



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada

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

INVITATION TO TENDER

APPEL D'OFFRES

**Tender 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.

**Soumission 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 et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

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

Issuing Office - Bureau de distribution

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

Title - Sujet RHIB & Trailer	
Solicitation No. - N° de l'invitation 47304-190712/A	Date 2018-09-04
Client Reference No. - N° de référence du client 47304-19-0712	GETS Ref. No. - N° de réf. de SEAG PW-\$HAL-311-10497
File No. - N° de dossier HAL-8-81105 (311)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-10-16	
Time Zone Fuseau horaire Atlantic Daylight Saving Time ADT	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Dunne, Dave	Buyer Id - Id de l'acheteur hal311
Telephone No. - N° de téléphone (902) 401-4294 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: CANADA BORDER SERVICES AGENCY 3139 OXFORD STREET HALIFAX NOVA SCOTIA B3L0B6 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

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

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47304-190712/A
Client Ref. No. - N° de réf. du client
47304-190712

Amd. No. - N° de la modif.
File No. - N° du dossier
HAL-8-81105

Buyer ID - Id de l'acheteur
hal311
CCC No./N° CCC - FMS No./N° VME

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PART 1 - GENERAL INFORMATION

1.1 Introduction

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 and Additional Information: includes the certifications and additional information 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.

The Annexes include the Statement of Work, the Basis of Payment, the Insurance Requirements, the Warranty Defect Claims Procedures and Forms, the Bidder Questions and Answers, the Financial Bid Presentation Sheet, the Electronic Payment Instruments, the Integrity Provisions – Required Documentation, and any other annexes.

1.2 Summary

Canada Border Services Agency (CBSA) has a requirement for a Contractor to design, fabricate and supply quantity one (1) Glass Reinforced Plastic (GRP) Rigid Hull Inflatable Boat (RHIB) with an extended cabin and trailer based on the current Transport Canada Marine Safety Branch (TCMSB) Marine Safety Publication TP 1332 "Construction Standards for Small Vessels" (hereinafter referred to as TCMSB TP 1332). The boat must be dual gasoline outboard motor configuration.

The primary role of this RHIB will be Border Services Operations, including but not limited to rummages, ROV operations and Immigration and Refugee Protection Act risk assessments of crew for the Atlantic Region, based out of the Halifax Marine Unit. The secondary roles will be other border enforcement duties such as boarding and surveillance duties within the reasonable capabilities for this type and size of craft.

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Canadian Free Trade Agreement (CFTA).

This bid solicitation allows bidders to use the ePost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

2.1 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) (<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](#) (2018-05-22), Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days

Insert: 90 days

2.1.1 SACC Manual Clauses

SACC Manual Clause B1000T (2014-06-26), Condition of Material

SACC Manual Clause B3000T (2006-06-16), Equivalent Products

2.2 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 in the bid solicitation.

Email address for ePost Connect service:

TSPGC.RARceptionSoumissionsNE-ARBidReceivingNS.PWGSC@tpsgc-pwgsc.gc.ca

Bids/Offer will be not be accepted if emailed directly to this email address. This email is to initiate an ePost Connect conversation, as detailed in the Standard Instructions.

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

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than 7 working days before the bid closing date. Enquiries received after that time may not be answered.

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

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Nova Scotia.

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.

2.5 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least 10 days before the bid closing date. Canada will have the right to accept or reject any or all suggestions

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

- If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. Bidders must provide their bid in a single transmission. The epost Connect service has the capacity to receive multiple documents, up to 1GB per individual attachment.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid
Section II: Management Bid
Section III: Financial Bid
Section IV: Certifications

- If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its bid in separately bound sections as follows:

Section I: Technical Bid (2 hard copies)
Section II: Management Bid (2 hard copies)
Section III: Financial Bid (1 hard copy)
Section IV: Certifications (1 hard copy)

- If the Bidder is simultaneously providing copies of its bid using multiple acceptable delivery methods, and if there is a discrepancy between the wording of any of these copies and the electronic copy provided through epost Connect service, the wording of the electronic copy provided through epost Connect service will have priority over the wording of the other copies.

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

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

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

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

3.2 Section I: Technical Bid

The entire contents of the Statement of Work at Annex "A", as revised in Annex "E", is mandatory. In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

In addition to providing the documentation and information mentioned above, Bidders must provide the following documentation in articles 3.2.1, 3.2.2 and 3.2.3.

3.2.1 Project Schedule

1. As part of its technical bid, the Bidder must propose its preliminary project schedule, in MS Project format or equivalent. The project schedule must include the Bidder's work breakdown

structure, the scheduling of main activities and milestone events, and any potential problem areas involved in completing the Work.

2. The Bidder's schedule must also provide a target date for each of the following significant events as applicable:
 - a. hull materials delivered to Contractor and sustained construction commenced;
 - b. hull and deck completed, but not closed in to allow for full inspection of the structure and welding. The Contractor will be required to supply a hard copy of the material certs and construction drawings to the Technical/Inspection Authority one (1) week prior to inspection by the Technical/Inspection Authority;
 - c. outfitting/electrical 75% complete but all equipment and components delivered to the Contractor and available for full inspection. The Contractor will be required to supply a hard copy of the list of equipment and electrical supplies to the Technical/Inspection Authority one (1) week prior to inspection by the Technical/Inspection Authority;
 - d. technical manuals delivered to Canada for approval (no less than 14 days prior to the planned delivery date);
 - e. Contractor's tests and trial and final sea trials required by the TSOR;
 - f. boat and trailer delivered to Canada for approval;
 - g. the start and the end of the twelve (12) month warranty period.

Note: Technical Manuals will not be returned once approved.

3.2.2 Preliminary Drawings

The following documents must be included with the Bid:

- a) draft stability calculation;
- b) calculated lightship weight;
- c) general arrangement;
- d) structural drawings showing deck plan, a centerline profile and frame station construction details;
- e) detailed lines plan; and
- f) a drawing of the fuel supply arrangement.

3.2.3 List of Proposed Subcontractors

If the bid includes the use of subcontractors, the Bidder agrees, upon request from the Contracting Authority, to provide a list of all subcontractors including a description of the things to be purchased, a description of the work to be performed and the location of the performance of that work. The list should not include the purchase of off-the-shelf items, software and such standard articles and materials as are ordinarily produced by manufacturers in the normal course of business, or the provision of such incidental services as might ordinarily be subcontracted in performing the Work

3.3 Section II: Management Bid

In their management bid, Bidders must describe their capability and experience and that of their project management team. The management bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

In addition to providing the documentation and information mentioned above, Bidders must provide the following documentation in articles 3.3.1, 3.3.2 and 3.3.3.

3.3.1 Vessel Construction Experience

The bid must provide objective evidence that the bidder has proven capability in the construction of vessels of the same size, type and complexity as the vessel(s) that make up the requirement of this bid solicitation, by providing detailed information of a minimum of 2 boats built within the last 8 years. Prototype hulls will not be considered as fulfilling this requirement. The bid must include the following details for each vessel submitted as evidence of construction capability:

- a) General Arrangement drawings;
- b) Photographs;
- c) References;
- d) Builder's plates (if applicable); and
- e) Hull identification numbers confirming multiple builds.

3.3.2 Contractor Quality Management System

The bid must provide objective evidence that the Bidder has a Quality Assurance Program, which must be in place during the performance of the Work, and which addresses the quality control elements below. The objective evidence may be in the form of a copy of the Bidder's Quality Assurance Manual which addresses these elements. Proof of registration with a recognized quality assurance organization whose system addresses the minimum requirements below, may be submitted for consideration.

The quality control elements must include, as a minimum:

- a) Management Representative
- b) Quality Assurance Manual
- c) Quality Assurance Program
- d) Descriptions Quality Reporting Organization Documentation
- e) Measuring and Testing
- f) Equipment Procurement
- g) Inspection and Test Plan
- h) Incoming Inspection
- i) In-Process Inspection
- j) Final Inspection Special Processes Quality Records
- k) Non-Conformance
- l) Corrective Action

3.3.3 Marine Drafting and Engineering Capability

The bid must provide objective evidence in the form of a statement, signed by an authorized representative of the Bidder that the bidder has either:

- a) In-house capabilities for marine drafting and engineering; or
- b) A written commitment from a supplier that will be providing marine drafting and engineering services to the Bidder for the duration of the Contract. The supplier must have marine drafting and engineering experience and capabilities on vessel construction projects similar in size, type and complexity to the subject bid solicitation.

3.4 Section III: Financial Bid

Bidders must submit their financial bid in accordance with the Financial Bid Presentation Sheet in Annex "F".

3.4.1 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex "G" Electronic Payment Instruments, to identify which ones are accepted.

If Annex "G" Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.4.2 Exchange Rate Fluctuation

[C3011T](#) (2013-11-16), Exchange Rate Fluctuation

3.5 Section IV: Certifications

Bidders must submit the certifications and additional information required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

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

4.1.1 Technical Evaluation

4.1.1.1. Mandatory Technical Criteria

In order to be compliant, a Bidder's proposal must, to the satisfaction of Canada, meet all requirements of the Annex A - TSOR and provide all information as requested in PART 3 - BID PREPARATION INSTRUCTIONS, 3.2 Section I, Technical Bid.

4.1.2 Management Evaluation

4.1.2.1 Mandatory Management Criteria

In order to be compliant, a Bidder's proposal must, to the satisfaction of Canada, meet all requirements and provide all information as requested in PART 3 - BID PREPARATION INSTRUCTIONS, 3.3 Section II –Management Bid.

4.1.3 Financial Evaluation

4.1.3.1 Mandatory Financial Criteria

In order to be compliant, a Bidder's proposal must, to the satisfaction of Canada, meet all requirements and provide all information as requested in PART 3 - BID PREPARATION INSTRUCTIONS, 3.4 Section III –Financial Bid.

4.2 Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria and management evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract

A mandatory requirement is described using the words "shall", "must", "will", "is required" or "is mandatory".

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

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

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, 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 made knowingly or unknowingly, 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 and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, if applicable, the Integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to

provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 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 available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/canada/esdc-labour) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

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.

5.2.3 Additional Certifications Precedent to Contract Award

5.2.3.1 Welding Certification

1. Welding must be performed by a welder certified by the Canadian Welding Bureau (CWB) for the following Canadian Standards Association (CSA) standards:
 - a. CSA W47.1 (current version), Certification of Companies for Fusion Welding of Steel (Minimum Division Level 2.1);
 - b. CSA W47.2 (current version), Certification of Companies for Fusion Welding of Aluminum (Minimum Division Level 2.0).
2. Before contract award and within 2 calendar days of the written request by the Contracting Authority, the successful Bidder must submit evidence demonstrating its and its subcontractor's certification by CWB in accordance with the CSA welding standards.

5.2.3.2 Workers Compensation Certification- Letter of Good Standing

The Bidder must have an account in good standing with the applicable provincial or territorial Workers' Compensation Board.

The Bidder must provide, within 2 days following a request from the Contracting Authority, a certificate or letter from the applicable Workers' Compensation Board confirming the Bidder's good standing account. Failure to comply with the request may result in the bid being declared non-responsive.

5.2.3.3 Valid Labour Agreement

Where the Bidder has a labour agreement, or other suitable instrument, in place with its unionized labour, it must be valid for the proposed period of any resulting contract. Documentary evidence of the

agreement or suitable instrument must be provided within 2 days following a request from the Contracting Authority.

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security Requirements

There is no security requirement applicable to this contract.

6.2 Financial Capability

SACC Manual clause [A9033T](#) (2012-07-16), Financial Capability

6.3 Insurance Requirements

The Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in Annex "C".

If the information is not provided in the bid, 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.

PART 7 - RESULTING CONTRACT CLAUSES

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

7.1 Statement of Work

The Work to be performed is detailed in Annex "A" Statement of Work.

7.2 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) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

7.2.1 General Conditions

[2030](#) (2018-06-21), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

7.2.2 Supplemental General Conditions

1028 (2010-08-16), Ship Construction, Firm Price, apply to and form part of the Contract.

7.2.2.1 Conduct of Work

The Supplemental General Conditions 1028, Article 02 (2010-08-16), Conduct of Work, delete Paragraph 1, entitled "Canadian Labour", in its entirety.

