine intake air filtration/separation system which		Air filtration system would normally be referred to as a particle separator system.

	provides protection from fine particle erosion.		
7.3.7.2 TURBINE/TURBOPROP ENGINE			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.7.2.1	The aircraft shall be a twin engine turbine powered helicopter.		
7.3.7.3 ENGINE (FUEL AND CONTROL)			
ID	**Mandatory Requirement**	**Desirable Requirement**	**Design Guidance**
7.3.7.3.1	The helicopter shall be equipped with a full authority digital electronic control system providing the following functionality, as a minimum: - automatic engine starting and shut down, controlling all parameters - control engine power management through all regimes of flight - provisions for manual intervention in the event of malfunction or failure, or for training purposes - provision for simulated single engine training mode - exceedance prevention, monitoring and reporting		The system refers to what is normally called a FADEC system, having equivalent functionality, as a minimum.
7.3.7.4 IGNITION – NOT USED			
7.3.7.5 AIR – NOT USED			
7.3.7.6 ENGINE CONTROLS – NOT USED			
7.3.7.7 ENGINE INDICATING – NOT USED			
7.3.7.8 ENGINE EXHAUST – NOT USED			
7.3.7.9 ENGINE OIL – NOT USED			
7.3.7.10 STARTING – NOT USED			

7.3.7.11 TURBOCHARGING – NOT USED
7.3.7.12 WATER INJECTION – NOT USED
7.3.7.13 ACCESSORY GEARBOXES – NOT USED
7.3.7.14 RECIPROCATING ENGINE – NOT USED
7.3.7.15 SURVIVABILITY – NOT USED
7.3.7.16 AUXILIARY EQUIPMENT – NOT USED

7.4 AUXILIARY EQUIPMENT

ID	Mandatory Requirement	Desirable Requirement	Design Guidance
7.4.1	The helicopter shall be furnished with all necessary cover(s), blanks and equipment for outside short term parking where the aircraft is unattended.		This requirement addresses the CCG Operational need for winter covers to store the aircraft outside short term (up to 7 nights).
7.4.2	The helicopter shall be furnished with covers for the helicopter blades and fuselage, suitable for outside storage of the aircraft in winter conditions.		This statement refers to fuselage, rotor and blade covers designed for overnight outside parking in winter climate.
7.4.3	The helicopter shall be furnished with M/R and T/R (where applicable) blade tie-down kits, including high wind tie downs, if available.		Requirement applicable where tail rotors are inherent in the aircraft design.
7.4.4	The helicopter shall be furnished with ground handling equipment compatible with the landing gear, to permit ground handling of the helicopter for both shipboard and shore-based operations.		Ground handling equipment may include equipment such as tow-bars and ground handling wheels etc.
7.4.5	The helicopter shall be furnished with an external lashing kit to enable the helicopter to be secured either to the deck of a ship or in the ship's hangar in both fair weather and heavy weather conditions.		This kit shall meet the needs of Requirement 7.3.5.23.5 to ensure that the lashing kits can be used when the wire strike kit is installed on the aircraft.

7.4.6	The helicopter shall be furnished with a main rotor blade folding kit that allows the main rotor blades to remain attached to the main rotor head during the folding and unfolding procedure, and does not require the use of tools.		CCG operational needs require that Pilots be able to fold and unfold main rotor blades without the use of tools.

8 SPECIAL MISSION CAPABILITIES

ID	Mandatory Requirement	Desirable Requirement	Design Guidance
8.1	The helicopter shall be fitted with a cargo hook having a minimum load carrying capacity of at least the sum of the aircraft maximum gross take-off weight minus Configuration “A” empty weight.		In order to get maximum lift capacity CCG needs to be able to carry up to MCTOW (at minimal operational weight) by using the cargo hook (i.e. CCG needs to be able to carry the maximum possible weight on the cargo hook).
8.2	The helicopter cargo hook shall be fitted with a Keeperless, or equivalent, system.		
8.3	The helicopter cargo hook suspension system shall not extend below the landing gear when not in use.		
8.4	The helicopter shall be capable of conducting Vertical Reference Operations (VRO) with all doors on and closed.		CCG Operations are often conducted at mountaintop sites and in coastal environments in cold and inclement weather conditions where it would be dangerous for the pilot to be exposed to the elements.
8.5	The helicopter cargo hook system shall have long line remote hook provisions.		Electrical system and associated cabling are provided to enable activation of the remote hook electrical release.
8.6	The helicopter shall be equipped with a system to enable the pilot operating the aircraft to view the aircraft belly area during sling operations.		For example the requirement may be addressed using sling mirror systems or alternate means.

8.7	The helicopter shall be capable of enunciating critical flight and power parameters to the pilot flying during vertical reference operations.		Enunciate refers to pilot notification including audio or visual notification of critical engine performance parameters and system malfunctions.
8.8	The helicopter shall be equipped with a system to enable the pilot to be aware of the external load weight at all times during slinging and vertical reference operations.		Refers to load meter mounted in the cockpit.

9 OPERATOR STIPULATED FEATURES

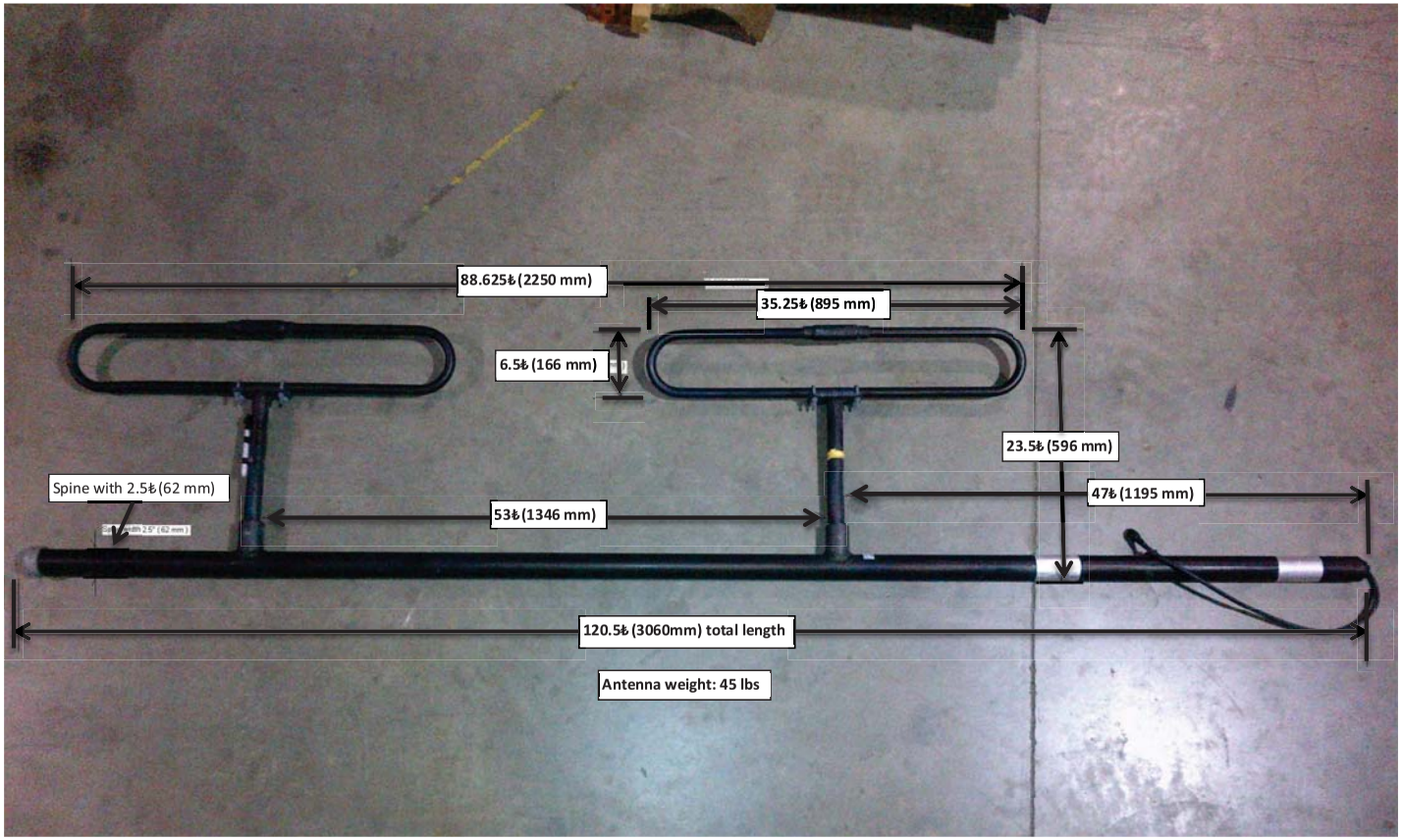
ID	Mandatory Requirement	Desirable Requirement	Design Guidance
9.1	The helicopter shall be painted Canadian Coast Guard colours in accordance with the CCG Federal Identity Program Guide (FIPG) and Coast Guard directives.		

10 MAINTENANCE AND LIFECYCLE SUPPORT

ID	Mandatory Requirement	Desirable Requirement	Design Guidance
10.1	Not used.		
10.2	Not used.		

11 RELIABILITY AND REDUNDANCY – NOT USED

Attachment 1 - Structural Components to be Transported (photo)



Attachment 2 - Minimum Load Composition

Minimum Load Composition for CCG Medium Helicopter per CCG Medium Helicopter Baseline Requirement 7.2.1		
Pilot and Engineer	Average Male Winter Weight –Aeronautical Information Manual RAC 3.0 Table 1 – 206 lbs Life Vest – 4.2 lbs Head Set – 1.5 lbs Immersion Suit – 9.0 lbs	220.7 lbs x 2 = 441.4 lbs
Passengers	3 technicians - necessary for safe working environment ie: heavy lifting, tower work etc. - efficiency of work - large carnivorous animal protection - pilot cannot assist in work due to possibility of injury, rendering him/her unable to perform duties. - technicians are occasionally left at work site while helicopter continues with other taskings	220.7 x 3 = 662.1 lbs
Survival Equipment	In accordance with CCG Operations Manual and W&B calculations	115 lbs
Unused Headsets and Life Vests Based on a 2 crew 9 pax aircraft	6 headsets @ 1.5 = 9.0 lbs 6 life vests @ 4.2 = 25.2 lbs These are carried on board to allow flexibility in operational requirements throughout the taskings without having to return to base to equip helicopter for additional passengers	34.2 lbs
Aircraft Library	Required documentation such as Company Operations Manual, Supplemental Equipment Pilot Guides, Maps, Canada Flight Supplement etc. Estimated at 13 lbs.	13.0 lbs
Sling Equipment	Longline – 60 lbs Light weight cargo net – 15 lbs Lanyard – 4 lbs Sling Straps (2) – 3 lbs This is equipment is often carried to accommodate simple sling jobs that require the movement of equipment to the work site from a nearby staging area	82 lbs

Helicopter Refueling Kit	Necessary to refuel from drummed fuel caches	52 lbs
Batteries	4 batteries and carrying cases. Navigation aids with electrically powered beacons or lights are powered by two gel cell type lead acid batteries and it is necessary to carry up to 6 batteries to enable technicians to service navaids during a full day routine service run.	300 lbs
Tools	Typical technician's tool kit and equipment such as shovels, fall arrest harnesses, chain saw, two brush cutters, sledge hammers, cabling, etc. sufficient to service Nav Aid site.	Tools - 70 lbs Chain saw – 20 lbs Brush cutter 25 lbs x 2 = 50 lbs Fuel and oil = 10 lbs Fall arrest harness kit for 4 persons = 120 lbs Miscellaneous equipment = 50 lbs TOTAL = 320 lbs
Carry On Luggage	Pilot and technician lunches, additional clothing, water, etc. estimated at 10 lbs person.	50 lbs
2 hours 20 minutes fuel	As per the Statement of Requirements. Although fuel loads can be adjusted to accommodate additional payload. A minimum 2 hours of endurance at cruise speed is necessary to cover the long distances between fueling points, especially in remote areas of Canada and taking into account contingency fuel for things such as unpredicted head winds, unexpected poor weather conditions, unexpected increases to flight times for program delivery such as additional work, difficult sling work, etc.	To be supplied by OEM
TOTAL		**2069.7 lbs**

Attachment 3 - Wooden Helipad (photo)

ANNEX C

Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters

Terms and Conditions

Industrial and Regional Benefits (IRB)

Version 3.0:

TABLE OF CONTENTS

1. DEFINITIONS

1.1. For the purpose of this Part, unless the context otherwise requires, the following definitions apply:

1.1.1. “Accepted IRB Transaction” means an Industrial and Regional Benefits (IRB) Transaction which has been accepted in writing by the IRB Authority as meeting the IRB Eligibility Criteria.

1.1.2. "Achieved IRB Transaction" means all or any part of an Accepted IRB Transaction for which IRB Credits have been awarded by the IRB Authority;

1.1.3. “Allowable Investment Framework (IF) Investment” - For cash contributions, an Allowable IF Investment means: a grant; or, a purchase of common or preferred shares. It does not include either the purchase of debentures or a repayable loan. For In-Kind contributions, an Allowable IF Investment means: a licence for intellectual property (authorization to use the licensed material); equipment (equipment, software or systems to develop new or improved goods/services); knowledge transfer (lending of an employee to provide technical or managerial know-how); or, marketing and sales support (lending of an employee to undertake marketing/sales activities and share market intelligence; or, a licence for brand or trademarks);

1.1.4. “Banked IRB Transaction” means an Accepted IRB Transaction that resides in the IRB Bank;

1.1.5. "Canadian Company" or "Canadian Corporation" means a commercial enterprise that is incorporated pursuant to the laws of Canada and which has ongoing business activities in Canada;

1.1.6. "Canadian Content Value" or ACCV@ is as described in Article 6, Canadian Content Value;

1.1.7. ACapitalization@ means the total value of a company's issued shares plus the value associated with instruments which can be converted into shares. For publicly traded companies, this is equal to the total number of issued shares multiplied by the market price plus the equity portion of any derivative instrument according to Canadian Generally Accepted Accounting Principles. For privately held companies, this is equal to the total number of issued shares multiplied by the most recent price at which they were sold plus the equity portion of any derivative instrument according to Canadian Generally Accepted Accounting Principles;

1.1.8. “Causality” means the Eligibility Criteria of the IRB Policy which stipulates that a proposed IRB Transaction must be brought about, in part, by an IRB Obligation to Canada as set forth in Article 7 (Eligibility Criteria for IRB Transactions);

1.1.9. “Commercialization Activity” means a process through which economic value is extracted from knowledge through the production and sale of new or significantly improved goods and services. It can also include advertising, sales promotion and other marketing activities. Specific commercialization activities consist of: business and market planning; project feasibility studies; identifying customer needs; market engagement and testing; basic and applied research; experimental development; profitability analysis and financing; and, launch advertising;

1.1.10. “Consortium” or “Consortia” means a public-private partnership established with the intent of undertaking activities related to research and development, and which shall meet the criteria set out in Article 8.6 (Consortium Transactions);

1.1.11. "Designated Regions of Canada" means the following regions which have been designated by the Government of Canada for socio-economic purposes: the Atlantic Region (consisting of the Provinces of Newfoundland and Labrador, Prince Edward Island, New Brunswick and Nova Scotia); the Quebec Region (consisting of the Province of Quebec); the Northern Ontario Region (consisting of that part of the Province of Ontario north of and including Nipissing and Parry Sound Districts); the Southern Ontario Region (consisting of that part of the Province of Ontario south of Nipissing and Parry Sound Districts); the Western Region, (consisting of the Provinces of Manitoba, Alberta, Saskatchewan, and British Columbia); and, the Northern Region (consisting of the Territories of Yukon, Northwest Territories and Nunavut);

1.1.12. "Direct IRB Transaction@ means an IRB Transaction that is entered into for the performance of any part of the Work under this Contract;

1.1.13. "Eligibility Criteria" means those criteria outlined in Article 7 (Eligible Criteria for IRB Transactions), which an IRB Transaction must meet in order to be an Accepted IRB Transaction;

1.1.14. "Eligible Party" means the Eligibility Criteria of the IRB Policy which stipulates which companies can be a provider (or donor) of an IRB Transaction, as set forth in Article 7 (Eligibility Criteria for IRB Transactions);

1.1.15. “Enhanced Priority Technology List” or “EPTL” means the list attached as Annex D which identifies the technologies that reflect the emerging, critical technology needs of the Department of National Defence;

1.1.16. “Global Value Chain (GVC) Platform” means a vehicle/craft or major system platform which meets the criteria outlined in Article 8.2.3 (Global Value Chain);

1.1.17. “Grouped Transaction” means an IRB Transaction that has more than one Recipient. Grouped Transactions may only include activities involving: the purchase of Direct goods or services; Canadian suppliers with similar characteristics of product, size and/or region; and, a total Canadian Content Value of not more than 10% of the total IRB

Obligation;

1.1.18. "Import Replacement" refers to the production/manufacture of a good or the provision of a service in Canada that was formerly manufactured or provided from off-shore sources of supply;

1.1.19. “Incrementality” means the Eligibility Criteria of the IRB Policy which stipulates that an indirect IRB Transaction must involve new work in Canada, as set forth in Article 7 (Eligibility Criteria for IRB Transactions);

1.1.20. "Indirect IRB Transaction" means an IRB Transaction that is entered into for a business activity unrelated to the performance of any part of the Work under this Contract;

1.1.21. “In-kind Contribution” means a non-monetary contribution, such as services, equipment, intellectual property, etc. In-kind Contributions will be valued by an independent third party who possesses a Chartered Business Valuator designation (or other similar acceptable designation) and who complies with all by-laws, code of ethics and practice standards of the organizational body governing their profession. Valuation reports will be detailed, use all standard, generally-accepted report formats and valuation approaches, and arrive at one conclusion regarding valuation which balances all approaches. The Contractor or its Eligible Party will assume all costs associated with obtaining the in-kind valuation report. The in-kind valuation report is valid for twelve (12) months;

1.1.22. “Investment Framework” or “*IF*” means the method of assessing, valuing and calculating IRB Credits associated with innovation-related investments made directly with Canadian SMB, as outlined in Article 8.7 (Investment Framework Transactions).

1.1.23. “Investment Framework Business Plan” means a complete and well-supported plan which: includes an executive summary; provides detailed company information and financial statements; describes the proposed *IF* project; details the specific *IF* activities, goals and duration; and, includes key market, risk and due diligence considerations;

1.1.24. "IRB Achievement Period" means the period commencing on August 20, 2012 and ending 7 years following the Effective Date of this Contract;

1.1.25. "IRB Authority" means the Minister of Industry or any other person designated by the Minister of Industry to act on the Minister's behalf. The IRB Authority is responsible for evaluating, accepting, monitoring, verifying and crediting IRB, and for assessing the Contractor's IRB performance under this Contract;

1.1.26. "IRB Credit" means the written notice by the IRB Authority that an Accepted IRB Transaction has been achieved in whole or in part. All Accepted IRB Transactions are subject to annual reporting, verification and approval before IRB Credit is awarded;

1.1.27. "IRB Investment" means an IRB Transaction which consists of an investment within Canada of a verifiable amount of money which fosters the production of goods or the performance of services by Canadian citizens or permanent residents as defined in the *Immigration and Refugee Protection Act 2001, c.27*, and which meets the criteria set forth in Article 8.9 (General Investment Transactions);

1.1.28. "IRB Obligation" or "IRB Commitment" means the Contractor=s contractual obligation to achieve the CCV for IRB Transactions as set forth in Article 2 (Statement of Work: IRB Commitments and Responsibilities);

1.1.29. "IRB Plans" means the Contractor- prepared IRB Plans which, by reference, form part of this Contract: the Company Business Plan, the IRB Management Plan, the Regional Development Plan, and the Small and Medium Business Development Plan, all dated XXX and all bearing reference number XXX;

1.1.30. "IRB Recipient" means the Canadian entity that is the recipient of the IRB business activity outlined in an IRB Transaction;

1.1.31. "IRB Reporting Period" means the annual periods within the IRB Achievement Period upon which the Contractor's IRB reporting will be based. For example, Reporting Period 1 commences on the first day of the IRB Achievement Period and ends on the last day of the twelfth month after the Effective Date of the Contract. Subsequent Reporting Periods (Period 2, 3, etc) will follow in consecutive annual increments until the end of the IRB Achievement Period;

1.1.32. "IRB Transaction" means a commercial or business activity that is carried out by means of a contract, including any purchase order, sales agreement, license agreement, letter of agreement or other similar instrument in writing, and which has an identified dollar value;

1.1.33. "Major Obligor" means a company that holds contractual commitments for IRB Obligations in Canada in excess of $1 billion;

1.1.34. "Over-achievement" means the amount by which the Contractor's IRB Credits, awarded on an Accepted IRB Transaction during the IRB Achievement Period, are greater than the IRB Commitment for that IRB Transaction;

1.1.35. "Pooling" refers to the act of applying the IRB Credits achieved on a single IRB Transaction to the IRB Obligations associated with two or more projects;

1.1.36. "Post-Secondary Institution" means an institution or other organizational entity in Canada involved in developing and delivering formal education activities and in awarding academic credentials to people for whom the normal entrance requirement is high school completion. The institution should be available to the general public, be recognized by a province or the Canada Student Loans Program, and offer programs

leading to degrees and diplomas that are recognized by the academic community in Canada;

1.1.37. “Proposed IRB Transaction” means an IRB Transaction which has been proposed by the Contractor to the IRB Authority, but which has not yet been formally accepted in writing by the IRB Authority as meeting the IRB Eligibility Criteria;

1.1.38. “Public Research Institution” means a federal or provincial organization in Canada that: is engaged in research, research training and related activities in Canada: has as its primary goals the conduct of research, peer review, and the dissemination of results by way of publication, technology transfer or training; reinvests its profits into its research activities or into the dissemination of results; and, is funded primarily from public resources and has established processes, systems, procedures and controls in place to ensure achievement of public objectives;

1.1.39. “Research and Development (R&D) activity” means a scientific investigation that explores the development of new goods and services, new inputs into production, new methods of producing goods and services, or new ways of operating and managing organizations. Specific R&D activities consist of: standard test/measurement/analysis; test/measurement/analysis report; specific thermo-mechanical analysis methodology development projects; product/process design/engineering; customized product/process/ technology development project; related evaluation and feasibility studies; applied research projects for new product concepts, new technology platforms and new test/measurement/analysis; basic scientific research for creating better understanding and insights in new phenomena; research to advance scientific knowledge with or without a specific practical application in view; and, support work in engineering, design, operations research, mathematical analysis, computer programming, data collection, testing or research;

1.1.40. “Semi-processed Goods” means goods converted from their natural state of a raw material through the use of a specialized process into a state of readiness for use or assembly into a final product;

1.1.41. AShortfall@ means the amount by which the Contractor’s IRB Credits, awarded on Accepted IRB Transactions during the IRB Achievement Period, are less than the IRB Commitment;

1.1.42. "Small and Medium Business" or “SMB” means a Canadian-based, independently-owned and operated manufacturer or service company with fewer than 250 full-time personnel as of the date of entering into an eligible IRB Transaction. Agents and distributors of foreign goods and services, as well as subsidiaries of firms that are Contractors or Eligible Parties on any IRB contract, do not qualify as Small and Medium Business;

1.1.43. “Strategic Plan” means a document which describes the Contractor’s broad corporate business development plans for Canada and how these plans may translate into strategic IRB activities, as set forth in Article 9 (Strategic Plans);

1.1.44. "Technology and Skills Cooperation" means the granting of a license and/or the transmission of a usable body of knowledge to a Canadian company. Technology and Skills Cooperation is assessed and measured for IRB Credit as set forth in Article 8.8 (Technology and Skills Cooperation Transaction);

1.1.45. “Tier One Supplier” means a company that takes on a specific portion of the Work under this Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters Contract from the Prime Contractor, producing or servicing a major subassembly or major component that is installed or used in the platform or system being procured under this Contract;

1.1.46. "Venture Capital Fund" or "VCF" means a pooled group of investments directed at assisting the growth of Canadian small businesses, which is managed by a third party and meets the criteria set forth in Article 8.10 (Venture Capital Fund Transactions); and

1.1.47. AWorld Product Mandate@ means a long-term supplier relationship between the Contractor or an Eligible Party and a Canadian Company, whereby the Canadian company has been legally authorized to carry out and has sole responsibility for specific activities including the design, development, intellectual property, manufacture and marketing related to the supply of products, components, modules or services destined for the domestic and world markets. The CCV of the product or service is calculated as described in Article 13 (World Product Mandate).

2. STATEMENT OF WORK: IRB COMMITMENTS AND RESPONSIBILITIES

2.1. Through the implementation of the Company Business Plan, the IRB Management Plan, the Regional Development Plan and the Small and Medium Business Development Plan referenced in Annex A, the Contractor shall by the end of the Achievement Period:

2.1.1. achieve $ [***100% of contract value]*** in CCV as Direct and Indirect IRB Transactions, as specified in Annex A;

2.1.2. achieve $ [***not less than 20% of Contract Value]*** in CCV as Direct IRB Transactions, as specified in Annex A;

2.1.3. achieve $ [***to be inserted from Contractor=s proposal]*** in CCV, as Direct and Indirect IRB Transactions in the Designated Regions of Canada, as follows:

2.1.3.1. Atlantic: $ [***to be inserted from Contractor=s proposal]***
2.1.3.2. Quebec: $ [***to be inserted from Contractor=s proposal]***
2.1.3.3. Northern Ontario: $ [***to be inserted from Contractor=s proposal]***

2.1.3.4. Southern Ontario: $ [***to be inserted from Contractor=s proposal]***
2.1.3.5. West: $ [***to be inserted from Contractor=s proposal]***
2.1.3.6. North***:*** $ ***[to be inserted from Contractor's proposal]***

2.1.4. achieve $ [***not less than 15% of Contract Value]*** in CCV for Direct and Indirect Small and Medium Business Development IRB Transactions, as specified in Annex A;

2.1.5. carry out each and every IRB Transaction as per the IRB Transaction Sheet list attached at Annex A;

2.1.6. submit to the IRB Authority, one (1) year following the Effective Date of Contract, eligible tranche 2 IRB Transactions which are detailed, fully described and which bring the cumulative total of identified eligible IRB Transactions to not less than 60% of the contract value, including any options, measured in CCV; and

2.1.7. submit to the IRB Authority, three (3) years after the Effective Date of Contract, eligible tranche 3 IRB Transactions which are detailed, fully described and which bring the cumulative total of identified acceptable IRB Transactions to 100% of the contract value, including any options, measured in CCV.

2.2. The Contractor shall submit to the IRB Authority, through the PWGSC Contracting Authority, annual IRB Reports based on the performance achieved during the IRB Reporting Periods defined in this Contract. These reports shall be submitted sixty (60) calendar days after the end of the annual IRB Reporting Period. The Contractor is encouraged to use the format and template outlined in Article 3 (IRB Reporting).

2.2.1. As evidence of the Contractor=s achievement of IRB Commitments, the Contractor shall provide, appended to the Annual IRB Reports, a Certificate of Compliance, as set forth in Annex B to this Contract, signed by the senior company Comptroller in respect to the IRB Transactions for which there was activity in that IRB Reporting Period. This Certificate of Compliance also applies to those IRB achievements of the Contractor=s Eligible Parties.

3. <u>IRB REPORTING</u>

3.1. Each annual IRB Report shall consist of five parts, as outlined in the following sub-paragraphs and in the format template attached in Annex B:

3.1.1. Part A must include:

3.1.1.1. An overview and status of the Work on the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters;

3.1.1.2. A list of all the progress payment requests or invoices (broken down by reporting period and including the amount, date submitted and payment status) which have

been submitted by the Contractor to the Contracting Authority for Work completed since the Effective Date;

3.1.1.3. A description of any changes to the IRB Management Plan.

3.1.2. Part B must include, for each transaction being reported:

3.1.2.1. An update on any changes to transaction details, such as the CCV percentage or company contact information;

3.1.2.2. A description of significant achievements and activities; and

3.1.2.3. A description of any delays, problems or achievement shortfalls, along with a plan of action to resolve.

3.1.3. Part C must include, for each transaction being reported:

3.1.3.1. The CCV value of the IRB achievement claimed for the current reporting period.

3.1.4. Part D must include, for each transaction reported:

3.1.4.1. The CCV value of the IRB achievement claimed to date in all the reporting periods since the beginning of the IRB Achievement Period.

3.1.5. Part E must include:

3.1.5.1. A description of Small and Medium Business and Regional development activities undertaken during the reporting period;

3.1.5.2. A list of IRB Transactions which have been cancelled, added or substantially altered during the reporting period with the approval of the IRB Authority, and their status vis-à-vis contract amendment;

3.1.5.3. A Certificate of Compliance related to the Contractor's achievement of IRB Commitments, signed by the senior company comptroller in respect of the IRB Transactions for which there was activity in that IRB Reporting Period. This Certificate of Compliance also covers any IRB achievements of the Contractor's Eligible Parties.

3.1.5.4. A Certificate of Compliance related to the Lobbying Act, signed by the senior company official with the authority to bind the Contractor. This Certificate of Compliance also covers any lobbying activities of the Contractor's sub-contractors and/or Eligible Parties.

4. CONTRACT PRICE CHANGES

4.1. In the event that the Contract value is increased or decreased, the Contractor's IRB Commitment in Article 2.1.1 shall be correspondingly either increased or decreased to reflect this change.

4.2. If the Contract value increases after the third year following the Effective Date of the Contract, the Contractor will submit to the IRB Authority Proposed IRB Transactions valued at 100 percent of the increase within one year of the date of the increase.

5. OVER-ACHIEVEMENT OF IRB COMMITMENTS

5.1. The Contractor may achieve a CCV for any Commitment in excess of the value stated in the IRB Transactions without prior approval. When an Over-achievement occurs in an IRB Transaction Commitment, subject to the prior written approval of the IRB Authority, the Over-achievement may be applied against the Shortfall or unidentified portion of the IRB Transactions, as long as the Regional and Small and Medium Business Commitments are achieved. An Over-achievement in one Region will not be applied to reduce a Shortfall in another Region.

6. CANADIAN CONTENT VALUE (CCV)

6.1. The CCV of any Direct and Indirect Transaction shall be determined by the Net Selling Price Method or the Cost Aggregate Method.

6.1.1. Net Selling Price Method: A product or service which bears a substantiated selling price may have its CCV calculated as follows:

6.1.1.1. begin with the total selling price of the product or service

6.1.1.2. subtract the applicable customs duties, excise taxes and applicable GST, HST and all provincial sales taxes; and

6.1.1.3. subtract any costs incurred as set out in Article 6.2.

6.1.2. Cost Aggregate Method: Any product or service that cannot be assigned a substantiated selling price may have its CCV calculated as the aggregate of the following:

6.1.2.1. the cost of parts produced in Canada, and the cost of materials to the extent that they are of Canadian origin, that are incorporated in the equipment in the factory of the manufacturer in Canada;

6.1.2.2. the cost of parts or materials which the IRB Authority can verify as being of Canadian origin, in that they have been exported from Canada and subsequently imported into Canada as parts or finished goods;

6.1.2.3. transportation costs, including insurance charges incurred in transporting parts and materials from a Canadian supplier or frontier port of entry to the factory of the manufacturer in Canada for incorporation in the equipment, to the extent that such costs are not included in the foregoing paragraph; and

6.1.2.4. such part of the following costs (not including GST, HST, all provincial sales taxes, excise taxes, royalties and license fees paid outside of Canada) as are reasonably attributable to the production or implementation of the equipment, service or activity:

6.1.2.4.1. wages and salaries paid for direct and indirect production and non-production labour in Canada paid to Canadians or to permanent residents as defined in the Immigration and Refugee Protection Act 2001, c.27;

6.1.2.4.2. materials used in the Work but not incorporated in the final products;

6.1.2.4.3. light, heat, power and water;

6.1.2.4.4. workers compensation, employment insurance and group insurance premiums, pension contributions and similar expenses incurred with respect to labour referred to above in Article 6.1.2.4.1;

6.1.2.4.5. taxes on land and buildings in Canada;

6.1.2.4.6. fire and other insurance premiums relative to production inventories and the production plant and its equipment, paid to a company authorized by the laws of Canada or any province to carry on business in Canada or such province;

6.1.2.4.7. insurance purchased specifically from a company authorized by the laws of Canada or any province to carry on business in Canada or such province;

6.1.2.4.8. rent of factory or office premises paid to a registered owner in Canada;

6.1.2.4.9. maintenance and repairs to buildings, machinery and equipment used for production purposes that is executed in Canada;

6.1.2.4.10. tools, dies, jigs, fixtures and other similar plant equipment items of a non-permanent nature that have been designed, developed or manufactured in Canada;

6.1.2.4.11. engineering and professional services, experimental work and product or process development work executed and completed in Canada;

6.1.2.4.12. pertinent miscellaneous factory and office expenses, such as: administrative and general expenses; depreciation with respect to production machinery and

permanent plant equipment and the installation costs of such machinery and equipment; and, a capital allowance not exceeding five (5) % of the total capital outlay incurred for buildings in Canada owned by the producer of the work;

6.1.2.4.13. personal travel expenses, including Canadian carriers, accommodations and meals, for travel associated with Direct IRB activities in this Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters Contract;

6.1.2.4.14. fees paid for services not elsewhere specified; and,

6.1.2.4.15. pre-tax net profit upon which Canadian taxes are paid or are payable.

6.2. **Costs or Business Activities that are <u>ineligible</u> for IRB Credit**:

6.2.1. the value of materials, labour and services imported into Canada;

6.2.2. in the case of Indirect IRB, the value of raw materials and Semi-Processed Goods exported from Canada;

6.2.3. the value of any living, relocation costs and remuneration paid to non-Canadians for work on the Project;

6.2.4. the amount of all Canadian Excise Taxes, Import Duties, Federal and Provincial Sales Taxes, Goods and Services Taxes, Harmonized Sales Taxes and other Canadian duties;

6.2.5. the value of goods and services with respect to which IRB Credit has been received or is being claimed by the Contractor or its Eligible Parties as an IRB to Canada under any other IRB Obligation or agreement;

6.2.6. any proposal or bid preparations costs;

6.2.7. all transportation or travel costs not covered under Articles 6.1.2.3 or 6.1.2.4.13;

6.2.8. obligations of the Federal Government (e.g. government furnished equipment);

6.2.9. license fees paid by the Canadian IRB Recipient and any on-going royalty payments;

6.2.10. IRB Transactions claimed by a Contractor that pertain to its influence or that of one of its Eligible Parties over any country=s purchasing agent/department;

6.2.11. interest costs associated with letters of credit or other financial instruments to support IRB Transactions;

6.2.12. fees paid to lobbyists (as per the *Lobbying Act*); and

6.2.13. fees paid to third-party consultants or agents for work related to obtaining IRB Credit against this Contract. This includes, but is not limited to, providing advice on the IRB Policy, preparation of IRB Transactions and/or reports, representing the interests of the Contractor to the IRB Authority, and/or searching for potential recipient firms.

7. ELIGIBILITY CRITERIA FOR IRB TRANSACTIONS

7.1. **Causality** - each IRB Transaction shall be one which was brought about by either the Contractor or one of its Eligible Parties, due in part to a current or anticipated IRB Obligation to Canada. It shall not be one which probably would have been entered into if an IRB obligation had not existed or been anticipated. Causality may be demonstrated to a specific project or more broadly to a company's IRB obligation in general.

7.1.1. The Contractor or its Eligible Party must demonstrate Causality by providing a detailed statement on Causality, which outlines the steps and timelines involved in its decision about a procurement or investment activity and which clearly shows the link between the steps and decision on a business activity and Canada's IRB Policy.

7.1.2. The Contractor or its Eligible Parties will provide evidence of Causality in support of its detailed statement referred to in Article 7.1.1. Evidence of Causality is written documentation and may include, but not be limited to: sub-contract documentation, correspondence, meeting documents, corporate presentations, etc.

7.1.3. The Contractor or its Eligible Party should provide as much detailed documentary evidence as possible, at the time of submitting a Proposed IRB Transaction to the IRB Authority. Failure to provide sufficient evidence of Causality may result in the IRB Transaction being rejected.

7.1.4. Further guidance on Causality is available on the IRB website at www.ic.gc.ca/irb.

7.2. **Timing** - IRB Transactions shall be implemented within the IRB Achievement Period, as defined in Article 1.1.24.

7.2.1. IRB Transactions, or substitute IRB Transactions, that are identified after the Effective Date of the Contract must meet the IRB Eligibility Criteria and they must only involve work occurring after the date of identification of the IRB Transaction to the IRB Authority.

7.3. **Incrementality** – IRB Transactions shall involve new work in Canada.

7.3.1. Should an IRB Transaction involve the purchase of goods or services from an existing Canadian supplier to the Contractor or its Eligible Party, the incremental method of calculating the IRB Credits will apply, as follows:

7.3.1.1. A three-year average of previous purchases is calculated, based on the three years

immediately preceding the date of identification of the IRB Transaction to the IRB Authority;

7.3.1.2. IRB Credit will be awarded only on those purchase amounts which exceed the three year average, in each of the Reporting Periods.

7.3.2. The incremental method of calculation outlined in 7.3.1 does **not** apply in cases where the product or service being purchased in the IRB Transaction:

7.3.2.1. involves Direct Work;

7.3.2.2. is substantially different than what was previously purchased;

7.3.2.3. involves a different end use (market sale, application, etc) than what was previously purchased; or,

7.3.2.4. follows a competitive process to re-select the Canadian supplier.

7.4. **Eligible Party** - IRB Transactions shall be undertaken by an Eligible Party as defined and named in the Contract.

7.4.1. An Eligible Party is the Contractor, its parent corporation, and all the parent's subsidiaries, divisions and subdivisions; and, the Contractor's Tier-One suppliers related to the performance of the Work under this Contract, their parent corporations and all the parent's subsidiaries, divisions and subdivisions.

7.4.2. For proposed Eligible Parties that are Canadian Companies with less than 500 employees, Contractors must clearly demonstrate that the Canadian Company has the capacity to undertake IRB Obligations with respect to this Contract. Capacity includes factors such as: company size, product offerings, market conditions, corporate ownership, IRB management processes, level of Canadian content, etc.

7.4.3. The Contractor shall be fully responsible to Canada for all IRB Commitments related to this Contract, regardless of flow down arrangements with Eligible Parties.

7.4.4. A list of approved Eligible Parties for the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters Contract is found in Article 24. The IRB Authority reserves the right to seek validation of the Eligible Parties found in Article 24, as outlined in Article 7.5.

7.5. **Validation of Eligibility**

7.5.1. Wherever possible, the IRB Authority will confirm IRB Transaction eligibility prior to a proposed IRB Transaction being accepted into the Contract. As Contractors plan, negotiate and conclude proposed IRB activities, they are encouraged to retain and

submit all of the records and documentation necessary to demonstrate eligibility.

7.5.2. The IRB Authority reserves the right to validate, within one calendar year of the Effective Date of the Contract, the criteria associated with IRB Transaction eligibility, Global Value Chain Platform eligibility and Enhanced Priority Technology List eligibility.

7.5.3. The IRB Authority shall submit to the Contractor a written notice of the IRB Transactions that the IRB Authority wishes to validate. Once this written notice is submitted, the Contractor shall have 60 calendar days to submit a package of information and documentation in support of their eligibility claims. Contractors are strongly encouraged to respond in a timely manner as they are responsible to ensure that the information received by the IRB Authority is accurate and complete.

7.5.4. Should the Contractor be unable during the one year validation period to demonstrate IRB eligibility, the IRB Transaction will not be eligible for IRB Credit and a substitute IRB Transaction will be sought from the Contractor.

7.5.5. Should the Contractor be able to demonstrate IRB eligibility during the validation period, but unable to demonstrate GVC or EPTL eligibility, the IRB Transaction will be eligible for IRB Credit but not counted towards the Contractor's Direct or EPTL obligations.

7.5.6. Contractors should note that all IRB Transactions are subject to annual reporting, verification and approval before IRB Credits are confirmed. Should new information arise during verification that seriously calls into question the eligibility of an IRB Transaction, the IRB Authority will review and investigate as soon as possible.

8. IRB TRANSACTIONS

8.1. Direct IRB Transactions

8.1.1. Direct IRB Transactions are those achieved through the provision of the goods and services required to deliver the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters.

8.1.2. Canadian resources should be utilized to the maximum extent possible to develop, produce, integrate and deliver the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters.

8.2. Indirect IRB Transactions

8.2.1. Indirect IRB Transactions are those achieved through business activities not related to the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters.

8.2.2. Indirect IRB Transactions shall involve a level of technology that is generally the same or higher than that of the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters, with applications in Canadian advanced technology industries.

8.2.3. Indirect IRB Transactions must have a Canadian Content Value (CCV) of no less than 30 percent of the total value of the IRB Transaction.

8.2.4. Global Value Chain (GVC):

8.2.4.1. GVC are those business activities which are related to the provision of goods and services on an Eligible GVC Platform and, while being Indirect Transactions, may be counted towards fulfilling a Direct IRB Commitment.

8.2.4.2. GVC Platform

8.2.4.2.1. An IRB GVC Platform is a vehicle/craft or tier 1 major sub-system, used for a particular purpose or which performs a specific mission. It has various stages in the supply chain which are connected by the division of production and aftermarket support among many global firms, leveraging each partner's core competencies.

8.2.4.2.2. To be eligible, an IRB GVC Platform must:

- be the same or similar (in nature and complexity) to the platform being procured by Canada under the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters;
- have the same or greater market potential, measured by estimated market value, size and/or timeframe, as the platform procured by Canada under the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters;

8.2.4.2.3. GVC Platforms should also offer significant opportunities for:

- technological advancement and growth in the level of system integration;
- regional and SMB participation; and,
- high-value and long-term activities related to acquisition and/or in-service support.

8.2.4.2.4. The Contractor or its Eligible Party must clearly describe how any proposed GVC Platform(s) meets the criteria in Article 8.2.4.2.2 and the extent to which it fulfills the goals outlined in Article 8.2.4.2.3. The Contractor or its Eligible Party should provide complete details and documentation in support of the eligibility of any proposed GVC Platform.

8.2.4.2.5. A list of approved GVC Platforms is found in Article 25. The IRB Authority reserves the right to seek validation of the eligibility of the GVC Platforms found in Article 25, as outlined in Article 7.5.

8.2.4.3. GVC Transactions

8.2.4.3.1. Activities associated with GVC Platforms include, but are not limited to, pre-commercialization activities (e.g. collaborative technology development and demonstration projects), production activities (e.g. definition, design, and manufacturing) and In Service Support activities.

8.2.4.3.2. Even though a proposed GVC Transaction may be counted towards meeting a Direct IRB requirement, this does not negate the need for the GVC Transaction to meet all of the IRB Eligibility Criteria, including those related to Causality and Incrementality.

8.3. **Small and Medium Business (SMB) Transactions**

8.3.1. An IRB Transaction where an SMB is the IRB Recipient, and the SMB's product or service has a CCV of at least seventy (70) percent, will have its IRB Credit credited as follows:

8.3.1.1. the portion of the Transaction's CCV value that is equal to or less than $1,000,000 will be deemed to have 100 percent CCV for reporting and verification purposes;

8.3.1.2. any portion of the Transaction's CCV value that is over $1,000,000 will use the actual CCV as calculated using Article 6 (Canadian Content Value).

8.4. **Enhanced Priority Technology List (EPTL) Transactions**

8.4.1. Version 1 of the EPTL is attached as Annex D and applies to this contract. The IRB Authority will assess proposed EPTL transactions to determine whether they are relevant to the EPTL List Version 1, and involve technology and/or capabilities that do not currently exist among global product offerings. All EPTL transactions must meet the IRB Eligibility Criteria outlined in Article 7.

8.4.2. The IRB Authority may publish updated versions of the EPTL. Such a subsequent published version of the EPTL may be considered to replace Version 1 in this Contract. Replacing the EPTL would require agreement between the IRB Authority and the Contractor, as part of a Contract Change Proposal submitted to the Contracting Authority.

8.4.3. In the case where EPTL Version 1 is replaced with a subsequent version, any IRB Transactions which have already been accepted by the IRB Authority as eligible under

Version 1 will remain unaffected by the change to a subsequent version.

8.4.4. The Contractor may choose to submit a banked EPTL-related transaction for this Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters. With respect to a banked EPTL transaction, the Version of the EPTL which was in effect at the time of the transaction's acceptance into the IRB bank may be different than the version applicable to this Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters. In that case, the banked EPTL transaction can nonetheless be counted towards the EPTL requirement on this Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters.

8.4.5. The IRB Authority reserves the right to seek validation of the eligibility of the EPTL transactions found in Annex A, as outlined in Article 7.5.

8.4.6. The IRB Authority is the single point of contact between industry and government regarding the EPTL. All enquiries regarding the EPTL contents should be directed to the IRB Authority.

8.5. **Post-Secondary and Public Research Institution Transactions**

8.5.1. Multipliers are permitted on IRB Transactions involving: cash contribution input to Canadian universities for university research or the establishment of university chairs; investments in advanced technology skill development through publicly operated Post-Secondary Institutions; and, collaborative research undertaken with Public Research Institutions.

8.6. **Consortium Transactions**

8.6.1. In any instance where the Contractor or its Eligible Party invests in research and development through a Consortium, the method of crediting such investments will be as detailed in this Article.

8.6.2. Scope: A Consortium shall consist of:

8.6.2.1. the Contractor or its Eligible Party;

8.6.2.2. a minimum of one (1) Canadian Company, and;

8.6.2.3. a minimum of one (1) Canadian Post-Secondary Institution or Public Research Institution.

8.6.2.4. Involvement of non-Canadian company(s) in the Consortium shall be permitted. The combined total investment from non-Canadian companies shall not exceed fifty (50) percent of the Consortium value.

8.6.2.5. The Contractor shall not be able to claim its Consortium members as Eligible Parties to this Contract.

8.6.2.6. In cases where an existing Eligible Party to the Contract participates in the same Consortium as the Contractor, separate IRB Transaction Sheets shall be submitted that describes both the Contractor's and the Eligible Party's involvement in the Consortium. Both the Contractor and the Eligible Party may only claim the IRB Credits associated with the contributions that each has leveraged into the Consortium. At no time shall the Contractor and Eligible Party be able to claim for the same contribution(s).

8.6.2.7. Contributions to the Consortium may take the form of cash or in-kind contributions. In the case of in-kind contributions, the value of these shall be determined by an assessment to be undertaken by a Third Party to this Contract solely at the cost of the Contractor.

8.6.2.8. The future sales that may arise from the Consortium will not be counted for IRB Credit within the Consortium Transaction. Should the Contractor procure goods and services from the Consortium, the purchase will be considered as a separate IRB Transaction and no multiplier will be applied.

8.6.2.9. When a Consortium IRB Transaction is submitted, the Contractor must identify the manner that it proposes to calculate the regional distribution. The Contractor may opt to make regional commitments based on where funding for the Consortia originates as a proportion of the total Canadian funding. Alternatively, the Contractor may opt to make regional commitments based on where the work associated with the Consortium is taking place. In either situation, once a Contractor selects a regional calculation, the Contractor will be held to this selection.

8.6.2.10. In addition to demonstrating that its investment in the Consortium meets all of the IRB Eligibility Criteria, the Contractor shall also be responsible for demonstrating how its involvement in the Consortium leveraged the investments from the other parties involved. In order to receive IRB Credit for funds invested by other companies, the Contractor must demonstrate that the additional funds invested into the Consortium were the result of the Contractor's participation. The Contractor will not receive any IRB Credit for contributions already existing in the Consortium prior to their participation.

8.6.2.11. The Contractor will not receive any IRB Credit on any contributions leveraged by other parties and applied to other IRB obligations. In cases where multiple Contractors with IRB obligations are involved in the same Consortium, each of these Contractors may be eligible to receive IRB credit for their own contribution and that of the members they can demonstrate they attracted to the Consortium.

8.6.3. Valuation for IRB Credit Purposes:

8.6.3.1. An initial value will first be calculated, and shall be the sum of the following:

8.6.3.1.1. the value of cash contributions from the Contractor to the Consortium; and,

8.6.3.1.2. the value of cash contributions from other eligible participants, up to a maximum value equal to that of the Contractor's contribution, which have been demonstrably leveraged by the Contractor's participation in the Consortium.

8.6.3.2. Once the initial value is established, the Contractor shall receive a five (5x) times multiplier on it.

8.6.3.3. The value of any in-kind contributions would then be added. In-kind contributions are not eligible for a multiplier.

8.6.4. Timing:

8.6.4.1. IRB Credit can be claimed when both the Contractor and the member(s) make their contributions to the Consortium.

8.6.4.2. All Consortium-related IRB Credits claimed by the Contractor are subject to annual reporting, verification and written approval by the IRB Authority before IRB Credits are approved.

8.6.5. The following will <u>not</u> be eligible for IRB Credit:

8.6.5.1. contributions made to the Consortium by Post-Secondary Institutions or Public Research Institutions; and,

8.6.5.2. direct contributions into the Consortium made by any level of government.

8.6.6. Performance Guarantees:

8.6.6.1. IRB Transaction sheets related to a Consortium should be stated in the multiplied value of the proposed contributions. This multiplied value is part of the Contractor=s total IRB Commitment and, as such, is subject to the performance guarantees stipulated in this Contract.

8.6.6.2. If the Contractor fails to achieve an Accepted IRB Transaction involving a Consortium, the full multiplied value of its IRB Commitment shall be made up with other IRB activities that meet the IRB Eligibility Criteria. Substitute IRB Transactions will not automatically be subject to a multiplier.

8.7. **Investment Framework (IF) Transactions**

8.7.1. IRB Transactions may involve R&D or Commercialization investments made directly by the Contractor with a Canadian SMB. The methods of assessing, valuing and crediting these investments are detailed in this article.

8.7.2. Proposed IF activities will be reviewed, approved and awarded by the IRB Authority using the following gate process:

8.7.2.1. Gate 1 - Term Sheet Eligibility
8.7.2.2. Gate 2 - Investment Valuation
8.7.2.3. Gate 3 - Determination of IRB Credits and Transaction Sheet Approval
8.7.2.4. Gate 4 - Monitoring and Award of IRB Credit

8.7.3. Gate 1, Term Sheet Eligibility - Proposed IF activities must meet all six of the following eligibility criteria:

8.7.3.1. Investment must be linked to Research and Development (R&D) and/or Commercialization activities, as defined in this Contract;

8.7.3.2. Investment must be with a Canadian SMB, as defined in this Contract;

8.7.3.3. Investment must meet the IRB Eligibility Criteria, as defined in this Contract;

8.7.3.4. Investment must be an Allowable IF Investment, as defined in this Contract;

8.7.3.5. IF activity must have a duration of at least five (5) continuous years, beginning at the date the investment is made; and,

8.7.3.6. A complete IF Business Plan, as defined in this Contract, must be submitted to the IRB Authority.

8.7.4. Gate 2, Investment Valuation – Eligible IF activities will be valued, using the following methods:

8.7.4.1. Eligible cash investments will be taken at face value.

8.7.4.2. Eligible in-kind investments will be valued by an independent third party, as outlined in article 1.1.21.

8.7.5. Gate 3, Determination of IRB Credits – The following multipliers will be applied to the value of the eligible IF investment:

8.7.5.1. Cash for R&D activities; or, License for IP – nine (9)

8.7.5.2. Cash to purchase, or in-kind transfer of, Equipment – seven (7)

8.7.5.3. In-kind transfer of Knowledge and/or Marketing/Sales Support – four (4)

8.7.6. Gate 4, Monitoring and Award of IRB Credits –

8.7.6.1. The multiplied IRB credits resulting from an IF activity will be awarded along the following timeline:

- 50 percent up front, once the investment activity is made according to the IF Business Plan, reported to the IRB Authority, and verified by the IRB Authority;
- 50 percent apportioned over the remaining years of the IF project, as annual IF reporting requirements are met.

8.7.6.2. The Contractor will be deemed as having met each year's annual IF reporting requirements once the Contractor:

- reports on its IF activities through the established IRB annual reporting requirements outlined in Article 3, "IRB Reporting"; and,
- includes in its IRB Annual Report each year a specific and complete IF activity report, using the template provided in Annex E of this contract, "Annual IF Activity Report."

8.7.7. The total issued IRB Credits associated with IF activities cannot exceed five (5) percent of the total IRB Obligation value in this Contract, as identified in Article 2.1.1.

8.7.8. The investment must be made within 12 months from the date of either: the final IRB transaction approval from the IRB Authority (cash investment); or, the third party valuation report (in-kind investment).

8.7.9. The investment must remain with the SMB for at least five (5) continuous years and be used for the purposes outlined in the IF Business Plan.

8.7.10. IRB Credits may be disallowed or revoked by the IRB Authority in any of the following circumstances:

8.7.10.1. failure to provide a detailed, complete and accurate "Annual IF Activity Report" in each year of the IF project;

8.7.10.2. removal, in whole or in part, of the IF investment from the SMB prior to the end of five continuous years; or

8.7.10.3. use of the IF investment for purposes other than those outlined in the IF Business Plan.

8.7.11. A "Guide for Applicants" is available on the IRB Website (www.ic.gc.ca/irb), which provides additional details on the IF processes, timelines and deliverables. The Guide also provides the templates to be used by the Contractor or its Eligible Party during the IF submission process.

8.8. **Technology and Skills Cooperation Transactions**

8.8.1. IRB Transactions may take the form of direct Technology and Skills Cooperation and shall meet the following criteria:

8.8.1.1. technology shall be in a form that is sufficiently complete to allow the Canadian recipient to apply the knowledge to existing or new products or processes;

8.8.1.2. technology shall be proprietary, current and at a level of technology equivalent to or higher than that used on the Project;

8.8.1.3. all required licenses or permits to facilitate the sale of products/services domestically or for export shall be included;

8.8.1.4. the transferor shall make available all engineering and technical advice and assistance required to exploit and keep current the transferred technology and all related information (drawings, methods of application, etc.);

8.8.1.5. the Canadian Company shall have access to domestic and foreign markets and have the resources to exploit the technology in these markets;

8.8.1.6. the technology shall be exploitable in terms of the capability (financial and technical) of the Canadian Company to use and keep it current; and

8.8.1.7. the Contractor shall make available, upon request by the IRB Authority, the licensing agreement with the Canadian recipient. Failure to do so may result in the technology and skills cooperation IRB Transaction being rejected.

8.8.2. The Technology and Skills Cooperation shall be measured in Canadian Content Value of the future sales, export sales or Import Replacement, of goods or services by the Canadian Company as a result of the Technology and Skills Cooperation. In addition, the Contractor may be credited for reasonable costs incurred as a result of the Technology and Skills Cooperation once the achievement in future sales surpasses the cost of the Technology and Skills Cooperation. Reasonable costs incurred include:

8.8.2.1. training costs;

8.8.2.2. set-up of infrastructure needed to exploit the technology; and

8.8.2.3. any others as deemed reasonable by the IRB Authority.

8.8.3. IRB activities in the form of Technology and Skills Cooperation with Canadian Companies may include, but not be limited to, activities such as:

8.8.3.1. participation in the design, development and manufacture of new or improved systems;

8.8.3.2. the provision of new process technologies that will enhance Canadian industry by improving their capabilities in present product lines and enhance their export potential; and

8.8.3.3. the provision of licenses which will allow Canadian Companies to manufacture new or existing components of major systems for export sale and Import Replacement.

8.9. **General Investment Transactions**

8.9.1. IRB Transactions can involve activities such as investment in Canada. These investments shall meet the IRB Eligibility Criteria and shall be made by the Contractor or its Eligible Party and placed directly with a Canadian recipient.

8.9.2. The Contractor will be credited the CCV of future sales achieved by the IRB Recipient as a result of the specific investment. In addition, the Contractor will also be credited for the amount of the investment itself, once the Recipient's future sales achievement surpasses the amount of the initial investment. The credited future sales will be prorated by multiplying the applicable sales to the ratio of the Contractor=s own direct investment in the Canadian company relative to the Canadian company=s Capitalization at the time the investment was made once the accepted IRB Credits surpasses the amount of the total investment.

8.9.3. Credited Future Sales =

$$\text{Applicable Sales} \times \frac{\text{Contractor=s own direct investment in Canadian Recipient}}{\text{Canadian Recipient=s Capitalization at the time the investment was made}}$$

8.9.4. The investment shall not be in the form of a loan or for the purchase of debentures.

8.9.5. The investment made by the Contractor or its Eligible Parties shall remain placed with the Canadian Recipient for a minimum of three (3) years, starting from the date the investment is placed with the Recipient. Failure to do so will result in the immediate clawback of all IRB approved IRB Credits for the IRB Transaction by the IRB

Authority. No further IRB Credits will be approved for that particular transaction.

8.9.6. In the event the Contractor or an Eligible Party invests in its own Canadian facilities, the investment and the incremental sales resulting from that investment may be eligible for IRB Credit, assuming the investment meets the IRB Eligibility Criteria. Consideration will be given to whether the investment results in a benefit to Canada and that it does not result in overcapacity, shutdowns of existing companies or losses of prospective sales by existing companies in Canada.

8.9.7. The capital associated with the purchase of a Canadian Company that is considered a Agoing concern@ is not an eligible investment for IRB purposes. If the investment is for a Canadian Company that has availed itself of the Canadian bankruptcy laws, then the investment can be considered for IRB purposes.

8.9.8. Investment transactions may also include:

8.9.8.1. the establishment or enhancement of a Canadian facility or project which will develop Canada=s advanced technology industries, and provide a capability that does not already exist in Canada. Consideration will be given to whether the transaction results in overcapacity, shutdowns of existing companies or losses of prospective sales by existing companies in Canada;

8.9.8.2. the development of joint ventures with Canadian firms, which will contribute to their long-term viability and increase sales in both domestic and international markets.

8.10. **Venture Capital Fund Transactions**

8.10.1. In any instance where the Contractor or its Eligible Party is not placing an investment directly with a Canadian Recipient, and is utilizing a third party to manage such investments, the method of crediting such investments will be as detailed in this Clause. Any organization which manages investments such as, but not limited to Banks, Trust Companies, Venture Capital Funds, and Investment Companies, will not be an Eligible Party to the Contract, but will be deemed a third party. A portion of a Contractor=s investment may come from the placement of funds into a Venture Capital Fund (VCF) directed at assisting the growth of Canadian small businesses through their development and exploitation of new technologies. The multiplied IRB credit related to these investments shall not exceed 5% of the IRB Commitment Value. Contributions in support of Canadian small business are permitted within the following parameters:

8.10.2. Timing:

8.10.2.1. IRB Credit can be claimed when:

8.10.2.1.1. the Contractor makes a financial contribution to a qualifying VCF. Only the face value of the contribution, measured in Canadian dollars, can be sought as an

IRB at this time; and,

8.10.2.1.2. the VCF Manager invests funds with a Canadian small business and the funds remain placed with the Canadian Recipient for a minimum of three (3) years, starting from the date the funds are placed. Failure to do so will result in the immediate clawback of all IRB credits claimed or approved for the IRB Transaction by the IRB Authority.

8.10.2.2. All VCF related IRB Credits claimed by the Contractor are subject to verification and approval by the IRB Authority before IRB Credits are accepted.

8.10.3. Scope:

8.10.3.1. (Privately held) small business recipients of the VCF investment shall have 50 employees or less (service based industries) or 100 employees or less (manufacturing based industries) at the commencement of the investment.

8.10.3.2. Initial investments by the VCF Manager, including co-investments, in eligible small businesses cannot exceed $1M.

8.10.3.3. Small business recipients will generally be involved in the development, manufacture or commercialization of a technologically advanced product or service in one of the following sectors:

- Life sciences (biotechnology, medical devices and pharmaceuticals) Health
- Advanced materials
- Advanced manufacturing
- Environment
- Information and communications technologies, and
- Aerospace and defence

8.10.3.4. Only Canadian registered and managed VCFs (or Third Parties) which support the above industrial sectors will be acceptable. The Contractor will have to provide evidence that a high percentage of a chosen fund=s investment activity is with companies that are in the above sectors.

8.10.4. Multiplier for IRB Credit purposes:

8.10.4.1. The multiplier for IRB Credit purposes is 5:1. The IRB Credit will be given for the initial contribution at the time of the deposit to the VCF by the Contractor. The IRB Credit that makes up the remaining multiples will be offered when the VCF Manager or Third Party Investment Manager assigns the funds to a Canadian small business and the funds remain placed with the Canadian Recipient for a minimum of three (3) years, starting from the date the funds are placed. The maximum multiplied IRB

Credit for the Project is 5% of the IRB Commitment Value.

8.10.5. Limitation to Venture Capital Funds

8.10.5.1. Once a small business reaches the Initial Public Offering stage, no further IRB credit will be granted by the IRB Authority for further VCF investment to the Canadian small business.

8.10.6. Performance Guarantees

8.10.6.1. IRB Transaction sheets related to qualifying VCF transactions are stated in the multiplied value of the proposed contributions to the VCF. This multiplied value is part of the Contractor=s total IRB Commitment, and as such is subject to the performance guarantees stipulated in this Contract.

8.10.6.2. If the Contractor fails to achieve an Accepted IRB Transaction involving a VCF, the full Amultiplied@ value of its IRB Commitment shall be made up with other IRB activities that meet the IRB Eligibility Criteria. Substitute transactions will not be subject to the multiplier.

9. STRATEGIC PLANS

9.1. Major Obligors to Canada are required to submit a Strategic Plan to the IRB Authority;

9.2. The Contractor and the IRB Authority will meet regularly to update, review and discuss the Contractor's Strategic Plan. Representatives at senior levels of both the Contractor's corporation and IRB Authority will be available for these meetings.

9.3. The Contractor's Strategic Plan should include:

9.3.1. a description of the Contractor's broad corporate plans and overarching strategic vision for Canada over the medium-term (3-5 years) and long-term (5+ years);

9.3.2. how these corporate plans and vision may translate into IRB activities

9.3.3. an overview of the Contractor's current and anticipated IRB Obligations to Canada

9.3.4. IRB Partnerships with Tier-one Suppliers or other Eligible Parties; and,

9.3.5. Notice of potential IRB Transactions that will request Pooling.

9.4. Contractors with multiple IRB Obligations totaling less than $1 billion may also submit a Strategic Plan to the IRB Authority. However, neither the IRB Authority, nor the Contractor will be required to meet to discuss the Strategic Plan.

9.5. Contractors with a Strategic Plan may be permitted to pool high value, strategic IRB business activities.

9.6. Pooled IRB Transactions must meet the following criteria:

9.6.1. meet all of the IRB Eligibility Criteria as described in Article 7 (Eligibility Criteria for IRB Transactions);

9.6.2. have a value of over $100 million, measured in CCV; and

9.6.3. have strategic and long term impacts on the Canadian IRB Recipient, including but not limited to: R&D support; first purchase of innovative Canadian technologies; unique market leadership; world product mandate; global value chain activities; consortia activities; small and medium business activities; and/or technology advancement.

9.7. The Contractor must clearly describe and document how any proposed IRB Transaction for Pooling meets the criteria in Article 9.6.

9.8. The receipt, storage and protection of corporate business information included in a Strategic Plan is governed by applicable federal laws and processes, such as the *Access to Information Act*, the *Privacy Act* and the *Library and Archives of Canada Act*.

10. VALID ORDERS

10.1. The extent to which each IRB Transaction will qualify will be based on and limited to valid orders and/or contracts delivered by the end of the IRB Achievement Period.

11. BANKING

11.1. Banked IRB Transactions may comprise a total of 50% of the IRB Commitment value.

11.2. The entire CCV of a Banked IRB Transaction, not a portion thereof, must be applied to a single IRB Transaction under the Contract.

11.3. Each transaction must clearly state that it is a Banked IRB Transaction. The Banked IRB Transaction must contain the exact information as submitted to the IRB Bank.

11.4. Trading and/or transfer between companies of banked transactions is not permitted.

12. IMPORT REPLACEMENT

12.1. Import replacements due to the transference of work into Canada will be counted for IRB purposes.

13. WORLD PRODUCT MANDATE

13.1. If a product designed, developed and manufactured by a Canadian company is the subject of a world product mandate, where it is a long term relationship between the Contractor or an Eligible Party and a Canadian company, whereby the Canadian company has been legally authorized to carry out the aforementioned specific activities, and is identified as such in an Indirect IRB Transaction, and where the CCV of the product is verified to be seventy (70) percent or greater, the full contract value of the transaction will be deemed to be CCV.

14. PUBLIC COMMUNICATIONS

14.1. The Contractor, its Eligible Parties and/or IRB Recipients are encouraged to be as transparent as possible regarding its IRB plans, obligations and specific IRB Transactions, making them publicly available whenever possible.

14.2. In the above efforts at transparency, the Contractor and the IRB Authority will jointly coordinate public communications related to the IRB activities associated with the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters. The two parties will also collaborate to identify IRB impact and success stories associated with IRB activities.

14.3. The Contractor consents to public announcements regarding the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters, made by or on behalf of the Minister of Industry, that are related to i) IRB Obligations and ii) those IRB Transactions which involve business activities with a signed contract or Memorandum of Understanding between the IRB Donor and the IRB Recipient. These announcements would include company names, general descriptions of the work being proposed and approximations of CCV. In these cases, the IRB Authority will make all reasonable efforts to ensure that the Contractor has the opportunity to participate in the announcement and/or the preparation of any related materials.

14.4. For all other public communications regarding the IRB activities on the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters, drafts of announcements and their publication schedule will be delivered by either party to the other as soon as is reasonably possible, but in any event prior to the proposed release date. Each party will make every effort to inform the other, and seek resolution of, any objections to the content or timing of the proposed announcement.

14.5. Nothing in this Article 14 shall be interpreted as preventing the fulfillment by any company involved in an IRB obligation or activity of its reporting obligations under applicable Securities laws.

15. IRB TRANSACTION ALTERATIONS

15.1. The Contractor shall not alter the IRB Commitments listed in Annex A unless:

15.1.1. the Contractor has submitted a proposal to the IRB Authority through the Contracting Authority, with respect to the alteration; and,

15.1.2. the IRB Authority through the Contracting Authority has given written approval to the Contractor and requested the Contracting Authority to amend the Contract accordingly.

15.2. The Contractor may propose alterations to or substitutions for any of the IRB Transaction(s) listed in Annex A, and the IRB Authority may accept these requests provided that in the judgment of the IRB Authority:

15.2.1. the circumstances requiring the change are exceptional and likely to result in undue hardship upon the Contractor if a change is not made;

15.2.2. the obligations of this Contract under the Statement of Work are maintained i.e. the overall Regional and Small and Medium Business Commitments are maintained;

15.2.3. the proposed alterations or substitutions meet the IRB Eligibility Criteria stated in this Contract;

15.2.4. the proposed substitute IRB Transaction is not less than the IRB Transaction to be replaced both as to the level of technological sophistication of the work to be performed and the CCV;

15.2.5. Canadian industry will receive the maximum high-quality, low risk, Direct Benefits associated with the delivery of the work; and

15.2.6. Canadian industry will receive high-quality, low risk, Indirect Benefits of the same level of technology as the Direct Benefits.

15.3. Mutual Abatement and Trading

15.3.1. Mutual Abatement means a reduction of the Contractor's IRB Obligation in exchange for the reduction of a Canadian company's obligations to a foreign offset authority.

15.3.2. Mutual Abatement is not permitted.

15.3.3. Trading of IRB Obligations, or of IRB Credits, is not permitted.

16. VERIFICATION AND ACCESS TO RECORDS

16.1. The Contractor shall implement the IRB procedures and practices as described in the IRB Management Plan. Any changes to the IRB Management Plan are subject to approval by the IRB Authority.

16.2. The Contractor shall keep proper records and all documentation relating to the IRB Transactions attached to this Contract, including invoices, proof of payments, etc. The Contractor shall not, without the prior written consent of the IRB Authority, dispose of any such records or documentation until the expiration of two (2) years after final payment of this Contract, or until settlement of all outstanding claims and disputes, whichever is later. All such records and documentation shall at all times during the aforementioned retention period be open to verification, inspection and examination by the IRB Authority or his/her delegate, who may make copies thereof and take extracts there from.

16.3. In addition, the IRB Authority may request the Contractor provide copies of all such information be sent to him/her via mail or courier for a random sample of IRB Transactions, as he/she may from time to time request.

16.4. If the IRB Authority determines that the information contained in the Annual IRB Report and certified by the Certificate of Compliance shall be verified, the Contractor shall undertake to provide the IRB Authority with access, at all reasonable times, and within sixty (60) calendar days of being notified, to its accounts and records relating thereto and shall, by obtaining similar undertakings in the subcontracts of all Eligible Parties, arrange for the same in respect of any subcontracts and suppliers carrying out the work.

16.5. Where, subsequent to the verification action taken pursuant to this Article, the IRB Authority determines that the records are insufficient to verify the Contractor's achievements in respect of any IRB Commitment, the Contractor shall provide such additional information as may be required by the IRB Authority.

16.6. Where it cannot be verified that an IRB Transaction has provided the IRB claimed, that portion of the IRB Transaction which cannot be verified will be considered as not having been achieved and the IRB Authority will give Notice to the Contractor of the Shortfall through the Contracting Authority.

16.7. If the IRB Authority determines that a significant Shortfall in the Contractor=s total IRB Commitment exists and if the IRB Authority believes that the Contractor will not meet its total IRB Commitment, the IRB Authority may give, through the Contracting Authority, notice to the Contractor and request the Contractor to submit a proposal showing how the Contractor plans to correct such deficiencies. The Contractor will submit its proposal within sixty (60) calendar days of receipt of such notice. If the proposal is not acceptable to the IRB Authority, the IRB Authority may request the Contracting Authority to terminate the Contract.

17. INFORMATION MANAGEMENT

17.1. The Contractor=s overall, aggregate information related to IRB Obligations, activities and achievements is considered by the IRB Authority to be information available to Parliament and the public.

17.2. The receipt, storage and protection of the Contractor's specific corporate and transactional business information, which is provided to the IRB Authority in the context of this Contract and/or through a Strategic Plan, is governed by applicable federal laws and processes, such as the *Access to Information Act*, the *Privacy Act* and the *Library and Archives of Canada Act*.

17.2.1. This data may be used by the IRB Authority for internal policy analysis purposes. Certain relevant information may also be shared, subject to applicable laws and processes, with other government organizations with whom the IRB Authority collaborates in the administration of the IRB Policy, such as the Regional Development Agencies.

18. CONFLICT RESOLUTION

18.1. The IRB Authority and the Contractor acknowledge that they have entered into a long-term contractual relationship, with the goal that the Contractor achieves the IRB Obligations stated herein, delivers long-term economic benefits to Canada and effectively carries out the Terms and Conditions of this Contract.

18.2. Guiding this long-term relationship are common values and approaches, such as mutual accountability, open communication, mutual respect and effective collaboration. The relationship will involve officials at the project level (ie IRB and contract managers) and at the management level (ie Departmental and Executive officials). Discussions will be frequent and ongoing over the life of the Contract.

18.3. In the event that a disagreement arises between the IRB Authority and the Contractor regarding an IRB matter, each party will bring their concerns forward to the other for discussion and resolution. Parties are encouraged to raise concerns first at the project level. Should discussions at the project level fail to resolve the issue, the parties are then encouraged to engage at the management level. If these discussions fail to reach a satisfactory resolution, either party is then free to make use of the broader dispute resolution process outlined in Article XX of the Contract (*insert reference from PWGSC portion of contract*).

19. PERFORMANCE GUARANTEES

19.1. The long-term relationship between the Contractor and IRB Authority is supported by several processes aimed at promoting regular, ongoing engagement between the two

parties. These processes include the IRB identification schedule outlined in Article 2 and the annual reporting process outlined in Article 3. Taken together, these and other monitoring measures are aimed at encouraging positive engagement, use of best practices and the successful completion of the Contractor's IRB Obligations in this contract.

19.2. In the unlikely event that the Contractor fails to meet its IRB Obligations under this Contract, the following performance guarantees are in place:

19.2.1. Holdback/Stop Payment:

19.2.1.1. If at the end of IRB Reporting Period 2, it is confirmed through the submission and assessment of transactions that the Contractor failed to meet the requirements as stated in Article 2.1.7, milestone payment X will be withheld.