7.2.2.2 Warranty

The Supplemental General Conditions 1028, Article 12 (2010-08-16), Warranty, Paragraph 3 is deleted and replaced with the following:

- "The warranty periods for the vessel, from the date of its delivery to and acceptance by Canada, are:
- a) Twelve (12) months for the boat propelling machinery and auxiliaries, fittings and equipment of all kinds (excluding Government Supplied Material).
 - b) Twenty four (24) months for the vessel hull and welding."

7.3 Security Requirements

There is no security requirement applicable to the Contract.

7.4 Term of Contract

7.4.1 Delivery Date

All the deliverables must be received on or before March 15, 2019.

7.4.2 Shipping Instructions

Incoterms 2000 "DDP Delivered Duty Paid" Halifax, NS.

7.4.3 Delivery Point

Delivery of the requirement will be made to:

Canada Border Services Agency
3139 Oxford Street
Halifax, NS B3L 0B6

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Dave Dunne
Title: Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch, Marine Procurement
Address: 1713 Bedford Row, Halifax, NS, B3J 1T3

Telephone: (902) 401-4294
Facsimile: (902) 496-5016
E-mail address: Dave.Dunne@tpsgc-pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform

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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.

7.5.2 Technical Authority

The Technical Authority for the Contract is:

<< Named upon contract award >>

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

7.5.3 Contractor's Representative

<< Contractor to complete >>

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ____-____-____
Facsimile: ____-____-____
E-mail: _____.

7.6 Payment

7.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price as specified in Annex "B". Customs duties are included and Applicable Taxes are extra.

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.

7.6.2 Payment for Fuels, Oils and Lubricants

The Contractor is responsible for the supply and cost of all fuel, lubricating oil, hydraulic oil and other lubricants sufficient for fully charging all systems as required for operating the machinery and other equipment and for performing all tests and trials. After successful completion of all trials and upon Acceptance of the Rigid Hull Inflatable Boats by Canada, all oils, lubricants and fuels shall be returned to full condition levels at the Contractor's cost.

7.6.3 Milestone Payments - Subject to holdback

1. 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 90 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 Progress 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 90 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;
 - d. all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.
2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of the item if the Work has been accepted by Canada and a final claim for the payment is submitted.

7.6.4 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

Milestone No	Description and Deliverable(s)	Firm Payment Amount
1	Hull materials delivered to the Contractor and sustained construction commenced	25% of the FIRM PRICE (determined at contract award)
2	Technical documentation and manuals delivered and accepted by Canada	5% of the FIRM PRICE (determined at contract award)
3	Vessel delivered and accepted by Canada	67% of the FIRM PRICE (determined at contract award)
4	End of the 12 month warranty period	3% of the FIRM PRICE (determined at contract award)

7.6.5 Outstanding Work

In addition to any amount held under the Warranty Holdback Clause, a holdback of twice the estimated value of outstanding work will be held until that work is completed.

7.6.6 Invoicing Instructions

1. The Contractor must submit a claim for payment using form [PWGSC-TPSGC 1111](#), Claim for Progress 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;
 - c. the description and value of the milestone claimed as detailed in the Contract;
 - d. copies of material invoices as requested by the Contracting Authority;
 - e. quality assurance documentation as requested by the Contracting Authority.
2. Applicable Taxes, must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.
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 two (2) copies 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 until all work identified in the claim is completed.

7.6.7 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI).

7.6.8 SACC Manual Clauses

SACC Manual Clause H4500C (2010-01-11), Lien – Section 427 of the Bank Act

7.7 Certifications and Additional Information

7.7.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

7.7.2 Welding Certification

1. The Contractor must ensure that welding is performed by a welder certified by the Canadian Welding Bureau(CWB) for the following Canadian Standards Association(CSA) standard(s):

- a. CSA W47.1 (current version), Certification of Companies for Fusion Welding of Steel (Minimum Division Level 2.1);
 - c. CSA W47.2 (current version), Certification of Companies for Fusion Welding of Aluminum (Minimum Division Level 2.0).
2. In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications.
 3. Before the commencement of any fabrication work, and upon request from the Technical Authority, the Contractor must provide approved welding procedures and/or a list of welding personnel they intend to use in the performance of the Work. The list must identify the CWB welding procedure qualifications attained by each of the personnel listed and must be accompanied by a copy of each person's current CWB certification to CSA welding standards.

7.7.3 Project Schedule

1. The Contractor must provide a detailed project schedule in Gantt chart format to the Contracting Authority and the Technical Authority 5 calendar days after award of Contract. This schedule must highlight the specific dates for the events listed below.
2. The Contractor's schedule must include target dates for each of the following significant events:
 - a) Hull materials delivered to Contractor and sustained construction commenced;
 - b) Hull and deck completed, but not closed in to allow for full inspection of the structure and welding. The Contractor must supply a hard copy of the material certificates and construction drawings to the Technical/Inspection Authority one week prior to inspection by the Technical/Inspection Authority;
 - c) Outfitting/electrical 75% complete but all equipment and components delivered to the Contractor and available for full inspection. The Contractor must supply a hard copy of the list of equipment and electrical supplies to the Technical/Inspection Authority one week prior to inspection by the Technical/Inspection Authority;
 - d) Technical manuals delivered to Canada for approval (no less than 14 days prior to the planned delivery date);
 - e) Contractor's tests and trial and final sea trials required by the TSOR;
 - f) Boat delivered to Canada for approval.

Note: Technical Manuals will not be returned once approved.

An updated schedule must be provided to the Technical Authority and Contracting Authority 2 days before each progress meeting.

7.8 Meetings

Progress meetings, chaired by the Contracting Authority, will take place at the Contractor's facility as and when required, generally once a month. Interim meetings may also be scheduled. Contractor's attendees

at these meetings will, as a minimum, be its Contract (Project) Manager, Production Manager (Superintendent) and Quality Assurance Manager. Progress meetings will generally incorporate technical meetings to be chaired by the Technical Authority.

7.9 Progress Report

The Contractor must submit monthly reports on the progress of the Work in an electronic format to the Technical Authority and to the Contracting Authority.

The report must be in narrative format, brief, yet sufficiently detailed to enable the Technical Authority to evaluate the progress of the Work, containing at a minimum:

- a) a description of the progress of each task and of the Work as a whole during the period of the report. Sufficient sketches, diagrams, photographs, etc., must be included, if necessary, to describe the progress accomplished.
- b) an explanation of any variation from the schedule.

7.10 Procedures for Design Change/Deviations

The Contractor must follow these procedures for any proposed design change/deviation to contract specifications.

The Contractor must complete Part 1 of form [PWGSC-TPSGC 9038 \(PDF 241 KB\)](#), Design Change/Deviation, and forward 1 copy to the Technical Authority and one (1) copy to the Contracting Authority.

7.11 Outstanding Work and Acceptance

The Inspection Authority, in conjunction with the Contractor, will prepare a list of outstanding work items at the end of the work period. This list will form the annexes to the formal acceptance document for the vessel. A contract completion meeting will be convened by the Inspection Authority on the work completion date to review and sign off the form PWGSC-TPSGC 1105, Vessel Acceptance. In addition to any amount held under the Warranty Holdback Clause, a holdback of twice the estimated value of outstanding work will be held until that work is completed.

The Contractor must complete the above form in three (3) copies, which will be distributed by the Inspection Authority as follows:

- a) original to the Contracting Authority;
- b) one copy to the Technical Authority;
- c) one copy to the Contractor.

7.12 Applicable Laws

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

7.13 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the supplemental general conditions 1028 (2010-08-16), Ship Construction, Firm Price;
- (c) the general conditions 2030 (2018-06-21), General Conditions - Higher Complexity – Goods;
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) Annex E, Bidder Questions and Canada Responses;
- (g) Annex F, Financial Bid Presentation Sheet;
- (g) Annex C, Insurance Requirements;
- (h) the Contractor's bid dated _____, as clarified on _____.

7.14 SACC Manual Clauses

SACC Manual clause A0285C (2007-05-25), Workers Compensation
SACC Manual clause A1009C (2008-05-12), Work Site Access
SACC Manual clause A9006C (2012-07-16), Defence Contract
SACC Manual clause B1501C (2018-06-21), Electrical Equipment
SACC Manual clause D0018C (2007-11-30), Delivery and Unloading
SACC Manual clause D2000C (2007-11-30), Marking
SACC Manual clause D2001C (2007-11-30), Labelling
SACC Manual clause D9002C (2007-11-30), Incomplete Assemblies

7.15 Condition of Material

The Contractor must provide material that is new production of current manufacture supplied by the principal manufacturer or its accredited agent. The material must conform to the latest issue of the applicable drawing, specification and part number, as applicable, that was in effect on the bid closing date.

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ANNEX "A"

STATEMENT OF WORK

The entire Statement of Work is a separate electronic document entitled:

**Technical Statement of Requirements
Glass Reinforced Plastic (GRP) Rigid Hull Inflatable Boat
(RHIB) with Extended Cabin and Trailer
Revision 4**

ANNEX “B”

BASIS OF PAYMENT

Remark to Bidder: Annex B will form the Basis of Payment for the resulting contract and should not be filled in at the bid submission stage. Refer to Annex F “Financial Bid Presentation Sheet”.

1. Contract Price

a)	Known Work For work as stated in Part 1, Specified in Annex “A”, as revised in Annex “E” for a FIRM PRICE of:	\$ _____
b)	HST (15%) of Line a) only	\$ _____
c)	Total Firm Price HST Included: For a FIRM PRICE of :	\$ _____

2. Unscheduled Work

2.1 Price Breakdown:

The Contractor must, upon request, provide a price breakdown for all unscheduled work, by specific activities with trades, person-hours, material, subcontracts and services.

2.2 Pro-rated Prices:

Hours and prices for unscheduled work will be based on comparable historical data applicable to similar work at the same facility, or will be determined by pro-rating the quoted work costs in the Contract when in similar areas of the vessel.

2.3 Payment for Unscheduled Work:

The Contractor will be paid for unscheduled work arising, as authorized by Canada. The authorized unscheduled work will be calculated as follows:

Number of hours (to be negotiated) x \$ _____ , being the Contractor's firm hourly charge-out labour rate which includes overhead and profit, plus net laid-down cost of materials to which will be added a mark-up of 10 percent, plus Goods and Services Tax or Harmonized Sales Tax, if applicable, calculated at 15 percent of the total cost of material and labour. The firm hourly charge-out labour rate and the material mark-up will remain firm for the term of the Contract and any subsequent amendments. The material mark-up rate will also apply to subcontracted costs.

3 Overtime

No overtime work will be compensated for under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing such details as Canada may require with respect to the overtime work performed.

3.1 Overtime Labour Rate

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Firm overtime labour rate \$_____

This rate will remain firm for the duration of the Contract including all amendments and are subject to audit if deemed necessary by Canada.

ANNEX "C"

INSURANCE REQUIREMENTS

Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability policy must include the following:
 - a. Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
 - b. Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
 - c. Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
 - d. Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
 - e. Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - f. Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
 - g. Employees and, if applicable, Volunteers must be included as Additional Insured.
 - h. Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
 - i. Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
 - j. Notice of Cancellation: The Contractor will provide the Contracting Authority thirty (30) days prior written notice of policy cancellation or any changes to the insurance policy.
 - k. If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.
 - l. Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
 - m. Non-Owned Automobile Liability - Coverage for suits against the Contractor resulting from the use of hired or non-owned vehicles.
 - n. Amendment to the Watercraft Exclusion to extend to incidental repair operations on board watercraft.
 - o. Sudden and Accidental Pollution Liability (minimum 120 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.