19.2.1.2. With respect to the Holdback outlined in article 19.2.1,1, a grace period of thirty (30) calendar days, beginning on the date of failure notification by the IRB Authority, shall pass before the Holdback takes effect. Within this period, the Contractor may take corrective action.

19.2.1.3. If at the end of the IRB Reporting Period 4, it is confirmed through the submission and assessment of transactions that the Contractor has failed to meet the requirements as stated in Article 2.1.8, Canada will suspend contract payment until the situation is remedied.

19.2.1.4. With respect to the payment suspension outlined in article 19.2.1.3, a grace period of thirty (30) calendar days, beginning on the date of failure notification by the IRB Authority, shall pass before the payment suspension takes effect. Within this period, the Contractor may take corrective action.

19.2.2. Liquidated Damages:

19.2.2.1. In respect of the failure to achieve any of the Commitments in articles 2.1.1 to 2.1.6 (Statement of Work: IRB Commitments and Responsibilities) by the end of the IRB Achievement Period, the Contractor shall pay to Canada as liquidated damages 10% of the Shortfall.

19.2.2.2. In the event that liquidated damages arise under more than one of the IRB Commitments, the Contractor will be liable only under the IRB Commitment which results in the highest liquidated damages.

19.2.2.3. Included in the total IRB Commitments are the unidentified IRB Commitments.

19.3. In the event that the Contract is terminated for default pursuant to Clause 2030 31

(Default by the Contractor), the Contractor will immediately pay to Canada an amount equal to the Liquidated Damages that would be payable under article 19.2.2.1 based on the Shortfall in regard to those Commitments that, according to Annex A (Plans and Transactions), were to be achieved by the date of termination. In the event of such payment, the Contractor will have no further liabilities in regard to the IRB requirements of the Contract.

19.4. In the event that this Contract is terminated for convenience pursuant to Clause 2030 32 (Termination for Convenience), the Contractor will have no further liabilities. In the event of partial termination of the Contract under Clause 2030 32, the Contractor will be released from the terminated portions of its Commitments and from the provisions of Article 2 (Statement of Work: IRB Commitments and Responsibilities) as it relates to such terminated portions.

19.5. If, during the progress of the Contract, a change in the Work is initiated by Canada which results in the Contractor no longer being able to source from a Canadian Company and, as a consequence, Commitments in the Statement of IRB Work may not be met, the Contractor shall immediately notify the IRB Authority through the Contracting Authority. The Contractor shall fully describe the issue, provide all supporting data, including a complete record of attempts to purchase from Canadian sources and Canadian suppliers' responses, together with an analysis of specific technical, commercial or other factors which result in the inability to source from Canada.

19.6. The obligation of the Contractor to pay Liquidated Damages pursuant to articles 19.2.2.1 will be triggered by notice executed by either the Minister or the Deputy Minister of Public Works and Government Services Canada to the Contractor, stating that the Contractor is in default under the Contract for failure to achieve the IRB Commitments within the IRB Achievement Period and that Canada is demanding payment of Liquidated Damages in accordance with the Liquidated Damages Clause.

19.7. Letter of Credit: The Contractor shall, prior to being entitled to receipt of the final Milestone Payment from Canada following the completion of the Work, provide Canada a guarantee in the form of a letter of credit, covering the amount of monies that would be owing by way of liquidated damages pursuant to the Liquidated Damages clause should the Contractor not achieve any further IRB Credits after the date of the final Milestone Payment. The letter of credit shall be:

19.7.1. issued by a financial institution which is a member of the Canadian Payment Association;

19.7.2. in form and substance satisfactory to the Minister;

19.7.3. solely at the cost of the Contractor;

19.7.4. abated as set forth below;

19.7.5. unconditional and irrevocable; and

19.7.6. subject to the Uniform Customs and Practice for Documentary Credits, as set out in Publication No. 600, July 2007.

19.8. The letter of credit shall remain in force until the earliest of:

19.8.1. the achievement of the Commitments; and

19.8.2. six months following the submission of the final IRB Report at which time the letter of credit will be abated in full and will be returned by Canada to the Contractor.

19.9. The obligation of the Financial Institution to pay under the letter of credit will be triggered by notice executed by either the Minister or the Deputy Minister of Public Works and Government Services Canada to the Issuing Bank stating that the Contractor is in default under the Contract for failure to achieve the Commitments within the Achievement Period, that Canada has made a demand by Notice for payment of Liquidated Damages in accordance with the Liquidated Damages Clause and that the Contractor has failed to pay Canada Liquidated Damages in accordance with the Liquidated Damages Clause. No other event will trigger payment under the letter of credit.

19.10. The Contracting Authority in accordance with this Article, will have the right to holdback, drawback, deduct and set off from and against the monies owing at any time by Canada to the Contractor, any damages owing under this Contract equal to ten percent (10%) of the Shortfall amount.

19.11. Nothing in this Article will be interpreted as limiting the rights and remedies which the Contracting Authority may otherwise have in relation to any breach of this Article by the Contractor, including the right to terminate the Contract for default.

19.12. Actual damages which would be sustained by Canada in the event of a breach by the Contractor of the CCV Commitment provisions of this Contract would be commercially impracticable or extremely difficult to compute or ascertain and, therefore, the provisions for Liquidated Damages are agreed to be a fair and reasonable best estimate of such actual damages, and the manner provided herein for the enforcement and collection of Liquidated Damages is agreed to be fair and reasonable.

20. RESPONSIBILITIES OF THE PARTIES

20.1. The Parties to this Contract acknowledge and agree that:

20.1.1. Canada has responsibility to set in place programs and policies which foster a

growing, competitive, knowledge-based Canadian economy and to establish IRB Objectives which include:

20.1.1.1. the long-term creation and exploitation of capabilities, knowledge, advanced technologies and markets of lasting impact on Canadian industry;

20.1.1.2. the involvement of advanced technologies and result in the enhancement of Canadian capability to undertake other work of a similar nature and make a positive contribution to the continuing viability, growth, innovation, export growth and development of the Canadian IRB Recipient.

20.1.1.3. encouraging the participation of Canadian companies in the Designated Regions of Canada, assisting with long-term quality improvements to their capability, capacity, international competitiveness and growth potential.

20.1.1.4. encouraging the participation of Canadian SMB as suppliers on major federal procurements and to increase their competitiveness and export market access.

20.1.2. the award of this Contract to the Contractor resulted from a procurement process in which the Contractor committed to fulfill the CCV Commitments set out in Article 2, Statement of Work: IRB Commitments and Responsibilities; and

20.1.3. it is the responsibility of the Contractor to ensure that it can complete the IRB Transactions and that these are not limited by applicable laws, regulations, policies or standards.

21. GOVERNMENT ORGANIZATIONS

21.1. It is the responsibility of the Contractor to be familiar with Government departments and agencies, including the following, which are responsible for regional and industrial development: Industry Canada; Western Economic Diversification Canada (WD); Federal Regional Development Organization for Northern Ontario (FedNor); Federal Economic Development Agency for Southern Ontario (FedDev Ontario); Canada Economic Development for Quebec (CED-Q); Atlantic Canada Opportunities Agency (ACOA); and, Canadian Northern Economic Development Agency (CanNor).

22. COMPLIANCE WITH THE *LOBBYING ACT*

22.1. The Contractor and its Eligible Parties each represents, warrants and undertakes:

22.1.1. that it has filed all *Lobbying Act* returns to be filed in respect of persons employed by it who communicate and/or arrange meetings with public office holders as part of their employment duties, and that it will continue to do so;

22.1.2. that it has not contracted with any person to communicate and/or arrange meetings with public office holders for remuneration that is or would be contingent in any way upon success of such person arranging meetings with public office holders, or upon the approval and granting of IRB Credit under this Contract;

22.1.3. that it will not contract with any person to communicate and/or arrange meetings with public office holders for remuneration that is or would be contingent upon the success of such person arranging meetings with public office holders, or upon the approval and granting of IRB Credit under this Contract;

22.1.4. all persons who are or have been contracted by it to communicate and/or arrange meetings with public office holders in respect to this Contract are in full compliance with the registration and other requirements of the *Lobbying Act*;

22.1.5. it shall at all times ensure that any persons contracted to communicate and/or arrange meetings with public office holders in respect of this Contract are in full compliance with the requirements of the *Lobbying Act*.

22.2. When submitting each IRB Annual Report, the Contractor and its Eligible Parties must provide the IRB Authority with a Certificate of Compliance related to Lobbying, signed by the senior officer of the corporation who is authorized to bind the company. The Certificate of Compliance template is contained in Annex B.

23. CONTINGENCY AND/OR SUCCESS FEES

23.1. The Contractor shall not make or agree to make any payment to an individual, company or entity that is contingent on the approval of IRB Credit by the IRB Authority under this Contract or upon the entity's success in arranging meetings with public office holders.

24. LIST OF APPROVED ELIGIBLE PARTIES

24.1. The Eligible Parties to this Contract include the companies and coordinates listed below:

24.1.1. (List to be included at contract award)

25. LIST OF APPROVED GLOBAL VALUE CHAIN PLATFORMS

25.1. The Platforms approved for GVC work are listed below:

25.1.1. (List to be included at contract award)

ANNEX A – PLANS AND TRANSACTIONS

IRB Plans – to be referenced from Contractor's IRB Proposal

IRB Transactions – a detailed list and tabular chart to be attached based on the Contractor's IRB Proposal and then updated throughout the IRB Achievement Period.

ANNEX B
TEMPLATE – ANNUAL IRB REPORT

Protected B (when completed

GENERAL INFORMATION
Project Name:
Contractor Name:
Reporting Period:
Date of Report
IC IRB Manager:

PART A
Overview and Status of Work on the Project:
Progress Payments: (*list all invoices to date, the amount, the date submitted and the status of payment*)
Changes to the IRB Management Plan:

PART B - For each transaction being reported, describe:
Any changes to the transaction details (such as CCV % or company contact info)
Significant achievements and activities
Any delays, problems or achievements shortfalls, with a plan of action to resolve

PART C – For each transaction being reported, include:
The IRB achievement claims for the **CURRENT** reporting period, with appropriate totals and subtotals for Direct, Indirect, SMB, EPTL/SADTL, and each of the Designated Regions. The Contractor may use the chart format of their choice.

PART D – For each transaction reported, include:
The IRB achievement claims **SINCE THE START OF THE IRB ACHIEVEMENT PERIOD**, with appropriate totals and subtotals for Direct, Indirect, SMB, EPTL/SADTL, and each of the Designated Regions. The Contractor may use the chart format of their choice.

PART E
Description of activities undertaken related to SMB and regional development
List of IRB Transactions that have been cancelled or substantially altered (with previous IRB Authority approval)
Certificate of Compliance for IRB Achievements (template attached)
Certificate of Compliance for the Lobbying Act (template attached)

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CERTIFICATE OF COMPLIANCE
For IRB Reporting Purposes

WHEREAS Her Majesty the Queen in right of Canada as represented by the Minister of Public Works and Government Services Canada (referred to herein as the Minister) on the ____ day of _____ has entered into contract with _____ for the Contract.

AND WHEREAS Such Contract requires that, as evidence of the achievement of Canadian Content Value of Industrial and Regional Benefits Transactions and Commitments, the Contractor shall submit a Certificate of Compliance to that effect to the IRB Authority;

NOW THEREFORE, The Contractor declares and certifies as follows:

i) The information contained in the documents appended herewith, which applies to the reporting of the IRB Transaction periods is to the best of our knowledge and ability complete, true and correct;

ii) The information contained in the documents appended herewith is compliant with information contained in Certificates of Compliance submitted to the Contractor by other Eligible Parties;

iii) The Canadian Content Values shown in documents appended herewith have been determined in accordance with Article 6 (Canadian Content Value) of the Contract;

IN WITNESS THEREOF THIS CERTIFICATE OF COMPLIANCE HAS BEEN SIGNED THIS _____ DAY OF _____ BY THE SENIOR COMPTROLLER WHO IS DULY AUTHORIZED IN THAT BEHALF.

_____
SIGNATURE

_____
NAME AND TITLE OF SENIOR COMPTROLLER

AT:_____

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CERTIFICATE OF COMPLIANCE - Lobbying Act For IRB Reporting Purposes

WHEREAS Her Majesty the Queen in right of Canada as represented by the Minister of Public Works and Government Services Canada (referred to herein as the Minister) on the ____ day of _____ has entered into contract with _____ for the Contract.

AND WHEREAS Such Contract requires that, as evidence of the contractor's compliance with the Lobbying Act, the Contractor shall submit a Certificate of Compliance to that effect to the IRB Authority;

NOW THEREFORE, The Contractor declares and certifies as follows:

i) that it has filed all *Lobbying Act* returns to be filed in respect of persons employed by it who communicate and/or arrange meetings with public office holders as part of their employment duties, and that it will continue to do so;

ii) that it has not contracted with any person to communicate and/or arrange meetings with public office holders for remuneration that is or would be contingent in any way upon success of such person arranging meetings with public office holders, or upon the approval and granting of IRB Credit under this Contract;

iii) that it will not contract with any person to communicate and/or arrange meetings with public office holders for remuneration that is or would be contingent upon the success of such person arranging meetings with public office holders, or upon the approval and granting of IRB Credit under this Contract;

iv) all persons who are or have been contracted by it to communicate and/or arrange meetings with public office holders in respect to this Contract are in full compliance with the registration and other requirements of the *Lobbying Act*; and

v) it shall at all times ensure that any persons contracted to communicate and/or arrange meetings with public office holders in respect of this Contract are in full compliance with the requirements of the *Lobbying Act*.

vi) it shall not make or agree to make any payment to an individual, company or entity that is contingent on the approval of IRB Credit by the IRB Authority under this Contract or upon the entity's success in arranging meetings with public office holders.

IN WITNESS THEREOF THIS CERTIFICATE OF COMPLIANCE HAS BEEN SIGNED THIS _____ DAY OF _____ BY THE SENIOR OFFICIAL WHO IS DULY AUTHORIZED IN THAT BEHALF.

_____
SIGNATURE

_____
NAME AND TITLE OF SENIOR OFFICIAL
AT:_____

ANNEX C
TEMPLATE FOR IRB TRANSACTION SHEET

(Please refer to IRB Bidder Instructions for guidance on completing Transaction Sheet)

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1. IRB OBLIGOR INFORMATION
Canadian Procurement Project:
Company Name:
IRB Contact Name:
Email:
Telephone:
Address:
City:
Province/State:
Country:
Postal Code:

2. TRANSACTION DETAILS			
Title:			
Number:			
Date of Submission:			
Tranche:	☐ 1	☐ 2	☐ 3
IRB Transaction Type: ☐ Direct ☐ Indirect			
IRB Activity Type: ☐ Purchase ☐ Consortium ☐ University Investment ☐ Investment Framework ☐ General Investment ☐ Technology Transfer ☐ VCF			

Business Activity Type:

☐ Aircraft	☐ C4ISR	☐ CBRNE	☐ Castings/ Machining	☐ Cyber Security	☐ Electronics
☐ ISS	☐ IT	☐ Manufact-uring	☐ Munitions	☐ Power/ Propulsion/ Transmission	☐ Prof. Services
☐ Ships	☐ Space	☐ Soldier Systems	☐ Steering/ Navigation	☐ Systems/ Integration	☐ Training/ Simulation
☐ Vehicles	☐ Weapons	Other:			

Federal Supply Class (FSC) Code:

(*see FSC Website: http://www.dispositionservices.dla.mil/asset/fsclist.html*)

Global Value Chain (GVC):

☐ Yes
☐ No

If yes, provide name of GVC platform and description of eligibility:

Technology Lists

☐ SADTL
☐ EPTL
Version:
Sector:
Category:
Description of transaction relevance to EPTL:

Description of Transaction:

Government Assistance or Participation in Transaction:

3. TRANSACTION DONOR
Company Name
IRB Contact Name
Email
Telephone
Address
City
Province/State
Country
Postal Code
NAISC code (See NAISC website - *http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVDPage1&TVD=118464)*
Description of Core Capabilities
Tier Level

4. TRANSACTION RECIPIENT
Company Name
IRB Contact Name
Email
Telephone
Address
City
Province
Country
Postal Code
NAISC code
Description of company and core capabilities
Description of impact on recipient
Number of Employees

Small and Medium Business?
Tier Level

5. CONSORTIUM MEMBER (if applicable)
Company Name
IRB Contact Name
Email
Telephone
Address
City
Province/State
Country
Postal Code

6. IRB ELIGIBILITY CRITERIA
Causality
Eligible Party
Incrementality
Timing
Other – CCV Overview
Other – Level of Technology (Indirect)

7. QUALITY OF TRANSACTION

8. LIST OF SUPPORTING DOCUMENTATION

Nature of Document	Relevance

9. VALUATION AND TIME PHASING	
Total Value of Transaction	
Cdn Content Value (CCV) % of Recipient	
Estimated Future Sales, if applicable	
Multiplier, if applicable	
Total CCV $ of Transaction	

(CCV$)

Period	**Direct**	**Indirect**	**SMB**	**EPTL**	**Atl**	**Que**	**NOnt**	**Ont**	**West**	**Total CCV**
1										
2										
3										
4										
5										
6										
7										
8										
Totals										

.

ANNEX D
ENHANCED PRIORITY TECHNOLOGY LIST

Version 1.0 (Winter 2011)
Department of National Defence

Sector	Category	Description
Ships	Defence	Detection capabilities and decision aids
	Signature Management	Detectability reduction
Cyber	Network Monitoring	Detection and tracking of anomalous behaviours that threaten network defence capabilities
	Network Defence	Tools to support dynamic responses to isolate, monitor and defeat cyber intrusions
Aerospace	Arctic and Maritime Domain Awareness	Affordable aerospace-based surveillance and monitoring systems
	Vulnerability Reduction	Precision navigation and timing capabilities that reduce vulnerabilities in current systems such as GPS
Soldier Systems	Power and Energy	Lightweight high-energy portable power sources
	Full Spectrum Protection	Blast and ballistic omni-directional shielding
	Garment Platforms	Integrated multi-function electro-textiles
	Tunable Weapons Systems	Weapons systems which deliver effects across non-lethal and lethal environments
	Situation Awareness	Integrated, portable, lightweight, multifunction, wireless and secure C3 systems

ANNEX E – TEMPLATE FOR ANNUAL IF ACTIVITY REPORT

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ANNUAL *IF* ACTIVITY REPORT *(Please complete entire form)*
***IF* Transaction Number:**
***IF* Transaction Title:**
***IF* Investor:**
SMB Recipient:
Date of this report:
<u>PART A – FIRST *IF* REPORT</u> **At a minimum, the Contractor's first Annual *IF* Activity Report must contain and address the items listed below:** **1. Documentation confirming *IF* investment:** **For cash investments, attach the following:** ☐ **A certified copy of the cheque or wire transfer to the SMB** ☐ **Written reconfirmation from the SMB of their anticipated use of the cash investment** ☐ **A copy of the final signed legal agreement (or similar signed document) between the IRB Obligor and the SMB outlining the terms and conditions of the investment.** **For in-kind investments, attach the following:** **For tangible assets** ☐ **written confirmation that the transfer of the asset has taken place** ☐ **written confirmation from the SMB of its receipt** ☐ **written reconfirmation from the SMB of its expected use.** **For intangible assets (licenses, knowledge, marketing and sales)** ☐ **written confirmation from the SMB identifying the contribution, confirming its receipt and reconfirming its expected use.** ☐ **a copy of the final signed legal agreement (or similar signed document) between the *IF* Investor and the SMB, outlining the terms and conditions of the investment, including the final value of the transfer.**
<u>PART B – ENSUING *IF* REPORTS</u> **Once *IF* activities begin, each of the Contractor's Annual *IF* Activity Reports must, at a minimum, contain and address the items listed below:**

1. Overview of the *IF* investment and how it is to be used:
2. Current, overall status of the *IF* project:
3. Confirmation of the SMB's full-time equivalent employees and ownership structure: **Number of Full time equivalent employees** _____ **Ownership structure** _____ _____ _____
4. Confirmation that the *IF* investment remains with the SMB and is being used as intended: ☐ **Yes** ☐ **No** **Details**: _____ _____
5. Description of the specific activities undertaken during the reporting year: **Challenges associated with *IF* activities**?

☐ **Yes**
☐ **No**
Details:

_____
_____
_____
_____

Successes associated with *IF* activities?
☐ **Yes**
☐ **No**
Details:

_____
_____
_____
_____

Opportunities associated with *IF* activities?
☐ **Yes**
☐ **No**
Details:

_____
_____
_____
_____

6. Description of the evolving industry and market conditions related to the *IF* project:

7. Update on the financial status of the Canadian SMB:

Attach the most recent audited financial statements (balance sheet, income statement, statement of change in equity, statement of cash flows).

8. Status of the business relationship and collaboration between the IRB Obligor and the Canadian SMB:

Overview:

☐ **Successes related to relationship/collaboration?**
☐ **Yes**
☐ **No**
Details

☐ **Challenges related to relationship/collaboration?**
☐ **Yes**
☐ **No**
Details

☐ **Future opportunities related to relationship/collaboration?**
☐ **Yes**
☐ **No**
Details:

☐ **Links to other partners or sectors**
☐ **Yes**
☐ **No**
Details:

☐ **Other information**
☐ **Yes**
☐ **No**
Details:

9. Description of the impact of the *IF* project to date:

Impact on Innovation
☐ **High**
☐ **Moderate**
☐ **Low**

Details:

Impact on Competitiveness
☐ **High**
☐ **Moderate**
☐ **Low**

Details:

Impact on Delivering Broader Benefits to Canada

- ☐ **Technology**
- ☐ **Economy**
- ☐ **Environment**
- ☐ **Social**
- ☐ **Security**
- ☐ **Other**

Details:

10. Major Changes
Changes have occurred to the *IF* project in the following area(s):

- ☐ **Company bankruptcy**
- ☐ **Changes in SMB ownership or size**
- ☐ **New *IF* activities**
- ☐ **Other** _____
- ☐ **Not applicable**

Details regarding nature and magnitude of change, plus its impact on *IF* project:

_____
_____
_____

11. Signatures
By signing this *IF* Activity Report, the undersigned parties attest that the information included in and attached to this document is complete, accurate and can be relied up on by the IRB Directorate for the purposes of monitoring the *IF* investment. Ultimate responsibility for the completeness, accuracy and reliability of this *IF* Activity Report rests with the Contractor and the *IF* Donor.

Please see the "Required Signatures" section of the *IF* Applicant Guide.

IRB Contractor

Signature Date

_____

Name (please print)	Title
_____	
***IF* Donor**	
Signature	Date
_____	
Name (please print)	Title
_____	
***IF* Recipient (Canadian SMB)**	
Signature	Date
_____	
Name (please print)	Title
_____	

APPENDIX A

IRB DIDs and CDRLs

DATA ITEM DESCRIPTION		
1. TITLE **Industrial and Regional Benefits (IRB) Annual Report**		2. IDENTIFICATION NUMBER **IRB 001**
3. DESCRIPTION The IRB Annual Report reports IRB achievements against Contract commitments.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST Industry Canada IRB Authority	6. GIDEP APPLICABLE N/A
7. APPLICATION / INTERRELATIONSHIP **Reference:** IRB Terms and Conditions (Annex __, clauses 2.2 and 3)		
8. ORIGINATOR Industry Canada IRB Authority	9. APPLICABLE FORMS N/A	

10. PREPARATION INSTRUCTIONS

10.1 The Contractor must submit to the IRB Authority, through the PWGSC Contracting Authority (CA), annual IRB Reports based on the performance achieved during the IRB Reporting Periods noted in this Contract. These reports must be submitted 60 calendar days after the end of the annual IRB Reporting Period. Each annual IRB Report shall consist of five parts.

10.2 Content:

Part A. Must include:

i. An overview and status of the Work on the Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters ;

ii. A list of all the progress payment requests or invoices (broken down by reporting period and including the amount, date submitted and payment status) which have been submitted by the Contractor to the Contracting Authority for Work completed since the Effective Date;

iii. A description of any changes to the IRB Management Plan.

Part B. Must include, for each transaction being reported:

i. An update on any changes to transaction details, such as the CCV percentage or company contact information;

ii. A description of significant achievements and activities ;

iii. A description of any delays, problems or achievement shortfalls, along with a plan of action to resolve.

Part C. Must include, for each transaction being reported:

i. The CCV value of the IRB achievement claimed for the current reporting period.

Part D. Must include, for each transaction reported:

i. The CCV value of the IRB achievement claimed to date in all the reporting periods since the beginning of the IRB Achievement Period.

Part E. Must include:

i. A description of Small and Medium Business and Regional development activities undertaken during the reporting period;

ii. A list of IRB Transactions which have been cancelled, added or substantially altered during the reporting period with the approval of the IRB Authority, and their status vis-à-vis contract amendment;

iii. A Certificate of Compliance related to the Contractor's achievement of IRB Commitments, signed by the senior company comptroller in respect of the IRB Transactions for which there was activity in that IRB Reporting Period. This Certificate of Compliance also covers any IRB achievements of the Contractor's Eligible Parties;

iv. A Certificate of Compliance related to the Lobbying Act, signed by the senior company official with the authority to bind the Contractor. This Certificate of Compliance also covers any lobbying activities of the Contractor's sub-contractors and/or Eligible Parties.

10.3 Additional Information

As evidence of the Contractor's achievement of IRB Commitments, the Contractor shall provide, appended to the IRB Annual Reports, a Certificate of Compliance, signed off by the senior company Comptroller, in respect of each IRB Transaction for which there was activity in that Reporting Period. The Certificate of Compliance also covers those IRB achievements of the Contractor's Eligible Parties and sub-contractors.

DATA ITEM DESCRIPTION		
1. TITLE **Tranche 2 of proposed IRB Transactions**		2. IDENTIFICATION NUMBER **IRB 002**
3. DESCRIPTION Contractor shall submit to the IRB Authority, at 12 MACA, acceptable IRB Transactions which are detailed, fully described and which bring the cumulative total of identified acceptable IRB Transactions to a minimum of 60% of the contract value, measured in CCV.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST Industry Canada IRB Authority	6. GIDEP APPLICABLE N/A
7. APPLICATION / INTERRELATIONSHIP **Reference:** IRB Terms and Conditions (Annex __, clause 2.1.6)		
8. ORIGINATOR Industry Canada IRB Authority	9. APPLICABLE FORMS N/A	
10. PREPARATION INSTRUCTIONS Contractor shall submit to the IRB Authority, at 12 MACA, acceptable IRB Transactions which are detailed, fully described and which bring the cumulative total of identified acceptable IRB Transactions to a minimum of 60% of the contract value, measured in CCV. For each IRB Transaction, the information submitted must be in the same format as that which was used for the IRB Proposal submitted at bid closing.		

DATA ITEM DESCRIPTION		
1. TITLE **Tranche 3 of proposed IRB Transactions**		2. IDENTIFICATION NUMBER **IRB 003**
3. DESCRIPTION Contractor shall submit to the IRB Authority, at 36 MACA, acceptable IRB Transactions which are detailed, fully described and which bring the cumulative total of identified acceptable IRB Transactions to 100% of the contract value, measured in CCV.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST Industry Canada IRB Authority	6. GIDEP APPLICABLE N/A
7. APPLICATION / INTERRELATIONSHIP **Reference:** IRB Terms and Conditions (Annex __, clause 2.1.7)		
8. ORIGINATOR Industry Canada IRB Authority	9. APPLICABLE FORMS N/A	
10. PREPARATION INSTRUCTIONS Contractor shall submit to the IRB Authority, at 36 MACA, acceptable IRB Transactions which are detailed, fully described and which bring the cumulative total of identified acceptable IRB Transactions to 100% of the contract value, measured in CCV. For each IRB Transaction, the information submitted must be in the same format as that which was used for the IRB Proposal submitted at bid closing.		

CONTRACT DATA REQUIREMENTS LIST

A. SYSTEM / ITEM Industrial and Regional Benefits (IRB) Annual Report					B. CONTRACT			
C. SOW IDENTIFIER n/a		D. DATA CATEGORY PM (IRB)			E. CONTRACTOR			
1. ITEM NUMBER IRB 001		2. TITLE OR DESCRIPTION OF DATA IRB Annual Report			3. SUBTITLE			
4. AUTHORITY (Data Item Number)		5. CONTRACT REFERENCE__ IRB Terms and Conditions – Annex __, Clauses 2.2 and 3			6. REQUIRING OFFICE Industry Canada (IC) IRB Authority			
7. INSPECTION	9. INPUT	10. FREQUENCY ANNLY	12. DATE OF 1st SUBMISSION 14 MACA		14. DISTRIBUTION and ADDRESSEES			
8. APP CODE		11. AS OF DATE Contract award	13. DATE OF SUBSEQUENT SUBMISSION / EVENT ANNLY			INITIAL		FINAL
						Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Review period by IC – 12 months					PWGSC CA	0	0	1	0
					IC IRB Auth	0	0	1	0
PREPARED BY	DATE	APPROVED BY							
17. CONTRACT FILE /DOCUMENT NUMBER	18. ESTIMATED NO OF PAGES	19. ESTIMATED PRICE			15. TOTAL	0	0	2	0

CONTRACT DATA REQUIREMENTS LIST

A. SYSTEM / ITEM Tranche 2 IRB Transactions				B. CONTRACT				
C. SOW IDENTIFIER n/a	D. DATA CATEGORY PM (IRB)			E. CONTRACTOR				
1. ITEM NUMBER IRB 002	2. TITLE OR DESCRIPTION OF DATA Tranche 2 IRB Transactions			3. SUBTITLE				
4. AUTHORITY (Data Item Number)	5. CONTRACT REFERENCE IRB Terms and Conditions – Annex __, Clause 2.1.6			6. REQUIRING OFFICE Industry Canada (IC) IRB Authority				
7. INSPECTION	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION 12 MACA	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE		11. AS OF DATE Contract award	13. DATE OF SUBSEQUENT SUBMISSION / EVENT R/ASR		INITIAL		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Review period by IC – 12 months				PWGSC CA	0	0	1	0
				IC IRB Auth	0	0	5	1
PREPARED BY	DATE	APPROVED BY						
17. CONTRACT FILE /DOCUMENT NUMBER	18. ESTIMATED NO OF PAGES	19. ESTIMATED PRICE		15. TOTAL	0	0	6	1

CONTRACT DATA REQUIREMENTS LIST

A. SYSTEM / ITEM Tranche 3 IRB Transactions				B. CONTRACT				
C. SOW IDENTIFIER n/a	D. DATA CATEGORY PM (IRB)			E. CONTRACTOR				
1. ITEM NUMBER IRB 003	2. TITLE OR DESCRIPTION OF DATA Tranche 3 IRB Transactions			3. SUBTITLE				
4. AUTHORITY (Data Item Number)	5. CONTRACT REFERENCE IRB Terms and Conditions – Annex __, Clause 2.1.7			6. REQUIRING OFFICE Industry Canada (IC) IRB Authority				
7. INSPECTION	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION 36 MACA	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE		11. AS OF DATE Contract award	13. DATE OF SUBSEQUENT SUBMISSION / EVENT R/ASR		INITIAL		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Review period by IC – 12 months				PWGSC CA	0	0	1	0
				IC IRB Auth	0	0	1	1
PREPARED BY	DATE	APPROVED BY						
17. CONTRACT FILE /DOCUMENT NUMBER	18. ESTIMATED NO OF PAGES	19. ESTIMATED PRICE		15. TOTAL	0	0	2	1

Fisheries and Oceans Canada | Pêches et Océans Canada

Coast Guard | Garde côtière

Canadian Coast Guard

ANNEX E
Bid Evaluation Plan – Medium Helicopters
CCG Helicopter Project
January 8th, 2014

Published under the Authority of:

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Canada

Approvals

Deputy Project Manager	TBD	Approved: Date:
Project Manager	P. Egener	Approved: Date:
Director General, Major Projects	R. Wight	Approved: Date:

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Purpose

This Bid Evaluation Plan details the methods, procedures and reporting structures for evaluating the proposals for the Canadian Coast Guard (CCG) Medium Helicopter Project.

Part 4 of the RFP addresses Industrial Regional Benefits (IRB) evaluation which is outside the scope of this document.

1.2 Objectives of the Evaluation Plan

The objectives of the evaluation process are to:

a. Identify the proposals that are compliant with the Operational Evaluation
b. Identify the proposals that are compliant with the Mandatory criteria.
c. Score the point rated desirable requirements with associated weights.
d. Calculate the Weighted Evaluation Prices, found in the proposals from bidders found compliant with the Operational Evaluation and Mandatory criteria.
e. Complete the O&M evaluation to provide cost per flight hour analysis.
f. Provide PWGSC with an overall weighted Technical score for each of the compliant proposals.
g. To determine Bidder's Final Score and recommend a bidder for Contract award.

2. EVALUATION PROCESS

2.1 General

The evaluation process for incoming bids to the Medium Helicopter RFP will be conducted by three entities: the CCG Helicopter Project Team, Industry Canada and the PWGSC.

The Technical Evaluation will be based on the Bidder's proposal in accordance with the following documents:

a) The CCG Medium Helicopter Statement of Work

b) The Medium Helicopter RFP

c) The Operational Evaluation Plan for CCG Medium Helicopter

d) The CCG Medium Helicopter Baseline Statement of Requirements

Canada will be selecting the winning proposal based on the concept of value for money. The final proposal score will be determined using the result of the Price Proposal evaluation, conducted by PWGSC, and the Technical Proposal rated evaluation, with a weighting of 50% Technical and 50% Price.

2.1.1 Technical Evaluation General

The technical portion of the Bid Evaluation will proceed through the following phases:

1. Phase I – Operational Evaluation
2. Phase II – Mandatory Technical Requirements Evaluation
3. Phase III - Evaluation of Rated Requirements
4. Phase IV - Calculation of Operation and Maintenance Costs
5. Phase V – Evaluation of Price Proposals
6. Phase VI – Determination of Bidder's Final Score
7. Phase VII – Recommendation of Bidder for Contract award

2.1.2 Phase 1 - Operational Evaluation

For the first phase, bidders will be required to provide an aircraft and necessary personnel for an Operational Evaluation prior to continuing to Phase II of the Bid Evaluation. The Operational Evaluation is designed to verify that the proposed aircraft will be compliant with key operational requirements.

The ground portion of the Operational Evaluation, including demonstrations, will be conducted at Transport Canada's facility located at 200 Comet Private, Ottawa, Ontario Canada. It is expected that all in-flight evaluation will be

conducted over the Gatineau Airport (1717 Arthur-Fecteau Street Gatineau, QC J8R 2Z9) area.

Complete test details are provided in the Medium Helicopter Operational Evaluation Test Plan, enclosed as Appendix A to this document. The associated Medium Helicopter Logistics Plan for Operational Evaluation is found as Appendix B to this document.

2.1.3 Phase II – Mandatory Technical Requirements Evaluation

Once an aircraft has met all the requirements of the Operational Evaluation, Canada will review the bids for compliance with the Mandatory Technical Requirements. The Evaluation Team will examine each proposal individually and assess for compliance.

If a bidder's proposal fails to meet any one of the mandatory requirements, it is declared NON-COMPLIANT. The evaluation will continue reviewing the proposal until all mandatory requirements have been considered.

Reasons for declaring a proposal NON-COMPLIANT will be clearly documented by the evaluation team. The complete details of the mandatory requirements are found in Appendix C Mandatory Technical Requirements. Bidders are requested to fill in the matrix included in Appendix C. Those bids meeting all mandatory requirements shall then be reviewed and scored using the rated requirement criteria.

2.1.4 Phase III - Rated Requirements Evaluation

The evaluation team will evaluate each proposal using the rated requirement criteria as defined in the Rated Requirements Evaluation Matrix included in Annex D Rated Technical Requirements. Bidders are asked to submit documents as required in Appendix D. The Scoring of Rated Requirements is found in Appendix D and also in the associated spreadsheet in Annex G of this RFP.

2.1.5 Phase IV - Calculation of Operations & Maintenance Cost

In order to enable Canada to fairly evaluate the proposed aircraft's Operation and Maintenance costs, bidders shall provide the proposed aircraft's operating cost in Canadian Dollars per flight hour (C$/Flight Hour) with their bid in a sealed envelope.

Within five days AFTER the bid closing date, bidders will forward the information at Appendix E Calculation of Operation and Maintenance Costs to Conklin & de Decker for validation of the figure (C$/Flight Hour) provided with the bid.