- p. Litigation Rights: Pursuant to subsection 5(d) of the [Department of Justice Act](#), S.C. 1993, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named Insured under the insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

For the province of Quebec, send to:

*Director Business Law Directorate,
Quebec Regional Office (Ottawa),
Department of Justice,
284 Wellington Street, Room SAT-6042,
Ottawa, Ontario, K1A 0H8*

For other provinces and territories, send to:

*Senior General Counsel,
Civil Litigation Section,
Department of Justice
234 Wellington Street, East Tower
Ottawa, Ontario K1A 0H8*

A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

Marine liability insurance

1. The Contractor must obtain protection and indemnity insurance that must include excess collision liability and pollution liability. The insurance must be placed with a member of the International Group of Protection and Indemnity Associations or with a fixed market in an amount of not less than the limits determined by the [Marine Liability Act](#), S.C. 2001, c. 6. Coverage must include crew liability, if it is not covered by Worker's Compensation as detailed in paragraph (2.) below.
2. The Contractor must obtain worker's compensation insurance covering all employees engaged in the Work in accordance with the statutory requirements of the territory or province or state of nationality, domicile, employment, having jurisdiction over such employees. If the Contractor is subject to an additional contravention, as a result of an accident causing injury or death to an employee of the Contractor or subcontractor, or due to unsafe working conditions, then such levy or assessment must be paid by the Contractor at its sole cost.
3. The protection and indemnity insurance policy must include the following:

- a. Additional insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada as additional insured should read as follows: Canada, represented by Public Works and Government Services Canada.
- b. Waiver of subrogation rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by Canada Border Services Agency and Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.
- c. Notice of cancellation: The Contractor will provide the Contracting Authority thirty (30) days prior written notice of policy cancellation or any changes to the insurance policy.
- d. Cross liability and separation of insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
- e. Litigation rights: Pursuant to subsection 5(d) of the [Department of Justice Act](#), R.S.C. 1985, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named Insured under the insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

For the province of Quebec, send to:

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234 Wellington Street, East Tower
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A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

ANNEX "D"

WARRANTY DEFECT CLAIM PROCEDURES AND FORMS

Warranty Procedures

1. Scope

a. The following are the procedures, which suit the particular requirements for warranty considerations for a vessel on completion of the work.

2. Definition

There are a number of definitions of "warranty" most of which are intended to describe its force and effect in law. One such definition is offered as follows:

"A warranty is an agreement whereby the vendor's or manufacturer's responsibility for performance of its product is extended for a specific period of time beyond the date at which the title to the product passes to the buyer."

4. Reporting Failures with Warranty Potential

a. The initial purpose of a report of a failure is to facilitate the decision as to whether or not to involve warranty and to generate action to effect repairs. Therefore in addition to identification, location data, etc. the report must contain details of the defect. Warranty decisions as a general rule are to be made locally and the administrative process is to be in accordance with procedures as indicated.

b. These procedures are necessary as invoking a warranty does not simply mean that the warrantor will automatically proceed with repairs at his expense. A review of the defect may well result in a disclaimer of responsibility, therefore, it is imperative that during such a review the Department is directly represented by competent technical authority qualified to agree or disagree with the warrantor's assertions.

5. Procedures

a. Immediately it becomes known to the Ship's Staff that an equipment/system is performing below accepted standards or has become defective, the procedures for the investigation and reporting are as follows:

i. The vessel advises the Technical Authority when a defect, which is considered to be directly associated the refit work, has occurred.

ii. On review of the Specification and the Acceptance Document, the Technical Authority in consort with Ship's Staff is to complete the Tombstone Data and section 1 of the Warranty Claim Form attached and forward the original to the Contractor for review with a copy to the PWGSC Contracting Authority. If the PWGSC Contracting or Inspection Authority is unable to support warranty action, the Defect Claim Form will be returned to the originator with a brief justification. (It is to be noted that in the

latter instance PWGSC will inform the Contractor of its decision and no further action will be required of the Contractor.

Warranty defect claims may be forwarded in hard copy, by fax or by e-mail whichever format is the most convenient.

iii. Assuming the Contractor accepts full responsibility for repair, the Contractor completes Section 2 and 3 of the Warranty Claim Form, returns it to the Inspection Authority who confirms corrective action has been completed, and who then distributes the form to the Technical Authority and the PWGSC Contracting Authority.

b. In the event that the Contractor disputes the claim as a warranty defect, or agrees to share, the contractor is to complete Part 2 of the Warranty Claim Form with the appropriate information and forward it to the Contracting Authority who will distribute copies as necessary.

c. When a warranty defect claim is disputed by the Contractor, the Technical Authority may arrange to correct the defect by in-house resources or by contracting the work out. All associated costs must be tracked and recorded as a possible charge against the contractor by PWGSC action. Material costs and man-hours expended in correcting the defect are to be recorded and entered in Section 5 of the warranty defect claim by the Technical Authority who will forward the warranty defect claim to the PWGSC Contracting Authority for action. Defective parts of equipment are to be retained pending settlement of claim.

d. Defective equipment associated with potential warranty should not normally be dismantled until the contractor's representative has had the opportunity to observe the defect. The necessary work is to be undertaken through normal repair methods and costs must be segregated as a possible charge against a contractor by PWGSC action.

6. Liability

a. Agreement between the Contracting Authority, Inspection Authority, Technical Authority and the Contractor will result in one of the following conditions:

i. The contractor accepts full responsibility for costs to repair or overhaul under the warranty provisions of the contract;

ii. The Technical Authority accepts full responsibility for repair and overhaul of item concerned;
or

iii. The Contractor and the Technical Authority agree to share responsibility for the costs to repair or overhaul the unserviceable item, in such cases the PWGSC Contracting Authority will negotiate the best possible sharing arrangement.

b. In the event of a disagreement as in paragraph 5c, PWGSC will take necessary action with the contractor while the Technical Authority informs its Senior Management including pertinent data and recommendations.

c. The total cost of processing warranty claims must include accommodation and travel costs of the contractor's employees as well as equipment/system down time and operational constraints. Accordingly, the cost to remediate the defect, in man-hours and material, will be discussed between the Contracting/Inspection Authorities and the Technical Authority to determine the best course of action.

7. Alongside Period For Warranty Repairs and Checks

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a. If at all possible, an alongside period for the vessel is to be arranged just before the expiration of the warranty period. This alongside period is to provide time for warranty repair and check by the contractor.

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ANNEX "E"

BIDDER QUESTIONS AND ANSWERS

Updated during the bid solicitation period

ANNEX "F"

FINANCIAL BID PRESENTATION SHEET

1. Evaluation of Price

a)	Known Work – RHIB and Trailer For the work and material as stated in Part 1, specified in Annex "A", as revised in Annex "E" for a FIRM PRICE of:	\$ _____
b)	Unscheduled Work – Regular Labour Rate Estimated labour hours at a firm Charge-out Labour Rate, including overhead and profit: 50 person hours X \$ _____ per hour for a PRICE of:	\$ _____
c)	Unscheduled Work – Overtime Labour Rate Estimated overtime labour hours at a firm Charge-out Labour Rate, including overhead and profit: Overtime rate: 10 person hours X \$ _____ per hour for a PRICE of:	\$ _____
d)	EVALUATION PRICE HST Excluded, [a + b + c]: <div style="text-align: right;">For an EVALUATION PRICE of :</div>	\$ _____

2. Unscheduled Work

2.1 Price Breakdown:

The Contractor must, upon request, provide a price breakdown for all unscheduled work, by specific activities with trades, person-hours, material, subcontracts and services.

2.2 Pro-rated Prices:

Hours and prices for unscheduled work will be based on comparable historical data applicable to similar work at the same facility, or will be determined by pro-rating the quoted work costs in the Contract when in similar areas of the vessel.

2.3 Payment for Unscheduled Work:

The Contractor will be paid for unscheduled work arising, as authorized by Canada. The authorized unscheduled work will be calculated as follows:

Number of hours (to be negotiated) x \$ _____, being the Contractor's firm hourly charge-out labour rate which includes overhead and profit, plus net laid-down cost of materials to which will be added a mark-up of 10 percent, plus Goods and Services Tax or Harmonized Sales Tax, if applicable, calculated at 15 percent of the total cost of material and labour. The firm hourly charge-out labour rate and the material mark-up will remain firm for the term of the Contract and any subsequent amendments. The material mark-up rate will also apply to subcontracted costs.

3 Overtime

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No overtime work will be compensated for under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing such details as Canada may require with respect to the overtime work performed.

3.1 Overtime Labour Rate

Firm overtime labour rate \$_____

This rate will remain firm for the duration of the Contract including all amendments and are subject to audit if deemed necessary by Canada.

Solicitation No. - N° de l'invitation
47304-190712/A
Client Ref. No. - N° de réf. du client
47304-190712

Amd. No. - N° de la modif.
File No. - N° du dossier
HAL-8-81105

Buyer ID - Id de l'acheteur
ha1311
CCC No./N° CCC - FMS No./N° VME

ANNEX "G" to PART 3 OF THE BID SOLICITATION

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts to be paid by any of the following Electronic Payment Instrument(s):

- VISA Acquisition Card;
- MasterCard Acquisition Card;
- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);

Canada Border Services Agency

Technical Statement of Requirements Glass Reinforced Plastic (GRP) Rigid Hull Inflatable Boat (RHIB) with Extended Cabin and Trailer

Atlantic Region

August 2, 2018

Revision 4

**TRANSPORT CANADA MARINE SAFETY BRANCH (TCMSB)
TP1332 APPROVED CONSTRUCTION**

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ABBREVIATIONS

ABYC	American Boat and Yacht Council
AC	Alternating Current
ASTM	American Society for Testing and Materials
CFM	Contractor Furnished Material
CSA	Canadian Shipping Act
CSA	Canadian Standards Association
COLREGS	Collision Regulations
DC	Direct Current
GPS	Global Positioning System
GRP	Glass Reinforced Plastic
GSM	Government Supplied Material
ISO	International Organization for Standardization
PVC	Polyvinylchloride
RHIB	Rigid Hull Inflatable Boat
TA	Technical Authority (As defined by the Contract)
TCMS	Transport Canada Marine Safety
TSOR	Technical Statement of Requirements
UV	Ultraviolet
VHF	Very High Frequency
WMO	World Meteorological Organization

LIST OF REFERENCE DOCUMENTS

REFERENCE	TITLE
ASTM F1166	Standard Practice for Human Engineering Design for Marine Systems, Equipment and Facilities
TP 1332	Construction Standards for Small Boats
TP 13430	Standard For Tonnage Measurement of Ships
TP 14070	Small Commercial Vessel Safety Guide
TP 14612	Procedures for approval of life-saving appliances and fire safety systems, equipment and products.
TP14475	Canadian Life Saving Appliance Standard.
ISO 12217	Small Boat – Stability and Buoyancy Assessment and Categorization
Canada Shipping Act	Small Vessel Regulations
Canada Shipping Act	Collision Regulations (COLREGS)
ABYC	American Boat and Yacht Council Standards
Canadian Standards Association (CSA) CSA W47.2-M1987	Certification of Companies for Fusion Welding of Aluminium
(CSA) C22.2 No. 183.2-M1983 (R1999)	Standards for DC Electrical Installations on Boats
CT-043-EQ-EG-001-E	Canadian Coast Guard Welding Specification, August 2017

1.0 OVERVIEW

1.1 GENERAL

- 1.1.1 The Canada Border Services Agency buys, manages and operates numerous small craft in support of its Departmental programs and other missions.
- 1.1.2 The Public Services and Procurement Canada is the “Contracting Authority” (CA), and the Canada Border Services Agency is the Technical Authority (TA) / Inspection Authority (IA).
- 1.1.3 Wherever actual brand or model names are referenced, equivalent or superior equipment may be considered. Bidder must provide supporting documentation to validate choice, which will require approval prior to purchase.

1.2 REQUIREMENT

- 1.2.1 The Contractor must design, fabricate and supply quantity one (1) Glass Reinforced Plastic (GRP) Rigid Hull Inflatable Boat (RHIB) with an extended cabin and trailer based on the current Transport Canada Marine Safety Branch (TCMSB) Marine Safety Publication TP 1332 “Construction Standards for Small Vessels” (hereinafter referred to as TCMSB TP 1332). The boat must be dual gasoline outboard motor configuration.
- 1.2.2 The primary role of this RHIB will be Border Services Operations, including but not limited to rummages, ROV operations and Immigration and Refugee Protection Act risk assessments of crew for the Atlantic Region, based out of the Halifax Marine Unit.
- 1.2.3 The secondary roles will be other border enforcement duties such as boarding and surveillance duties within the reasonable capabilities for this type and size of craft.
- 1.2.4 This RHIB will be shore-based and launched and recovered by trailer.