Conklin & de Decker will use the spreadsheet and instructions provided in Appendix F Calculation of Operation and Maintenance Costs to validate the bidder's aircraft C$/Flight Hour. This validation in the form of a letter from Conklin & de Decker will then be forwarded to PWGSC Contract Authority.

The Government of Canada will only receive the C$/Flight hour figure and the accompanying letter from Conklin & de Decker. These figures will be weighted and used for evaluation purposes.

Conklin & de Decker contact information:

Bill de Decker

Phone: 1 817 – 277 6403

e-mail – bill@conklindd.com

2.1.6 Phase V - Evaluation of Price Proposal (PWGSC)

The number of Helicopters purchased shall depend on the cost of the helicopters and the associated O&M costs; thus, bidders are asked to provide prices for 4,5,6,7 and 8 helicopters. The cost of the helicopters and the associated equipment and services will be based on the following formula:

The Total Assessed Bid Price for Bidder *n* is $\mathbf{P_n}$**:**

$P_n = P1_a + P1_b + P1_c + P1_d + P1_{e\ \ldots n} + P2 + P3 + P4 + P5 + P6$

And must include the following:

$P1_a$ = Cost for quantity 4 Medium helicopters as per "Configuration A"

$P1_b$ = Cost for quantity 5 Medium helicopters as per "Configuration A"

$P1_c$ = Cost for quantity 6 Medium helicopters as per "Configuration A"

$P1_d$ = Cost for quantity 7 Medium helicopters as per "Configuration A"

$P1_e$ = Cost for quantity 8 Medium helicopters as per "Configuration A"

Note: All P1 items shall include prices for the following items, as a minimum:

a) Equipment Catalogue in Microsoft Excel 2007 for all Equipment supplied
b) Data in accordance with the Contract data requirements in Appendix C Document and Data Requirements for Project Deliverables of the SOW
c) Main rotor and tail rotor tie-downs
d) All auxiliary equipment not carried onboard the aircraft
e) Litter kit

P2 = First Factory Training for Pilots (8 personnel)

P3 = Second Factory Training for Pilots (4 personnel)

P4= First Factory Aircraft Maintenance Course (7 personnel)

P5 = Second Factory Aircraft Maintenance Course (4 personnel)

P6 = Quantity 12 helicopter models

Bidders will also provide pricing for each of the following items. These prices will be used by CCG for planning purposes only and will **not** be considered as part of the cost evaluation:

P7 = Each Additional Optional Factory Training for Pilots (Up to 4 personnel)

P8 = Each Additional Optional Factory Aircraft Maintenance Course (4 personnel)

P9 = On-site Field Service Representative on an as required basis $ Cost per hour x minimum number of hours per call

P10 = For the provision of spares the Contractor agrees to supply parts at the list price less _____ percent

P11 = Optional - Paperless cockpit including, but not limited to: VFR/IFR charts, approach plates, flight manuals, and company publications

P12= Optional - Inside of all access panels and compartments painted white (engine, main rotor transmission, hydraulics)

P13 = Optional - Seatbelt extensions

P14 = Optional - External hard point

P15 = Optional - Auxiliary fuel tank(s)

P16= Optional - Health and usage monitoring system;

P17 = Optional - Electrically heated windshield

P18 = Optional - Fuel flow control on both collective controls

P19 = Optional - Helicopter simulator data, aircraft parts and equipment required to support the development of a “Level D” Full Flight Simulator

P20= Optional - Windshield wipers

P21= Optional - Automatically deployable floats

P22= Optional - Automatically deployable life rafts upon activation of deployable floats

P23= Optional - Four axis autopilot.

2.2 Contractor Selection Methodology

The Bidder who has met all the mandatory requirements and has obtained the highest Bidder's Final Score will be recommended for contract award, subject to the provisions of this solicitation.

The weights assigned to each of the factors discussed earlier are itemized in Table_1.

The Bidder's Final Score will be determined by using the following formula:

a) Technical Weighting Factor = 50
b) Price Weighting Factor = 50

$$\textbf{Bidder's Final Score} = \frac{(TP_n}{TTP} \times P_{wf}) \times \frac{LPP}{P_n} + \frac{(TP_n}{TTP} \times T_{wf})$$

Where:
TP_n = Total Technical Points Acquired by Bidder n
TTP = Total Available Weighted Technical Points
P_{wf} = Price Weighting Factor (50)
LPP = Lowest Total Assessed Bid Price of all Compliant Proposals
P_n = Total Assessed Bid Price by Bidder n
T_{wf} = Technical Weighting Factor (50)

The complete Excel spreadsheets used to calculate the Bidders Final Score can be found in Annex G to the RFP – Bid Evaluation Score Sheet. An Excel formatted copy may be obtained from PWGSC on request.

Table 1 - Weights assigned to Financial and Technical Factors

Weight	FINANCIAL
50	**Acquisition**
	TECHNICAL
10	**O&M**
15	**Operational Test**
15	**Rated Requirements**
	Project Management
6	Project Management Plan
4	Maintenance Management Plan
100	**TOTAL**

APPENDIX A – Medium Helicopter Operational Evaluation Test Plan

Attach Document Here

APPENDIX B – Medium Helicopter Operational Evaluation Logistics Plan

Attach Document Here

APPENDIX C – Mandatory Technical Requirements

Bidders are required to complete the matrix below.

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
6.0	**Regulatory and Certification Requirements**			
6.1 a.	No later than 60 days after bid closing the bidder shall provide proof of compliance of the following: -The helicopter type, model and variant shall hold a valid type certificate issued in accordance with Part V, subpart 21 of the Canadian Aviation Regulations that meets the Standards of Airworthiness of Chapter 529 of the Airworthiness Manual, as applicable. -The type certified helicopter meets the following mandatory requirements: a) Helicopter Performance requirements as stated in Sections 7.1.1, 7.1.2, and 7.1.4 of the CCG Baseline Statement of Requirements - Medium Helicopters, b) Power Plant System requirements as stated in Requirements 7.3.7.2 and 7.3.7.3 of the CCG Baseline Statement of Requirements - Medium Helicopters, c) Instruments requirements as stated in requirement 7.3.5.11.1 of the	**Provide certificate or equivalent**		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	CCG Baseline Statement of Requirements - Medium Helicopters.			
6.1 b.	The aircraft shall be equipped, as applicable, to comply with the requirements of Canadian Aviation Regulation Part VII, Subpart 3 & 4 for the following, at the time of aircraft acceptance: a) Day Visual Flight Rules (VFR) b) Night VFR c) Dual pilot Instrument Flight Rules (IFR) d) Night Vision Imaging System (NVIS) flight operations e) All equipment listed in the CCG Baseline Statement of Requirements – Medium Helicopters	**Provide certificate or equivalent And/or** Section and Page Reference from Helicopter Technical Specifications or applicable manual		
6.2	The helicopter shall be certified for day and night Visual Flight Rules (VFR) operations.	**Provide certificate or equivalent And/or** Section and Page Reference from Helicopter Technical Specifications or applicable manual		
6.3	The helicopter shall be certified for day and night Instrument Flight Rules (IFR) operations.	**Provide certificate or equivalent**		
6.4*	The helicopter shall be certified for operations and flight in ambient outside air temperatures between -30°C and +40°C.	**Provide certificate or equivalent**		
6.5	The helicopter shall be certified and equipped for flight in snow and rain.	**Provide certificate or equivalent**		
6.6	Where vertical reference operations cannot be performed from the pilot seat, the helicopter shall be certified for single pilot operation from the co-pilot seat.	**Provide certificate or equivalent**		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
6.7	The helicopter shall be certified for Night Vision Imaging System (NVIS) operations.	**Provide certificate or equivalent**		
7.0	**Helicopter requirements**			
7.1	**Performance requirements**			
7.1.1	The Helicopter shall be capable of ground level helipad Category "A" take-offs and landings at sea level ISA conditions, with no wind at MCTOW.	Extract from proposed Helicopter Pilot Operating Handbook or Helicopter Technical Specifications or applicable manual		Category A take off and landing is the ability to maintain safe single engine performance
7.1.2	The Helicopter shall have a Hover In-Ground Effect (HIGE) capability at its MCTOW, Take-off Power (TOP) and in ISA conditions of at least 7000 ft (2133 m) pressure altitude.	Extract from proposed Helicopter Pilot Operating Handbook or Helicopter Technical Specifications or applicable manual		
7.1.3	The Helicopter shall have a Hover Out-of-Ground Effect (HOGE) capability at its MCTOW, Take-off Power (TOP) and in ISA conditions of at least 5000 ft (1524m) pressure altitude.	**Evaluated during Operational testing**		
7.1.4	The Helicopter shall be capable of maintaining a pressure altitude of 5000 ft (1524 m) or greater, at ISA conditions and at MCTOW at Maximum Continuous Power (MCP) with One Engine Inoperative (OEI).	Extract from proposed Helicopter Pilot Operating Handbook or Helicopter Technical Specifications or applicable manual		
7.2	**Capability requirements**			
7.2.1*	The helicopter in its Flight Configuration "A", as defined in Section 5, shall be capable of carrying a minimum useful load of 2000 lbs (907 kg), plus the necessary fuel for at least 2 hrs plus 20 minutes VFR reserve, at a cruise speed of at least 115 knots (213 km/hr).	**Evaluated during Operational Testing**		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
7.2.2*	The helicopter shall be capable of a minimum cruise speed of at least 115 knots True Air Speed (213 km/hr) at Maximum Certified Take-Off Weight (MCTOW) and International Standard Atmosphere (ISA) sea level standard conditions in its Flight Configuration "A" as defined in Section 5.	Extract from proposed Helicopter Pilot Operating Handbook or Helicopter Technical Specifications or applicable manual		
7.2.3*	The helicopter shall be capable of a minimum endurance of 2 hours plus 20 minutes VFR reserve (i.e. 2 hours 20 minutes to dry tanks) without the use of auxiliary tanks, at a minimum cruise speed of at least 115 knots True Air Speed, at MCTOW, ISA sea level standard conditions, and its Flight Configuration "A", as defined in Section 5.	Extract from proposed Helicopter Pilot Operating Handbook or Helicopter Technical Specifications or applicable manual		
7.2.4	Not used.			
7.2.5	The helicopter shall be capable of folding the Main Rotor (MR) blades without removing the blades.			
7.2.6*	The helicopter shall have a minimum cargo capacity of at least 215.4 cubic feet (6.1 cubic metres), including the passenger seating area and exclusive of the crew seating area, as stipulated in 7.3.5.5.1.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.2.7	The helicopter must be capable of landing on unprepared surfaces such as rocky terrain and gravel at its MCTOW.	Proof of scuff pads or anti-wear pads for helicopter landing gear.		
7.2.8	The helicopter must be capable of landing on	Proof of anti-sink pads for helicopter		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	soft surfaces such as snow, mud and sand at its MCTOW.	landing gear.		
7.2.9*	The helicopter shall have the capability of landing on slopes of at least 5 degrees fore and aft, and at least 5 degrees side to side.	Section and Page Reference from Helicopter Technical Specifications or applicable manual. (limitations section –Pilot Operating handbook)		
7.2.10*	The helicopter shall be capable of using jeta1 fuel in operations and flight in ambient outside air temperatures between -30°C and +40°C.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.2.11	In order to land aboard CCG ships, the helicopter in its Flight Configuration "A", as defined in Section 5, must be capable of carrying a minimum useful load of at least 2000 lbs (907 kg), plus the necessary fuel for at least 1 hr plus 20 minutes VFR reserve at the helicopter Maximum Range Speed and shall not exceed 11,000 lbs (4989.5 kg).	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.2.12	The helicopter shall have a main rotor diameter of not more than 48 ft (14.63 m).	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.2.13*		Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.2.14*				
7.2.15	The helicopter shall be capable of landing at shore-based touchdown locations where there are wooden helipads having the dimensions 16 ft X 16 ft (4.8 m x 4.8 m) and the landing gear	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	point(s) of contact shall be at least 2 ft (60.96 cm) from all edges of the helipad when the aircraft is centered on the pad.			
7.2.16	The helicopter in its Flight Configuration "A", as defined in Section 5, and carrying a minimum useful load of at least 2000 lbs (907 kg), plus the necessary fuel for at least 2 hrs plus 20 minutes VFR reserve, shall be capable of landing on wooden helipads where the Maximum Bending Capacity of the member is 1.63 kn-m (1202 lbf-ft) and the Maximum Load Limitation is 4.17 kn (937 lbs) per Point of Contact.	Section and Page Reference from Helicopter Technical Specifications or applicable manual. In demonstrating how the proposed solution fulfills this requirement, bidders shall submit all drawings and calculations which clearly indicate the number of points of contact associated with the proposed landing gear configuration and the resulting helicopter loads on the helipad. All calculations shall reflect CCG helipad construction in accordance with the requirements of CAN/CSA-086-01 Engineering Design in Wood, where the tabulated value for timber is 64x286mm (2.5 x 11.2 inches), for planks of pressure treated spruce, grade no. 1/2, measuring 16 ft. (4.87 m) in length. The helipad structure is comprised of deck planks placed on 8x8 inch (203 x 203 mm) joists, spaced at intervals of 5.125 ft. (1.56 m) along the length of the structure. These helipads measure 16 ft x 16 ft (4.87m). Please note, for the purposes of calculation:		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
		1. The Maximum Bending Capacity equals Maximum Load Limitation times the Length of the spacing interval between the joists, divided by four. I.e. M max = (P xl) / 4 M max = Maximum Bending Capacity P = Maximum Load Limitation L = Length of the spacing interval between the joists 2. For the purposes of calculation, a Dynamic Load Factor of 1.5 is applied to the weight of the subject helicopter. 3. The number of Points of Contact corresponds directly to the number of planks that the landing gear touches.		
7.2.17	For Shore based Operations, the maximum overall height of the helicopter shall not exceed 18 ft 6 inches (5.6 m) with ground handling equipment installed and deployed and with all operational equipment installed per CCG helicopter Configuration "A".			
7.3	**Aircraft equipment requirements**			
7.3.1	**Placards and Markings – Not used**			
7.3.2	**Servicing – Not used**			

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
7.3.3	**Hardware – Not used**			
7.3.4	**Helicopter vibration**			
7.3.4.1	Not used.			
7.3.5	**Airframe systems**			
7.3.5.1	**Air conditioning**			
7.3.5.1.1	The helicopter shall be equipped with a cockpit and cabin air conditioning system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.1.2	The helicopter shall be equipped with a bleed air heater with windshield defrost capability.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.2	**Auto flight**			
7.3.5.2.1*	The helicopter shall be equipped with a three (3) axis coupled digital autopilot system, as minimum, with Flight Director.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3	**Communications**			
7.3.5.3.1	The helicopter shall be equipped with a dual VHF communication system with 8.33 khz spacing and with a minimum 15 watt transmitter output.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.2	The helicopter shall be equipped with a P25 compliant digital FM radio interfaced with the audio system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.3	The helicopter shall be equipped with the latest version of the Iridium satellite based Flight Following System, skytrac ISAT (including DVI, CDP, Sat phone, Hardware Installation Support,	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	etc.) And complete with the "Rendezvous" software component, all of which must be fully compatible/backwards compatible with the existing CCG shipboard skytrac ISAT-200 Flight Following System currently operating in the CCG fleet.			
7.3.5.3.4	The helicopter Iridium satellite based Flight Following System shall be interfaced to the aircraft audio system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.5	The helicopter shall be equipped with a secondary radio transmit capability for the co-pilot position, in a location other than on the Flight controls.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.6	the helicopter shall be equipped with an audio system consisting of one pilot, one co-pilot and at least one passenger cabin audio control panel, having the following features as a minimum: - push to talk and voice activated intercom system - high impedance phone output - pilot position shall be capable of rear cabin and co-pilot isolation - co-pilot position shall be capable of rear cabin and pilot isolation - minimum of five transceiver interfaces - minimum of five receiver interfaces - two auxiliary audio inputs	section and page reference from helicopter technical specifications or applicable manual.		
7.3.5.3.7	The helicopter shall be equipped with a rear cabin audio control panel with radio(s) transmit capabilities from at least one station with an	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	Intercom System/Push To Talk (ICS/PTT) adjustable volume control located on the down lead cord.			
7.3.5.3.8	The helicopter shall be equipped with a rear cabin audio system with adjustable volume, voice activated intercom, complete with radio and side tone monitoring for all passenger stations.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.9	The helicopter shall be equipped with a 406 mhz Automatic Fixed (AF) emergency locator transmitter meeting the requirements of FAA-TSO-C91 or FAA-TSO-C91a or FAA-TSO-C126, interfaced to the aircraft Global Navigation Satellite System (GNSS).	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.10	The helicopter shall be equipped with an Automatic Dependent Surveillance – Broadcast (ADS-B) transponder.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.11	The helicopter shall be equipped with a satellite data-link system displaying Canadian aviation weather information, as a minimum, to the flight crew.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.12	Any belly and tail boom mounted antennas on the helicopter shall permit the use of aircraft ground handling equipment, including dollies.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.3.13	The helicopter shall be equipped with an Underwater Locator Beacon that meets CAN TSO C-121a and include the following features, as a minimum: - Operating frequency - 37.5 khz Â± 1	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	khz - Operating Depth - Surface to 20,000 feet - Pulse Length - Not less than 9 milliseconds - Pulse Repetition Rate - Not less than 0.9 pulse per second - Useful Life - Six years - Operating Life - 30 days (minimum) - Acoustic Output, Initial - 1060 dynes/cm^{2}rms pressure at 1 meter (160.5 db) - Acoustic Output, After 30 days: 700 dynes/cm^{2}rms pressure at 1 meter (157.0 db) - Operating Temperature - 28º F to 100º F (-2.2 ºc to + 37.8 ºc) - Actuation - Fresh or salt water, surface to 20,000 feet - Radiation Pattern - Rated output over 80 percent of sphere			
7.3.5.4	**Electrical power**			
7.3.5.4.1	The helicopter shall be equipped with a minimum of one 115 VAC 60 Hz outlet in the passenger cabin suitable for the operation of low power audio and video equipment, portable computers and telecommunication equipment.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.4.2	The helicopter shall be equipped with two 28 VDC utility power receptacles (standard 2-Pin connector), with one outlet located in the crew	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	cabin and one outlet located in the passenger cabin on the same side of the aircraft as the fuel filler port.			
7.3.5.4.3	The helicopter shall be equipped with external power provisions capable of being connected to all aircraft electrical equipment including equipment used for engine start.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5	**Equipment and Furnishings**			
7.3.5.5.1*	The helicopter shall be equipped with seating provisions for two (2) crew and at least nine (9) passengers.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.2	The helicopter shall have cushioned passenger seating.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.3	The helicopter shall be equipped with 4 point safety harnesses, as a minimum, for crew seats.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.4*	The helicopter shall be equipped with 3 point safety harnesses, as a minimum, for all passenger seats.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.5	The helicopter passenger seats shall be detachable and removable from the aircraft without the use of tools.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.6*	(This item is point rated)	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.7	The helicopter shall be equipped with an	Section and Page Reference from		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	approved litter kit, suitable for transporting one person, fully reclined to the horizontal position, aboard the aircraft, including fixed provisions.	Helicopter Technical Specifications or applicable manual.		
7.3.5.5.8	The helicopter shall be equipped with flight publications storage located in the crew cabin accessible from both crew positions.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.9	The helicopter shall be equipped with a securely mounted First Aid Kit meeting certification and regulatory requirements.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.10	The helicopter shall be equipped with one securely mounted LED flashlight located in the crew cabin, as a minimum.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.11	The helicopter shall be equipped with an approved cargo restraint system in the passenger compartment, suitable to restrain a weight equal to the maximum authorized cargo and baggage weight for the aircraft.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.12	If the helicopter is fitted with a cargo restraint system between the passenger cabin and rear cargo area, it must be removable without the use of tools and designed to restrain the maximum authorized cargo and baggage weight for the cargo area.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.13	The helicopter shall be equipped with externally mounted emergency flotation equipment.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.5.14	The helicopter shall be equipped with externally mounted life raft(s), suitable for the seating capacity of the aircraft.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
7.3.5.6	**Fire protection**			
7.3.5.6.1	The helicopter shall be fitted with two (2) securely mounted hand-held fire extinguishers, with one mounted in the cockpit and one mounted in the passenger compartment.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.7	**Flight controls**			
7.3.5.7.1*	The helicopter shall be equipped with dual flight controls.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.8	**Fuel**			
7.3.5.8.1	The helicopter shall be fitted with provisions for an auxiliary fuel system or additional fuel capacity that shall be capable of extending fuel endurance beyond the basic fuel system configuration by at least 0.5 hours.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.8.2	Not used.			
7.3.5.9	**Hydraulic power – not used**			
7.3.5.10	**Ice and Rain Protection – Not Used**			
7.3.5.11	**Instruments**			
7.3.5.11.1*	The helicopter shall be equipped with an integrated pilot and co-pilot electronic flight instrument system with multi-function display(s). This system shall display, as a minimum, primary flight and navigation information.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.11.2	The helicopter shall be equipped with Engine Indicating and Crew Alerting System (EICAS).	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
7.3.5.11.3	The helicopter shall be equipped with dual (pilot & co-pilot) digital chronometers in the instrument consoles for both pilot positions.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.11.4	The helicopter shall be equipped with a Cockpit Voice Recorder (CVR) meeting the requirements of CAN-TSO c124b.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.11.5	The helicopter shall be equipped with a Flight Data Recorder (FDR) meeting the requirements of CAN-TSO 123.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.12	**Landing gear**			
7.3.5.12.1	Not used.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.13	**Lighting**			
7.3.5.13.1	The helicopter shall be equipped with a flashing landing light system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.13.2	The helicopter shall be equipped with a Light Emitting Diode (LED) position light system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.13.3.	The helicopter shall be equipped with a Light Emitting Diode (LED) anti-collision light system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.13.4.	The helicopter shall be equipped with a high intensity white strobe light system that can be selected "OFF" independently of the position and anti-collision light system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.13.5	The helicopter shall be equipped with a two	Section and Page Reference from		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	axis, pilot controlled light to be used for landing and search.	Helicopter Technical Specifications or applicable manual.		
7.3.5.14	**Navigation**			
7.3.5.14.1	The helicopter shall be equipped with all equipment needed to comply with Night Visual Flight Rules (NVFR).	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.2	The helicopter shall be equipped with all equipment needed to comply with dual pilot Instrument Flight Rules (IFR).	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.3	Not used.			
7.3.5.14.4	The helicopter shall be equipped with a dual Attitude, Heading Reference System (AHRS) with a free gyro mode meeting the requirements of FAA TSO-C201.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.5	The helicopter shall be equipped with dual digital air data systems.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.6	The helicopter shall be equipped with coupled dual IFR certified Global Navigation Satellite System (GNSS) sensor/receivers with Wide Area Augmentation System (WAAS) meeting the requirements of TSO C146 including Localizer Precision with Vertical guidance (LPV) approach capabilities.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.7	The helicopter shall be equipped with dual VHF navigation systems capable of being coupled to the auto-pilot.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.8	The helicopter shall be equipped with a VFR	Section and Page Reference from		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	and IFR moving map display capable of presenting all VFR Navigation Chart (VNC) details in the instrument panel within the pilot's field of view.	Helicopter Technical Specifications or applicable manual.		
7.3.5.14.9	The helicopter shall be equipped with an Automatic Direction Finder (ADF) with a bearing indicator displayed on the electronic flight information system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.10	The helicopter shall be equipped with a weather radar with a lowest selectable scale of at least 2.5 nautical miles (4.6 km) and 0.5 nm (0.9 km) range arcs displayed on the electronic flight information system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.11	The helicopter shall be equipped with a Traffic Advisory System (TAS) meeting the requirements of CAN TSO-C147, displayed on the electronic flight information system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.12	The helicopter shall be equipped with a Helicopter Terrain Awareness and Warning System (H-TAWS) meeting the requirements of CAN-TSO C194 displayed on the electronic flight information system or elsewhere on the instrument console that is in both the pilot's and co-pilot's field of view.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.14.13	The helicopter shall be equipped with a radar altimeter having data displays for both pilot and co-pilot.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.15	**Oxygen - Not used**			
7.3.5.16	**Pneumatic – Not used**			

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
7.3.5.17	**Vacuum – Not used**			
7.3.5.18	**Water/Waste – Not used**			
7.3.5.19	**Central Maintenance System (CMS) – Not used**			
7.3.5.20	**Airborne Auxiliary Power – Not used**			
7.3.5.21	**Standard Practices/Structures – Not used**			
7.3.5.22	**Doors**			
7.3.5.22.1	The helicopter shall provide a method of securing all hinged doors in an open position for ease of entry, exit and loading.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.22.2	Not used.			
7.3.5.23	**Fuselage**			
7.3.5.23.1	The helicopter shall be equipped with internal cargo tie-down provisions that are designed to restrain the maximum authorized weight of cargo and baggage.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.23.2	Not used.			
7.3.5.23.3	The helicopter shall be equipped with hard points to permit the attachment of body harnesses to safely secure personnel during open door operations, from either side of the aircraft.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.23.4	The helicopter shall be fitted with step(s) to permit personnel to access areas of the aircraft for maintenance and pre-flight inspections.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.23.5	*The helicopter shall be equipped with a wire*	Section and Page Reference from		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	strike protection system.	Helicopter Technical Specifications or applicable manual.		
7.3.5.24	**Nacelles/Pylons – Not used**			
7.3.5.25	**Stabilizers – Not used**			
7.3.5.26	**Windows**			
7.3.5.26.1	The helicopter shall be equipped with emergency egress provisions for passengers and crew.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.5.27	**Wings – not used**			
7.3.6	**Propeller/rotor systems**			
7.3.6.1	**Propellers/Propulsors – Not used**			
7.3.6.2	**Main rotor**			
7.3.6.2.1	The helicopter shall be equipped with erosion protection on the main rotor blades.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.6.2.2	The helicopter shall be equipped with high visibility main rotor blades.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.6.3	**Main rotor drive**			
7.3.6.3.1	The helicopter shall be equipped with a main rotor brake.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.6.4	**Tail rotor**			
7.3.6.4.1	The helicopter shall be equipped with high visibility tail rotor blades, where tail rotor blades are fitted.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
7.3.6.4.2	The helicopter shall be equipped with erosion protection on Tail Rotor (TR) blades, where tail rotor blades are fitted.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.6.5	**Tail Rotor Drive – Not used**			
7.3.7	**Powerplant system**			
7.3.7.1	**Powerplant**			
7.3.7.1.1	The helicopter shall be equipped with an engine compressor wash kit.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.7.1.2	The helicopter shall be equipped with an engine intake air filtration/separation system which provides protection from fine particle erosion.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.7.2	**Turbine/turboprop engine**			
7.3.7.2.1	The aircraft shall be a twin engine turbine powered helicopter.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.3.7.3	**Engine (Fuel and Control)**			
7.3.7.3.1	The helicopter shall be equipped with a full authority digital electronic control system providing the following functionality, as a minimum; - Automatic engine starting and shut down, controlling all parameters - Control engine power management through all regimes of flight - Provisions for manual intervention in the event of malfunction or failure, or for training purposes	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	- Provision for simulated single engine training mode - Exceedance prevention, monitoring and reporting			
7.3.7.4	**Ignition – Not used**			
7.3.7.5	**Air – Not used**			
7.3.7.6	**Engine Controls – Not used**			
7.3.7.7	**Engine Indicating – Not used**			
7.3.7.8	**Engine Exhaust – Not used**			
7.3.7.9	**Engine Oil – Not used**			
7.3.7.10	**Starting – Not used**			
7.3.7.11	**Turbocharging – Not used**			
7.3.7.12	**Water Injection – Not used**			
7.3.7.13	**Accessory Gearboxes – Not used**			
7.3.7.14	**Reciprocating Engine – Not used**			
7.3.7.15	**Survivability – Not used**			
7.3.7.16	**Auxiliary Equipment – Not used**			
7.4	**Auxiliary equipment**			
7.4.1	The helicopter shall be furnished with all necessary cover(s) , blanks and equipment for outside short term parking where the aircraft is unattended.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.4 2	The helicopter shall be furnished with covers for the helicopter blades and fuselage, suitable for outside storage of the aircraft in winter	Section and Page Reference from Helicopter Technical Specifications or		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	conditions.	applicable manual.		
7.4.3	The helicopter shall be furnished with M/R and T/R (where applicable) blade tie-down kits, including high wind tie downs, if available.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.4.4	The helicopter shall be furnished with ground handling equipment compatible with the landing gear, to permit ground handling of the helicopter for both shipboard and shore-based operations.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.4.5	The helicopter shall be furnished with an external lashing kit to enable the helicopter to be secured either to the deck of a ship or in the ship's hangar in both fair weather and heavy weather conditions.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
7.4.6	The helicopter shall be furnished with a main rotor blade folding kit that allows the main rotor blades to remain attached to the main rotor head during the folding and unfolding procedure, and does not require the use of tools.	**Evaluated during Operational Testing.**		
8.0	**Special mission capabilities**			
8.1	The helicopter shall be fitted with a cargo hook having a minimum load carrying capacity of at least the sum of the aircraft maximum gross take-off weight minus Configuration "A" empty weight.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
8.2	The helicopter cargo hook shall be fitted with a Keeperless, or equivalent, system.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
8.3	The helicopter cargo hook suspension system	Section and Page Reference from		

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	shall not extend below the landing gear when not in use.	Helicopter Technical Specifications or applicable manual.		
8.4	The helicopter shall be capable of conducting Vertical Reference Operations (VRO) with all doors on and closed.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
8.5	The helicopter cargo hook system shall have long line remote hook provisions.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
8.6	The helicopter shall be equipped with a system to enable the pilot operating the aircraft to view the aircraft belly area during sling operations.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
8.7	The helicopter shall be capable of enunciating critical flight and power parameters to the pilot flying during vertical reference operations.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
8.8	The helicopter shall be equipped with a system to enable the pilot to be aware of the external load weight at all times during slinging and vertical reference operations.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
9.0	**Operator stipulated features**			
9.1	The helicopter shall be painted Canadian Coast Guard colours in accordance with the CCG Federal Identity Program Guide (FIPG) and Coast Guard directives.	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		
10.0	**Maintenance and Life Cycle Support**			
10.1	Not used.			
10.2	Not used.			
11.0	**Reliability and Redundancy – Not used**			

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
Requirements derived from the statement of work				
SOW REFERENCE				
3.2.1*	The Bidder shall supply a preliminary high level Project Management Plan (PMP) as part of their proposal.	Provide as separate document.	N/A	
3.4.1	Aircraft Acceptance Test Plan. The Bidder shall provide a preliminary Aircraft Acceptance Test Plan (ATP), as part of the proposal.	Provide as separate document.	N/A	
3.6.2	The Bidder shall supply a preliminary Pilot Training Plan, as part of their proposal. The training plan shall include the scheduling and complete course outlines.	Provide as separate document.	N/A	
3.6.2	The Bidder shall supply a preliminary Maintenance Training Plan, as part of their proposal. The training plan shall include the scheduling and complete course outlines.	Provide as separate document.	N/A	
3.7.1	As part of the proposal, the Bidder shall be responsible to provide a detailed Maintenance Program and Schedule detailing daily maintenance requirements, scheduled inspection requirements and major component overhaul schedules and requirements, as a minimum.	Provide as separate document.	N/A	
3.7.3*	The Contractor shall submit a Maintenance Management Plan (MMP) as part of its proposal. The MMP shall describe how it will support the Approved Maintenance Organization (AMO) in maintaining the CCG	Provide as separate document.	N/A	

ID	Mandatory Requirement	Proof of Compliance Required from Bidder	Bidder's Response (How requirement is met)	Comments
	helicopter fleet for 30 years.			
3.7.5	As part of the proposal, the Bidder shall provide a preliminary Spares List, including prices to identify recommended sparing for the aircraft.	Provide as separate document.	N/A	
3.7.6	As part of the proposal, the Bidder shall provide the preliminary tooling and equipment list required for handling, testing, maintenance and overhaul of the aircraft in accordance with Aircraft Maintenance and Overhaul Manuals.	Provide as separate document.	N/A	
3.7.7	As part of the proposal, the Bidder shall provide a preliminary list of all Ground Support Equipment to perform daily operational maintenance and inspections for each aircraft purchased under this Contract.	Provide as separate document.	N/A	
3.8	As part of the proposal, the Bidder shall provide a description of how it will support the Simulator Manufacturer in the development and commissioning of flight simulation (Helicopter design data and deliverables required to support the development of a "Level D" Full Flight Simulator as outlined in the SOW).	Provide as separate document.	N/A	
3.11	As part of the proposal, the Contractor shall include provisions to host a Contract Award and a "Delivery Ceremony" at the Contractor facility for handover of the first Helicopter. The ceremony may include Government of Canada personnel, dignitaries and media.	Include statement to support provision.	N/A	

APPENDIX D – Rated Technical Requirements

ID	Rated Requirement	Minimum Rating	Point Rating	Proof of Response Required from bidder	Bidders Response	% of total Max Value	Comments
6.4	It is desirable that the helicopter should be certified for operations and flight in ambient outside air temperatures exceeding the minimum acceptable threshold of -30°C, to an extreme temperature of -40°C.	-30°C = 0 Points	-31°C--- 10 -32°C--- 20 -33°C ---30 -34°C ---40 -35°C ---50 -36°C ---60 -37°C ---70 -38°C ---80 -39°C ---90 -40°C ---100	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		11%	
7.2.1	It is desirable that the helicopter should have a useful load (i.e. crew, passengers, fuel, payload) in its Flight Configuration "A", as specified in Section 5, in excess of the minimum useful load of 2000 lbs (907 kg), plus the necessary fuel for at least 2 hrs plus 20 minutes VFR reserve, at a cruise speed of at least 115 knots (213 km/hr).	2000lbs =0 points	2100---20 2200---40 2300---60 2400---80 2500---100	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		12%	
7.2.2	It is desirable that the aircraft should have a cruise speed in excess of the minimum acceptable 115 knots (213	115knots=0 points	120—20 125---40 130---60 135---80	Section and Page Reference from Helicopter Technical Specifications or		10%	

ID	Rated Requirement	Minimum Rating	Point Rating	Proof of Response Required from bidder	Bidders Response	% of total Max Value	Comments
	km/hr) True Air Speed.		140---100 (increments of 1knot will add 4 points eg 124 knots 36 points)	applicable manual.			
7.2.3	It is desirable that the helicopter should be capable of a minimum endurance in excess of 2 hours plus 20 minutes without the use of auxiliary tanks, at a minimum cruise speed of at least 115 knots at MCTOW, ISA sea level standard conditions, and its Flight Configuration "A" as defined in Section 5.	2 hrs 20 mins=0 points	2:35 --25 2:50 –50 3:05-- 75 3:20 --100	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		17%	
7.2.6	It is desirable that the helicopter should exceed the minimum required cargo capacity of at least 215.4 cubic feet (6.1 cubic metres) within the a/c fuselage combined with the area required for passenger and crew seating, as stipulated in 7.3.5.5.1.	215.4 cu. Feet.	216.4 -10 217.4 -20 218.4 -30 219.4- 40 220.4 or more -50 (Increments of .1 cu. ft will add 1 point, e.g. 216.5 cu ft – 11pts)			6%	
7.2.9	It is highly desirable that the helicopter should have the capability of landing on slopes in excess of 5 degrees and up to 10 degrees side to side.	5 degrees	6---20 7-- 40 8-- 60 9-- 80 10--100	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		2%	

ID	Rated Requirement	Minimum Rating	Point Rating	Proof of Response Required from bidder	Bidders Response	% of total Max Value	Comments
7.2.10	It is desirable that the helicopter should be capable of using JetA1 fuel during cold weather operations, where the outside ambient air temperature is in excess of -30°C to an extreme of -40°C.	-30°C	-31°C ---10 -32°C ---20 -33°C ---30 -34°C ---40 -35°C ---50 -36°C ---60 -37°C ---70 -38°C ---80 -39°C ---90 -40°C ---100	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		11%	
7.2.13	For Ship based Operations, the maximum overall length of the helicopter should not exceed 57 ft (17.37 m), the overall helicopter height should not exceed 13 ft 10 inches (4.21 m) with ground handling equipment installed and deployed, and the overall helicopter width, with main rotor blades in the folded position with cradles installed should not exceed 10 ft 10 inches (3.3 m) with all operational equipment installed per CCG helicopter Configuration “A”.		Does not meet requirement as described = 0 Meets requirements as described =10			2%	
7.2.14	It is desirable that the helicopter should be capable of carrying internal to the aircraft, structural components having dimensions equal to or greater than those described in the photograph		No --0 Yes --20	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		2%	

ID	Rated Requirement	Minimum Rating	Point Rating	Proof of Response Required from bidder	Bidders Response	% of total Max Value	Comments
	attached in Figure 1.						
7.3.5.2.1	It is highly desirable that the helicopter should be equipped with a four (4) axis autopilot.	3 axis	4 axis --20	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		3%	
7.3.5.5.1	It is desirable that the aircraft should be equipped with seating provisions for more than nine (9) passengers.	9pax	10 --25 11 --50 12- --75 13–100	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		11%	
7.3.5.5.4	It is desirable that the helicopter should be equipped with 4 point safety harnesses for all passenger seats.	3 point	4 point – 20	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		4%	
7.3.5.5.6	It is desirable that the helicopter should be fitted with cargo and passenger cabin floor and wall protection that does not impede access to cargo restraint hard points, seat anchors, etc. and provides impact protection.		Fitted as described – 20	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		2%	
7.3.5.7.1	The helicopter dual flight controls should have: quick removal co-pilot cyclic and collective		Not fitted as described = 0 Fitted as described = 20			2%	

ID	Rated Requirement	Minimum Rating	Point Rating	Proof of Response Required from bidder	Bidders Response	% of total Max Value	Comments
	quick removal tail rotor pedals; or pedals that can be disabled						
7.3.5.11.1	It is desirable that the system should be capable of selecting and displaying external video sources.		Fitted as described - - 20	Section and Page Reference from Helicopter Technical Specifications or applicable manual.		5%	

APPENDIX E – Bidder's Project and Maintenance Management Evaluation Matrices

ID	Requirement	Bidders Response	Comments
SOW 3.2.1	The Bidder shall supply a preliminary high level Project Management Plan (PMP) as part of their proposal.	**Please provide response as a separate document.**	
SOW 3.7.3	Note: As part of the proposal, the bidder shall describe how it will support the Approved Maintenance Organization (AMO) to maintain aircraft serviceability for a period of up to 30 years and shall include details pertaining to the responsibilities of both the AMO and the bidder years in the following manner: a. An Aircraft on Ground (A.O.G.) parts supply capable of shipping the required parts to locations in Canada such as Prince Rupert, B.C., Stephenville, NL., Parry Sound, ON, etc. within 24 hours b. A Product Support and Field Service Representative (FSR) shall be available 24 hours per day, 7 days per week, 365 days per year, through a toll free telephone service c. Sufficient North American inventory to support CCG's fleet d. Turn-around times on repair and overhaul of Components e. Availability of exchange components f. Availability of rental components g. Release of Service Bulletins and Advisory Materials	**Please provide response as a separate document.**	

APPENDIX F – Calculation of Operation and Maintenance Costs

1. Operating Cost Evaluation

The hourly operating cost of each helicopter (expressed in C$/Flight Hour) submitted in response to this solicitation will be evaluated using a standardized format. The weighting given to this part of the overall evaluation is discussed in Contractor Selection Methodology of this solicitation.

To accomplish a fair evaluation that will allow a direct “apples-to-apples” comparison and ranking of the hourly operating cost of each helicopter, we have established the following format and procedure.

Each bidder is asked to complete the attached maintenance input for each helicopter they submit in response to this solicitation. Instructions for how to complete each of these tables are discussed in the next section.

The data provided by each bidder for each helicopter will be used to calculate the hourly operating cost in a uniform manner. A copy of this template populated by sample data is shown in the attached tables.

The approach used is to sum the following cost elements, each expressed as a cost per flight hour:

- Fuel consumption per hour based on a standard mission
- Minor scheduled and unscheduled maintenance parts and labor per hour for the airframe, systems and avionics, as well as for the engines.

Added to this will be the cost per flight hour for major inspections as well as components and parts that have a fixed overhaul or replacement life. The cost per hour will be calculated by dividing the total cost by the major inspection interval or the TBO or life limit of the component/part:

- Major scheduled inspection and attendant unscheduled maintenance.
- Overhaul of airframe and system components that have a fixed overhaul interval.
- Replacement of airframe and system components that have a fixed life.
- Overhaul of engine components that have a fixed overhaul interval.
- Replacement of engine components that have a fixed life.

In addition, the following costs for “on-condition” parts and components will be calculated by dividing the cost incurred with an unscheduled removal by the frequency of occurrence expressed in hours:

- Repair, overhaul or replacement of airframe and system components that are “on condition”.
- Repair, overhaul or replacement of engine components that are “on condition”.
- Repair or replacement of major avionics components that are “on condition”.

The costs per hour are then summed and ranked based on their total hourly operating cost. Helicopters that have the same cost within $25.00 of each other will be ranked as equal.

2. Instruction to Complete Input Form

The Input Form is an Excel spreadsheet. The requested data should be entered into the appropriate cell for each cost element.

Note that all costs shown for parts and components that are replaced must be list/catalogue price for delivery in Ottawa, ON, Canada without any discounts applied. Costs shown for major inspections and component overhauls must be an average cost based on the use of new parts at list/catalogue price without any discounts applied. In addition, the costs must be shown in Canadian dollars. One paper or electronic copy of the various parts/component price catalogues must be included with the proposal.

In addition, one paper or electronic copy of the documentation that contains all inspection, overhaul and replacement items with the applicable interval (such as is contained in Chapter 4 & 5 of the Helicopter Maintenance Manual using the ATA-100 chapter convention) must be included with the proposal.

Following is a detailed explanation of the data required.

a. Fuel consumption

For the purposes of this analysis, fuel consumption per hour will be based on the following:

1. The Bidder shall calculate the overall fuel consumption from engine start to engine shutdown, expressed in liters/hour (using 0.82 Kilo of Jet A per liter).

2. The operational scenario has a flight duration of 2 hours plus 20 minutes VFR reserve (i.e. 2 hours 20 minutes to dry tanks), at a minimum cruise speed of at least 120 knots.

3. The helicopter load composition for this operational scenario is found in Attachment 2 of the CCG Medium Helicopter Baseline Statement of Requirements.

Enter this data in the appropriate cell.

b. Minor scheduled and unscheduled maintenance parts and labor per hour

Minor scheduled maintenance includes all scheduled maintenance with intervals of one year or less. Unscheduled maintenance includes all unscheduled maintenance that is required as a direct result of the scheduled maintenance discussed above as well as any other unscheduled maintenance that occurs in between scheduled maintenance.

The labor required should be expressed as Labor Hours per Flight Hour (LH/FH) and the parts as Cost per Flight Hour (C$/FH).

Enter this data in the appropriate cells for the airframe and systems, avionics, and the engines.

c. Major scheduled inspection and attendant unscheduled maintenance

Major inspections include all scheduled maintenance that occurs at intervals or greater than one year. It is assumed for this analysis that these inspections will be accomplished by a contract maintenance organization. Thus, an average cost that includes both parts and labor at a typical MRO labor rate should be used for this cost element.

Record the name of the inspection, its cost, and its interval as shown in the approved maintenance documentation for this helicopter. If the interval has both an hour limit and a calendar limit, record both in the appropriate cells.

d. Overhaul or replacement of airframe and system components that have a fixed overhaul or replacement interval

The cost per flight hour for airframe and systems components and parts that have a fixed overhaul or replacement life will be calculated by dividing the total cost of the overhaul or replacement for the part or component by the TBO or life limit of the component/part.

If the part or component requires overhaul, the cost shown should be the average cost and include both the parts and the labor required. The labor cost should be calculated at a typical labor rate for a properly qualified vendor.

The cost of replacement parts or components should be the list or catalogue price as shown in the parts cost documentation submitted with this proposal.

If the overhaul or replacement interval has an hour limit as well as a cycle and/or a calendar limit, record all in the appropriate cells.

e. Overhaul or replacement of engine components that have a fixed overhaul or replacement interval

The cost per flight hour for engine components and parts that have a fixed overhaul/inspection or replacement life will be calculated by dividing the total cost of the overhaul/inspection or replacement for the part or component by the TBO or life limit of the engine or component/part.

For engines that require overhaul, the cost shown should be the average cost and include both the parts and the labor required. The labor cost should be calculated at a typical labor rate for an engine overhaul organization.

The cost of replacement parts or components should be the list or catalogue price as shown in the parts cost documentation submitted with this proposal.

If the overhaul or replacement interval has an hour limit as well as a cycle and/or a calendar limit, record all in the appropriate cells.

f. “On-condition” parts and components

The cost of repair of “on-condition” parts and components will be calculated by dividing the average cost incurred with an unscheduled removal by the frequency of occurrence expressed in hours. This approach will be used for:

- Repair, overhaul or replacement of airframe and system components that are “on condition”.
- Repair, overhaul or replacement of engine components that are “on condition”.
- Repair or replacement of major avionics components that are “on condition”.

The frequency of occurrence will be expressed per 1,000 flight hours. For example if the average unscheduled removal rate for a component is once every 10,000 hours, it should be expressed as 0.1 per 1,000 Hours, or 0.1/1,000 Hours.

Fisheries and Oceans Canada | Pêches et Océans Canada

Coast Guard | Garde côtière

Canadian Coast Guard

APPENDICE A à ANNEX E– Plan d'évaluation des soumissions : Plan d'essais d'évaluation opérationnelle relatif aux hélicoptères moyens Projet d'hélicoptères de la GCC

Le 7 janvier 2014

Approbations

Gestionnaire de projet adjointe	à confirmer	Approuvé : Date :
Gestionnaire de projet	P. Egener	Approuvé : Date :
Directeur général Grands projets de l'État	R. Wight	Approuvé : Date :

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1. APERÇU

Les essais d'évaluation opérationnelle de l'hélicoptère moyen ont pour objet de vérifier qu'un hélicoptère proposé pourra effectuer les principales tâches opérationnelles concernant la performance, la charge utile, la capacité de repliage des pales et les vols en fonction de repères verticaux décrits dans l'énoncé des besoins de base en matière d'hélicoptères moyens de la Garde côtière canadienne (GCC). Étant donné que l'analyse initiale de ces tâches doit être réalisée avant l'attribution du contrat, les fabricants peuvent fournir un hélicoptère représentatif pour cette évaluation.

La partie des essais d'évaluation opérationnelle exécutée au sol, y compris les démonstrations, sera réalisée au centre de Transports Canada, qui sont situées au 200 Comet Private, Ottawa (Ontario), Canada. L'ensemble de l'évaluation en vol, à l'exception de l'essai de charge utile, aura lieu à l'aéroport de Gatineau, qui est situé au 1717, rue Arthur-Fecteau, Gatineau (Québec).

Il est prévu que les essais d'évaluation opérationnelle s'échelonneront sur cinq jours consécutifs. Le calendrier proposé, qui présente la chronologie des activités pour respecter les objectifs décrits dans le plan d'évaluation opérationnelle, est exposé à la section 3 de la présente évaluation. Pour gagner du temps, certains essais pourraient être effectués simultanément, et il est possible que certaines journées s'étirent au-delà de ce qui est prévu au calendrier.

Le soumissionnaire devra arriver aux installations de Transports Canada d'Ottawa à la date qu'il aura convenue avec Travaux publics et Services gouvernementaux Canada (TPSGC). Il devra également être prêt à commencer les essais à 8 h la première journée du calendrier présenté dans le présent document, et il devra respecter ce calendrier. Si un changement à l'horaire est nécessaire, ce changement sera inscrit par l'agent technique principal de projet de la GCC et le surveillant de l'équité. Tout changement au calendrier sera organisé par TPSGC en collaboration avec l'autorité technique de la GCC. Le personnel du gouvernement du Canada fera tout en son pouvoir pour garantir la poursuite des essais d'évaluation opérationnelle et leur réalisation en temps opportun.

Il incombe au soumissionnaire de fournir le carburant et les ressources humaines nécessaires ainsi que l'équipement décrit dans le Plan d'évaluation opérationnelle et le Plan logistique (annexe A) pour réaliser tous les essais.

L'échelle de cotation de Cooper-Harper sera utilisée dans certains cas, tandis que l'échelle de cotation de Bedford sera utilisée pour évaluer la charge de travail imposée au pilote pendant les opérations sélectionnées.

Les renseignements complets concernant les essais sont présentés dans le présent plan d'essais d'évaluation opérationnelle, et le plan logistique relatif aux hélicoptères moyens aux fins d'évaluation opérationnelle se trouve à l'annexe A.

2. BUT ET PRINCIPALES DÉFINITIONS

L'évaluation opérationnelle a pour but d'évaluer :

1. la performance de l'hélicoptère;
2. la charge utile;
3. la capacité de repliage des pales;
4. les vols en fonction de repères verticaux.

2.1 Évaluation opérationnelle

Dans le contexte de ce plan d'essais d'évaluation opérationnelle, une évaluation opérationnelle « l'essai et l'analyse d'un élément ou d'un système précis, dans la mesure du possible en situation de fonctionnement, en vue de déterminer s'il faut une évaluation supplémentaire. L'essai d'évaluation opérationnelle relatif aux hélicoptères moyens de la GCC évaluera l'aéronef proposé par le soumissionnaire pour déterminer la conformité avec les critères retenus dans l'Énoncé des besoins de base en matière d'hélicoptères moyens.

2.2 Hélicoptère représentatif

Aux fins de cette évaluation opérationnelle, l'hélicoptère représentatif de la solution proposée pour l'hélicoptère de « configuration A » de la GCC doit être de marque, de modèle et de version identiques à l'hélicoptère qui fait l'objet de la proposition présentée par le soumissionnaire en réponse à la demande de propositions.

L'hélicoptère représentatif devra être équipé du système de flottabilité de secours (avec radeaux de sauvetage externes), les commandes de vol doubles et des trousses de repliage des pales appropriées aux fins de ces essais.

Toutes les trousses et tout le matériel en cours de fabrication en vue de répondre aux exigences de la « configuration A » de la GCC doivent être présentés dans un document qui doit être remis au responsable délégué de la GCC au moment de l'évaluation opérationnelle. Conformément à l'énoncé des besoins de base en matière d'hélicoptères moyens de la GCC, l'ensemble des trousses et du matériel requis pour répondre aux exigences de la « configuration A » de la GCC doit être terminé et approuvé par Transports Canada au moment de la livraison du premier hélicoptère.

Aux fins de la démonstration d'un hélicoptère représentatif, si des trousses (y compris les certificats de type supplémentaire), de l'équipement et des éléments, quels qu'ils soient et qui nécessitent l'approbation de Transports Canada, doivent être fabriqués pour l'hélicoptère à livrer, le soumissionnaire doit présenter tous les documents (y compris les dessins pertinents) et les calculs du centre de gravité en masse à vide

prouvant que la masse et le centrage sont conformes à la solution d'hélicoptère proposée et présentée dans la soumission.

2.2.1 Hélicoptère de « configuration A »

Hélicoptère moyen de la GCC 2.2.1 Hélicoptère de « configuration A »	
La « Configuration A » qui se rapporte aux hélicoptères de la GCC est définie comme configuration normale de fonctionnement et type de construction requis pour satisfaire aux exigences des missions de la GCC. Cette configuration comprend tout l'équipement et tous les éléments des hélicoptères, conformément aux exigences obligatoires décrites dans l'énoncé des besoins de base en matière d'hélicoptères moyens de la GCC, à l'exception de ce qui suit :	
A.	**Nécessaire pour civière**
B.	**Réservoirs de carburant auxiliaires**
C.	**Dispositifs d'arrimage de rotor principal et de rotor de queue**
D.	**Tout l'équipement auxiliaire qui n'est pas transporté à bord de l'hélicoptère**
Document de référence	
L'énoncé des besoins de base en matière d'hélicoptères moyens de la Garde côtière canadienne (GCC) se trouve à l'annexe B de l'énoncé des travaux concernant les hélicoptères moyens.	

2.2.2 Représentant du soumissionnaire

Aux fins des essais d'évaluation opérationnelle des hélicoptères moyens, le représentant du soumissionnaire est la personne que le soumissionnaire désigne à titre de représentant autorisé responsable d'attester et de reconnaître par écrit la validité de tous les essais d'évaluation opérationnelle et de répondre au Canada sur les questions relatives aux activités des essais d'évaluation opérationnelle.

3. CALENDRIER

Il est prévu que les essais d'évaluation opérationnelle s'échelonneront sur cinq jours consécutifs. Le calendrier ci-dessous a été préparé pour indiquer la chronologie des activités pour la conduite de l'essai d'évaluation opérationnelle.

Remarque : Aucun repas n'est fourni.

3.1 Activités de la 1re journée

Lieu : Centre de Transports Canada au 200 Comet Private, Ottawa (Ontario).	
8 h à 12 h	Séance d'information au personnel du soumissionnaire (présentations, vue d'ensemble du calendrier des essais d'évaluation, exposé sur les mesures de sécurité, etc.).
12 h à 13 h	Repas
13 h à 16 h	Le soumissionnaire donne une formation au sol aux pilotes de Transports Canada responsables de l'évaluation.

3.2 Activités de la 2e journée

Lieu : Centre de Transports Canada au 200 Comet Private, Ottawa (Ontario).	
8 h à 9 h	Séance d'information pour le soumissionnaire et l'équipe d'évaluation (information sur les activités prévues de la journée).
9 h à 10 h	Le soumissionnaire prépare l'hélicoptère en vue d'un vol de familiarisation.
10 h à 11 h 30 (activité no 1)	1er vol de familiarisation (comprend la préparation de l'hélicoptère en vue du vol de familiarisation suivant).
10 h à 11 h 30 (activité no 2)	Évaluation de la performance de l'hélicoptère.
11 h 30 à 12 h 30	Repas
12 h 30 à 14 h	2e vol de familiarisation (comprend la préparation de l'hélicoptère en vue du vol de familiarisation suivant).
14 h à 15 h 30	3e vol de familiarisation.

3.3 Activités de la 3e journée

Lieu : Centre de Transports Canada au 200 Comet Private, Ottawa (Ontario).	
8 h à 10 h	Séance d'information pour le soumissionnaire et l'équipe d'évaluation (information sur les activités prévues de la journée).
10 h 15 à 12 h	Évaluation de la capacité de repliage des pales.
12 h à 13 h	Repas
13 h à 14 h 30	Pesage de l'hélicoptère et pesage du lest.
14 h 30 à 16 h	Évaluation de la charge utile (vol effectué à l'aéroport international d'Ottawa).

3.4 Activités de la 4e journée

Lieu : Aéroport de Gatineau, 1717, rue Arthur-Fecteau, Gatineau (Québec).	
8 h à 9 h	Préparation de l'équipement et de l'équipe au sol et déplacement vers l'aéroport de Gatineau.
9 h à 10 h	Séance d'information pour le soumissionnaire et l'équipe d'évaluation (information sur les activités prévues de la journée), préparation de l'hélicoptère et de l'équipage et séance d'information pour l'équipage en vue du départ vers l'aéroport d'essai.
10 h à 11 h	Préparation de l'hélicoptère en vue des vols d'essai en fonction de repères verticaux.
11 h à 12 h 30	Commencer les vols d'essai en fonction de repères verticaux (trois pilotes X 1,5 heure chacun comprenant les arrêts pour les changements de pilotes et pour le ravitaillement).
12 h 30 à 13 h 30	Repas
13 h 30 à 16 h 30	Poursuivre les vols d'essai en fonction de repères verticaux (trois pilotes X 1,5 heure chacun comprenant les changements de pilote et les arrêts pour l'avitaillement).
16 h 30 à 17 h 30	Séance d'information pour l'évaluation opérationnelle

3.5 Activités de la 5e journée

Lieu : Centre de Transports Canada au 200 Comet Private, Ottawa (Ontario).
Les activités qui ont dû être déplacées en raison de retards attribuables à de mauvaises conditions météorologiques, par exemple, auront lieu au cours de la 5e journée.

4. HYPOTHÈSES ET CONDITIONS

4.1 Rôles et responsabilités

Au minimum, un équipage chargé des vols d'essai d'un pilote d'essai employé par le soumissionnaire, d'un directeur des essais et d'un pilote de Transports Canada responsable de l'évaluation devra être transporté pour tous les essais et toutes les évaluations.

Une équipe composée de trois pilotes qualifiés de Transports Canada responsables de l'évaluation réalisera l'évaluation opérationnelle, sous la supervision du chef pilote, Opérations de giravions de Transports Canada, en collaboration avec le pilote d'essai employé par le soumissionnaire.

Le directeur des essais agira comme expert tiers pour les vols d'essai et devra s'assurer que les essais en vol sont menés équitablement et vérifiés par une partie autre que l'équipe de projet canadienne.

Le pilote de Transport Canada responsable de l'évaluation doit être qualifié, à jour et compétent en matière de vol en fonction de repères verticaux.

Les membres d'équipage et de l'équipe d'évaluation assumeront les rôles et les responsabilités suivants :

4.1.1 Pilote d'essai employé par le soumissionnaire

– Doit se trouver à bord et détenir l'autorité à titre de commandant de bord pendant tous les vols d'essai. Le commandant de bord doit être responsable de l'exécution sécuritaire des vols d'essai et a le pouvoir final de décision quant à la sécurité des vols, au contrôle intégral de l'hélicoptère et au respect des règlements et des limites.

4.1.2 Pilotes de Transports Canada responsables de l'évaluation

– Responsables de l'exécution des points d'essai et de la formulation de commentaires au sujet des évaluations au moyen des échelles de Cooper-Harper et de Bedford.

4.1.3 Directeur des essais (expert tiers)

- S'assure que tous les tests sont effectués en conformité avec le Plan d'essais d'évaluation opérationnelle relatif aux hélicoptères moyens de la GCC.
- Règle l'ordre des points d'essais et coordonne l'équipage en vue d'atteindre les objectifs d'essai de façon optimale.
- Donne le signal du départ de chaque point d'essai à l'équipage et prend la décision d'interrompre un point d'essai, si nécessaire.
- Détermine si un point d'essai a été mené à bonne fin ou s'il faut le reprendre.
- Dirige les pilotes de Transports Canada responsables de l'évaluation tout au long des évaluations reposant sur les échelles de Cooper-Harper et de Bedford.
- Recueille les données consignées à la main et utilise le système d'acquisition de données de l'hélicoptère, s'il en est équipé, pour tous les essais d'évaluation opérationnelle (essais en vol et au sol).
- Manie la caméra vidéo.
- Dirige les réunions de débreffage post-essais.
- Témoigne et appuie la méthodologie d'essais pour assurer la compréhension et confirmer son accord sur les exigences spécifiées dans le plan d'essais.
- Témoigne et reconnaît que chaque essai a été complété.

4.1.4 Autorité technique de la GCC

- Tient une séance d'information sur les activités et les attentes avec l'équipe responsable des essais d'évaluation opérationnelle avant le début des essais. Cette séance s'adresse à tous les participants aux essais d'évaluation ainsi qu'aux observateurs.
- Observe les essais et s'assure la conformité avec l'Énoncé des besoins de base en matière d'hélicoptères moyens.
- Certifie et approuve la méthodologie d'essai pour en assurer la compréhension, et confirme le respect des exigences énoncées dans le plan d'essai.
- Assiste à chaque essai et atteste qu'il a été mené à bien.
- Participe en tant qu'observateur aux réunions de compte rendu de vol.
- Participe à une réunion de compte rendu avec le directeur des essais et le surveillant de l'équité à la fin de chaque journée.

4.1.5 Représentant du soumissionnaire

- Certifie et approuve la méthodologie d'essai pour en assurer la compréhension, et confirme le respect des exigences énoncées dans le plan d'essai.
- Assiste à chaque essai et atteste qu'il a été mené à bien.

4.1.6 Chef pilote, Opérations de giravions de Transports Canada

- Donne une séance d'information à tous les participants aux essais avant tous les essais de l'hélicoptère proposé par le soumissionnaire.

- S'assure de la sécurité générale des pilotes de Transports Canada responsables de l'évaluation au cours des opérations en vol.
- Certifie et approuve la méthodologie d'essai pour en assurer la compréhension, et confirme le respect des exigences énoncées dans le plan d'essai en ce qui concerne les questions de sécurité et de respect de la réglementation et des pratiques en aviation.
- Assiste à chaque essai et atteste qu'il a été mené à bien.
- Assiste au lestage de l'hélicoptère et s'assure qu'il a été effectué correctement.
- Participe aux réunions de débreffage post-essais sur les questions relatives à la sécurité.

4.1.7 Autorité contractante de TPSGC

- S'assure que les essais d'évaluation opérationnelle sont effectués avec ouverture, transparence et intégrité et de façon impartiale.
- Point de contact principal de l'équipe du Canada pour le représentant du soumissionnaire.
- Point de contact principal de l'équipe du Canada pour toutes les questions liées aux contrats en relation avec les essais d'évaluation opérationnelle.
- Certifie et approuve la méthodologie d'essai pour en assurer la compréhension, et confirme le respect des exigences énoncées dans le plan d'essai.
- Assiste à chaque essai et atteste qu'il a été mené à bien.
- Participe en tant qu'observateur aux réunions de compte rendu de vol.
- Participe en tant qu'observateur à une réunion de compte rendu avec le directeur des essais et l'autorité technique de la GCC à la fin de chaque journée.

4.1.8 Surveillant de l'équité

- S'assure que tous les essais sont effectués de façon uniforme et impartiale.
- Assiste à chaque essai et atteste qu'il a été mené à bien.
- Participe en tant qu'observateur aux réunions de compte rendu de vol.
- Participe en tant qu'observateur à une réunion de compte rendu avec le directeur des essais et l'autorité technique de la GCC à la fin de chaque journée.

4.2 Familiarisation et formation

Le soumissionnaire doit offrir la formation aux pilotes de Transports Canada responsables de l'évaluation et fournir la documentation au Canada au moment de soumettre la soumission. Un minimum de trois heures de formation au sol seront menées par l'équipe du soumissionnaire dans le cadre de la 1ère Journée d'activités des essais d'évaluation opérationnelle afin de donner un aperçu de l'hélicoptère et des systèmes importants.

Avant le début des essais d'évaluation opérationnelle, le soumissionnaire doit offrir un vol de familiarisation d'une durée d'au moins une heure à chaque pilote de Transports Canada responsable de l'évaluation (maximum de trois pilotes). Ces vols de familiarisation comprendront :

- inspection de prévol;
- vérifications préalables au démarrage, au démarrage et après le démarrage;
- vérifications préalables au décollage;
- vol stationnaire en effet de sol et hors effet de sol;
- virages en vol stationnaire (jusqu'à un minimum de 45°/sec);
- vols dans des circuits de circulation normale;
- accélération de vol stationnaire en effet de sol jusqu'à la vitesse de croisière;
- ascension à la puissance au décollage
- vol à vitesse de croisière;
- vol jusqu'à la vitesse à ne pas dépasser;
- procédures de vol avec un seul moteur –
    - pannes de moteur en vol stationnaire;
    - atterrissages avec un moteur en panne;
- descente en autorotation;
- utilisation des modes des commandes automatiques de vol (CADV);
- utilisation du pilote automatique;
- procédures d'arrêt.

4.3 Séances d'information sur les vols d'essai et la sécurité

Avant le début prévu d'un essai, l'autorité technique de la GCC doit donner une séance d'information sur les activités qui auront lieu pendant cet essai, à laquelle doivent assister tous les participants et les observateurs qui prennent part aux essais d'évaluation opérationnelle.

Avant chaque vol d'essai de l'hélicoptère du soumissionnaire, le chef pilote, Opérations de giravions de Transports Canada, et le pilote d'essai employé par le soumissionnaire, tiendront une séance d'information sur les vols d'essai et la sécurité aux Pilotes de Transports Canada responsables de l'évaluation en se basant sur les fiches d'essai contenues dans le présent document, et il faudra remplir le formulaire simplifié relatif aux séances d'information sur les vols d'essai sur la sécurité présenté à l'appendice C. Le plan d'essais devra être approuvé par la GCC, Transports Canada, Travaux publics et Services gouvernementaux Canada et le soumissionnaire. ***Les essais n'auront pas lieu tant que toutes les parties n'auront pas certifié et approuvé la méthodologie d'essai pour en assurer la compréhension et confirmer le respect des exigences précisées dans le plan d'essais***. Si des problèmes sont soulevés quant à la méthodologie d'essai ou pour toute autre raison, ils seront réglés selon les consignes de Travaux publics et Services gouvernementaux Canada.

Le pilote d'essai employé par le soumissionnaire devra tenir une séance d'information sur la sécurité relativement à l'hélicoptère et à l'équipement individuel en donnant des détails sur des éléments comme les procédures de sortie en situation normale ou d'urgence, l'évacuation, l'utilisation des casques, les gilets de sauvetage, les postures sécuritaires et de protection, les trousses de survie et de premiers soins, les emplacements des extincteurs et des haches de secours, l'équipement de sécurité divers, le fonctionnement de l'émetteur de localisation d'urgence (ELT) et les signaux normalisés. Cette séance mettra aussi l'accent sur les limitations d'emploi pertinentes liées à l'essai proposé.

Une séance d'information après vol, à laquelle devront être présents le directeur des essais, le pilote de Transports Canada responsable de l'évaluation, l'autorité technique de la GCC et le surveillant de l'équité, aura lieu après chaque essai pour confirmer que tous les points d'essai ont été effectués et pour reconnaître les leçons apprises ou les lacunes quant à la sécurité qui pourraient modifier le cours des vols d'essai suivants. Le chef pilote, Opérations de giravions de Transports Canada participera au début de la séance d'information après vol pour identifier s'il y a des questions liées à la sécurité qui doivent être communiquées aux autres membres de l'équipe des essais.

Afin d'assurer l'impartialité des essais subséquents, les résultats des essais demeureront confidentiels. Le directeur des essais devra compiler tous les résultats des essais et en informer l'autorité technique de la GCC à la fin de chaque journée. Un rapport d'essai d'évaluation opérationnelle final portant la mention « Confidentiel » devra être présenté à l'agent technique principal de projet de la GCC à la fin des essais d'évaluation de l'hélicoptère du soumissionnaire.

4.4 Exigences relatives aux conditions météorologiques et au fonctionnement

Tous les essais devront être effectués dans des conditions météorologiques de vol à vue (VMC) selon les règles de vol à vue (VFR) applicables aux hélicoptères. La vitesse maximale du vent pour effectuer les essais devra être de 15 nœuds et les rafales maximales de vent devront être de 10 nœuds.

4.5 Manœuvres au sol

Le soumissionnaire est responsable de l'évaluation et de la démonstration pour lesquels des manœuvres au sol de l'hélicoptère sont nécessaires.

Le soumissionnaire doit fournir l'ensemble du matériel et des outils requis pour les manœuvres au sol de l'hélicoptère comme la trousse de repliage des pales, les berceaux, les roues de servitude et le matériel connexe de manœuvre au sol.

Le personnel du gouvernement du Canada observera le personnel du soumissionnaire pendant qu'il exécute les manœuvres ou le déplacement au sol de l'hélicoptère à tout moment de l'évaluation opérationnelle et de la démonstration.

4.6 Préparation de l'hélicoptère

Avant les essais d'évaluation opérationnelle, les représentants autorisés de la GCC, de Travaux publics et Services gouvernementaux Canada et de Transports Canada, ainsi que le surveillant de l'équité, le représentant du soumissionnaire et l'équipage chargé des vols d'essai doivent attester et approuver par écrit tous les éléments d'essai nécessaires, notamment les masses et les configurations.

4.6.1 Pesage de l'hélicoptère

Transports Canada fournira des balances étalonnées pour permettre au soumissionnaire de peser l'hélicoptère. Le but du pesage de l'hélicoptère est de déterminer la masse à vide et le centre de gravité et de confirmer l'exactitude des calculs de la masse à vide et du centrage du soumissionnaire avant le début des essais. L'hélicoptère sera pesé conformément aux instructions d'entretien que le soumissionnaire aura fournies et le pesage sera effectué par le personnel d'entretien du soumissionnaire. Transports Canada devra également fournir des balances pour évaluer le poids de l'équipage et du lest avant le vol.

4.6.2 Liste d'équipement

L'équipement requis pour satisfaire aux exigences relatives aux hélicoptères de « configuration A » de la GCC, comme un récepteur radio MF et un système ISAT, ne sont pas installés dans l'hélicoptère représentatif, le soumissionnaire devra fournir une liste d'équipement comprenant la masse des biens d'équipement et l'emplacement où devront être installés ces biens d'équipement. Le soumissionnaire devra présenter un rapport des calculs de la masse et du centrage représentant le centre de gravité en masse à vide requis pour l'hélicoptère de « configuration A » de la GCC. L'hélicoptère d'essai devra être lesté pour ajuster le centre de gravité afin qu'il soit conforme au centre de gravité en masse à vide requis pour un hélicoptère de « configuration A » de la GCC.

4.6.3 Sacs de lest

Pour les besoins des essais, des sacs de lest devront être placés dans l'hélicoptère d'essai pour satisfaire aux exigences relatives aux hélicoptères de « configuration A » de la GCC, le centre de gravité sans poids. Le lest devant être chargé dans l'hélicoptère sera sous forme de sacs pesés fournis par Transports Canada. Ces sacs doivent être numérotés aux fins de contrôle et emballés afin d'empêcher qu'ils se vident.

Le soumissionnaire sera responsable du chargement sécuritaire des sacs de lest utilisés pour l'hélicoptère d'essai et il devra respecter la limite de résistance du plancher. Cette activité sera assistée par le Directeur des essais et par le Canada.

4.7 Documents relatifs à l'hélicoptère

Dans sa soumission, le soumissionnaire devra inclure le manuel de vol de l'hélicoptère et les autres documents essentiels énumérés ci-après aux fins de préparation aux essais, en les regroupant dans une trousse séparée portant la mention **« Documentation relative au plan d'essais d'évaluation opérationnelle »**.

4.7.1 Graphiques de puissance disponible des moteurs

Le soumissionnaire devra fournir des graphiques de puissance disponible des moteurs qui équipent l'hélicoptère. Les graphiques doivent comprendre les données sur les conditions d'atmosphère type internationale (ISA), du niveau de la mer jusqu'aux conditions d'atmosphère type internationale (ISA) à 10 000 pieds à 30 °C, et comprendre toutes les puissances nominales (biturbine et monomoteur).

4.7.2 Graphiques de performance en vol stationnaire

Le soumissionnaire devra fournir les renseignements ci-dessous sur la performance en vol stationnaire de l'hélicoptère de la ou des configurations requises pour les essais.

4.7.3 Graphiques de performance contenus dans le manuel de vol

Les graphiques de performance en effet de sol et hors effet de sol contenus dans le manuel de vol seront utilisés pour déterminer la capacité maximale de transport de charge selon les altitudes spécifiées. Le soumissionnaire fournira les graphiques contenus dans le manuel de vol qui portent sur la capacité en vol stationnaire.

4.7.4 Graphiques de coefficient de puissance par rapport au coefficient de poussée

Le soumissionnaire devra fournir des graphiques non dimensionnels du coefficient de puissance (C_P) par rapport au coefficient de poussée (C_T) (c.-à-d. la masse) pour la performance en vol stationnaire selon la configuration requise pour les essais. Il devra présenter des graphiques pour un seul vol stationnaire en effet de sol. Il devra également présenter des graphiques de vol stationnaire hors effet de sol pour l'ascension d'une élévation en effet de sol à une élévation hors effet de sol (c.-à-d. lorsque la hauteur de vol stationnaire au-dessus du sol est égale ou inférieure à une fois et demie le diamètre du rotor) ainsi que les graphiques obtenus lors de la transition d'un vol vers l'avant à un vol stationnaire hors effet de sol à une hauteur au-dessus du sol supérieure à deux fois le diamètre du rotor.

4.8 Préparation du site d'essais

La zone au-dessus de laquelle devront être effectués les vols d'essai en fonction de repères verticaux devra être étudiée par l'équipage chargé des vols d'essai à la recherche de dangers possibles pendant le vol. La superficie et les limites exactes des zones d'atterrissage des vols d'essai en fonction de repères verticaux doivent être marquées sous la supervision du directeur des essais, au moyen de piquets et de ruban de sécurité jaune ou d'un autre moyen approprié fournis par la GCC.