2.0 DESIGN AND CONSTRUCTION REQUIREMENTS

2.1 GENERAL

- 2.1.1 Unless stated otherwise all components, equipment and material must be contractor supplied.
- 2.1.2 Canada Border Services is undergoing the tender process for a new ROV, and as such accurate specifications are not available at this time. These will be provided at a later date, and some vessel modifications maybe required.

2.2 ERGONOMIC DESIGN

- 2.2.1 Hazardous operating conditions must be prevented by arranging machinery and equipment in a safe manner; providing guards for all electrical, mechanical and thermal hazards to personnel; and providing guards or covers for any controls that might accidentally be activated by contact of personnel.

- 2.2.2 The boat must be designed and constructed to accommodate both male and female crew from approx. 5' to 6' 4" in height, wearing cold weather clothing and equipment in accordance with ASTM F1166-07 Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities.
- 2.2.3 Human engineering factors considered in design must include accessibility, visibility, readability, crew efficiency and comfort. All equipment must be accessible for use, inspection, cleaning and maintenance.
- 2.2.4 Equipment must be accessible for use, inspection, cleaning and maintenance as per ASTM F1166-07.

2.3 VIBRATION

- 2.3.1 The boat and all components must be free of local vibration that could endanger boat personnel, damage boat structure, machinery or systems, or interfere with the operation or maintenance of boat machinery or systems.
- 2.3.2 Mounts for movable components, including items moved for stowage, towing or transport must be provided with resilient material as necessary to prevent rattling.
- 2.3.3 Loosening of fasteners under vibration must be prevented by the use of selflocking fasteners.

2.4 EQUIPMENT PROTECTION

- 2.4.1 The Contractor is responsible for the care of all equipment. All parts, especially those having working surfaces or passages intended for lubricating oil, must be kept clean and protected during manufacture, storage, assembly and after installation. Equipment must at all times be protected against dust, moisture or foreign matter and must not be subject to rapid temperature changes or extremes in temperature.

2.5 SITE CLEANLINESS

- 2.5.1 During construction, all chips, shavings, refuse, dirt and water must be removed at the completion of the work shift or sooner. The Contractor must ensure measures are taken to avoid wear and damage incident to construction, and to prevent corrosion or other deterioration. Equipment subject to freezing must be kept drained, except during test and trials. Equipment must be kept clean and protected from the environment prior to installation.

2.6 STRUCTURAL STRENGTH

- 2.6.1 All structures and components (hull, deck, seating, etc.) must be of sufficient strength to withstand when in the Fully Loaded Condition, the lateral and vertical impact-loading that equates to the conditions of the operational requirements.

2.7 LAUNCHING

- 2.7.1** The boat must be capable of being launched, recovered and transported by road trailers.
- 2.7.2** The boat must have a three (3) point to single point lifting arrangement (with two (2) points at the transom and one (1) point at the bow complete with a rated three (3) legged sling, shackles and lifting eye. This arrangement is to facilitate lifting the boat with a crane (both on shore and ship based).

2.8 HULL

- 2.8.1** Rigid hull must be constructed of vinylester glass-reinforced plastic. All materials used in the hull construction must be fire-retardant or non-combustible.
- 2.8.2** The deck and hull must be constructed of similar materials. The deck must have a suitable non-skid surface.

2.9 DECK

- 2.9.1** Deck must be self-draining, by means of non-return freeing ports or similar. The deck above the watertight compartments must be bolted for easy removal to allow access for repair of buoyancy compartments beneath.

2.10 TIE DOWNS

Stainless steel recessed deck tie downs will be fitted on the aft deck area for the securing of deck cargo. (Minimum of four (4) per boat required).

2.11 STOWAGE

- 2.11.1** The Contractor must provide a watertight compartment for safe stowage of equipment and accessories. Arrangements must be provided for safe, secure and accessible stowage of an anchor and cable, paddles, and other equipment.

2.12 BEACHING SHOE

- 2.12.1** A high-density protective shoe of stainless steel or equivalent composite must be fitted the full length of the keel, to protect against damage from grounding or similar hazards. This shoe must not detract from performance or sea keeping capabilities, and it must be capable of withstanding the horizontal and vertical impact loading associated with the boat operational requirements. (See section 3.3 Operational Performance - Beaching).

2.13 TOWING/TRAILERING

2.13.1 A bow eye or U-bolt arrangement must be incorporated into the construction of the stem, suitable for towing the boat at a speed of five (5) knots in calm water in the normal loaded condition, on an even keel without damaging the boat or causing undue chafing of the towline. This bow eye must also be suitable for trailering purposes.

2.14 OUTBOARD MOTOR CRASHBAR

2.14.1 A reinforced aluminum outboard crashbar bracket constructed of 5086 aluminum alloy is to be fitted to protect the outboard motors. The crash-bar must be removable if it obstructs outboard motor removal.

2.15 COLLARS

2.15.1 The boat is to be outfitted with a 'D' shaped foam / air hybrid collar with a Thermo-Welded Polyurethane outer skin (complete with UV protection, rub strip and lifelines).

2.15.2 The collar must be slide on style attached to the hull using mechanical fasteners at the bow and stern allowing the collar to be easily removed for repair or replacement. The use of screws and lag bolts or glue-on type collar is not acceptable.

2.15.3 HD Rubrails must run fore, aft and along the bow for added protection when coming alongside other vessels, piers or other structures.

2.15.4 Grab lines of nylon braided rope construction ½" diameter, must be fitted along the port and starboard sides of the collar.

2.15.5 The material must be thermo-welded polyurethane with a minimum weight of 1360 grams per square metre. The surface of the collar must be textured to provide for traction (Coolthane® L409OUPWNG4 meets this requirement).

2.15.6 Patch Kit for Welded Polyurethane tubeset. (See section 6.3.2)

2.16 STANDARDS

2.16.1 The boat constructed under this TSOR must be fabricated in accordance with the current TCMSB TP 1332 "Construction Standards for Small Vessels" and where applicable the American Boat & Yacht Council (ABYC)

2.16.2 The boat constructed under this TSOR must be fabricated of GRP composite construction.

2.16.3 The Contractor must construct each boat as per this TSOR and where this TSOR interferes or contravenes the above standard; the above TCMSB TP 1332 standard will take precedence

2.16.4 The Contractor must arrange for Technical/Contracting Authority site visits, during all phases of each boat's construction. The site visits are required to insure that the boat constructed under this TSOR comply with each standard addressed in this TSOR. The Contractor must supply an electronic copy and

two (2) hard copies of all drawings for the boat design to the Technical Authority.

- 2.16.5** The Contractor must supply a signed letter insuring the proposed RHIB complies with TCMSB TP 1332 and a completed Small vessel Compliance Form (available from the TCMSB web site), to ensure compliance with the current TCMSB requirements.
- 2.16.6** Electrical systems for the boat must be in accordance with TCMSB TP 1332 Section 8 “Electrical Systems”.

2.17 MATERIALS

- 2.17.1** All materials must be corrosion resistant and suitable for use in a salt water environment as detailed in the Operational Requirements. All materials normally subjected to sunlight must resist degradation caused by ultraviolet radiation. Galvanized materials are unacceptable.
- 2.17.2** Dissimilar Metals: Direct contact of electrolytically dissimilar metals is not allowed. Electrolytic corrosion must be prevented by insulating dissimilar materials from each other with gaskets, washers, sleeves, or bushings of suitable insulating material.
- 2.17.3** Aluminium: Aluminium alloy types 5086-H32 must be used for plate; aluminium alloy 6061-T6 (anodized grade), suitable for type 5356 filler alloy, must be used for extruded shapes and welded tubing and pipe. Non-structural items of trim and outfit such as hatch frames, castings, consoles, and hardware items may be of other aluminium alloys suitable for commercial saltwater marine use such as dual rated 5083 / 86 or 5052 or 6063-T54.
- 2.17.4** Stainless Steel: Stainless steel type 316L or 316 must be used for all stainless steel applications except as noted. Alloy 316L must be used in any welded underwater components.
- 2.17.5** Glass Reinforced Plastics and Resins: Good lamination practises required throughout, eg. overlap distances, resin control, air removal from laminates, laminate repair and preparation for subsequent laminations and part bonding / secondary bonding. NOTE: Vessel Particulars may specify upgrade materials.
 - 2.17.5.1** Minimum laminating material specification must include gel coats and skin-out of isothalic resins, which can be laid in Vinylester resins. No DCPD (Dicyclopentadiene) resins are to be used.
 - 2.17.5.2** Fibre materials to be standard mat / rovings, or `stitch` combined materials, some of which may use Carbon or Kevlar strands. NO `chopper` materials to be used in the hull.
- 2.17.6** Fittings and clamps must be stainless steel. Bolts used in all fittings must be Type 316 stainless steel.
- 2.17.7** Where flexible connections are required for steering and fuel systems, suitable hose with permanently crimped, detachable reusable type fittings must be used.

2.17.8 All materials and equipment must be stored installed and tested in accordance with the manufacturer's guidelines, recommendations and requirements.

2.18 FASTENERS

2.18.1 All fasteners must be of corrosion resistant materials.

2.18.2 Cadmium plated parts and fasteners, including washers, must not be used.

2.18.3 Direct attachment of alloys containing copper to aluminium is not permitted except for an electrical bonding strap.

2.18.4 No fasteners must be directly threaded into GRP. Aluminium or Stainless steel washers or backing plates must be used as appropriate.

2.18.5 Where nuts will become inaccessible after assembly of the vessel, nuts must be captured or anchored to allow reassembly and prevent backing off. Unless otherwise specified, self-locking nuts must be installed to prevent loosening of fasteners due to shock and vibration.

2.18.6 Fasteners in deck traffic areas must be flush-mounted to eliminate tripping and snagging hazards.

2.18.7 All GRP composite penetrations must have their exposed inner core areas protected / coated to prevent deterioration or de-lamination of the core.

2.19 FACILITIES

2.19.1 The Contractor must have a shop capable of maintaining temperature and humidity. It must be capable of maintaining temperature between 16°C and 25°C. It must be capable of maintaining relative humidity below 70%.

3.0 OPERATIONAL REQUIREMENTS

3.1 GENERAL

3.1.1 Unless otherwise stated, performance must be for conditions of zero sea state and no wind, in salt water with full load and complement. The boat must be designed and constructed for ease of maintenance and repair, long life, and are to be easily supportable in the location of the delivery address of the boat, by local commercial facilities and suppliers. The boat must be expected to have a service life of at least ten (10) years, with an expected usage of between 400 and 500 hours per year.

3.1.2 Maximum speed: 35 knots - 40 knots.

3.1.3 Minimum speed: 20 knots in sea state 6 with 35-knot wind.

3.1.4 Endurance: 30 knots for six (6) hours.

3.1.5 Range: 200 nautical miles with 10% reserve at 25-knot minimum speed.

3.2 STEERING

- 3.2.1** Capable of steering 15° from heading, in Sea State 6, with seas from any direction.
- 3.2.2** Steer and manoeuvre effectively at three (3) knots in Sea State 6.
- 3.2.3** Maintain course, made good over ground, when proceeding at three (3) knots with relative crosswind of 35 knots.
- 3.2.4** Capable of turning in its own length in Sea State 6.
- 3.2.5** Capable of steering effectively in Sea State 6 with winds of 30 knots while towing a 15 ton (displacement) vessel at 5 knots.
- 3.2.6** Be able to operate fully in depths of 1.0 metre with outboard motors fully lowered and be capable of basic manoeuvring in depths of 0.8 metre with the outboard motors in the partially raised position.
- 3.2.7** Operable by personnel, some without prolonged training or certification.
- 3.2.8** Must be easy to maintain.

3.3 BEACHING

- 3.3.1** Capable of beaching on soft (sand, earth or clay) surfaces at a speed of up to five (5) knots without damage to the hull.
- 3.3.2** Capable of beaching on hard (stone or concrete) surfaces at speeds of up to three (3) knots without damage to the hull.