4.9 Soutien au sol

Sous la direction du directeur des essais, un membre de son équipe doit être posté sur le côté de la zone de vol stationnaire marquée pour les vols d'essai en fonction de repères verticaux. Cette personne doit pouvoir communiquer avec l'hélicoptère par radio. En plus de sa fonction importante en matière de sécurité, ce lien radio servira également à l'une des tâches secondaires prévues dans la charge de travail. Transports Canada fournira l'équipement radio et les fréquences nécessaires.

4.10 Collecte et attestation des données

Au cours des essais d'évaluation opérationnelle de l'hélicoptère représentatif, les données seront recueillies par divers moyens, incluant :

- L'enregistrement vidéo et / ou photographie de l'appareil photo numérique de l'intérieur (poste de pilotage) et vues sur l'extérieur, par des caméras installées fixes et / ou d'un casque.
- L'enregistrement audio du canal intercom et des radios de l'aéronef.
- La saisie électronique des données par le directeur des essais en réponse à l'enquête Cooper-Harper.

La GCC fournira la / les caméra(s) et de l'équipement, la 1ère journée des évaluations pour l'installation par le soumissionnaire, sous la supervision du Directeur des essais. Le Directeur des essais identifiera les supports temporaires pour les caméras qui seront installées. Les domaines d'intérêt comprennent les commandes de vol et des tableaux de bord.

Tous les essais décrits dans le plan d'essais d'évaluation opérationnelle et les données provenant de ces essais doivent être attestés et approuvés par les représentants du gouvernement du Canada et du soumissionnaire afin que tous les représentants autorisés comprennent les exigences précisées dans le plan d'essais et leur méthodologie. À l'issue de chaque essai, les représentants autorisés désignés devront attester et reconnaître l'exécution de l'essai.

4.10.1 Journal de bord

Le directeur des essais devra tenir un journal de bord et consigner les renseignements sur le vol incluant, au minimum, le nom du pilote, le numéro du vol d'essai, l'heure de début et de fin du vol, les commentaires faits de vive voix par le pilote, la température et la vitesse des vents pendant le vol et d'autres renseignements qu'il jugera pertinents (voir l'appendice F au sujet du journal de bord).

4.11 Uniformes et équipement de sécurité

Pour effectuer tous les vols d'essai, les pilotes de Transports Canada responsables de l'évaluation devront porter la tenue de mission type de la GCC, c'est-à-dire la combinaison d'immersion, le gilet de sauvetage et le casque de vol. Le soumissionnaire est responsable d'assurer la compatibilité des casques de vol de la GCC avec l'hélicoptère. Les casques de vol doivent être munis d'un câble adaptateur doté d'une fiche U-61/U à une extrémité et d'une fiche U-174/U à l'autre extrémité.

Pour effectuer tous les vols d'essai, les pilotes de Transports Canada responsables de l'évaluation doivent porter les harnais de sécurité pour les cuisses et les épaules fournis en équipement de base de l'hélicoptère.

5. DESCRIPTION DES ESSAIS D'ÉVALUATION OPÉRATIONNELLE

Les essais d'évaluation opérationnelle devront être effectués conformément au présent plan d'essais d'évaluation opérationnelle. Les critères relatifs à chacun des quatre essais d'évaluation opérationnelle sont présentés ci-dessous.

5.1 Performance de l'hélicoptère

5.1.1 Enjeu opérationnel crucial

L'exigence 7.1.3 de l'énoncé des besoins de base en matière d'hélicoptères moyens de la GCC établit que les hélicoptères doivent être en mesure d'effectuer un vol stationnaire hors effet de sol en situations de masse maximale au décollage certifiée (MCTOW), de puissance maximale au décollage et d'atmosphère type internationale (ISA) d'au moins 5 000 pi (1 524 m) d'altitude-pression.

5.1.2 Critères d'évaluation – Essai

La performance de l'hélicoptère sera évaluée en utilisant les données fournies dans le manuel de vol de l'aéronef.

5.1.2.1 Procédures d'essai et consignation des résultats des essais

La performance en vol stationnaire sera évaluée selon des méthodes d'analyse, conformément à la Figure 1.

– SUITE À LA PAGE SUIVANTE –

Hélicoptère moyen de la GCC

5.1 Analyse de performance en vol stationnaire

Objectifs de l'essai (un objectif par rangée)	
1.	Énoncé des besoins de base 7.1.3 : Analyse du vol stationnaire hors effet de sol à une altitude-pression de 5 000 pi (1 524 m) à une atmosphère type internationale (ISA) de 5 °C à la puissance maximale au décollage.

Hélicoptère moyen de la GCC Évaluation de la performance en vol stationnaire		
	Condition et procédure d'essai	Observations et données
1.	Déterminer la masse maximale pour un vol stationnaire hors effet de sol à une altitude-pression de 5 000 pi (1 524 m) à une atmosphère type internationale (ISA) (+ 5 °C) à la puissance maximale au décollage en utilisant les données du manuel de vol de l'hélicoptère. Si l'hélicoptère peut effectuer un vol stationnaire hors effet de sol à la masse maximale brute au décollage certifiée (MTOGW) à une altitude-pression supérieure à 5 000 pi (1 524 m), calculer l'altitude de vol stationnaire hors effet de sol à une atmosphère type internationale (ISA) à la MTOGW en utilisant les données du manuel de vol de l'hélicoptère.	MTOGW du manuel de vol de l'hélicoptère pour un vol stationnaire hors effet de sol en particulier : _____ OU Altitude maximale du manuel de vol de l'hélicoptère pour un vol stationnaire hors effet de sol à la MTOGW, ISA : _____ pi
2.	En utilisant les rapports atmosphériques normaux pour les conditions pertinentes, déterminer la puissance requise pour un vol stationnaire hors effet de sol avec les données de montée en altitude et de vol en utilisant les graphiques du coefficient de puissance par rapport au coefficient de poussée et les méthodes et les formules provenant du US Naval test Pilot School Flight Test Manual (FTM) 106.	Puissance calculée de vol stationnaire hors effet de sol requise pour un vol stationnaire hors effet de sol spécifié dans des conditions de montée et de vol. Montrer la méthode et le travail sur une feuille séparée : _____
3.	Déterminer la puissance disponible pour les spécifications minimales du moteur. Comparer la puissance requise de l'étape 2 ci-dessus avec la puissance disponible indiquée dans la spécification minimale du moteur, et déterminer la capacité d'effectuer un vol stationnaire selon les conditions énoncées.	La puissance disponible du moteur dépasse la puissance calculée requise : Oui [ ] Non [ ]
4.	Comparer les données sur la performance en vol stationnaire du manuel de vol de l'hélicoptère et celles du FTM 106 (étapes 1 et 2 ci-dessus).	Les données du manuel de vol de l'hélicoptère correspondent aux calculs du FTM 106 : Oui [ ] Non [ ]

Figure 1 – Analyse de la performance en vol stationnaire

5.2 Charge utile

5.2.1 Enjeu opérationnel crucial

L'exigence 7.2.1 de l'énoncé des besoins de base en matière d'hélicoptères moyens de la GCC établit qu'en « configuration A » et comme le stipule la section 5, l'hélicoptère doit pouvoir transporter une charge utile d'au moins 2 000 lb (907 kg), en plus du carburant nécessaire pour voler pendant au moins deux heures et vingt minutes en vol à vue, à une vitesse de croisière d'au moins 115 nœuds (213 km/h).

5.2.2 Critères d'évaluation – Essai

À l'issue de l'essai d'évaluation décrit à la section 5.1.2, le soumissionnaire devra démontrer, au moyen de la documentation et des calculs relatifs au vol, à la masse et au centrage, que l'hélicoptère proposé de marque, de modèle et de variante identiques, y compris l'ensemble de l'équipement et des trousses, offert en réponse à la demande de propositions, en vue de satisfaire à la « configuration A » de la GCC, conservera une charge utile de 2 000 lb (907 kg) en plus du carburant nécessaire pour voler pendant au moins deux heures et vingt minutes en vol à vue à une vitesse de croisière d'au moins 115 nœuds (213 km/h).

5.2.2.1 Procédures d'essai et consignation des résultats des essais

Les procédures d'essai et les résultats des essais en ce qui concerne l'évaluation de la charge utile sont présentés dans la Figure 22 ci-dessous.

– SUITE À LA PAGE SUIVANTE –

Hélicoptère moyen de la GCC 5.2 Charge utile		
Commandant de bord :	Directeur de l'essai :	Indicatif d'appel :
Pilote chargé de l'évaluation :	Type d'hélicoptère :	Inscription :
Journal de mission		
Date :	N° du vol :	
DÉPART	**ARRIVÉE**	
Terrain d'aviation de départ :	Terrain d'aviation d'arrivée :	
Heure de démarrage :	Heure d'arrêt :	Durée du vol :
Heure de décollage :	Heure d'atterrissage :	Temps de vol :
Carburant au décollage :	Carburant à l'atterrissage	Carburant utilisé :
Masse au décollage :	Masse à l'atterrissage :	Masse à vide :
Centre de gravité au décollage :	Centre de gravité à l'atterrissage :	Centre de gravité à vide :

Objectifs de l'essai (un objectif par rangée)	
1.	Énoncé des besoins de base 7.2.1 : Démonstration d'une autonomie minimale de deux heures et vingt minutes avec une charge utile de 2 000 lb (907kg) à une vitesse vraie minimale de 115 nœuds (213 km/h).
2.	
3.	

Conditions préalables à l'essai	
A.	Le réservoir de carburant de l'hélicoptère doit être rempli à capacité.
B.	L'équipage doit être pesé.
C.	L'équipement additionnel doit être pesé.
D.	L'hélicoptère doit être lesté afin d'atteindre une charge utile de 2 000 lb (907 kg) (sans compter la masse de l'équipage et de l'équipement).
E.	Les soumissionnaires doivent fournir des facteurs de correction carburant pour tout l'équipement externe qui manque.

Figure 2 – Charge utile

Hélicoptère moyen de la GCC Procédure d'évaluation de la charge utile et de l'autonomie		
	Condition et procédure d'essai	Observations et données
1.	Commencer l'enregistrement vidéo.	Consigner l'altitude-pression (29,92) : _____ pi. Consigner la température extérieure : ____˚C
2.	Hélicoptère démarré, porté à la condition de vol.	Consigner la quantité de carburant au décollage : _____
3.	Hélicoptère placé en vol stationnaire en effet de sol.	Consigner les indications de puissance en vol stationnaire en effet de sol : _____
4.	Accélérer jusqu'à la vitesse ascensionnelle maximale.	
5.	Hélicoptère porté à la vitesse ascensionnelle maximale jusqu'à 1 000 pi au-dessus du sol.	Consigner la vitesse ascensionnelle maximale : _____ nœuds.
6.	L'hélicoptère accélère à un minimum 115 nœuds.	
7.	Date de début	
8.	Maintenir une vitesse minimale de croisière de 115 nœuds durant au moins 30 minutes, en s'éloignant de l'aéroport de départ.	Consigner l'altitude à la vitesse de croisière : _____ le calage du moteur à vitesse de croisière : _____ le calage altimétrique : _____ la vitesse de croisière : _____nœuds température extérieure ___˚C
9.	Virer vers l'aéroport de départ en maintenant la vitesse de croisière précédente.	
10.	Revenir à l'aéroport de départ, décélérer jusqu'au vol stationnaire, et circuler près du sol jusqu'au lieu de stationnement des aéronefs.	
11.	Arrêter l'hélicoptère selon les procédures du manuel de vol.	Consigner la quantité de carburant indiquée : _____
12.	Arrêter le chronométrage.	Consigner la durée chronométrée : __h____min
13.	Arrêter l'enregistrement vidéo.	
14.	Remplir les réservoirs de l'hélicoptère à capacité.	Consigner la quantité de carburant ajoutée : _____
15.	Calculer la distance franchissable maximale selon une extrapolation du carburant utilisé par rapport aux données sur la durée de vol pour tout facteur de compensation de combustion de carburant déterminé dans les objectifs de l'essai ci-dessus.	Autonomie calculée : _____h_____min
16.	Comparer la puissance requise pour un vol stationnaire en effet de sol dans des conditions ambiantes avec les données du manuel de vol de l'hélicoptère.	Consigner la puissance requise calculée dans le manuel de vol de l'hélicoptère pour un vol stationnaire en effet de sol : _____

Figure 2 – Charge utile

5.3 Capacité de repliage des pales

5.3.1 Enjeu opérationnel crucial n° 1 :

L'exigence 7.4.6 de l'énoncé des besoins de base en matière d'hélicoptères moyens de la GCC établit que l'hélicoptère devra être équipé d'une trousse de repliage des pales du rotor principal qui permet aux pales du rotor principal de rester attaché à la tête du rotor principal lors de la procédure de pliage et de dépliage, et qui ne requiert aucun outil.

L'exigence 7.4.5 de l'énoncé des besoins de base en matière d'hélicoptères moyens de la GCC établit que les pales du rotor principal de l'hélicoptère doivent pouvoir être repliées sans les retirer.

5.3.2 Critères d'évaluation – Essai n° 1

Observer pendant que deux membres au maximum de l'équipe du soumissionnaire replient les pales sans utiliser d'outils (des berceaux fournis par le fabricant peuvent être utilisés au besoin) et sans retirer les pales.

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5.3.3 Méthodes d'essai et inscription des résultats des essais

Les méthodes d'essai et l'inscription des résultats des essais pour l'évaluation de la capacité de repliage des pales sont affichées à la Figure 3 ci-dessous.

– SUITE À LA PAGE SUIVANTE –

Hélicoptère moyen de la Garde côtière canadienne 5.3 Évaluation de la capacité de repliage des pales		
Observateur du soumissionnaire :	Directeur de l'essai :	Date :
Observateur de TC :	Type d'hélicoptère :	Immatriculation :

Objectifs de l'essai (un objectif par rangée)	
1.	Énoncé des besoins de base 7.4.6 Démonstration du repliage des pales du rotor principal par deux personnes sans l'utilisation d'outils.
2.	Énoncé des besoins de base 7.2.5 Démonstration du repliage des pales du rotor principal sans démontage des pales.
Conditions préalables à l'essai	
A.	L'hélicoptère doit être préparé au repliage des pales conformément aux procédures du fabricant. S'il faut du temps (minimum ou maximum) entre l'arrêt et le repliage des pales. Le soumissionnaire doit en aviser le Canada avant le début de l'essai.
B	Le soumissionnaire doit fournir le matériel de manutention au sol représentatif de ce qui servira à ranger l'hélicoptère dans le hangar et à l'en sortir.
C.	Pour les opérations de manutention au sol, les placiers (fournis pas le soumissionnaire) requis doivent se placer de chaque côté de l'hélicoptère avec une vue dégagée du nez et de la queue.
D.	Il faut un enregistrement vidéo du repliage et du dépliage des pales du rotor.

Figure 3 – Évaluation de la capacité de repliage des pales

Hélicoptère moyen de la Garde côtière canadienne Procédure d'évaluation de la compatibilité à bord d'un navire		
	Condition/procédure d'essai	Observations/données
1.	Positionner et arrêter l'hélicoptère à l'extérieur du hangar à Transport Canada.	
2.	Préparer l'hélicoptère pour le repliage des pales.	
3.	Commencer l'enregistrement vidéo.	
4.	Demander au personnel du soumissionnaire de commencer la manœuvre de repliage des pales (limite : 2 opérateurs) et **commencer le chronométrage**.	Aucun outil ne peut être utilisé pour le repliage des pales.
5.	**Arrêter le chronométrage** lorsque les pales sont immobilisées dans les berceaux fournis et que l'équipe du soumissionnaire indique que c'est terminé (à l'exception des formulaires à remplir aux fins de suivi des activités d'entretien).	Consigner le temps écoulé pour le repliage des pales : _____H_____MM
6.	Arrêter l'enregistrement vidéo.	
7.	Répéter les étapes 1 à 6 de cette fiche d'essai.	Consigner le temps écoulé pour le dépliage des pales : _____H_____MM

Figure 4 – Procédure d'évaluation de la capacité de repliage des pales

5.4 Vol en fonction de repères verticaux

5.4.1 Enjeu opérationnel crucial

L'exigence 8.4 de l'énoncé des besoins de base en matière d'hélicoptères moyens de la GCC établit que l'hélicoptère doit être en mesure d'effectuer des manœuvres en fonction de repères verticaux avec toutes les portes posées et fermées.

5.4.2 Critères d'évaluation

On doit utiliser l'échelle de cotation de la qualité de vol de Cooper Harper et l'échelle de cotation de la charge de travail de Bedford présentées aux appendices A et B pour évaluer l'exécution des essais en vol, conformément aux critères d'évaluation ci-dessous.

L'essai en fonction de repères verticaux vise à vérifier, en vue d'obtenir une note de 3 ou moins sur l'échelle de cotation de la qualité de vol de Cooper Harper et l'échelle de cotation de Bedford, qu'il est possible de piloter l'hélicoptère représentatif offert de façon efficace à l'aide des techniques de vol en fonction de repères verticaux dans le cadre de missions de la GCC pour lesquelles la charge externe est représentative.

L'hélicoptère doit être lesté pour que le centre de gravité soit placé afin de représenter des manœuvres par un seul pilote du siège désigné pour les repères verticaux par soumissionnaire. La combinaison de poids de l'hélicoptère et de la charge ne doit pas dépasser 95 % de sa MCTOW.

Les essais 1 à 5 doivent être réalisés à tour de rôle par trois (3) pilotes de Transports Canada chargés des évaluations. Chaque pilote doit effectuer au moins trois (3) circuits en vue de réaliser toutes les séquences d'essai. Les deux premiers circuits doivent servir aux vols de familiarisation. L'évaluation aura lieu au troisième circuit.

5.4.3 Critères d'évaluation – essai n° 1

Avant le vol, le pilote de Transports Canada doit effectuer tous les contrôles avant démarrage, au démarrage, pendant le fonctionnement et les contrôles des systèmes de la liste de vérification. Pour ce faire, le pilote doit prendre place sur le siège prévu pour le vol en fonction de repères verticaux.

- Le pilote doit vérifier que les principaux commutateurs et commandes sont facilement accessibles et manœuvrables une fois assis à la place prévue pour le vol en fonction de repères verticaux.

5.4.4 Critères d'évaluation – essai n° 2

Le pilote d'essai de Transports Canada chargé de l'évaluation doit se mettre en vol stationnaire au-dessus d'un point fixe, à une altitude d'environ cinq (5) pieds (1,5 m).

– Le pilote doit maintenir la position de l'hélicoptère au-dessus du sol à plus ou moins 2 pi (0,6 m) d'écart latéral et vertical.

– Le pilote doit passer au vol en fonction de repères verticaux tout en maintenant la position de l'hélicoptère à plus ou moins 5 pi (1,5 m) d'écart latéral et à plus ou moins 2 pi (0,6 m) d'écart vertical au-dessus du point fixe.

5.4.5 Critères d'évaluation – essai n° 3

Essai A : le pilote de Transports Canada chargé de l'évaluation doit mettre l'hélicoptère en vol stationnaire avec une élingue de 50 pi (15 m) et une charge d'essai de 300 lb (136 kg).

– Le pilote doit maintenir la position de la charge au-dessus d'un point fixe (cible) sur le sol à une hauteur de 5 pi (1,5 m) (à plus ou moins 2 pi [0,6 m] d'écart vertical) et à plus ou moins 5 pi (1,5 m) d'écart latéral de la cible pendant 10 secondes.

Essai B : le pilote de Transports Canada chargé de l'évaluation, en vol stationnaire, doit effectuer deux (2) tâches secondaires :

– Le pilote doit recevoir une transmission radio envoyée par l'observateur au sol et y répondre.

– Le pilote doit accuser réception de la transmission radio et y répondre.

Essai C : le pilote de Transports Canada chargé de l'évaluation doit décoller, effectuer le circuit et se poser avec l'élingue de 50 pi (15 m) et une charge d'essai de 300 lb (136 kg) accrochées.

– Après le circuit et l'arrivée, le pilote doit placer la charge sur le sol à plus ou moins 5 pi (1,5 m) d'écart horizontal de la cible.

– Pendant le circuit et lorsqu'il est en vol stationnaire, le pilote doit **simuler** l'ouverture principale et secondaire du crochet de charge de l'hélicoptère et l'ouverture principale du crochet commandé à distance.

5.4.6 Critères d'évaluation – essai n° 4

Essai A : le pilote de Transports Canada chargé de l'évaluation doit mettre l'hélicoptère en vol stationnaire avec une élingue de 125 pi (38,1 m) et une charge d'essai de 300 lb (136 kg).

– Le pilote de TC chargé de l'évaluation doit maintenir la position de la charge au-dessus d'un point fixe (cible) sur le sol à une hauteur de 5 pi (1,5 m) (plus

ou moins 2 pi [0,6 m] d'écart vertical) et à plus ou moins 5 pi (1,5 m) d'écart latéral de la cible pendant 10 secondes.

Essai B : le pilote de TC chargé de l'évaluation doit décoller, effectuer le circuit et se poser avec l'élingue de 125 pi (38,1 m) et la charge d'essai accrochées.

– Après le circuit et l'arrivée, le pilote doit placer la charge sur le sol à plus ou moins 5 pi (1,5 m) d'écart horizontal de la cible.

Méthodes d'essai et inscription des résultats des essais

Les méthodes d'essai et l'inscription des résultats des essais pour l'évaluation du vol en fonction de repères verticaux sont affichées à la Figure 4 : Évaluation en vol en fonction de repères verticaux ci-dessous.

– SUITE À LA PAGE SUIVANTE –

Hélicoptère moyen de la Garde côtière canadienne

5.4 Évaluation du vol en fonction de repères verticaux

Commandant de bord :	Directeur de l'essai :	Indicatif d'appel :
Pilote chargé de l'évaluation :	Type d'hélicoptère :	Immatriculation :
Journal de mission		
Date :	n° du vol :	
DÉPART	ARRIVÉE	
Terrain d'aviation de départ :	Terrain d'aviation d'arrivée :	
Heure de démarrage :	Heure d'arrêt :	Durée du vol :
Heure de décollage :	Heure d'atterrissage :	Temps de vol :
Carburant au décollage :	Carburant à l'atterrissage	Carburant utilisé :
Poids au décollage :	Poids à l'atterrissage :	Poids sans chargement :
Centre de gravité au décollage :	Centre de gravité à l'atterrissage :	Centre de gravité sans chargement :

Objectifs de l'essai (un objectif par rangée)	
1.	Énoncé des besoins de base 8.4 : Démonstration des manœuvres en fonction de repères verticaux avec toutes les portes posées et fermées.
2.	Énoncé des besoins de base 8.4 : Démonstration des manœuvres en fonction de repères verticaux avec toutes les portes posées et fermées et évaluation des manœuvres lors de vols en fonction de repères verticaux au moyen de l'échelle de cotation de la qualité de vol de Cooper Harper.
3.	Énoncé des besoins de base 8.4 : Démonstration des manœuvres en fonction de repères verticaux avec toutes les portes posées et fermées et évaluation des manœuvres avec une charge de travail lors de vols en fonction de repères verticaux (avec tâches secondaires) au moyen de l'échelle de cotation de Bedford.
Conditions préalables à l'essai	
A.	L'hélicoptère doit avoir suffisamment de carburant pour que le col dure 1,5 heure et doit être chargé afin que le centre de gravité représente la manœuvre par un seul pilote. La combinaison de poids de l'hélicoptère et de la charge (300 lb [136 kg]) ne doit pas dépasser 95 % de sa MCTOW.
B.	L'équipe chargée de l'essai doit s'assurer que la zone de vol stationnaire et la trajectoire de vol ne posent pas de danger au personnel au sol s'il fallait que la charge soit larguée ou si elle tombait par inadvertance. Un observateur de la sécurité au sol doit se placer sur le côté de la zone de vol stationnaire marquée et doit pouvoir communiquer par radio avec l'hélicoptère. En plus de sa fonction importante en matière de sécurité, ce lien sera également utilisé pour une des tâches secondaires.
C.	Le pilote de la GCC doit prendre place sur le siège prévu pour le vol en fonction de repères verticaux.
D.	L'évaluation du vol en fonction de repères verticaux doit être réalisée à tour de rôle par trois (3) pilotes de la GCC différents chargés des essais en vol. Chaque pilote doit effectuer au moins trois (3) circuits en vue de réaliser toutes les séquences d'essai. Les deux premiers circuits doivent servir aux vols de familiarisation. L'évaluation aura lieu au troisième circuit.

Figure 5 : Évaluation en vol en fonction de repères verticaux

Hélicoptère moyen de la Garde côtière canadienne Procédure d'évaluation du vol en fonction de repères verticaux		
	Condition/procédure d'essai	Observations/données
	Phase 1	
1.	**Commencer l'enregistrement vidéo.**	Consigner l'altitude-pression (29,92) : _____ pi. Consigner la température extérieure : ____˚C
2.	Le pilote de TC chargé de l'évaluation démarre l'hélicoptère, puis effectue toutes les vérifications habituelles.	Consigner la quantité de carburant au décollage : _____
3.	Vérifier que les principaux commutateurs et principales commandes sont facilement accessibles et manœuvrables depuis le siège prévu pour le vol en fonction de repères verticaux.	Consigner tout problème de positionnement des commandes ou des affichages, ou tout obstacle à la visibilité, sur une feuille à part et la joindre au présent rapport.
	ATTRIBUER UNE NOTE AUX ÉTAPES 1 À 3	
4.	Le pilote de TC chargé de l'évaluation positionne l'hélicoptère en vue de commencer les essais en fonction de repères verticaux.	Consigner les indications de puissance en vol stationnaire en effet de sol : _____
5.	Maintenir en vol stationnaire l'hélicoptère à 5 pi (3 m) du sol, à partir du train d'atterrissage, à plus ou moins 5 pi (1,5 m) d'écart horizontal et à plus ou moins 2 pi (0,6 m) par rapport à la cible au sol, pendant 10 secondes.	L'observateur au sol filme l'essai pour vérifier la précision de la position et la stabilité de l'hélicoptère.
6.	Le pilote de TC chargé de l'évaluation remet les commandes au pilote de l'entreprise.	
7.	Avec le pilote de TC, le directeur des essais remplit le questionnaire Cooper-Harper concernant le maintien de la position en vol stationnaire.	Consigner la note Cooper-Harper pour la tâche de maintien de la position en vol stationnaire : _____
	ATTRIBUER UNE NOTE AUX ÉTAPES 4 À 7	
8.	Le pilote de l'entreprise remet les commandes au pilote de TC chargé de l'évaluation.	
9.	Le pilote de TC s'assoie en vue du vol en fonction de repères verticaux, et maintient en vol stationnaire l'hélicoptère à 5 pi du sol, à partir du train d'atterrissage, pendant 10 secondes. Écart toléré de plus ou moins 2 pi sur le plan vertical, et plus ou moins 5 pi sur le plan	Consigner la note pour la transition en position pour le vol en fonction de repères verticaux :

Hélicoptère moyen de la Garde côtière canadienne Procédure d'évaluation du vol en fonction de repères verticaux		
	Condition/procédure d'essai	Observations/données
	horizontal	
10.	Le pilote de TC remet les commandes au pilote de l'entreprise.	
11.	. Avec le pilote de TC chargé de l'évaluation, le directeur des essais remplit le questionnaire Cooper-Harper concernant le maintien de la position de l'hélicoptère.	Consigner la note Cooper-Harper pour la tâche de maintien de la position en vol stationnaire : _____
	ATTRIBUER UNE NOTE AUX ÉTAPES 8 À 11	
12.	Le pilote de l'entreprise remet les commandes au pilote de TC chargé de l'évaluation.	Consigner l'altitude-pression (29,92) : _____ pi. Consigner la température extérieure : ____˚C Consigner la quantité de carburant : _____ Consigner les indications de puissance en vol stationnaire hors effet de sol : _____
13.	Le pilote de TC chargé de l'évaluation fait atterrir l'hélicoptère, et l'équipage au sol attache à l'hélicoptère la longue élingue de 50 pi et la charge.	
14.	Le pilote de TC chargé de l'évaluation lève la charge du sol, puis fait le circuit en vol vers l'avant. Le pilote de TC chargé de l'évaluation vérifie l'emplacement de la commande de largage d'urgence.	Accessibilité de la commande de largage d'urgence Satisfaisant ( ) Insatisfaisant ( )
15.	Le pilote de TC termine le circuit et doit placer la charge sur le sol à plus ou moins 5 pi (1,5 m) d'écart horizontal de la cible.	
16.	Le pilote de TC dépose la charge au sol, puis remet les commandes au pilote de l'entreprise.	
17.	Avec le pilote de TC, le directeur des essais remplit le questionnaire Cooper-Harper	Consigner la note Cooper-Harper pour la tâche de maintien d'une charge au-dessus d'une cible :

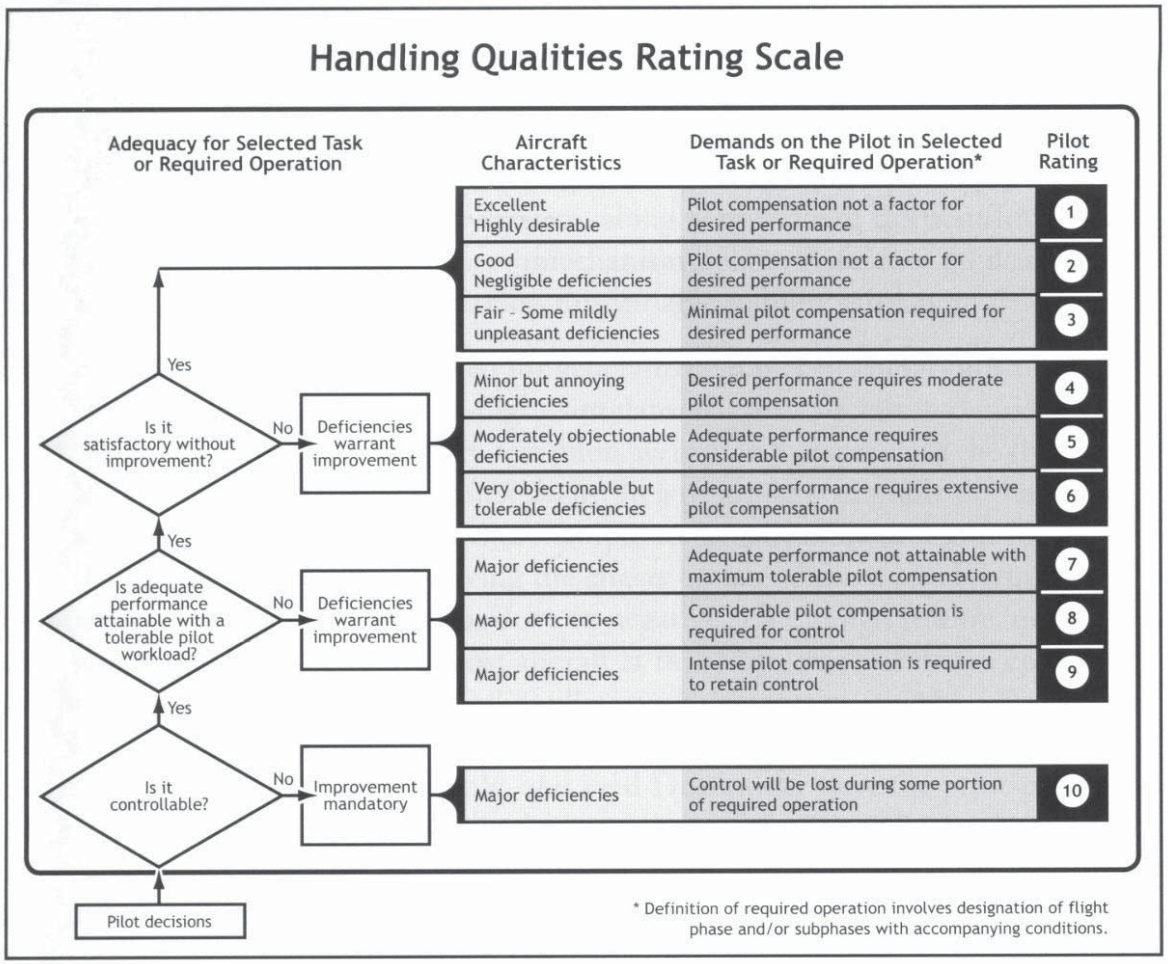
Hélicoptère moyen de la Garde côtière canadienne Procédure d'évaluation du vol en fonction de repères verticaux		
	Condition/procédure d'essai	Observations/données
	concernant le positionnement de la charge la cible.	_____
	ATTRIBUER UNE NOTE AUX ÉTAPES 12 À 17	
18.	Le pilote de l'entreprise remet les commandes au pilote de TC chargé de l'évaluation.	
19.	Le pilote de TC soulève la au-dessus du sol en vol stationnaire.	
20.	Le pilote de TC chargé de l'évaluation exécute la tâche secondaire n° 1 – recevoir et répondre à une transmission radio.	
21.	Le pilote de TC chargé de l'évaluation exécute la tâche secondaire n° 2 – Détecter une défaillance simulée, puis exécuter la manœuvre appropriée, soit lâcher la charge sous élingue, puis faire atterrir l'hélicoptère.	
22.	Le pilote de TC chargé de l'évaluation fait atterrir l'hélicoptère, puis remet les commandes au pilote de l'entreprise.	
23.	Avec le pilote de TC chargé de l'évaluation, le directeur de l'essai remplit le questionnaire Cooper-Harper concernant la réaction en cas de défaillance, et l'évaluation Bedford portant sur la tâche de communication radio.	Consigner la note Cooper-Harper pour la tâche d'atterrissage : _____ Consigner la note Bedford pour la tâche de communication radio : _____ _____
	ATTRIBUER UNE NOTE AUX ÉTAPES 18 À 23	
24.	Cesser l'enregistrement vidéo, et arrêter l'hélicoptère s'il y a lieu.	
25.	Comparer la puissance requise pour le maintien en vol stationnaire hors effet de sol en conditions ambiantes avec les données du manuel de vol.	Consigner la puissance requise pour le vol stationnaire hors effet de sol du manuel de vol : _____

Hélicoptère moyen de la Garde côtière canadienne Procédure d'évaluation du vol en fonction de repères verticaux		
	Condition/procédure d'essai	Observations/données
26.	L'équipage au sol attache à l'hélicoptère la longue élingue de 125 pi et la charge.	
27.	Commencer l'enregistrement vidéo.	
28.	Le pilote de TC met l'hélicoptère en marche, s'il était arrêté.	
29.	Le pilote de TC maintient l'hélicoptère en vol stationnaire au-dessus du sol. La charge est suspendue à 125 pi du fuselage.	
30.	Le pilote de TC fait le circuit, en vol vers l'avant.	
31.	Le pilote de TC termine le circuit et doit placer la charge sur le sol à plus ou moins 5 pi (1,5 m) d'écart horizontal de la cible (essai 6).	
32.	Le pilote de TC dépose la charge au sol, puis fait atterrir l'hélicoptère.	
33.	Le pilote de TC remet les commandes au pilote de l'entreprise.	
34.	Avec le pilote de TC, le directeur des essais remplit le questionnaire Cooper-Harper concernant le maintien de la charge au-dessus de la cible.	Consigner la note Cooper-Harper pour la tâche de maintien d'une charge au-dessus d'une cible : _____
	ATTRIBUER UNE NOTE AUX ÉTAPES 24 À 34	
35.	Le pilote de l'entreprise arrête l'hélicoptère, ce qui met fin aux vols d'essai en fonction de repères verticaux.	