3.4 ENVIRONMENTAL CONDITIONS

- 3.4.1** Capable of operating day or night in the following conditions:
 - 3.4.1.1** Average ambient air temperature range: -5° C to + 30° C;
 - 3.4.1.2** Average water temperature: 0° C to +20° C;
 - 3.4.1.3** Wave heights of four (4) meters to six (6) meters (WMO Sea-State 6);
 - 3.4.1.4** Wind speeds of 30 knots minimum;
 - 3.4.1.5** Required to operate safely in ice infested waters, (some minor damage to each boat, not affecting stability or buoyancy is acceptable);
 - 3.4.1.6** The boat must operate in freezing spray or freezing rain with accumulations of up to 6.0 mm while maintaining stability while allowing for safe transit in Beaufort force 7.

3.5 LAUNCHING, RECOVERY & TRANSPORTATION

- 3.5.1** The crafts must be readily road transportable on a trailer, must be able to be launched and recovered using the trailer at existing launch ramps.

3.6 MAINTENANCE

- 3.6.1** The crafts must be designed and constructed for ease of maintenance and repair, long life, and be easily supportable by local commercial facilities and suppliers.

4.0 PHYSICAL CHARACTERISTICS

4.1 VESSEL PARTICULARS

- 4.1.1** Length overall - between 8.75 and 9.50 metres
4.1.2 Breadth overall – between 2.95 and 3.2 metres
4.1.3 Maximum draft (outboard motors lowered) - between 0.80 and 0.90 meters.
4.1.4 Maximum draft (outboard motors raised) - between 0.65 and 0.75 meters.
4.1.5 Maximum freeboard (from top of collar at amidships, in normal load condition) 0.82 meters.
4.1.6 Maximum height of collar above deck 0.75 meters
4.1.7 Displacement (in normal load condition) between 4500kg and 4800kg.
4.1.8 Normal load conditions:
 4.1.8.1 Crew of four (4) = 400kg;
 4.1.8.2 Fuel = 700 liters to 750 liters;
 4.1.8.3 Equipment & supplies = 500kg.
4.1.9 Hull material – Glass Reinforced Plastic (GRP).
4.1.10 Vessel style – Rigid Hull Inflatable Boat (RHIB) with extended cabin.
4.1.11 Propulsion – Twin 250 hp Mercury outboard motors or equivalent.
4.1.12 Sewage capacity – A holding tank must be incorporated into the Contractor supplied marine head and is to comply with the current TCMS pollution regulations.

5.0 VESSEL CONFIGURATION

5.1 CABIN ARRANGEMENT

- 5.1.1** The layout of the console and/or cabin must take into account ergonomic considerations, with easy viewing and access to all critical instruments and controls. The cabin deck to be covered with anti-fatigue matting. A marine Head is to be contractor supplied and installed in the cuddy cabin.

5.2 CABIN LOCATION

- 5.2.1** Provision must be made for safe passage of personnel without the necessity to stand or walk on the sponson.

5.3 CABIN REQUIREMENTS

- 5.3.1** The cabin must be sized to accommodate and provide seating for a four (4) person crew. The cabin must be fully enclosed with access through a weather tight door in the aft bulkhead, and weather tight slide pilot doors (one Port &

Starboard). The cabin must be of such a design that the operator will have an unobstructed view from directly forward to 22 ½ ° abaft the beam on the port and starboard sides. The enclosed wheelhouse door arrangement as detailed above is for three (3) wheelhouse doors, two (2) side pilot doors, one (1) main rear door (all with windows and slider operated). The cuddy must have a watertight access hatch. Visibility as detailed above is full 360 degree from large safety glass windows in front, sides and rear of wheelhouse. Cabin and cuddy must be heated with a Webasto Air Top EVO 5500, Model no Artikel Nr. 1312517C (or equivalent), such that the wheelhouse and cuddy cabin are heated and there is a means provided to reduce window fogging and icing. The Contractor must calculate the required size of the total space being serviced by the heater and use this measurement when ordering the system. The Contractor must install the system as per the manufacturer's recommendations.

- 5.3.2** Two (2) electric windshield wipers with pantograph arms and a wiper washer system are to be installed one (1) on each fore window. The windshield wipers are to be activated individually by a switch –four (4) positions (stop-slow-fast-intermittent) - located in the pilot house.
- 5.3.3** Two 12v fans to be installed in the upper corners of the windshield facet to provide air circulation and assist with the defrost/de-fogging system.
- 5.3.4** Grab rails must be fitted, securely attached and located for quick access. Their color should be in contrast to grab rail location. At a minimum we should have grab rails at these locations;
 - 5.3.4.1** Cabin ceiling full length offset from passage way (one port, one starboard).
 - 5.3.4.2** Roof perimeter (exterior).
 - 5.3.4.3** Cabin Aft (outer exterior) vertical port and starboard.
 - 5.3.4.4** Helm station on side of console going into forward cuddy.
 - 5.3.4.5** Co-pilot station on side of console going into forward cuddy.

5.4 DECK REQUIREMENTS

- 5.4.1** The deck aft of the cabin must be a minimum of 213 cm wide from port to starboard and 213 cm long.
- 5.4.2** Hand rails mounted at the bow of the boat to facilitate boarding onto and off of larger vessels.
- 5.4.3** Stainless Steel davit (500lbs cap.) must be installed behind the port side of the wheelhouse. The davit must rotate between usage (with a boom length of 1 meter) and storage (to keep davit inboard when not in use) positions and be locked in either position with a stainless steel locking pin. Metal backing plates must be installed in the deck and tube carrier to allow for easy removal of the davit. Winch must be a NG Midi 1400 or equivalent complete with 90 meters of 8mm (5/16") Wire Rope Polycad / Combination wire rope.

6.0 OUTFIT GENERAL

6.1 TOWING

- 6.1.1** Sufficient barrier protection must be provided to protect control station from potential recoil of towline.
- 6.1.2** A cruciform towing post must be fitted aft (4000 pound tow capacity minimum) and a removable cruciform tow post (2000 pound tow capacity minimum), fitted toward the bow. The tow posts to be stamped with the Safe Working Load (SWL) of each post, and the paint must be highlighted.

6.2 INTERIOR OUTFIT

6.2.1 SEATING

Seating must be provided in the wheelhouse via Four (4) Fixed Shock mitigating seats (Shoxs model 2000 or equivalent) adjustable front to rear and for height, with foot rests, adjustable backrest and folding armrests. Shock mitigating seats must have adjustable ride to accommodate variable personnel characteristics. Seats are to be mounted on a raised storage box and be located in two rows of two on both port and starboard side allowing for adequate room for both seating and standing of all personnel. The Wheelhouse must be configured to provide room to accommodate four (4) officers in seated position comfortably, all with full vision out of wheelhouse and all with quick access out of wheelhouse via large rear sliding door and pilot sliding doors at each side of wheelhouse. Fabric of the upholstery must be rugged Naugahyde or equivalent that must be resistant to tearing, puncture, and environmental conditions and moisture. All four (4) seats must be Contractor supplied and installed as identified by the Technical Authority.

6.2.2 WORKSPACE

The port side rear seat must be placed against the aft interior bulkhead, giving space for a table and a lamp, table must be fold down and hinged to cabin wall to create a work space for the ROV operator. Size must allow for use of ROV equipment with table dimensions of 30 inches wide and 20 inches deep. This table must be able to support 100 lbs. A robust locking mechanism with quick release must be fitted to keep table stable. The space must also allow for a future installation of a drop down monitor from the ceiling.

6.2.3 CONSOLE INSTRUMENTATION

- 6.2.3.1** Operators console must be fitted with all appropriate gauges as recommended by the propulsion-system manufacturer, as a minimum the following gauges are to be provided on the console:
 - 6.2.3.1.1** Tachometer for each engine;
 - 6.2.3.1.2** Fuel gauge for each tank;
 - 6.2.3.1.3** Volt meter for each engine;

- 6.2.3.1.4 Tilt/trim gauge for each motor;
 - 6.2.3.1.5 Oil pressure gauge, if applicable;
 - 6.2.3.1.6 Oil level gauge;
 - 6.2.3.1.7 Hour Meters for both Outboard motors;
 - 6.2.3.1.8 Cooling water temperature gauge;
 - 6.2.3.1.9 Water Pressure gauge for each motor; and,
 - 6.2.3.1.10 Battery condition/ voltage meters for each battery.
- 6.2.3.2 Note: Bidders must supply and install the controls and gauges that are recommended by the suppliers for operation of the twin (2) 250 HP Gasoline outboards.

6.2.4 COAT HOOKS – Four (4) Stainless steel coat hooks are to be mounted on the aft interior bulkhead of the main cabin.

6.2.5 FORWARD CUDDY Cuddy must be designed to provide maximum stowage with one side designated as a large lockable area. Shelving on both sides must be supplied and installed from ceiling to deck best suited for a marine environment. Shelving must be easily removed without the use of hand tools.

6.3 LIFESAVING & EMERGENCY EQUIPMENT

- 6.3.1 The following items must be provided with appropriate stowage / securing arrangements (as appropriate for each item). All fittings, Contractor supplied, must be heavy duty, corrosion resistant 316 stainless steel fittings. All items must be readily accessible (the repair kits must be stowed in a stowage locker). All items must be readily accessible.
- 6.3.2 Patch Kit for Welded Polyurethane tubeset.
 - 6.3.3 Anchor chocks installed on the fore deck
 - 6.3.4 A water-resistant flashlight and a set of spare batteries.
 - 6.3.5 Two (2) wooden paddles
 - 6.3.6 One extinguisher (Class 5BC, marine type) with mounting bracket installed on RHIB
 - 6.3.7 Anchor (Fortress FX16 model or equivalent) with 200 feet of ½” line and a 5 meter galvanized chain
 - 6.3.8 Sea anchor and Line
 - 6.3.9 Four (4) 25-foot mooring lines
 - 6.3.10 Four (4) 6 inch diameter fenders
 - 6.3.11 Transport Canada approved First aid kit
 - 6.3.12 Air horn
 - 6.3.13 Buoyant heavy line of at least 15 meters
 - 6.3.14 TCMS approved radar reflector
 - 6.3.15 ACR RLS 406MZ beacon (EPRIB) with hydrostatic release or equivalent, installed
 - 6.3.16 Six (6) TCMSB approved flares, among which at least 3 of which to be type A, B or C.

7.0 SYSTEMS GENERAL

7.1 PROPULSION

7.1.1 ENGINES

- 7.1.1.1** Outboard motors must be twin (2) 250 HP Mercury gasoline Outboard Engines or equivalent. The Contractor must install the outboards, supply and install the controls for each outboard on the RHIB.
- 7.1.1.2** The engines must be installed, mounted and operated in accordance with the engine manufacturer's recommendations. The use of engine manufacturer's approved accessories and equipment is required. Equipment and components must not be used, or trials performed on the engines that would, in any way, void the engine manufacturer's warranties.
- 7.1.1.3** Motors must be mounted outboard of the transom on a GRP extension bracket. The bracket should have adequate buoyancy for the twin 250 hp outboards and extend the vessels waterline to provide optimal handling characteristics.

7.1.2 PROPELLER(S)

- 7.1.2.1** Two identical propellers for each outboard (Two are spares) must be provided by the Contractor (CFM).
- 7.1.2.2** Propeller(s) must be properly sized and Contractor installed.
- 7.1.2.3** Contractor must inform the Technical Authority of appropriate pitch and diameter to meet the Performance Requirements as determined by the Contractor through their developed design check.
- 7.1.2.4** The propellers must be of stainless steel.

7.1.3 CONTROLS

- 7.1.3.1** Propulsion control system installation must include a dual binnacle engine controls located on the starboard side of the helm console. The controls must conform to engine manufacturer's recommendations and must not interfere with any of the other controls.
- 7.1.3.2** Engine package must incorporate a lanyard style automatic shutdown feature (kill switch) for the engines, to be mounted near the ignition switch.

7.1.4 ALARMS

- 7.1.4.1** Monitoring system for the engine must include the following alarms:
- 7.1.4.2** Oil level gauge, for the remote tank, if applicable;

- 7.1.4.3 Coolant flow alarm, if applicable; and,
- 7.1.4.4 Engine overheat/high temperature alarm.

7.1.5 VERIFICATION OF INSTALATION

7.1.5.1 Installation of the motor, controls, lubrication and fuel systems, manometers, battery connections, are to be verified by an authorized technician. The motors are to be started by the authorized technician, who must provide a written report with a copy for the Technical Authority.

7.1.6 ENGINE BREAK-IN

7.1.6.1 The Contractor is to respect the engine manufacturer's break-in procedures.

7.1.7 PROTECTION OF CONTROLS

7.1.7.1 All control cables, electrical wiring for the motor and the steering hydraulic hoses are to be installed in UV resistant plastic pipes (LOOM). These pipes are to be installed in such a manner as to ensure that no cable is immersed in water.

7.2 STEERING

- 7.2.1 Steering systems must be remote hydraulic with self-contained oil reservoir, and replaceable seals on the rams, with a maximum of 4.0 turns from hard over to hard over. (The SeaStar® and / or DayStar steering systems, depending on vessel horsepower, from Teleflex or equivalent). Particular propulsion systems may have their own requirements for steering which must be adhered to.
- 7.2.2 All hydraulic steering hoses must be routed in such a manner that they are protected from physical damage and so that there is no pinch or chafing points on the hoses.
- 7.2.3 Hydraulic hoses must be of sufficient size and length to prevent pulsing. Hoses must be suitable for use in an exposed marine environment complete with stainless steel fittings.
- 7.2.4 The wheel / console connection must be of robust construction, to eliminate fore and aft or lateral movement of wheel / steering shaft fixture.
- 7.2.5 The Steering wheel must be stainless steel and may be rubber or plastic covered. The Steering wheel must be stiff enough that during rough water operations there is no flexing of the wheel and the wheel should be padded to provide a comfortable non-slip surface for the operator to grip. (Momo Marine steering wheels meet these requirements).

7.3 FUEL SYSTEM

7.3.1 The Boat must include the following;

7.3.1.1 The complete fuel systems must be supplied, installed, labeled and tested in accordance with Section 7 of TCMSB TP 1332 and ABYC specifications.

7.3.1.2 The fuel system must include two (2) Racor filter/separators or equivalent suitable for fuel supply to the twin gasoline outboard motors.

7.3.1.3 All fuel valves must be readily accessible and labeled as per TCMSB TP 1332.

7.3.1.4 Fuel filling must be located in an accessible watertight / vented compartment designed to catch fuel from over filling or blow back, so that the fuel does not enter the vessel as per TCMSB TP 1332 requirements.

7.3.1.5 Remote fuel shutoff valves must be installed in accordance with TP1332 and ABYC requirements, remote from the fuel tanks and engine compartments. Labeled as per TCMSB TP 1332 requirements.

7.3.1.6 All fuel tanks are to be equipped with an anti-syphon valve installed on each suction

7.3.1.7 Fuel tank vent pipes are to be equipped with a non-return check valve

7.4 ELECTRICAL SYSTEM

7.4.1 The electrical system must meet TCMSB TP 1332 and ABYC Standards and be completely waterproofed and easily accessible, incorporating a waterproof breaker panel with a minimum of 10 circuits fitted. The Contractor must ensure that the breaker panel has 10% expansion room or a minimum of 2 spare breakers (whichever option is greater).

7.4.2 Twelve Volt (12V) DC distribution system must be provided to power the engine starting and boat service loads including:

7.4.2.1 Navigation lights;

7.4.2.2 Interior and Exterior Lighting;

7.4.2.3 Navigational equipment;

7.4.2.4 Instrumentation;

7.4.2.5 Bilge Pumps;

7.4.2.6 Electronics; and

7.4.2.7 Communications

7.4.2.8 Two interior fans

7.4.3 Four (4) marine quality 12V power outlets must be suitably located throughout the vessel. Two of the 12V power plugs must be installed on or near Operator's console.

7.4.4 One (1) Xantrex Prosine 1800W Inverter (complete with transfer switch) or equivalent wired to the Shore Power system (as detailed in 7.4.7) will run the accessory plugs including one domestic plug located port side of interior cabin near the workspace, one domestic plug located on the aft deck, and one domestic plug located in the cuddy. The Contractor must ensure that these plugs can still operate when strictly on the AC shore power.

7.4.5 Batteries, Switches & Charger:

7.4.5.1 The boat is to be equipped with a system of three type M30MF deep-cycle batteries (2 for the motors and 1 for accessories) with a selector switch and connected in accordance with the motor manufacturer's technical specifications.

7.4.5.2 Batteries must be marine grade glass mat or gel type maintenance free to eliminate leakage, and a minimum 1000 deep-cycle cranking amps.

7.4.5.3 A battery charger is to be supplied and installed on the boat. It must be used to charge both battery banks when the boat is on shore power.

7.4.5.4 Battery switches must be recessed to prevent snagging or accidental switching.

7.4.5.5 Battery compartments must be watertight and fitted with a suitable means of gas venting.

7.4.6 Bilge Blower: The boat must be fitted with a 12V DC bilge blower system in accordance with TCMSB TP 1332 "Construction Standards for Small Vessels" and ABYC specifications. The bilge blower system must be controlled by a separate watertight switch and fuse located at the operator's console.

7.4.7 Shore Power Service:

A shore power connection must be fitted complete with a marine grade service rated 50-ft shore power cable, capable of supplying 120V AC, 30 ampere, single phase service.

7.4.7.1 The boat's shore power receptacle must be a marine-style locking 30-amp waterproof male receptacle in a location that is accessible with all hatches closed.

7.4.7.2 Shore power must be connected to an AC distribution panel on the boat. Each AC circuit must have its own breaker. This distribution panel will supply the following:

7.4.7.2.1 Battery charger;

7.4.7.2.2 One domestic plug approve type, 15 A in cabin;

7.4.7.2.3 One domestic plug approve type, 15 A in cuddy;

7.4.7.2.4 One domestic plug approve type, 15 A outside cabin;

7.4.7.2.5 One cabin light; and

7.4.7.2.6 Two spare circuits.

7.4.7.3 Cable Installation: Cables and conductors must be supported with clamps or straps at least every 12-18 inches on horizontal runs and every 14 inches on vertical runs. Cable runs in PVC fire retardant LOOM as deemed acceptable by TCMSB TP 1332 requirements.

7.4.8 Lighting:

7.4.8.1 Backscatter of console lights must be minimized in the design. In all cases, progressive marine grade dimmers must be fitted wherever practicable, with the capability of dimming engine monitoring gauges and other indicators separately from compass illumination.

7.4.8.2 A night vision dome light (red dim Navigation type) must be installed on the deck above and behind the coxswain area for low light vision of panel instruments, key switches, distribution panels, motor controls etc.

7.4.8.3 Boat must be fitted with four (4) marine grade floodlights suitable for illuminating forward and aft deck spaces. (The Hella Sea Hawk LED floodlights model 980670201 or equivalent).

7.4.8.4 A blue flashing light (strobe type) must be fitted.

7.4.8.5 Navigation lighting must conform to CSA Collision Regulations.

7.4.8.6 Fitted searchlights: two (2) required as a minimum and must have remote control slew/tilt/focus capability, allowing 360° coverage. Fitted searchlights must produce at a minimum one million Candelas each. Mounting must minimize interference with operator's vision. Fixtures must be designed to resist the effects of vibration and moisture and must be protected from damage while laying alongside or while underway.

7.4.8.7 Handheld Searchlights: one (1) required as a minimum producing 1 million candelas at 12 volt supplied.

7.4.9 Generator:

A built-in generator, with a built-in fuel tank, supplied by Contractor, must be installed. Location must be near aft, below deck. Stowage area must be sound insulated and properly vented. The fuel tank must be hydrostatically or air tested approved. Tank must bear manufacturers' name, capacity and testing data. The generator must be vented in a way as to not adversely interfere with crew member conducting ROV tether operation on aft deck while generator is in operation. The entire system must be able to provide up to 4000 watts. The output power must be 100-120VAC or 200-240VAC, 60Hz, single phase.

7.4.10 Radar Arch:

Radar Arch must be fabricated and installed above the cabin. The arch must be constructed so that the radar, antennae, lights and other fittings can be mounted with minimal effort. All wiring penetrations in the cabin must be made water tight using TCMSB approved watertight glands. All penetration must be hose tested upon completion for water tightness. Acceptance based on no water penetrating the interior of the cabin.

7.4.11 Magnetic Compass:

The contractor is to supply and install a Ritchie SS-5000W Super Sport Flush Mount compass or equivalent – mounted in the Operator's console. Non-white (red or green) lighting connected to the 12 volt DC electrical system. System must be supplied with its own waterproof marine-grade dimmer switch. Compass must be adjustable for deviation.

7.5 ELECTRONIC AND NAVIGATION EQUIPMENT

The Contractor must supply and install the following electronics, all make and models listed from 7.5.1 to 7.5.16 equivalencies are acceptable. All antennas must be mounted on cabin top with fold down connections for road travel. All cable penetrations must pass through a watertight gland.

7.5.1 FLIR M617CS with deluxe dual station accessory kit and FLIR 500-0395-00 joystick control unit top down installation riser kit and video screen mounted near the operator position;

7.5.2 Simrad NSS 12 EVO 3, c/w GPS, Sonar and radar capabilities. The system must be able to interface with Regulus II BSB charts;

7.5.3 4G Broadband Radar for Simrad NSS series includes Scanner, installed as per manufacture's recommendations and proper accessories and sized cables.

7.5.4 Simrad BSM-1 Sounder module with Airmar Xsonic B150M tilted element (20 deg) thru Hull transducer;

7.5.5 Simrad GO 7XSR with HDI transducer, Backup GPS

7.5.6 NAIS 400 AIS transmit/receive/ gamss 2 Antenna;

7.5.7 Navionics MSD/NAV+CAD chart card;

7.5.8 GS-25 antenna/N2k Kit (for radar overlay);

7.5.9 One (1) Standard Horizon GX 5500S VHF with DSC capabilities radio.

Complete with loud hailer/intercom function plumbed to Radio. VHF must be connected to GPS via NMEA to complete DSC capabilities;

7.5.10 Antenna, specification is Comrod AV60P-4 and Shakespeare 4187 -HD SS ratchet mount and 408 stand-off bracket;

7.5.11 Whelan 295SL100 Loud Hailer / Siren complete with speaker;

7.5.12 Clarion 437 M309 CD AM/FM stereo with two (2) 6.5" waterproof speakers;

7.5.13 The Contractor must supply and install an electric horn that meets the requirements of the Canadian Standards Association (CSA) Collision Regulations. The horn must be operated by a spring-loaded switch located on the operator's console;

7.5.14 The Contractor must provide and install a direct read compass with light on each boat. The magnetic compass must be mounted on the centreline of the operator stations, in easy view of the operator when facing forward. Deviation card development is an Owner responsibility. (The Ritchie Explorer meets this requirement.); and

7.5.15 Externally Mounted EPIRB ACR RLB-36 w/ Sea shelter 3 Cat 1 bracket.

7.6 DRAINAGE & BILGE SYSTEMS

- 7.6.1** Electric bilge pump with 2000 gallons per hour (gph) capacity must be fitted in each watertight division as well as a fixed manual operated diaphragm type bilge pump. The bilge pump must be located so that it takes suction from the lowest point of the hull. Piping will allow the bilge pump to discharge directly overboard. An automatic control must be fitted that turns on the electric bilge pump when water is present in the bilge. The electric bilge pump control switch must be located on the operator's console, with settings for 'on', 'off and 'automatic' operation. An indicator light and an audible alarm must be installed at the console that lights when the bilge pump is operating. Bilge pump(s) must be wired direct to battery, so that it is constantly active as per TCMSB TP 1332 requirements.
- 7.6.2** Hull drainage - a marine bronze garboard threaded plug must be provided in the lowest point to drain the hull when out of the water.
- 7.6.3** Inboard raw water wash down system (STRIGHT-MACKAY, Jabsco Pump, High Speed, 378 gallons per hour or similar)
- 7.6.4** Valves and handles must be bronze or stainless steel and must be located where they are readily accessible for operation, maintenance or removal.