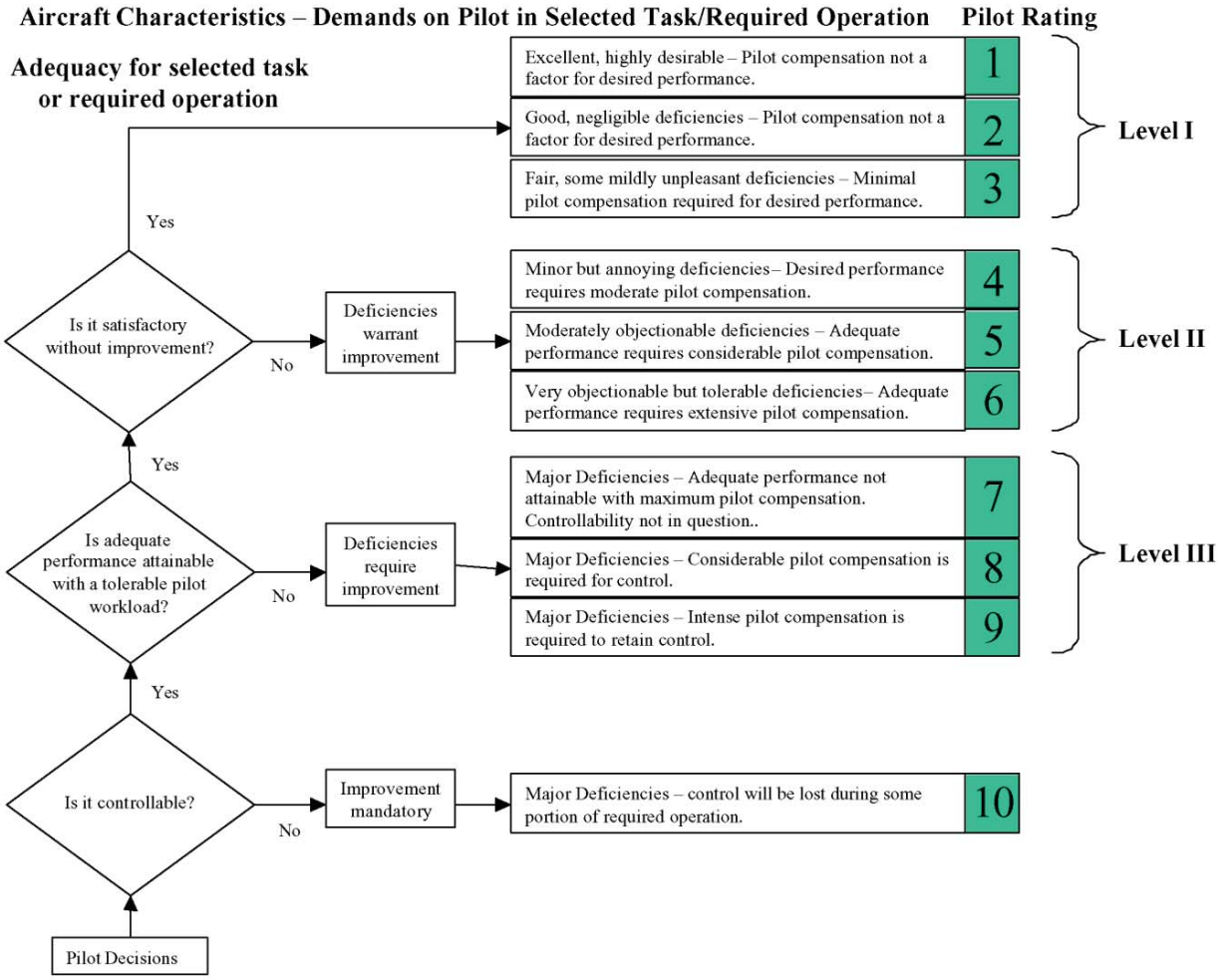
Figure 7 – Procédure d'évaluation du vol en fonction de repères verticaux

– FIN DE L'ESSAI –

PIÈCE JOINTE 1 – Échelle de cotation Cooper-Harper



PIÈCE JOINTE 2 – Échelle de cotation de Bedford relative à l'évaluation de la charge de travail



PIÈCE JOINTE 3 – Séance d'information obligatoire préalable à la mission

MV-SRB-001
Short Form SRB Checklist

Version 4.0 Sep 1, 2008

Short-Form Safety and Mission Briefing

TEST OBJECTIVE(S)	MISSION DATE/SEQUENCE:	AIRCRAFT:
A.		
B.		
C.		
D.		
E.		

MAJOR HAZARDS (e.g. CFIT, Overstress, Injury, Damage, etc.)	
A.	Operations near edge of height-velocity envelope
B.	Midair collision due to distractions from task loading
C.	Loss of control during external load testing
D.	Personal Injury on ground due to external load operations
E.	

HAZARD MITIGATION	
A.	Proper task differentiation: Company pilot (PIC)'s priority is to remain safe, not to collect data.
B.	Test Director and Company Safety Pilot relieve test pilot of data-collection and test conduct functions, allowing full concentration on safe conduct of test point.
C.	Assigned ground safety personnel to be in radio contact with helicopter for all slung-load operations.
D.	Build-up approach enforced.
E.	

RESIDUAL RISK (circle applicable combination)				
FAILURE CONDITION / FAILURE PROBABILITY	MINOR	MAJOR	HAZARDOUS	CATASTROPHIC
Probable	LOW	MEDIUM	HIGH	HIGH
Improbable-Remote	LOW	LOW	MEDIUM	HIGH
Extremely Remote	LOW	LOW	LOW	MEDIUM
Extremely Improbable	LOW	LOW	LOW	LOW

PIÈCE JOINTE 4 – Formulaires de reconnaissance préalables aux essais

DATE_____ N^{O} DE L'ESSAI_____

D-1.ESSAI OPÉRATIONNEL – PERFORMANCE DE L'HÉLICOPTÈRE

Les soussignés reconnaissent et confirment par les présentes que les activités préalables aux essais suivantes ont été réalisées à leur satisfaction :

- Séance d'information sur les essais opérationnels ☐
- Le soumissionnaire fournit le rapport de masse et centrage pour l'hélicoptère de « configuration A » ☐
- Le soumissionnaire fournit les données du manuel de vol de l'hélicoptère ☐
- Examiner les exemples de rapport de masse et centrage et de liste d'équipement fournis par le soumissionnaire pour l'hélicoptère proposé de configuration A de la GCC ☐

Autorité technique de la GCC : Nom en caractères d'imprimerie _____

Signature :_____

Représentant du soumissionnaire : Nom en caractères d'imprimerie _____

Signature :_____

Chef pilote de Transports Canada : Nom en caractères d'imprimerie _____

Signature :_____

Responsable du contrat de TPSGC : Nom en caractères d'imprimerie _____

Signature :_____

Directeur de l'essai : Nom en caractères d'imprimerie _____

Signature :_____

Commandant de bord du soumissionnaire :	Nom en caractères d'imprimerie _____ Signature :_____
Pilote de Transports Canada chargé de l'évaluation :	Nom en caractères d'imprimerie _____ Signature :_____
Surveillant de l'équité :	Nom en caractères d'imprimerie _____ Signature :_____

PIÈCE JOINTE 4 – Formulaires de reconnaissance préalables aux essais

DATE_____ N^{O} DE L'ESSAI_____

D-2.ESSAI OPÉRATIONNEL – CHARGE UTILE

Les soussignés reconnaissent et confirment par les présentes que les activités préalables aux essais suivantes ont été réalisées à leur satisfaction :

- Séance d'information sur les essais opérationnels ☐
- Séance d'information prévol sur les mesures de sécurité ☐
- Contrôle prévol de l'hélicoptère ☐
- L'hélicoptère est pesé ☐
- Calculer et consigner le poids et le centre de gravité de l'hélicoptère sans charge ☐
- Comparer le rapport de masse et le centrage de l'hélicoptère représentatif fourni par le soumissionnaire avec les calculs réalisés à l'étape précédente ☐
- Sacs de lest pesés ☐
- Le réservoir de carburant de l'hélicoptère a été rempli ☐
- L'hélicoptère a été lesté afin d'atteindre la charge utile de 2000 lb (907 kg) (sans compter le poids de l'équipage et de l'équipement) ☐

Autorité technique de la GCC : Nom en caractères d'imprimerie _____

Signature :_____

Représentant du soumissionnaire : Nom en caractères d'imprimerie _____

Signature :_____

Chef pilote de Transports Canada : Nom en caractères d'imprimerie _____

Signature :_____

Responsable du contrat de TPSGC :	Nom en caractères d'imprimerie _____
	Signature :_____
Directeur de l'essai :	Nom en caractères d'imprimerie _____
	Signature :_____
Commandant de bord du soumissionnaire :	Nom en caractères d'imprimerie _____
	Signature :_____
Pilote de Transports Canada chargé de l'évaluation :	Nom en caractères d'imprimerie _____
	Signature :_____
Surveillant de l'équité :	Nom en caractères d'imprimerie _____
	Signature :_____

PIÈCE JOINTE 4 – Formulaires de reconnaissance prévol

DATE_____ N^{O} DE L'ESSAI_____

D-3.ESSAI OPÉRATIONNEL – ÉVALUATION DU REPLIAGE DES PALES

Les soussignés reconnaissent et confirment par les présentes que les activités préalables aux essais suivantes ont été réalisées à leur satisfaction :

- Séance d'information sur l'essai opérationnel (information sur les fiches d'essai) ☐
- Séance d'information sur la sécurité ☐
- L'hélicoptère a été préparé en vue du repliage des pales du rotor ☐
- Les membres de l'équipe au sol ont été informés de leurs tâches prévues ☐
- L'équipe de tournage vidéo a été informée des exigences en matière de capture vidéo ☐

Autorité technique de la GCC : Nom en caractères d'imprimerie _____

Signature :_____

Représentant du soumissionnaire : Nom en caractères d'imprimerie _____

Signature :_____

Chef pilote de Transports Canada : Nom en caractères d'imprimerie _____

Signature :_____

Responsable du contrat de TPSGC : Nom en caractères d'imprimerie _____

Signature :_____

Directeur de l'essai : Nom en caractères d'imprimerie _____

Signature :_____

Commandant de bord du soumissionnaire : Nom en caractères d'imprimerie _____

Signature :_____

Pilote de Transports Canada chargé de l'évaluation :	Nom en caractères d'imprimerie _____ Signature :_____
Pilote de Transports Canada chargé de l'évaluation :	Nom en caractères d'imprimerie _____ Signature :_____
Pilote de Transports Canada chargé de l'évaluation :	Nom en caractères d'imprimerie _____ Signature :_____
Surveillant de l'équité :	Nom en caractères d'imprimerie _____ Signature :_____

PIÈCE JOINTE 4 – Formulaires de reconnaissance prévol

DATE_____ N^{O} DE L'ESSAI_____

D-4. ESSAI OPÉRATIONNEL – ÉVALUATION DU VOL EN FONCTION DE REPÈRES VERTICAUX

Les soussignés reconnaissent et confirment par les présentes que les activités préalables aux essais suivantes ont été réalisées à leur satisfaction :

- Séance d'information sur les essais opérationnels ☐
- Séance d'information prévol sur les mesures de sécurité ☐
- Contrôle prévol de l'hélicoptère ☐
- L'hélicoptère a suffisamment de carburant pour un vol de 1,5 heure ☐
- L'hélicoptère est configuré pour les vols en fonction de repères verticaux ☐
- L'hélicoptère a été lesté afin de représenter fidèlement l'opération par un seul pilote assis à la place prévue pour le vol en fonction de repères verticaux. ☐
- Le fonctionnement du système de chargement externe de l'hélicoptère a été vérifié ☐
- Toutes les élingues ont été inspectées et jugées utilisables ☐

Autorité technique de la GCC : Nom en caractères d'imprimerie _____

Signature :_____

Représentant du soumissionnaire : Nom en caractères d'imprimerie _____

Signature :_____

Chef pilote de Transports Canada : Nom en caractères d'imprimerie _____

Signature :_____

Responsable du contrat de TPSGC : Nom en caractères d'imprimerie _____

Signature :_____

Directeur de l'essai : Nom en caractères d'imprimerie _____

	Signature :_____
Commandant de bord du soumissionnaire :	Nom en caractères d'imprimerie _____ Signature :_____
Pilote de Transports Canada chargé de l'évaluation :	Nom en caractères d'imprimerie _____ Signature :_____
Surveillant de l'équité :	Nom en caractères d'imprimerie _____ Signature :_____

PIÈCE JOINTE 5 – Formulaire de reconnaissance après vol

DATE_____ N^{O} DE L'ESSAI_____

E-1. RECONNAISSANCE APRÈS VOL

COCHER LA CASE APPROPRIÉE (□) AFIN D'IDENTIFIER L'ESSAI PERTINENT

1) Performance de l'hélicoptère □
2) Charge utile □
3) Compatibilité à bord d'un navire □
4) Vol en fonction de repères verticaux □

Je, soussigné, reconnais avoir observé l'essai d'évaluation opérationnelle indiqué ci-dessus et confirme qu'il a été réalisé conformément aux spécifications techniques. Je suis également d'accord avec la méthodologie utilisée pour la réalisation de l'essai et confirme que ce dernier a été réalisé de façon ouverte, transparente, équitable et conforme au plan d'essai d'évaluation opérationnelle pour les hélicoptères moyens.

Autorité technique de la GCC : Nom en caractères d'imprimerie _____

Signature :_____

Représentant du soumissionnaire : Nom en caractères d'imprimerie _____

Signature :_____

Chef pilote de Transports Canada : Nom en caractères d'imprimerie _____

Signature :_____

Responsable du contrat de TPSGC : Nom en caractères d'imprimerie _____

Signature :_____

Directeur de l'essai : Nom en caractères d'imprimerie _____

Signature :_____

Commandant de bord du soumissionnaire :	Nom en caractères d'imprimerie _____ Signature :_____
Pilote de Transports Canada chargé de l'évaluation :	Nom en caractères d'imprimerie _____ Signature :_____
Surveillant de l'équité :	Nom en caractères d'imprimerie _____ Signature :_____

PIÈCE JOINTE 6 – Journal de l'essai d'évaluation opérationnelle

DATE DU JOURNAL DE VOL _____ N^{O} DE L'ESSAI _____

PILOTE CHARGÉ DE L'ÉVALUATION :_____

PILOTE DU SOUMISSIONNAIRE CHARGÉ DE L'ESSAI :_____

DIRECTEUR DE L'ESSAI : _____

Nº d'article	Numéro du vol	Heure de début	Heure de fin	Altimètre/météo/température	Commentaires

Fisheries and Oceans Canada | Pêches et Océans Canada

Coast Guard | Garde côtière

Canadian Coast Guard

Appendix B to ANNEX E
Logistics Plan for Operation Evaluation Test
Medium Helicopters
CCG Helicopter Project
December 12, 2013

Approvals

Deputy Project Manager	TBD	Approved: Date:
Project Manager	P. Egener	Approved: Date:
Director General, Major Projects	R. Wight	Approved: Date:

Table of Contents

1. PURPOSE

The purpose of this Logistics Plan is to provide details pertaining to the requirement for logistics support necessary to conduct the Operational Evaluation Testing of proposed solutions for the CCG Medium Helicopter. This Logistics Plan relates directly to the Operational Evaluation Test Plan, which outlines the detailed test objectives for performing the key operational tasks of helicopter performance, useful load, shipboard compatibility and vertical reference flight (as outlined in the Baseline Statement of Requirements for the CCG Medium Helicopters). All operational testing will be conducted as described in the CCG Medium Helicopter Operational Evaluation Test Plan. Testing will be recorded, verified and witnessed by all Authorized representatives from Canadian Coast Guard, Public Works and Government Services Canada, Transport Canada and the Bidder.

As outlined in the Operational Evaluation Test Plan the key operational evaluations are scheduled as follows:

1. Helicopter Performance (Day 2)
2. Useful Load (Day 3)
3. Blade Folding Capability (Day 3)
4. Vertical Reference Flight (Day 4)

2. OVERVIEW

The primary elements of the evaluation, including ground testing and pre-test evaluations, will be conducted at Transport Canada's facility located at 200 Comet Private, Ottawa, Ontario, Canada. The in-flight tests of the operational evaluation, with the exception of the useful load test, will be conducted at Gatineau Airport, 1717 Arthur-Fecteau Street, Gatineau, Quebec, Canada. Any material resources required for in-flight testing will be provided by Transport Canada.

3. ROLES AND RESPONSIBILITIES

As outlined in the Operational Evaluation Test Plan, a minimum flight test crew comprising of a Bidder Supplied Test Pilot, a Test Director, and a Transport Canada Evaluation Pilot shall be carried for all tests and evaluations.

A team of three (3) qualified Transport Canada Evaluation Pilots will conduct the Operational Evaluation under the supervision of the Transport Canada Chief Pilot, Rotorcraft Operations and in coordination with the Bidder Test Pilot as the Pilot in Command.

The Test Director will be a third-party expert in flight test and will ensure that the flight test process is conducted impartially, in accordance with the documented CCG Medium helicopter Operational Evaluation Test Plan and established industry practices.

The Transport Canada Evaluation Pilot will be qualified, current and proficient in precision vertical reference flight.

The crewmembers and evaluation team shall have the following assigned roles and responsibilities:

3.1 The Bidder's Test Pilot

- Shall be onboard and retain authority as Pilot in Command (PIC) during all test flights. The PIC shall be responsible for the safe execution of the mission and has the final authority over the safety of flight, positive aircraft control, and adherence to regulations and limitations.

3.2 The Transport Canada Evaluation Pilot(s)

- Responsible for executing the test points and providing responses to the Cooper-Harper and Bedford evaluations.

3.3 Test Director (Third Party)

- Ensures all tests are conducted in accordance with the documented CCG Medium Helicopter Operational Evaluation Test Plan.
- Adjusts the test - point sequence and coordinates the crew to achieve the test objectives in the optimum manner.
- Cues the crew when to conduct each test point, and initiates an abort of a test point, if necessary
- Determines whether a test point has been successfully completed or needs to be repeated.
- Leads the Evaluation Pilot through the Cooper-Harper and Bedford Evaluation processes
- Collects hand-recorded data and operates the aircraft data acquisition system, when installed, for **all** Operational Evaluation Testing (Flight and Ground Testing)
- Operate a video camera.
- Leads post-test debrief meetings
- Witnesses and endorses test methodology to ensure comprehension and confirm agreement to the requirements specified in the test plan.
- Witnesses and acknowledges that each test has been completed.

3.4 CCG Technical Authority

- Provides a briefing of the activities and expectations for the operational test team prior to commencing any testing. This briefing will include all CCG evaluation test participants and observers.
- Observes and verifies testing to ensure compliance with CCG Medium Helicopter Baseline Statement of Requirements. Witnesses and endorses test methodology to ensure comprehension and confirm agreement to the requirements specified in the test plan.
- Witnesses and acknowledges that each test has been completed in accordance with the test plan.
- Participates as an observer in the post - flight de-brief meetings.
- Participates in a de-brief meeting with the Test Director and the Fairness Monitor at the end of each day.

3.5 Bidder Representative

- Witnesses and endorses test methodology to ensure comprehension and confirm agreement to the requirements specified in the test plan.
- Witnesses and acknowledges that the test has been completed.

3.6 Transport Canada Chief Pilot Rotorcraft Operations:

- Briefs all test participants prior to any and all testing of the Bidder's aircraft.
- Supervises the overall safety of the Transport Canada Evaluation Pilots during flight operations.
- Witnesses and endorses test methodology to ensure comprehension and confirm agreement to the requirements specified in the Test Plan with respect to safety issues and compliance with aviation regulations and practices.
- Witnesses and acknowledges that the test has been completed.
- Witnesses and verifies ballasting of the aircraft.
- Participates in the post - flight de-brief meetings.

3.7 PWGSC Contracting Authority:

- Ensures that the Operational Evaluation Tests are carried out with openness, transparency and integrity, and in an impartial manner.
- Primary point of contact from Canada's Team for the Bidder Representative.
- Primary point of contact from Canada's Team for all contract related concerns related to the operational evaluation testing.
- Witnesses and endorses test methodology to ensure comprehension and confirm agreement to the requirements specified in the test plan.
- Witnesses and acknowledges that the test has been completed.
- Participates as an observer in the post-flight de-brief meetings.
- Participates as an observer in a de-brief meeting with the Test Director and CCG Technical Authority at the end of each day.

3.8 Fairness Monitor:

- Ensures that all testing is conducted in a consistent and impartial manner.
- Witnesses and acknowledges that the test has been completed.
- Participates as an observer in the post-flight de-brief meetings.
- Participates as an observer in a de-brief meeting with the Test Director and CCG Technical Authority at the end of each day.

4. REQUIREMENTS FOR MEETINGS

4.1 Introductory Meeting

An introductory meeting will be held at Transport Canada prior to commencing Operational Evaluation Testing. This meeting will be used to introduce participants, ensure that roles and responsibilities are clear and discuss the general goals and expectations of the Operational Testing.

Transport Canada Facilities Management group will conduct a Safety and Security Briefing for all evaluation participants and observers. This briefing is required prior to commencing the Operational Evaluation Tests for each Bidder.

4.2 Pre-Test Meetings

Prior to each day's test activities, the CCG Technical Authority will provide a briefing of the activities and expectations for the operational evaluation testing for that day. This meeting will include all CCG evaluation test participants and CCG observers.

Prior to any and all testing of the Bidder's aircraft, the Chief Pilot shall brief all test participants. The Pre-Test Acknowledgement Form for each test shall be endorsed by Canadian Coast Guard (CCG), Transport Canada (TC), Public Works and Government Services Canada (PWGSC), the Fairness Monitor, Test Crew and the Bidder.

4.3 Meeting Minutes and Decision Record

All meetings, briefings and debriefings will be minuted and records of decisions will be documented. PWGSC will be responsible to provide personnel for minute and decision record writing.

5. BIDDER REQUIREMENTS

5.1 General

In preparation for the Operational Evaluation, the Bidder must present the Representative Aircraft, Test Pilot, Maintenance Engineer and Ground Handlers for testing, as described in the Operational Test Plan.

The Bidder shall be responsible for preparing the aircraft for all tests. This pertains to every interaction with the aircraft, including aircraft loading. Where there is a requirement to weigh the aircraft, the Bidder will be responsible to supply all tools for the weighing of their helicopter with the exception of the aircraft scales. If there is a requirement to lift the helicopter to place it on blocks for the purpose of weighing, the Bidder will also be responsible to supply lifting tools for their aircraft types.

During Flight and Ground testing, the Bidder-supplied Test Pilot, as the Pilot in Command, has final authority over the conduct and maneuvering of the aircraft.

5.1.1 Bidder Representative

For the purpose of the Operational Evaluation Tests for Medium Helicopters, the Bidder Representative is defined as the individual designated by the Bidder as the authorized on-site representative responsible to witness and acknowledge in writing, agreement to all Operational Evaluation Tests.

5.1.2 Bidder and Bidder Aircraft Accommodation

For the duration of the Operational Evaluation Testing, the Bidder shall be responsible to provide their own meeting rooms and any overnight accommodations (eg. hangar and security) for their aircraft.

5.1.3 Costs

The Bidder is responsible for all costs associated with testing including hangar space for the stowage and the security of their aircraft. The Bidder will be responsible to obtain their own boardroom space for any internal meetings. Canada will not be responsible for any costs associated with testing, planned or otherwise.

5.1.4 Representative Aircraft

For the purpose of this Operational Evaluation, the Representative Aircraft of the proposed solution for the CCG “Configuration A” helicopter must be the same make, model and variant as the aircraft being proposed in the RFP submission.

The Representative Aircraft shall be equipped with appropriate emergency floatation gear, (complete with external life rafts), dual flight controls and blade folding kits for the purpose of these tests.

All kits and equipment under development to satisfy the requirements of CCG "Configuration A" must be identified in a document to be provided to the delegated CCG authority at the time of the Operational Evaluation. As specified in the CCG Medium Helicopter Baseline Requirements document, all necessary kits and equipment to satisfy the requirements of CCG "Configuration A" shall be completed and have received Transport Canada approval by the time of the first aircraft delivery.

Where any kits (including STCs), equipment, and items requiring Transport Canada approval are required to be developed for the final aircraft, for the purpose of demonstrating a Representative Aircraft, the Bidder shall provide all documentation (including relevant drawings) and associated calculations demonstrating that the weight shall correspond to the proposed aircraft solution submitted as part of the bid submission.

5.2 Ground Handling

Evaluation and demonstration requiring ground handling of the aircraft shall be the responsibility of the Bidder.

All equipment and tools required for handling of the aircraft shall be supplied by the Bidder. This includes items such as any blade folding kit, cradles, ground handling wheels and associated ground handling equipment, etc. that may be required.

Canada will observe the Bidder personnel performing the ground handling or ground movement of the aircraft during any part of the operational evaluation and demonstration.

5.3 Familiarization and Training

The Bidder shall provide training for the Transport Canada Evaluation Pilots. Study material and training documentation shall be provided by the Bidder to Canada at the time of bid submission. A maximum of three hours of ground school will be conducted by the Bidder's team as part of Day 1 Activities of the Operational Evaluation Testing to provide an overview of the helicopter and its salient systems.

Prior to the start of the Operational Evaluation Testing, the Bidder shall provide a familiarization flight for each Transport Canada Evaluation Pilot (maximum of three pilots) at a minimum duration of 1.0 flight hour per pilot.

5.4 Aircraft Documentation

As part of the Bid Submission, the Bidder shall provide the Aircraft Flight Manual and other key documentation listed below to prepare for testing in a separate package marked **"Operational Evaluation Test Plan Documentation"**.

5.4.1 Engine Power Available Charts

The Bidder shall supply engine power available charts for the engines as installed in the helicopter. The range of the charts shall cover from sea level, ISA standard, to 10,000' ISA +30°C and all engine ratings (twin and single).

5.4.2 Hover Performance Charts

The Bidder shall supply the following hover performance information for the helicopter in the configuration(s) required for the tests.

5.4.3 Flight Manual Performance Charts

The Flight Manual (FM) charts for IGE and OGE hover performance will be used to determine the maximum weight capability at the stated altitudes .The Bidder will supply FM charts for hover capability.

5.4.4 Hover C_P vs. C_T Charts

The Bidder shall provide non-dimensional charts of Coefficient of Thrust (C_T) (i.e. weight) vs. Coefficient of Power (C_P) for hover performance in the configuration required for the tests. The Bidder shall include such charts for a single IGE hover. For hover OGE charts shall be provided for 'hovering up' from an IGE hover to hover OGE (i.e. hover height above ground no more than 1.5 times rotor diameter), as well as that obtained by 'flying in' to an OGE hover from forward flight at heights over 2 rotor diameters above ground.

5.5 Aircraft Preparation

In preparation for operational testing, all necessary test components including weights and configurations shall be witnessed and endorsed in writing by authorized representatives from CCG, Public Works and Government Services Canada, Transport Canada, the Fairness Monitor, the Bidder Representative and Flight Test Crew.

5.6 Data Collection and Witnessing

During Operational Testing of the Representative Aircraft, data will be gathered by various means including the following:

- Video-recording and/or digital camera photography of internal (cockpit) and outside views, by fixed and/or helmet mounted cameras.
- Audio recording of the intercom channel and the aircraft radios.
- Electronic data entry by the Test Director of the Cooper-Harper survey responses.

CCG will provide the camera(s) and equipment on Day 1 of the evaluations for installation by the Bidder under the supervision of the Test Director. The Test Director will identify where the temporary mounts for the cameras that will be installed. Areas of interest include the flight controls and instrument panels.

All tests described in the Operational Evaluation Test Plan, and resulting data shall be witnessed and endorsed by Canada and Bidder representatives to ensure that all authorized representatives understand the requirements specified in the test plan, including methodology. Upon completion of each test, the designated authorized representatives will witness and acknowledge that the test has concluded. All Pre-Flight and Post-Flight Acknowledgement forms will be endorsed by the Coast Guard, Public Works and Government Services Canada, Transport Canada, the Bidder Representative, Test Crew and the Fairness Monitor

5.7 Schedule

Transport Canada shall provide a mock-up of the facilities and test areas prior to the scheduled evaluation and demonstration dates for the purpose of conducting a full pre-test dry run through of demonstration activities. Dry Run activities will be timed. Given the extent of the Operational Evaluation Testing, it is anticipated that five (5) consecutive days will be required to complete an adequate evaluation. The schedule of activities is found in Section 3 of the Operational Evaluation Test Plan.

In the event of postponement or cancellation due to unforeseen or uncontrollable circumstances such as poor weather conditions, the evaluation will be re-scheduled. If a change in the schedule is required, this will be arranged by the CCG Project Technical Authority in collaboration with Public Works and Government Services Canada. All changes shall be agreed upon in writing and endorsed by the Bidder Representative, CCG Technical Authority and Public Works and Government Services Canada and the Fairness monitor.

Canada will make every effort to ensure the continuation of the Operational Test is expedited and completed in a timely fashion.

6. FACILITIES

All safety and security requirements related to the facility during the Operational Evaluation Testing will be managed by Transport Canada's Facility Manager. For the purpose of this document "safety and security" refers to the safety and security regulations and policies that have to be adhered to for access to Transport Canada's hangar and restricted areas of Ottawa International Airport (airside).

Transport Canada's Facility Management will oversee all construction activities (ex., shipboard hangar mock up) and facility logistics related to the Operational Evaluation Testing conducted in or around Transport Canada's hangar.

6.1 Security

6.1.1 Airside Security Requirements

The “airside” of the facility is a restricted area. Unescorted access to airside can only be granted to personnel who hold a valid Restricted Area Identification Card (RAIC). Visitors who do not hold a valid RAIC are only permitted airside with a temporary RAIC, clearly displayed and must be accompanied by an escort at all times.

6.1.2 Facility Security Requirements

Government of Canada (GOC) Personnel is permitted access to Transport Canada facilities. GOC personnel are required to present their GOC ID to the commissionaire office upon entry into the facility. A temporary Transport Canada ID will be provided to personnel and must be clearly displayed at all times.

Non-Government of Canada Personnel are only permitted access with a temporary access card and an escort. Non-GOC personnel are required to present government issued picture ID (ex., driver’s license) to the commissionaire office upon entry into the facility. A temporary Transport Canada ID will then be provided and must be clearly displayed at all times.

6.1.3 Escorts

Escorts are required for any personnel holding a temporary RAIC or Transport Canada Facility pass. One escort is required for every 10 people holding a pass type that requires an escort. Escorts will be assigned to the Operational Evaluation Test Team by the Transport Canada Facilities Manager.

6.2 Safety

Airside and facility safety will be addressed through a “Safety Orientation” that will be provided to **all** personnel participating in the Operational Evaluation Testing. The orientation will include items such as situational awareness on airside, location of fire exits, parking requirements, location of washrooms, etc.

6.3 Meeting Areas

Transport Canada will provide a boardroom for the Canada Evaluation Team to conduct briefings, debriefings and reviews of applicable documentation for certification and endorsement.

A working area (desk/bench) on the hangar floor will also be reserved for the duration of the testing.

Bidders are responsible for booking their own meeting rooms for the duration of the testing.

6.4 Human Resources and Material Requirements

To successfully execute the demonstration, the following is a list of material and human resources to be provided by each of the stakeholders involved in the evaluation.

6.4.1 Bidder

- A list of personnel that will be participating in the Operational Evaluation Testing shall be provided to PWGSC at least 14 days prior to the first day of testing. This information shall consist of each individual's name and job title.
- Each visitor is required to have a valid government issued photo ID that can be held at the commissionaire office until the RAIC and facility pass is returned.

6.4.2 Transport Canada

- A complete Safety and Security briefing for all evaluation participants completed by Transport Canada Facilities Management.
- A fabrication representing the required hangar dimensions stipulated in the CCG Baseline Statement of Requirements for Medium Helicopters.
- The appropriate number of RAIC's and facility passes for all Operational Evaluation test dates.
- Ensure that the appropriate number of RAIC's and facility passes are readily available for all test dates.
- The appropriate number of escorts required for each test day.
- Portable VHF (+Spare) on the ground to communicate with the A/C.

6.4.3 Canadian Coast Guard Technical Authority

- An advanced list of personnel that will be participating in the Operational Evaluation will be supplied to Transport Canada. This list will consist of Government and Bidder personnel, identifying the type of passes required (5 days advance notice is required to ensure availability of RAIC and Facility passes).
- Each visitor is required to have a valid Government issued photo ID that can be held at the commissionaire office until the RAIC and Facility pass is returned.
- The measurements of the hangar and structures to be constructed (supplied to Transport Canada).
- If required, additional funding for additional escorts.

6.4.4 Public Works and Government Services Canada

- A list of personnel that will be participating in the Operational Evaluation Test including personnel participating on behalf of the Bidder to be supplied to CCG 14 days prior to testing.

– Each visitor is required to have a valid Government issued photo ID that can be held at the commissionaire office until the RAIC and Facility pass is returned.

7. OPERATIONAL EVALUATION TEST SUPPORT

To successfully execute the demonstration, the following is a list of material requirements and human resources to be provided by each of the stakeholders involved in the evaluation.

The Coast Guard, Public Works and Government Services Canada, Transport Canada, the Bidder Representative, Test Crew and the Fairness Monitor will participate in all Operational Evaluation Testing to fulfill the Roles and Responsibilities as described in Section 3 of this document.

7.1 Helicopter Performance

The Helicopter Performance Test will be conducted during Day 3 Activities of the Operational Evaluation Testing.

7.1.1 Bidder

– A Bidder Test Pilot to participate in conducting the test.
– A Bidder Maintenance Engineer to participate in conducting the test.
– Personnel to weigh the aircraft.
– A Representative Aircraft as described in the Operational Evaluation Test Plan.
– Report the differences between the Representative Aircraft and the proposed final aircraft, in “Configuration A”.
– An advance copy of the certified weight and balance data including equipment lists for the Representative Aircraft that will be presented for the purpose of the Operational Evaluation.
– Maintenance documentation on procedures for weighing the aircraft.
– Specialized support equipment for weighing the aircraft.

7.1.2 Transport Canada

– A TC Maintenance Engineer to participate in conducting the test.
– A TC Evaluation Pilot to participate in conducting the test.
– Calibrated Aircraft Weigh Scales **(Jetweigh Aircraft Weighing Kit P/N 64001-04 S/N M1466C)** to weigh the aircraft.
– The scales must be accompanied by the calibration records to ensure accuracy.
– Personnel to operate the scales.
– As required, weigh all personnel, bags and equipment.

7.2 Useful Load

The Useful Load Test will be conducted during Day 3 Activities of the Operational Evaluation Testing.

7.2.1 Bidder

- A Bidder Test Pilot to participate in conducting the test.
- A Bidder Maintenance Engineer to participate in conducting the test
- A Representative Aircraft as described in the Operational Evaluation Test Plan.
- Report the differences between the Representative Aircraft and the proposed final aircraft, in “Configuration A”.
- An advance copy of the certified weight and balance data including equipment lists for the Representative Aircraft that will be presented for the purpose of the Operational Evaluation.
- Two (2) Headsets for TC Evaluation Pilot and Test Director.
- An adapter cable with a U-61/U plug on one end and a U-174/U plug on the other end for Pilot helmets.

7.2.2 Transport Canada

- A TC Maintenance Engineer to participate in conducting the test.
- A TC Evaluation Pilot to participate in conducting the test.
- Ballast Bags (labeled and sealed).
- Calibrated Scales to weigh and certify the total weight of ballast bags and aircraft crew.

7.3 Blade Folding Capability

The Blade Folding Capability Test will be conducted during Day 3 Activities of the Operational Evaluation Testing.

7.3.1 Bidder

- A Bidder Test Pilot to participate in conducting the test.
- A Bidder Maintenance Engineer to participate in conducting the test.
- A Representative Aircraft as described in the Operational Evaluation Test Plan.
- Report the differences between the Representative Aircraft and the proposed final aircraft, in “Configuration A”.
- Maintenance procedures for ground handling the aircraft.
- Flight Manual and/or Maintenance manual or supplement, ICAs for blade folding and unfolding.

- Ground Handlers and Marshallers to move the Representative Aircraft and prepare the aircraft for testing.
- Two (2) personnel to fold the blades without the use of tools and install cradles as specified in the Operational Evaluation Test Plan.
- Ground Handling Wheels and associated ground handling equipment.

7.3.2 Transport Canada

- A TC Maintenance Engineer to participate in conducting the test.
- A TC Evaluation Pilot to participate in conducting the test.
- A videographer, camera and video recording equipment.

7.4 Vertical Reference Flight

The Vertical Reference Flight Test will be conducted during Day 4 Activities of the Operational Evaluation Testing.