7.7 PAINTING

7.7.1 GENERAL

- 7.7.1.1** The standard color of the hull, deck, collar, and console of the boat must be Grey Aluminium (RAL9007). Upholstery on the seats must be black. All exposed aluminum surfaces must be matte black and outer surfaces of cabin must be Grey Aluminium (RAL9007).
- 7.7.1.2** Prior to delivery, the Contractor must ensure that all non-painted exposed aluminium is free of cosmetic blemishes, including all construction marks, scratches, gouges and stains.

8.0 TESTS & TRIALS

8.1 TESTS - GENERAL

- 8.1.1** The Contractor must inspect and test the following items, as a minimum, for adherence to the contract requirements and proper operation (proper operation means that the equipment can be started, operated, connected together and demonstrated to function in a normal fashion, as applicable). All discrepancies must be corrected prior to delivery. The required inspections and tests are minimums and are not intended to supplant any controls, examinations, inspections or tests normally employed by the Contractor to assure the quality of the vessel:
 - 8.1.1.1** Weight;
 - 8.1.1.2** Construction Quality;
 - 8.1.1.3** Lifting Gear, if applicable;

- 8.1.1.4 Propulsion Engines, including starting;
- 8.1.1.5 Propulsion Controls;
- 8.1.1.6 Steering System;
- 8.1.1.7 Fuel System;
- 8.1.1.8 Electrical System; and,
- 8.1.1.9 Electronics.

8.2 SEA TRIALS - GENERAL

- 8.2.1 Sea trials must be conducted by the Contractor to demonstrate the vessel and its equipment conform to the requirements as stated in the Contract. All expenses incident to the trials must be borne by the Contractor, including fuel unless otherwise specified. A crew provided by the Contractor must operate the vessel during sea trials. Residual fuel, if not drained for shipping, must be delivered in its tank with the vessel.
- 8.2.2 All Sea Trial instrumentation and equipment must be furnished and operated by the Contractor. Trial instrumentation, where applicable, must not replace the vessel's instruments (e.g., engine tachometer, pressure gauges, and thermometers). The Contractor must furnish all necessary hardware and fittings and must install the measuring devices. After satisfactory completion of the trials, all instrumentation must be removed and all systems restored to their original condition. The Contractor must provide two (2) copies of the calibration data certifying the accuracy of the instrumentation for the tests and include it in the technical publications (see section 9.6).
- 8.2.3 The Contractor must submit a Test & Trials Plan, including a description of all of the acceptance trials to be performed. As a minimum, Using Appendix A, the following trials must be conducted: (the vessel must operate in the Normal Load Condition.)
 - 8.2.3.1 Speed Trials - The speed trials must be done over a course at least one (1) nautical mile in length. Two (2) runs must be made over the course, one (1) in each direction with the speeds for the two (2) runs averaged. The use of GPS data (averaged) is acceptable;
 - 8.2.3.2 Endurance Trial - The boat must operate at maximum speed for a minimum of ten (10) minute intervals in the Fully Loaded Condition over one (1) hour period considering the break in procedures of the equipment. During the endurance trials, it must be demonstrated that all parts of the propulsion system are in full operation. All systems must be operated to check for proper lubrication, control and alignment. Fuel consumption must be recorded for the one-hour trial;
 - 8.2.3.3 Astern Propulsion - The vessel must be operated and manoeuvred using astern propulsion to establish the astern performance. During the backing performance tests the throttles must be set to provide 1/3 of the rated engine horsepower. In order to demonstrate astern performance of the engines in an emergency stop and to test the strength of the foundations, the engine must be subjected to two stops from full power ahead at

maximum speed to dead in the water using reverse thrust. Time required to perform this trial must be recorded; and,

- 8.2.3.4 Steering Gear** - Tests must be conducted on the steering gear to demonstrate the adequacy of the steering system under all operations. Manoeuvring tests must be performed to ensure that the vessel meets the stated requirements. Manoeuvring trials must be conducted in the Normal Load Condition and repeated in the Full Load Condition.
- 8.2.4** The Contractor must provide a Tests & Trials Sheet, (Appendix A) for each boat and include this sheet in the technical publications (see section 9.6).
- 8.2.5** Public Works and Government Services Canada Contract Authority and Technical Authority must be notified no less than 2 weeks prior to sea trials. The Technical Authority will witness and attend the sea trials. Sea trial results must be forwarded to the Technical Authority prior to delivery of the vessel.
- 8.2.6** At the conclusion of sea trials each vessel must be thoroughly cleaned and inspected. Engine cooling systems must be flushed through with fresh water. The Contractor must repair any damage to the vessel or ancillary equipment resulting from sea trials, to the satisfaction of the Technical Authority.
- 8.2.7** For the purpose of the trials, Normal Loaded Condition must be considered to be the basic vessel, fitted with all normal equipment, full fuel, with complement and loads per Vessel Particulars, (see section 4.1).
- 8.2.8** Final Inspection and Acceptance (PWGSC Acceptance Document) for delivery Final Inspection must not be performed until all tests have been satisfactorily completed with data available for review. The vessel must be ready for delivery in all respects, except for final preparation for shipment. The Contractor must provide personnel, as required, to resolve questions and to demonstrate equipment operation maintenance accessibility, removal and installation. The Contractor must document the results of the Final inspection and provide these results to the Contracting Officer, a hard copy of the trial results must be shipped with the deliverables for each vessel. Where applicable, serial numbers and other identifying information must be recorded for each boat and engine and supplied to the Contracting Officer.
- 8.2.9** Stability examination per TCMSB TP1332 will require the Contractor to record all stability calculation and trial results and provide a copy for each craft produced, to be placed in the technical manual, and two (2) copies for the Technical Authority.
- 8.2.10** Final Acceptance upon delivery, the Technical Authority, or a representative of the Technical Authority will conduct the final delivery inspection. The Contractor must repair any damage to the vessel or ancillary equipment resulting from shipping, to the satisfaction of the Technical Authority.
- 8.2.11** Trial Records: The Contractor must maintain records of testing for each vessel for a minimum of two years. The Contractor must prepare a testing check sheet that certifies that each test has been completed. The check sheet must indicate the actual weight of the vessel in Light Condition. The check sheet must also indicate the total loaded weight.

9.0 DOCUMENTATION

9.1 GENERAL

All documentation must be provided in both official languages (French and English)

9.2 BUILDER'S PLATE

9.2.1 A Builder's Plate must be affixed to the RHIB in a readily visible location, e.g. for a boat, in way of the helm position, for a trailer on the left side of the tongue.

9.2.2 The plate must be made of a weather resistant material compatible with that to which it is affixed.

9.2.3 The dimensions of the plate must be not less than 200mm x 125mm

9.2.4 The plate must contain the following information, permanently etched:

9.2.4.1 Naval Architect/Designer;

9.2.4.2 Builder;

9.2.4.3 Hull Number;

9.2.4.4 Year of Construction;

9.2.4.5 Call Sign (if applicable); and,

9.2.4.6 Lightship Weight in kilograms.

9.3 TECHNICAL PUBLICATIONS

All technical publications are to be supplied in accordance with **Appendix B- FINAL DELIVERABLE DATA PACKAGE**.

10.0 TRAILER

All make and models listed from 10.01 to 10.34, equivalencies are acceptable.

The Contractor must supply a dual axle trailer to fit the boat and be rated at least 10% over the anticipated 'normal load' weight of the boat, minimum load capacity of 10,000 lbs. The contractor must record the trailer sales and registration information and provide the information in each vessel manual. The trailer must be certified commercial requirements in accordance with Department of Transport regulations for towing the vessel and be constructed and equipped as follows:

10.1 BOATMASTER COMMERCIAL LE TANDEM AXLE TRAILER OR EQUAL;

10.2 ALUMINUM I BEAM CONSTRUCTION;

10.3 GALVANIZED DURA-FLEX TOSION AXLES;

10.4 LT265/75R16 ALL TERRAIN TRUCK TIRES;

10.5 16" GALVANIZED SPOKE WHEELS;

10.6 8K BULLDOG DROP LEG JACK;

10.7 SAFETY LUBE LUBRICATION SYSTEM w/ TIMKEN BEARINGS;

10.8 ALL SS FASTENERS THROUGHOUT;

10.9 DIAMOND PLATE STEP FENDERS;

10.10 UHMW POLYMER AND ROLLER IN V ASSEMBLY;

- 10.11** SPARE TIRE WITH ALUMINUM MOUNT;
- 10.12** ALUMINUM WINCH STAND WITH 3500LB 2 SPEED WINCH & SNATCH BLOCK;
- 10.13** LED LIGHTS (NMMA COMMERCIAL GRADE LIGHTS AND WIRING);
- 10.14** GALVANIC BARRIER CORROSION PROTECTION;
- 10.15** DEEMAXX 13" SS ROTOR/316 SS CALIPER 7K - 2 AXLE DISC BRAKES;
- 10.16** 20K SURGE BRAKE ACTUATOR 2 5/16" BALL HITCH;
- 10.17** SS BRAKE LINES;
- 10.18** ENTRY LADDER;
- 10.19** POLYMER UHMW ON BUNKS;
- 10.20** D-RING 3/4 26.5K 3X3 ID TIE DOWN POINTS;
- 10.21** ADJ GALVANIZED BOW STOP;
- 10.22** 5/16" WINCH ROPE DYNEEMA;
- 10.23** GVW 13,660 LBS;
- 10.24** NET CAPACITY.... 11,160 LBS;
- 10.25** TIRE ----LT 265/75R 16 3415 LBS @ 80 PSI;
- 10.26** TIRE CONTACT ----- 7.5" X 7.5";
- 10.27** MAX AXLE LOADS LEVEL CONFIGURATION-----7,000 LBS EA;
- 10.28** MAX SINGLE AXLE LOAD LESS THAN 5 MPH (RAMP CREST ENTRY)-- 21,000 LBS;
- 10.29** MAX PINTLE TONGUE WEIGHT-----2,000 LBS;
- 10.30** MAX PINTLE PULL LOAD -----20,000 LBS;
- 10.31** D-RING TIE DOWN FRAME----SWL 15,666 LBS / 47,000 LBS BREAK STRENGTH;
- 10.32** D-RING TIE DOWN WINCH STAND---- SWL 15,666 LBS / 47,000 LBS BREAK STRENGTH;
- 10.33** SNATCH BLOCK----- SWL 4100 LBS / 12500 LBS BREAK STRENGTH; AND,
- 10.34** MAX PULL ANGLE W/ SNATCH BLOCK--- 33 DEGREES.

11.0 SHIPPING AND DELIVERY

Prior to shipping, the boat is to be cleaned, appropriately protected and covered in accordance with the instructions specified in this section.

- 11.1** Prior to shipping, the boat must be secured on their respective trailers, cleaned, preserved and covered in accordance with this section. All areas of the boat are to be cleaned prior to covering for shipping. Bilges are to be dry and free of oil and debris and the fuel tanks must be full with fuel stabilizer added.
- 11.2** THE PROPULSION SYSTEM MUST BE PRESERVED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR STORAGE OF UP TO ONE (1) YEAR IN AN ENVIRONMENT THAT WILL BE SUBJECTED TO FREEZING TEMPERATURES.
- 11.3** THE BATTERIES ARE TO BE DISCONNECTED. A WARNING PLATE IS TO BE TIED TO THE STEERING WHEEL WITH A WIRE INDICATING THAT THE BOAT HAS BEEN PROTECTED FOR SHIPPING AND STORAGE AND MUST NOT BE STARTED UNTIL THE PROPULSION MACHINERY HAS BEEN REACTIVATED.
- 11.4** ALL CONTACT POINTS WITH THE BOAT ARE TO BE PADDED. A SHRINK WRAP COVER IS TO BE PROVIDED TO PROTECT THE BOAT DURING SHIPPING AND STORAGE.

APPENDIX A
SMALL CRAFT / VESSEL TESTS & TRIALS SHEET

Small Craft / Vessel Builder:			
Small Craft / Vessel Description:			
Hull Identification Number:			
National Asset Code:			
Date of Trials:			
Personnel in Attendance:			
Builder			
PWGSC			
DFO			
DFO			
Time: _____ hrs Departing from _____			
Small Craft / Vessel Weights:	Dry Weight of Hull with cabin:		_____ lbs/ _____ kg
	Furnishings & Fittings:		_____ lbs/ _____ kg
	Engines & Equipment:		_____ lbs/ _____ kg
	Fuel:	Fuel:	_____ lbs/ _____ kg
	_____ Imp gal	_____ Litres	
	Total Weight of Small Craft/Vessel:		_____ lbs/ _____ kg
	Number of Crew _____ and operating equipment:		_____ lbs/ _____ kg
	Test Total Laden Weight:		_____ lbs/ _____ kg
Trailer weight:		_____ lbs/ _____ kg	

	Boat & Trailer weight:	_____ lbs/ _____ kg
Motors: Starting - Operation "IDENTIFY INBOARD/OUTBOARDS"	Port	<input type="radio"/> Immediate, Yes / No
	Starboard	<input type="radio"/> Immediate, Yes / No
Propellers/Impellers	Pitch	_____
	Diameter	_____
	No. of Blades	_____
	Stainless Steel or Aluminum	<input type="radio"/> S/S ___ AL
Static Attitude & Trim:		
Weather Conditions: Refer to attached Beaufort Wind Scale. BWS No. _____		
Speed Trials	Speed Required _____ - _____ knots	
	Cruising Speed: measured mile 1 way	_____ kts @ _____ rpm
	Cruising Speed: measured mile return	_____ kts @ _____ rpm
	Averaged Cruising Speed:	_____ kts @ _____ rpm
	Maximum Speed: measured mile 1 way	_____ kts @ _____ rpm
	Maximum Speed: measured mile return	_____ kts @ _____ rpm
	Average Maximum Speed	_____ kts @ _____ rpm
Full Throttle	From dead stop to plane	_____ seconds
	From dead stop to 30 knots	_____ seconds
	Straight line to 2000 rpm	<input type="radio"/> Issues, Yes / No

Astern Propulsion:		Hard a-port	<input type="radio"/> Issues, Yes / No
		Hard a-starboard	<input type="radio"/> Issues, Yes / No
		Emergency stop	_____ seconds
Tubes (if applicable)	No. of Chambers		_____
	Semi-auto fill system		<input type="radio"/> Yes / No
	Time to fill all chambers		_____ seconds
Fuel consumption			
Endurance Trials: X = gallons or Litres	Port & Starboard Motor: at cruise:		_____ X/hr @ _____ rpm
	Port & Starboard Motor: at full throttle:		_____ X/hr @ _____ rpm
Steering: Acceptable Y / N	Straight line		<input type="radio"/> Yes / No
	Hard-Port radius of turn. Full Throttle		_____ feet
	Hard-Stbd radius of turn. Full Throttle		_____ feet
	Lock to lock = 35 degrees pt. & stbd		<input type="radio"/> Yes / No
	Effective steering 0-5 knots		<input type="radio"/> Yes / No
	5-10 knots		<input type="radio"/> Yes / No
	20-30 knots		<input type="radio"/> Yes / No
Full speed		<input type="radio"/> Yes / No	
Outboard/Inboard Leg Trim Control:	From fully raised to fully lowered.		<input type="radio"/> Acceptable Yes / No
Trim Tab Operation:	Fully raised, fully lowered.		<input type="radio"/> Acceptable Yes / No

Engine Controls:	Start	<input type="radio"/> Issues, Yes / No
	Shift	<input type="radio"/> Issues, Yes / No
	Throttle	<input type="radio"/> Acceptable Yes / No

Engine Gauges:	Tachometer	<input type="radio"/> Acceptable Yes / No
	Fuel gauges	<input type="radio"/> Acceptable Yes / No
	Trim gauges	<input type="radio"/> Acceptable Yes / No
	Oil pressure	<input type="radio"/> Acceptable Yes / No
	Voltmeter	_____ volts
Cabin Sound Levels:	Cruising speed- door & windows closed	_____ dbA @ _____ rpm
	Cruising speed- door & windows open	_____ dbA @ _____ rpm
	Full speed- door & windows closed	_____ dbA @ _____ rpm
	Full speed- door and windows open	_____ dbA @ _____ rpm
Outboard/Inboard engine operation:	Starting	<input type="radio"/> Acceptable Yes / No
	Shifting	<input type="radio"/> Acceptable Yes / No
	Throttle	<input type="radio"/> Acceptable Yes / No
	Raise	<input type="radio"/> Acceptable Yes / No
	Lower	<input type="radio"/> Acceptable Yes / No
Loaded Vessel Drop Test:	If applicable	<input type="radio"/> Acceptable Yes / No
Lifting Bridle Certified:	If applicable	<input type="radio"/> Acceptable Yes / No
Rollover test	If applicable	<input type="radio"/> Acceptable Yes / No

NOTES

Beaufort Wind Scale Identifier

Force	Wind Speed		Descriptive Term	Effects Observed at Sea	Effects Observed on Land
	Km/h	Knots			
0	Less than 1	Less than 1	Calm	Sea surface like a mirror, but not necessarily flat.	Smoke rises vertically.
1	1 - 5	1 - 3	Light air	Ripples with the appearance of scales are formed, but without foam crests.	Direction of wind shown by smoke drift, but not wind vanes.
2	6 - 11	4 - 6	Light breeze	Small wavelets, still short but more pronounced. Crests do not break. When visibility good, horizon line always very clear.	Wind felt on face. Leaves rustle. Ordinary vane moved by wind.
3	12 - 19	7 - 10	Gentle breeze	Large wavelets. Crests begin to break. Foam of glassy appearance. Perhaps scattered whitecaps.	Leaves and small twigs in constant motion. Wind extends light flag.
4	20 - 28	11 - 16	Moderate breeze	Small waves, becoming longer. Fairly frequent whitecaps.	Raises dust and loose paper. Small branches are moved.
5	29 - 38	17 - 21	Fresh breeze	Moderate waves, taking a more pronounced long form. Many whitecaps are formed. Chance of some spray.	Small trees with leaves begin to sway. Crested wavelets form on inland waters.
6	39 - 49	22 - 27	Strong breeze	Large waves begin to form. The white foam crests are more extensive everywhere. Probably some spray.	Large branches in motion. Whistling heard in telephone wires. Umbrellas used with difficulty.
7	50 - 61	28 - 33	Near gale	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.	Whole trees in motion. Inconvenience felt in walking against wind.
8	62 - 74	34 - 40	Gale	Moderately high waves of greater length. Edges of crests begin to break into the spindrift. The foam is blown in well-marked streaks along the direction of the wind.	Breaks twigs off trees. Generally impedes progress. Walking into wind almost impossible.
9	75 - 88	41 - 47	Strong gale	High waves. Dense streaks of foam along the direction of the wind. Crests of waves begin to topple, tumble and roll over. Spray may affect visibility.	Slight structural damage occurs, e.g. roofing shingles may become loose or blow off.
10	89 - 102	48 - 55	Storm	Very high waves with long overhanging crests. Dense white streaks of foam. Surface of the sea takes a white appearance. The tumbling of the sea becomes heavy and shock-like. Visibility affected.	Trees uprooted. Considerable structural damage occurs.
11	103 - 117	56 - 63	Violent storm	Exceptionally high waves. Sea completely covered with long white patches of foam. Visibility affected.	Widespread damage.
12	118 - 133	64 - 71	Hurricane	Air filled with foam and spray. Sea entirely white with foam. Visibility seriously impaired.	Rare. Severe widespread damage to vegetation and significant structural damage possible.

APPENDIX B

Final Deliverable Data Package

The Final Data Package which must be delivered to Canada is as defined in the Contract, but must include, as a minimum the technical publications identified in this appendix.

1.0 Comprehensive Owner/Operator Manuals

1.1 Deliverables

1.1.1 One (1) complete hard copy and one (1) complete USB stick electronic copy set of the manuals per vessel delivered for the operator of each vessel, to be delivered with the vessel.

1.1.2 One (1) complete hard copy and one (1) complete USB stick electronic copy set of the manuals per vessel delivered for the Technical Authority, to be delivered to the same address identified for invoices.

1.2 Content

The manuals must provide a physical and functional description of the craft, it's machinery and equipment, as well as delivery testing and sea trial result documentation. The manuals must include as a minimum the following three sections and as detailed below: x General Information x Technical Information x Spare Parts List

1.2.1 GENERAL INFORMATION SECTION

The General Information Section must include a description of the arrangement and function of all structures, systems, fittings and accessories that comprise the boat, with illustrations as appropriate:

1.2.1.1 Operating procedures;

1.2.1.2 Basic operating characteristics (such as temperatures, pressures, flow rates)

1.2.1.3 Installation criteria and drawings, assembly and disassembly instructions with comprehensive illustrations showing each step;

1.2.1.4 Recommended planned maintenance; and

1.2.1.5 Complete troubleshooting procedures.

1.2.2 TECHNICAL INFORMATION SECTION

The Technical Information Section a complete set of detailed owner / operator instructions, drawings (Section 15), parts lists and supplemental data for all components of the boat (whether acquired from external sources or custom manufactured).

1.2.2.1 "As Fitted", dimensioned drawings must be produced for manuals to record the vessel particulars:

1.2.2.1.1 Calculated lightship weight;

- 1.2.2.1.2 General arrangement, Plan Profile section views;
- 1.2.2.1.3 Structural drawings showing deck plan, a centerline profile and frame station construction details;
- 1.2.2.1.4 Detailed lines plan;
- 1.2.2.1.5 Drawing of the fuel and propulsion supply arrangement; and,
- 1.2.2.1.6 Drawing of the electrical supply and functions of the vessel.
- 1.2.2.2 Parts list must include the name, part number and serial number if applicable of the parts, items or components and must indicate the supplier (name, address, phone number, email address) of this part, equipment or component and in which part of the specification the item appears.
- 1.2.2.3 Hull Serial Number (HIN), copy of builders plate, TEST and TRIAL results as per completed Attachment 1 of Appendix II, serial or manufacturer's numbers, and equipment warranty cards.
- 1.2.2.4 Engine(s) and equipment: including engine and propulsion serial numbers.
- 1.2.2.5 If applicable, collars; including collar material and glue materials and procedures necessary for onboard repair of the collar.
- 1.2.2.6 Acceptance Certificates, and compliance sheets or certificates distributed with equipment i.e. life-saving appliances, lifting appliances, engine test reports, calibration certificates, Nav light certificates, Fire suppression material certificates, flotation foam rating sheets
- 1.2.2.7 Pre-trial shop Testing Check Sheet.
- 1.2.2.8 Electronics, (if applicable): including model and serial numbers.
- 1.2.2.9 Regulatory and Stability documentation: as required per TP 1332, which, references ISO12217 or ISO 6185 for RIBs (if applicable).

1.2.3 SPARE PARTS LIST SECTION

The Spare Parts List section must include a list of recommended initial onboard spare parts to be stocked for the vessel. The list must include the name, part number and serial number if applicable of the parts, items or components and must indicate the supplier (name, address, phone number, email address) of this part, equipment or component and in which part of the TSOR the item appears. At a minimum this list must include the following items (as applicable):

- 1.2.3.1 Propulsion: Propellers, filters, water pump impeller, batteries, throttle and shift cables, special engine tools.
- 1.2.3.2 Electrical: panel breakers, fuses, light bulbs;
- 1.2.3.3 Boat Structures and Fittings: Miscellaneous commonly used fasteners.

2.0 ADDITIONAL DELIVERABLE DOCUMENTATION

2.1.1 The following additional documentation must be supplied in both sets of Technical publication manuals delivered (defined in 8.4.2):

- 2.1.1.1 Tonnage Registration Certificate in accordance with TP 13430
<http://www.tc.gc.ca/eng/marinesafety/svcp-gt-3948.htm>;
- 2.1.1.2 Registration to the Small Vessel Compliance Program (SVCP) Website:
<http://www.tc.gc.ca/eng/marinesafety/svcp-menu-3633.htm>;

- 2.1.1.3 Two (2) Bill of Sales, one (1) for the vessel and one (1) for the trailer;
- 2.1.1.4 Test & Trial results as required by Appendix A;
- 2.1.1.5 Acceptance Certificates, i.e. life-saving appliances, lifting appliances, engine test reports, calibration certificates, extinguishers, etc;
- 2.1.1.6 A valid Motor Vehicle Registration Certificate for the relevant Province, for the trailer; and
- 2.1.1.7 All testing check sheets created and completed by the builder.