7.4.1 Bidder

- A Bidder Test Pilot to participate in conducting the test
- A Bidder Maintenance Engineer to participate in conducting the test.
- A Representative Aircraft as described in the Operational Evaluation Test Plan.
- Report the differences between the Representative Aircraft and the proposed final aircraft, in “Configuration A”.
- Handling personnel to prepare the Representative Aircraft for testing.
- Two (2) Headsets for TC Evaluation Pilot and Test Director.
- An adapter cable with a U-61/U plug on one end and a U-174/U plug on the other end for Pilot helmets.
- Transportation for Bidder team to and from Gatineau Airport.

7.4.2 Transport Canada

- A TC Maintenance Engineer to participate in conducting the test.
- A TC Evaluation Pilot to participate in conducting the test.
- A videographer, camera and video recording equipment.
- The necessary approvals to conduct testing at Gatineau Airport.
- Long lines, nets and cargo (ballast) for testing.
- Calibrated Scales to weigh and certify the total weight of ballast bags and aircraft crew.
- Transport equipment, lines, nets and cargo required for testing to Gatineau Airport.
- Mark ground test area of Gatineau Airport as described in the Operational Evaluation test Plan.

Fisheries and Oceans Canada | Pêches et Océans Canada

Coast Guard | Garde côtière

Canadian Coast Guard

Annex F: CCG Helicopter Mission Profile Document

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Approvals

Project Manager	P. Egener	Approved: Date:
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1 Purpose

This Helicopter Mission Profile document provides a description of how the Canadian Coast Guard (CCG) helicopters are employed in support of CCG's mandate.

2 Background

CCG provides maritime services supporting government priorities, contributing to the safety, accessibility, sustainability and security of Canadian waters. In doing so, CCG serves clients in all sectors of the Canadian economy. CCG programs deliver services to Canadians that include:

- Aids to navigation, icebreaking, search and rescue, pollution response, and marine communications and traffic services to commercial fishers, commercial shippers, ports and recreational boaters;
- A response to federal maritime priorities and natural or man-made emergencies. The provision of support for various activities mandated under the Federal Emergency Response Plan and involvement, both nationally and internationally, in planning and exercises related to environmental response and search and rescue; and,
- Support to Department of Fisheries and Oceans (DFO) programs by providing vessels, helicopters, and maritime professionals to support science activities and to help manage and protect fisheries resources. Internal clients include DFO Fisheries Management, DFO Oceans Management, DFO Science, and DFO Small Craft Harbors.

In addition, CCG supports the non-military activities of other government departments and agencies by providing vessels, aircraft, marine expertise, and other maritime services, including support to maritime security activities. Clients for these services include the following:

- Department of National Defense;
- Environment Canada;
- Natural Resources Canada;
- Public Safety Canada;
- Royal Canadian Mounted Police;
- Canada Border Services Agency; and
- Transport Canada.

3 Scope

This document outlines the current mission profiles for the entire CCG helicopter fleet. These profiles provide insight to the activities that the CCG fleet undertakes to fulfill its mandate and outline the nature of the environmental conditions in which the helicopters operate, referring to factors such as weather, temperature, implications regarding coastal and high altitude areas, etc.

4 Profiles for CCG Programs

4.1 CCG Mission Overview

The Canadian Coast Guard light and medium helicopters will support a number of CCG programs such as Aids to Navigation, Icebreaking services, Marine Communication Traffic Services, Search and Rescue and Environmental Response, as well as the programs of the Department of Fisheries and Oceans and other government departments. These helicopters support activities such as:

- Personnel and cargo transfer, ship to shore and land based sites;
- Icebreaking and Ice reconnaissance;
- Support for Aids to Navigation and MCTS sites;
- Environmental Response;
- Support for Department of Fisheries and Oceans programs;
- Support for Other Government Departments and Agencies; and,
- Secondary Search and Rescue.

The helicopters operate in all areas of Canada, including the East and West Coasts, the Arctic, Great Lakes and St. Lawrence Seaway as well as inland waters and Canada's north.

Currently, both light and medium helicopters are used to conduct CCG missions, however limitations regarding helicopter size, range and lift capacity may determine which helicopter is assigned to a specific task.

Based on operational requirements, CCG envisions replacing the current fleet, possibly using up to three helicopter types, as follows:

a. Light helicopter capable of:

- Seating at least four passengers plus crew;
- Being hangared aboard existing CCG vessels;
- A useful load capacity of at least 453.5 kg (1000lbs) plus the necessary fuel to achieve a minimum endurance of at least two hours.

b. Medium helicopters capable of:

- Seating at least nine passengers plus crew;
- Landing aboard existing CCG vessels;
- Lift capacity of at least 3800lbs (including pilot, full fuel and payload); and,
- Minimum endurance of approximately two hours.

However, CCG's preference is to minimize the number of helicopter types in an effort to achieve economies of scale and reduced life cycle costs (maintenance and fuel costs), while ensuring that the requirements for each helicopter type mentioned above can be satisfied.

This document addresses the mission profiles for the light and medium helicopters.

4.2 Specific Mission profiles

4.2.1 Mission Profile 1 - Personnel and cargo transfer, ship to shore and land based sites

The new CCG light and medium helicopters will be used for personnel and cargo transfer between ship and shore and for crew changes, transporting injured persons or resupplying light stations or other remote sites with various items including mail, household goods, groceries, equipment etc.

In this capacity, the helicopter must be capable of over-water flight and operating from land and shipboard facilities in the harsh operating environment, often in reduced visibility conditions, associated with Canada's northern and maritime and coastal areas. The helicopter may be required to travel long distances from ship to shore (at least 240 nm / 444 km) or to reach light stations or other sites in remote locations such as the Queen Charlotte Islands, Sable Island or Canada's arctic, sometimes landing at unprepared sites.

The nature of CCG missions require that the interior of the helicopter be easily reconfigurable to accommodate passengers and crew together with cargo, and on occasion, it may be necessary to alter the aircraft interior to carry only crew and cargo. Rear facing cargo doors are used by crew to easily access cargo on the aircraft or easily retrieve a litter kit with a minimum of discomfort to the injured party.

4.2.2 Mission Profile 2 - Icebreaking and Ice Reconnaissance

CCG regions that provide icebreaking services use icebreakers with onboard helicopter facilities (hangar, etc.). During the winter, icebreakers and shipboard helicopters operate as a team, to facilitate the movement of ships through ice infested waters. Typical operations include ice reconnaissance as well as ice breaking.

Using the CCG light helicopter for ice reconnaissance operations often involves low level flying (under 500ft.) for at least 2 hours in cold weather temperatures extending to minus 30 degrees Celsius, over water, ice or land. The helicopters are used to conduct spring ice surveys to determine how fast ice is clearing and when CCG operations to commission aids to navigation can begin or to assess harbors for CCG vessels in advance of doing harbor breakouts.

At CCG, ice reconnaissance missions are conducted via a partnership agreement with the Canadian Ice Service branch at Environment Canada to provide an Ice Service Specialist to conduct ice surveys using a CCG helicopter. While aboard the helicopter the ice service specialist uses a laptop computer tablet connected to a GPS mechanism to record ice conditions and digitizes the information to generate an Ice Chart. The helicopter is often used to assess ice conditions approximately 50 miles from the vessel, greatly enhancing the visibility provided by shipboard radar. These missions are undertaken from both ship-borne and shore-based facilities and the helicopters may be required to land on snow and ice to retrieve ice samples.

4.2.3 Mission Profile 3 – Support for Aids to Navigation and MCTS Sites

The CCG new light and medium helicopters will be capable of providing the necessary support to maintain CCG Aids to Navigation and Marine Communications Traffic System (MCTS) sites, which may be remotely located at altitudes up to 1981m (6500ft.). Major Aids to navigation and MCTS sites require periodic preventive maintenance visits and refurbishment during their life cycle. Helicopters provide the necessary means of transport for the technicians, electronics components, construction materials and equipment to execute these tasks.

During such missions rear facing cargo doors would habitually be used to readily access equipment and materials, some of which may be irregularly shaped. Likewise, the capacity to sling sizeable loads would often be utilized to relocate materials and equipment from land or ship locations to mountaintop or otherwise inaccessible sites, in order to complete construction activities. For this reason, the light helicopters must be capable of transporting a useful load of at least 453.5 kg (1000 lbs) plus the necessary fuel to achieve a minimum endurance of at least two hours, internally and/or externally, while medium helicopters, which are often used in tower construction, must be able to transport useful loads of at least 1723kg (3800lbs).

All helicopters in the coast Guard are required to sling loads and the long line vertical reference capability allows the cargo to be delivered to otherwise inaccessible areas, with reduced environmental impact, as the size of drop zone requirement can be minimized. Lines can extend to up to 46 m (150ft) in length, in order to safely clear ship superstructure and other obstacles and allow optimal maneuverability of the helicopter.

Items slung by helicopter can include cement, sand, gravel and structural tower units. Incorporating a remote hook capability will permit the deposit of the load with minimal environmental footprint and risk, without the need for ground personnel to assist.

In this work scenario, the operating environment for the pilot and CCG personnel is highly demanding and intense, compounded by the challenges associated with performing repetitive tasks at high altitudes, in variable coastal environmental conditions, such as fog and cold temperatures. The pilot must be capable of viewing the sling equipment, the load, the drop zone and the ground crew at all times to facilitate safe delivery of the load and must be able to continually assess aircraft performance indicators while conducting the external lift so that the aircraft integrity and safety is not compromised.

4.2.4 Mission Profile 4 - Environmental Response

CCG Helicopters are used to identify suspected polluters. Generally, the light helicopters are used as platforms to collect pollutants (samples), acquire photographs or video from remote areas which are not accessible by any other means. On such missions, they often operate from ship borne facilities, flying at low altitudes for extended periods of time, in potentially reduced visibility conditions in a cold weather maritime environment.

One of the primary tools for oil spill reconciliation is “Heli-Torching”, where an incendiary device is attached to the underside of the helicopter, using the cargo hook, under the control of the pilot and is used to ignite pollutants (oil) and mitigate environmental risks. This task is often done at reduced speed.

4.2.5 Mission Profile 5 - Support for Department of Fisheries and Oceans Programs

CCG provides support for various DFO programs including those of the Ecosystems and Oceans Science (EOS) and Ecosystems and Fisheries Management (EFM). Missions supporting EOS may involve low altitude flying over large areas, in a maritime environment, to conduct ice reconnaissance using the DFO produced ice thickness probe, which is attached to the forward external aircraft fuselage. This exercise is carried out in order to study climate change and assess the situation pertaining to the thickness of the ice in a specific geographic area. For this activity, the ice service specialist generally brings a laptop computer and GPS equipment aboard the helicopter for use during the flight.

CCG deploys ice breakers and helicopters to support activities such as the annual seal hunt in the Gulf of St. Lawrence and the Front at the North East Coast of Newfoundland and Labrador. During these missions, a light helicopter is used primarily to identify both seal herd concentrations, and enforcement for EFM, with the fisheries observer

positioned in the front seat while using a laptop, possibly the helicopter GPS and video camera equipment that is mounted aboard the aircraft for the duration of the flight. Again, the nature of these missions indicates a harsh, possibly low visibility operating environment, where the helicopter may be operating from a ship borne base.

4.2.6 Mission Profile 6 - Support for Other Government Departments and Agencies

Given that CCG provides the on water support for Maritime Security activities, the mission operating environment requires both light and medium CCG helicopters to be in continuous communication during the exercise with parent vessels and partner agencies and departments. To that end, CCG helicopters will be required to have radio communication compatibility with the Department of National Defense (DND), the Royal Canadian Mounted Police (RCMP) and other government departments (OGD) and agencies as necessary. These activities may take place in coastal areas, requiring operations based aboard vessels or landing on unprepared surfaces (on snow, ice or rough terrain).

In this situation, a helicopter having Instrument Flight Rule (IFR) capability would provide the pilot the capacity for enhanced situational awareness to address navigation and emergency situations.

4.2.7 Mission Profile 7 – Secondary Search and Rescue

At times, the light helicopters accompanying CCG vessels may be used for air surveillance to augment CCG's surface Search and Rescue capability. While working onboard CCG vessels, they can and have assisted in SAR missions for missing or stranded fishers.

In this capacity the helicopter may be required to travel at low altitudes, over large areas, for at least two hours. It may be necessary to conduct these search activities in reduced visibility conditions in a harsh maritime environment, requiring IFR capability and the use of Night Vision Goggles.

MEDIUM HELICOPTER BID SCORE SHEET

Weight	FINANCIAL		Unit Price			Acquisition Sub-total		
		Qty	*Bidder A*	*Bidder B*	*Bidder C*	*Bidder A*	*Bidder B*	*Bidder C*
50	**Acquisition**	4	19,000,000	18,500,000	20,000,000	76,000,000	74,000,000	80,000,000
		5	18,900,000	18,400,000	19,900,000	94,500,000	92,000,000	99,500,000
		6	18,800,000	18,300,000	19,800,000	112,800,000	109,800,000	118,800,000
		7	18,700,000	18,200,000	19,700,000	130,900,000	127,400,000	137,900,000
		8	18,600,000	18,100,000	19,600,000	148,800,000	144,800,000	156,800,000
					Sum of prices for all quantities is Total Bid Price (Pn)=	563,000,000	548,000,000	593,000,000
					Lowest Price Proposal (LowPP) =	548,000,000		
					LowPP / Pn =	0.97	1.00	0.92
	TECHNICAL				O&M Cost Proposal (OMC) =	1,245	1,166	1,433
10	**O&M**				Lowest O&M Cost (LowOMC)=	1,166		
					LowOMC / OMC =	0.94	1.00	0.81
					Multiplied by O&M Weight to give O&M Points =	9	10	8
15	**Operational Test**				Operational Test Score for each bidder (OTSn) =	104	100	100
	See separate worksheet				Maximum Operational Test Score (MaxOTS) =	110	110	110
					OTSn / MaxOTS =	0.95	0.91	0.91
					Multiplied by Operational Test Weight to give Operational Test Points =	14.2	13.6	13.6
15	**Rated Requirements**				Rated Score for each bidder (RSn) =	32.50	50.00	47.45
	See separate worksheet				Maximum Rated Score (MaxRS)=	100		
					RSn / MaxRS =	0.33	0.50	0.47
					Multiplied by Rated Weight to give Rated Requirements Points =	4.9	7.5	7.1
	Project Management							
6	Project Management Plan				PMP Score (PMPn) =	23	24	22
	See separate worksheet				Maximum Rated Score (MaxPMP)=	32		
					PMPn / MaxPMP =	0.72	0.75	0.69
					Multiplied by Rated Weight to give Project Management Plan Points =	4.31	4.50	4.13
4	Maintenance Management Plan				MMP Score (MMPn) =	27	38	33
	See separate worksheet				Maximum Rated Score (MaxMMP)=	44		
					MMPn / MaxMMP =	0.61	0.86	0.75
					Multiplied by Rated Weight to give Maintenance Management Plan Points =	2.45	3.45	3.00
100					Total Weighted Technical Points Awarded to each bidder (TPn)=	35.19	39.09	36.02
					Total Available Technical Points (TTP)=	50		
					TPn / TTP =	0.70	0.78	0.72
					Price Weighting Factor (Pwt) =	50		
					Technical Weighting Factor (Twt) =	50		
					LowPP / Pn =	0.973357016	1.000	0.924
					Bidders Final Score =	69.44	78.18	69.30

Bidders Final Score = (TPn / TTP) x (Pwt x LowPP/Pn) + (TPn / TTP x Twt)

Operational Test							Evaluation Scores		
		Scale used	**Bidder 1**	**Bidder 2**	**Bidder 3**		**Bidder 1**	**Bidder 2**	**Bidder 3**
5.1 Hover Performance Analysis		Pass/fail	Pass	Pass	Pass		Pass	Pass	Pass
5.2 Useful Load		Pass/fail	Pass	Pass	Pass		Pass	Pass	Pass
5.3 Blade Folding Capability		Pass/fail	Pass	Pass	Pass		Pass	Pass	Pass
5.4 Vertical Reference Flight						***Max***			
Score of test points 1-3	1	Only Bedford	1	1	3	10	10	10	8
Score of test points 4-7	2	Cooper + Bedford	2	6	4	20	20	16	18
Score of test points 8-11	2	Cooper + Bedford	4	4	3	20	18	18	19
Score of test points 12-17	2	Cooper + Bedford	3	4	3	20	19	18	19
Score of test points 18-23	2	Cooper + Bedford	5	4	6	20	17	18	16
Score of test points 24-34	2	Cooper + Bedford	2	2	2	20	20	20	20
Operational Test Score for each bidder (OTSn) =			17	21	21	110	104	100	100

Modify the points awarded by each scale so Max is 10 and Min is 1. This enables the

Rated Requirements		Units			*Mandatory Reqt*		SCORING									WEIGHT	*Max Pts*	*Max Weighted Pts*	*Bidder A*	*Bidder B*	*Bidder C*
6.4	Cold air operating temperature	Celcius			-30	-31	-32	-33	-34	-35	-36	-37	-38	-39	-40	11%			30	40	50
			Available Points		0	10	20	30	40	50	60	70	80	90	100		100	11	3.3	4.4	5.5
7.2.1	Useful load	lbs			2000	2100	2200	2300	2400	2500						12%			0	40	20
			Available Points		0	20	40	60	80	100							100	12	0	4.8	2.4
7.2.2	Cruise speed	knots			115	120	125	130	135	140						10%	100	10	20	40	60
			Available Points		0	20	40	60	80	100									2	4	6
			(increments of 1 knot will add 4 points)																		
7.2.3	Endurance	minutes			2:20	2:35	2:50	3:05	3:20							17%	100	17	75	50	25
			Available Points		0	25	50	75	100										12.75	8.5	4.25
7.2.6	Cargo Capacity	cu. Feet			215.4	216.4	217.4	218.4	219.4	220.4+						6%	50	6	50	30	10
		(Increments of .1 cu ft will add 1 point)			0	10	20	30	40	50											
7.2.9	Side-to-side landing on sloped surfac	Degrees			5	6	7	8	9	10						2%	100	2	60	40	80
					0	20	40	60	80	100									1.2	0.8	1.6
7.2.10	Cold weather use of Jet A1	Celcius			-30	-31	-32	-33	-34	-35	-36	-37	-38	-39	-40	11%	100	11	50	100	70
			Available Points		0	10	20	30	40	50	60	70	80	90	100				5.5	11	7.7
7.2.13	Shipboard Compatibility				meets requirement											2%	10	2	0	10	0
			Available Points			10														2	
7.2.14	Carrying Antenna internally	N/A	As per Figure 2-Sample interior cargo			Greater than specified in Figure 1										2%	20	2	0	20	0
					0	20													0	2	0

7.3.5.5.1	Passenger seating	assengers			9	10	11	12	13							11%	100	11	25	50	100	
			Available Points		0	25	50	75	100										2.75	5.5	11	
7.3.5.2.1	Autopilot axes	axis			3-axis	4-axis										3%	20	3	20	0	20	
			Available Points		0	20													3	0	3	
7.3.5.5.4	Passenger safety harnesses	point			3-point	4-point										4%	20	4	0	20	20	
			Available Points		0	20													0	4	4	
7.3.5.5.6	Cargo and passenger wall protection				None	Fitted										2%	20	2	0	0	20	
					0	20													0	0	2	
7.3.5.11.1	External video display in EFIS	N/A			None	Yes										5%	20	5	0	20	0	
			Available Points		0	20													0	5	0	
7.3.5.7.1	dual flight controls	N/A				Fitted as described										2%	20	2	20	0	0	
			Available Points			20													2	0	0	
																100%		100	32.5	50	47.45	

Project Management Plan

0	The Bidder did not submit a Project Management Plan
1	The Bidder elaborated on a few identified main sections leaving many gaps. The Bidder did not sufficiently demonstrate how the project will be managed giving the Helicopter Project team a low degree confidence for success.
2	The Bidder elaborated on most identified main sections leaving minimal gaps. In most cases the Bidder demonstrated how the project will be managed giving the Helicopter project team an acceptable degree confidence for success.
3	The Bidder **elaborated** on each identified main section. The Bidder demonstrated how the project will be managed providing the Helicopter project team with a **good degree confidence** for success.
4	The Bidder **fully elaborated** on each identified main section as well and included other applicable and pertinent information. The Bidder clearly and effectively demonstrated how the project will be managed providing the helicopter project team with a **high degree of confidence** for success.

Project Management Plan	*Max*	*Bidder A*	*Bidder B*	*Bidder C*
Master Project Schedule	4	2	2	3
Communication and Issue Management Plan	4	4	4	3
Risk Management Plan	4	4	3	3
Quality Management Plan	4	2	4	3
Technical Data Management Plan	4	4	3	2
Configuration and Change Management Plan	4	3	2	2
Infrastructure Plan	4	2	2	3
HR Plan	4	2	4	3
PMP Score (PMPn) =	32	23	24	22

Maintance Management Plan - Scoring Matrix

	Existing	In place at 1st delivery of Helo	In place at last delivery of helo		*Max*	*Bidder A*	*Bidder B*	*Bidder C*		
Primary warehouse* location										
Canada	12	11	10		12	8	10	7		
United States	10	9	8							
Other	8	7	6							
% of recommended spare parts list SKUs for the CCG fleet stocked at primary warehouse										
Above 80%	12	11	10		12	10	12	9		
60-79%	10	9	8							
40-59%	8	7	6							
20-39%	6	5	4							
Under 20%	4	3	2							
Parts Rental Program for powertrain	5	4	3		5	5	4	5		
Parts Rental Program for drivetrain	5	4	3		5	4	3	4		
Parts Exchange Program for powertrain and drivetrain c	5	4	3		5	4	5	5		
Parts Exchange Program for all other components	5	4	3		5	4	4	3		
			MMP Score (MMPn) =		44	31	38	33		
* As defined in the SOW										

Coast Guard Helicopter Fleet Renewal Project – Medium Helicopters

ANNEX H
Industrial and Regional Benefits (IRB)

Evaluation Plan

Version 3.0

TABLE OF CONTENTS

1. INTRODUCTION

1.1. The purpose of the IRB Evaluation Plan is to describe the methodology that will be used to evaluate the IRB Proposal submitted by the Bidder.

1.2. Bidders' IRB Proposals will be evaluated as either acceptable or not acceptable. A Bidder's IRB Proposal will be deemed acceptable if it: i) meets all of the IRB Mandatory Requirements outlined in Clause 5 of the IRB Bidder Instructions; and, ii) achieves during IRB Evaluation no less than 32 points (out of a possible 64) for the IRB Plans and no less than 240 points (out of a possible 480) for the IRB Transactions.

1.3. The results of the IRB Evaluation will be conveyed to the Contracting Authority at Public Works and Government Services Canada (PWGSC). The results will then be integrated into the overall bid evaluation results on a pass/fail basis.

1.4. Bidders are strongly encouraged to closely review the entire IRB Bidder Instructions document.

1.5. Each IRB Proposal will be evaluated to determine if it meets the requirements for acceptability as outlined in Clause 1.2

1.6. All IRB Proposals will be evaluated based on the factual information as presented in the IRB Proposal.

2. IRB MANDATORY REQUIREMENTS

2.1. The chart below details each Mandatory IRB Requirement and how the IRB Authority will confirm whether each has been met.

IRB Mandatory Requirement	Method to Confirm	Failure to Meet Requirement
1. Bidder commits to achieving IRB activities valued at 100% of the contract value.	Mandatory IRB Requirements Certificate, duly signed and submitted.	IRB Proposal deemed not acceptable

2a Bidder has specified its bid price, not including taxes and rounded to the nearest dollar	Mandatory IRB Requirements Certificate, duly signed and submitted, with bid price provided.	IRB Proposal deemed not acceptable
2b. Bidder has identified eligible IRB Transactions equal in total to not less than 30% of the bid price, measured in CCV.	CCV value of each eligible IRB Transaction in the Bidder's IRB Proposal is totalled, then compared against the bid price.	IRB Proposal deemed not acceptable
2c. Bidder commits to identifying, one year after the Effective Date of the contract, additional eligible IRB Transactions which bring the cumulative total of eligible IRB Transactions to not less than 60% of the Contract value, measured in CCV.	Mandatory IRB Requirements Certificate, duly signed and submitted.	IRB Proposal deemed not acceptable
2d. Bidder commits to identifying, three years after the Effective Date of the contract, additional eligible IRB Transactions which bring the cumulative total of eligible IRB Transactions to 100% of the Contract value, measured in CCV.	Mandatory IRB Requirements Certificate, duly signed and submitted.	IRB Proposal deemed not acceptable
3. Bidder commits to achieving not less than 20% of the Contract value in Direct IRB Transactions, measured in CCV.	Mandatory IRB Requirements Certificate, duly signed and submitted.	IRB Proposal deemed not acceptable
4. Bidder commits to achieving not less than 15% of the Contract value in Small and Medium Business IRB Transactions, measured in CCV.	Mandatory IRB Requirements Certificate, duly signed and submitted.	IRB Proposal deemed not acceptable
5. Bidder accepts and agrees to the terms associated with a failure to meet IRB obligations (Holdbacks and/or Liquidated Damages).	Mandatory IRB Requirements Certificate, duly signed and submitted.	IRB Proposal deemed not acceptable

6. Bidder accepts all of the IRB Terms & Conditions	Mandatory IRB Requirements Certificate, duly signed and submitted.	IRB Proposal deemed not acceptable
7. Bidder submits all the required components in IRB Proposal: • Executive Summary of IRB Commitments • Company Business Plan • IRB Management Plan • Regional Development Plan • Small and Medium Business Development Plan • Detailed IRB Transaction Sheets, accompanied a summary chart of all IRB transactions. • Signed Mandatory IRB Requirements Certificate	Presence of each required component in the IRB Proposal. and Mandatory IRB Requirements Certificate, duly signed and submitted.	IRB Proposal deemed not acceptable
Table 2-1, Mandatory IRB Requirement Evaluation Chart		

3. MINIMUM POINTS ACHIEVEMENT

3.1. Each IRB Proposal will be evaluated to determine if it achieves the minimum points required for the IRB Plans and IRB Transactions.

3.2. Evaluation of IRB Plans

3.2.1. The Executive Summary is assessed to ensure that it is present in the IRB Proposal. It is not scored.

3.2.2. IRB Plans:

3.2.2.1. Each IRB Plan is evaluated to confirm that it is present in the IRB Proposal. Each plan is then given a score for Quality and a score for Risk, using the ratings in Tables 3-1 and 3-2.

3.2.2.1.1. Quality will be assessed as to whether the plan responds to all the requested components outlined in the Statement of IRB Work, the level of detail in the component, and how well the content of the plan meets the IRB Objectives.

3.2.2.1.2. Quality will be rated on a scale of one (1) to four (4), using the ratings below in Table 3-1;

VALUE	IRB PLAN – QUALITY RATINGS
4	**SUPERIOR** Plan contains most of the requested items in the Statement of IRB Work. Items are very well developed. The plan demonstrates that most of Canada's IRB Objectives will be met.
3	**GOOD** Plan contains many of the requested items in the Statement of IRB Work. Items are generally well developed. The plan demonstrates that many of Canada's IRB Objectives will be met.
2	**POOR** Plan contains some of the requested items in the Statement of IRB Work. Items are somewhat developed. The plan demonstrates that some of Canada's IRB Objectives will be met.
1	**VERY WEAK** Plan contains very few of the requested items in the Statement of IRB Work. Items are not well developed. The plan does not demonstrate that Canada's IRB Objectives will be met.

Table 3- 1, IRB Plan Quality Ratings

3.2.2.1.3. Risk will be assessed as to the levels demonstrated in the plan of previous experience, IRB capability, and IRB planning, resources and engagement.

3.2.2.1.4. Risk will be rated on a scale of one (1) to four (4), using the ratings below in Table 3-2

VALUE	IRB PLAN - RISK RATINGS
4	**SUPERIOR** Plan demonstrates a comprehensive level of experience, capability and planning, resources and engagement such that the probability of failure to achieve is extremely low.

VALUE	IRB PLAN - RISK RATINGS
3	**GOOD** Plan demonstrates a good level of experience, capability and planning, resources and engagement such that the probability of failure to achieve is low.
2	**POOR** Plan demonstrates some level of experience, capability and planning, resources and engagement such that the probability of failure to achieve is moderate.
1	**VERY WEAK** Plan demonstrates a very limited level of experience, capability and planning, resources and engagement such that the probability of failure to achieve is significant.

Table 3- 2, IRB Plan Risk Ratings

3.2.2.2. The average Quality and Risk scores for each plan will be multiplied together and the sums added together to determine the Final Plans Score for each IRB Proposal;

3.2.2.3. The Bidder must achieve or exceed a Final Plans Score score of thirty two (32) points (out of a possible sixty-four (64) points).

EXAMPLE:

Plan	Quality Score (A)	Risk Score (B)	Plan Score (C) (C) = (A) x (B)
Company Business Plan	4	3	12
IRB Management Plan	2	3	6
Regional Development Plan	4	4	16
SMB Development Plan	4	2	8

Final Plans Score			**42**

3.3. Evaluation of IRB Transactions

3.3.1. Each IRB Transaction will be evaluated to determine whether it aligns with the IRB Bidder Instructions and with the IRB Terms and Conditions, with respect to IRB Eligibility and transaction types.

3.3.2. If a proposed IRB Transaction is found to not meet the criteria outlined in 3.3.1, it will be rejected during the IRB evaluation. For further clarity, a rejected IRB Transaction:

3.3.2.1. will be counted as zero when calculating the final IRB Transaction evaluation score; and,

3.3.2.2. will be counted as zero when calculating whether the Bidder has identified IRB Transactions totalling not less than 30% of the Bid Price.

3.3.3. If a Proposed IRB Transaction is found to meet the criteria outlined in 3.3.1, it will be given a score for Quality and a score for Risk, using the ratings in Tables 3-3 and 3-4.

3.3.3.1. Quality will be assessed as to whether the Transaction responds to the requested components outlined in the Statement of IRB Work, the level of detail in the component, and how well the IRB Transaction meets the IRB Objectives.

3.3.3.2. Quality will be rated on a scale of one (1) to four (4), using the ratings below in Table 3-3;

VALUE	IRB TRANSACTION - QUALITY RATINGS
4	**SUPERIOR** The IRB Transaction is very well described. Most items contain a very good level of detail. The IRB Transaction demonstrates that most of Canada's IRB Objectives will be met.
3	**GOOD** The IRB Transaction is well described. Items are detailed. The IRB Transaction demonstrates that many of Canada's IRB Objectives will be met.
2	**POOR** The IRB Transaction is somewhat described. Several items are not detailed. The IRB Transaction demonstrates that some of Canada's IRB Objectives would be met.
1	**VERY WEAK** The IRB Transaction has minimal description. Most items are not detailed in any way. The IRB Transaction demonstrates that very few of Canada's IRB Objectives would be met.

Table 3-3, IRB Transaction Quality Ratings

3.3.3.3. Risk will be assessed as to the levels demonstrated in the Transaction of previous experience, IRB capability, and IRB planning, resources and engagement.

3.3.3.4. Risk will be rated on a scale of one (1) to four (4), using the ratings below in Table 3-4;

VALUE	IRB TRANSACTION - RISK FACTORS
4	**SUPERIOR** The IRB Transaction demonstrates a comprehensive level of experience, capability and committed planning, resources and engagement such that the probability of failure to achieve is extremely low.
3	**GOOD** The IRB Transaction demonstrates a good level of experience, capability and committed planning, resources and engagement, such that the probability of failure to achieve is low.
2	**POOR** The IRB Transaction demonstrates some level of experience, capability and committed planning, resources and engagement, such that the probability of failure to achieve is moderate.
1	**VERY WEAK** The IRB Transaction demonstrates a very limited level of experience, capability and committed planning, resources and engagement, such that the probability of failure to achieve is significant.

Table 3-4, IRB Transaction Risk Ratings

3.3.4. The score for each IRB Transaction will be determined by multiplying together the following three items: i) the applicable CCV value (rounded to the closest million Canadian dollars); ii) the average Quality score; and iii) the average Risk score;

3.3.5. The resulting scores for each IRB Transaction will then be totalled, divided by the total IRB Commitment (or the total of the Bidder's identified IRB Transactions, whichever is greater) and multiplied by one hundred (100) to obtain the Final Transactions Score;

3.3.6. For the first tranche of IRB Transactions due at bid closing, the Bidder must achieve or exceed a Final Transactions Score of two-hundred and forty (240) points (out of a possible four hundred and eighty [480] points).

EXAMPLE:

In this example the Bidder makes an IRB Commitment of $250M and has identified eligible IRB Transactions valued at $80M in its IRB proposal at bid closing.

IRB Transaction #	CCV $ (A)	Avg Quality score (B)	Avg Risk score (C)	Transaction Score (D)=(A) x (B) x (C)
001	$20M	3	2	120
002	$15M	4	3	180
003	$45M	4	3	540
Total of Transaction scores				**840**
Final Transactions Score – (840/250) x 100				**336**

3.3.7. For the second tranche of IRB Transactions due from the winning contractor one year after contract award, the point score for these Transactions will be combined with the point score from the first tranche, and taken together, the minimum acceptable IRB Transaction assessment score is four hundred and eighty (480) points (out of a possible nine hundred and sixty [960]).

4. IRB EVALUATION PROCESS

4.1. IRB evaluations take place within the context of the overall procurement evaluation process, led by the PWGSC Contracting Authority and outlined in Part 4 of the RFP.

4.2. Participant Roles and Responsibilities

4.2.1. The IRB Evaluation is led by the IRB Authority, with participation from representatives of the Regional Development Agencies (RDAs).

4.2.2. Members of the IRB Evaluation team are responsible to:

4.2.2.1. Possess sufficient IRB knowledge and evaluation experience to contribute effectively to the IRB evaluation;

4.2.2.2. Be cognizant of all relevant IRB documentation;

4.2.2.3. Be aware of and use the evaluation tools provided ;
4.2.2.4. Be aware of and follow evaluation process, conduct and security guidelines;
4.2.2.5. Actively participate in evaluation discussions and scoring;
4.2.2.6. Perform the IRB evaluation in accordance with the Evaluation Plan;
4.2.2.7. Seek consensus and endorse evaluation results.

4.2.3. The IRB Authority will lead the IRB evaluation and hold overall responsibility for ensuring that the members of the evaluation team carry out their responsibilities. The IRB Authority will act as the liaison between the IRB evaluation team and outside officials, such as project evaluation officials, the Contracting Authority, any Fairness Monitor, etc.

4.2.4. The Fairness Monitor is responsible to the PWGSC Contract Authority and has the responsibility of providing fairness advice and oversight on all aspects of the procurement. He/she may observe any part of IRB Evaluation.

4.3. Process Overview

4.3.1. The Industry Canada (IC) Evaluation Lead will provide participants with an introductory overview of IRB mandatory requirements, evaluation procedures, security and documentation, and any Fairness Monitor participation.

4.3.2. In evaluating each IRB Proposal, evaluators will first read the proposal. Discussion and scoring of each plan and transaction will then take place.

4.3.3. Once discussion and scoring are completed for all IRB Proposals, the results will be calculated and endorsed by all participants, and the pass/fail status of each Bidder will be conveyed to the PWGSC Contract Authority.

4.3.4. The IRB evaluation team will make every effort to ensure that the same officials participate throughout the entire evaluation, so as to ensure maximum fairness and consistency for all bidders. If circumstances arise during the course of an evaluation which makes it impossible for an evaluator to continue, the Industry Canada Evaluation Lead would remove their place from the evaluation team, as well as any scores the departing participant had submitted for any and all proposals which have been reviewed to date. The evaluation would continue on as planned with the remaining evaluation members, and scoring would later be averaged and calculated as if the departing participant's place on the team had never existed.

4.3.5. The sensitive nature of the IRB Proposal evaluation requires the application of stringent security measures throughout the process. The overall responsibility for IRB evaluation security rests with the IC Evaluation Lead and extends out to each participant.

4.3.6. Upon receipt by the IRB Authority, the Bidders' IRB Proposals shall only be made available during the evaluation, to those individuals participating in the evaluation process. All IRB Proposals and any written evaluation material shall be secure at all times during the course of the evaluation and will be securely stored and locked when not in use. IRB evaluation participants will not discuss the evaluation material or results outside of the evaluation room, except as required by the evaluation process. At the completion of the evaluation process, the IRB Proposals will be disposed of in accordance with Section xxx of the RFP (or in consultation with the PWGSC Contracting Authority).