

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.)
B3J 1T3
Bid Fax: (902) 496-5016

REQUEST FOR PROPOSAL DEMANDE DE PROPOSITION

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

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

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

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

Comments - Commentaires

| | |
|--|---|
| Title - Sujet INFLATABLE BOAT | |
| Solicitation No. - N° de l'invitation K4B20-120196/A | Date 2012-08-29 |
| Client Reference No. - N° de référence du client K4B20-12-0196 | |
| GETS Reference No. - N° de référence de SEAG PW-\$HAL-122-4913 | |
| File No. - N° de dossier HAL-2-68039 (122) | CCC No./N° CCC - FMS No./N° VME |
| Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-09-18 | Time Zone Fuseau horaire Atlantic Daylight Saving Time ADT |
| F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/> | |
| Address Enquiries to: - Adresser toutes questions à: Chinye (HAL), Chukwudi | Buyer Id - Id de l'acheteur hal122 |
| Telephone No. - N° de téléphone (902) 496-5476 () | FAX No. - N° de FAX (902) 496-5016 |
| Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF THE ENVIRONMENT SEE HEREIN Canada | |

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 3C9

| | |
|--|--|
| 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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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

Environment Canada has a requirement for a Goods contract for the furnishings of all labour, material, permits, certification, licenses, transportation and delivery required to supply a rigid hull inflatable boat, 9-10 metres with a trailer to 45 Alderney Drive, Dartmouth, Nova Scotia in accordance with Annex A -Technical Specification and Statement Of Requirement.

The requirement is exempt from the provisions of World Trade Organization Agreement on Government Procurement (WTO-AGP), North American Free Trade agreement (NAFTA), Canada-Peru, Canada-Colombia trade agreements.

3. Debriefings

After contract award, 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 of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

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

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

The 2003 (2012-07-11) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

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

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

2. Submission of Bids

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

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

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

4. Applicable Laws

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

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

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

Section I: Technical Bid (one hard copy)

Section II: Financial Bid (one hard copy)

Section III: Certifications (one hard copy)

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

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

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

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html)

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

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

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

Section I: Technical Bid

In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Goods and Services Tax (GST) or Harmonized Sales Tax (HST) must be shown separately, if applicable.

1.1 Exchange Rate Fluctuation

C3011T (2010-01-11), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

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

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

See Annex A- Technical Specification

1.2 Financial Evaluation

SACC Manual Clause A0220T (2007-05-25), Evaluation of Price

2. Basis of Selection

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

PART 5 - CERTIFICATIONS

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

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

1. Code of Conduct Certifications - Consent to a Criminal Record Verification

1.1 Bidders must submit with their bid, by the bid solicitation closing date:

- (a) a complete list of names of all individuals who are currently directors of the Bidder;
- (b) a properly completed and signed form Consent to a Criminal Record Verification (PWGSC-TPSGC 229), for each individual named in the list.

2. Certifications Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

2.1 Federal Contractors Program - Certification

The Federal Contractors Program (FCP) requires that some suppliers, including a supplier who is a member of a joint venture, bidding for federal government contracts, valued at \$200,000 or more (including all applicable taxes), make a formal commitment to implement employment equity. This is a condition precedent to contract award. If the Bidder, or, if the Bidder is a joint venture and if any member of the joint venture, is subject to the FCP, evidence of its commitment must be provided before the award of the Contract.

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

If the Bidder does not fall within the exceptions enumerated in 3.(a) or (b) below, or does not have a valid certificate number confirming its adherence to the FCP, the Bidder must fax (819-953-8768) a copy of the signed form LAB 1168, Certificate of Commitment to Implement Employment Equity, to the Labour Branch of HRSDC.

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

The Bidder or the member of the joint venture

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

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

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

() is subject to the FCP, and has a valid certificate number as follows: _____ (e.g. has not been declared an ineligible contractor by HRSDC).

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

2.2 Former Public Servant Certification

Contracts with former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts with FPS, bidders must provide the information required below.

Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the Financial Administration Act, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

an individual;

an individual who has incorporated;

a partnership made of former public servants; or

a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means, in the context of the fee abatement formula, a pension or annual allowance paid under the Public Service Superannuation Act (PSSA), R.S., 1985, c.P-36, and any increases paid pursuant to the Supplementary Retirement Benefits Act, R.S., 1985, c.S-24 as it affects the PSSA. It does not include pensions payable pursuant to the Canadian Forces Superannuation Act, R.S., 1985, c.C-17, the Defence Services Pension Continuation Act, 1970, c.D-3, the Royal Canadian Mounted Police Pension Continuation Act, 1970, c.R-10, and the Royal Canadian Mounted Police Superannuation Act, R.S., 1985, c.R-11, the Members of Parliament Retiring Allowances Act, R.S., 1985, c.M-5, and that portion of pension payable to the Canada Pension Plan Act, R.S., 1985, c.C-8.

Former Public Servant in Receipt of a Pension

Is the Bidder a FPS in receipt of a pension as defined above? Yes () No ()

If so, the Bidder must provide the following information:

name of former public servant;

date of termination of employment or retirement from the Public Service.

Work Force Reduction Program

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of a work force reduction program? Yes () No ()

If so, the Bidder must provide the following information:

name of former public servant;
 conditions of the lump sum payment incentive;
 date of termination of employment;
 amount of lump sum payment;
 rate of pay on which lump sum payment is based;
 period of lump sum payment including start date, end date and number of weeks;
 number and amount (professional fees) of other contracts subject to the restrictions of a work force reduction program.
 For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including the Goods and Services Tax or Harmonized Sales Tax.

2.3 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 three (3) 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 will result in the bid being declared non-responsive.

2.5 Welding Certification-B4075T

Welding must be performed by a welder certified by the Canadian Welding Bureau and in accordance with the requirements of the following Canadian Standards Association (CSA) standards:

CSA W47.2-M1987(R2003), Certification of Companies for Fusion Welding of Aluminum division level one and division level two.

Before contract award and within seven (7) calendar days of the written request by the Contracting Authority, the successful Bidder must submit evidence demonstrating its certification to the welding standards.

Certification

By submitting a bid, the Bidder certifies that the information submitted by the Bidder in response to the above requirements is accurate and complete.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The Contractor must provide a Rigid Hull Inflatable Boat in accordance with the Requirement at Annex "A".

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual

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

3.1 General Conditions

2010A (2012-07-16), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before March 15, 2013.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Chukwudi Chinye
Title: Real Property Contracting Officer
Public Works and Government Services Canada
Acquisitions Branch
Address: 1713 Bedford Row, Halifax, NS B3J 3C9

Telephone: 902-496-5476
Facsimile: 902-496-5016
E-mail address: chukwudi.chinye@pwgsc.gc.ca

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

5.2 Project Authority

The Project Authority for the Contract is: (To be Determined at Contract award)

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone : _____
Facsimile: _____
E-mail address: _____

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

5.3 Contractor's Representative (To be completed by bidder)

Name: _____

Telephone Number: _____

Cellular Number: _____

Facsimile Number: _____

6. Payment

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 lot price, as specified in Annex C for a cost of \$ _____ (To be determined at contract award). Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

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

6.2 Limitation of Price

SACC *Manual* clause C6000C (2011-05-16) Limitation of Price

6.3 Single Payment

SACC *Manual* clause H1000C (2008-05-12) Single Payment

6.4 SACC Manual Clauses

T1204 - Direct Request by Customer Department

A9117C

7. Invoicing Instructions

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

- (a) The original and two (2) copies must be forwarded to the following address for certification and payment.

Glen Ehler
CWS- Wildlife Enforcement
2nd floo, Queens Square
45 Alderney Drive,
Dartmouth, Nova Scotia
B2Y 2N6

8. Certifications

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

8.2 SACC Manual Clauses

Welding Certification

1. The Contractor must ensure that welding is performed by a welder certified by the Canadian Welding Bureau (CWB) in accordance with the requirements of the following Canadian Standards Association (CSA) standards:

a. CSA W47.2-M1987 (R2003), Certification for Companies for Fusion Welding of Aluminum Division one and Division two.

2. In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications. Before the commencement of any fabrication work, and upon request from the Inspection Authority, the Contractor must provide approved welding procedures and/or a list of welding personnel he intends 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 welding certification.

Shipping Instructions - FOB Destination and DDP

Goods must be consigned and delivered to the destination specified in the contract:

FOB Destination (Steve Smith, Environmental Canada, 45 Alderney Drive, Dartmouth, Nova Scotia, B2Y 2N6) including all delivery charges and customs duties and taxes.

9. Applicable Laws

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

10. Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the general conditions 2010A-2012-07-16- Goods (Medium Complexity);
- (c) Annex A, Statement of Requirement and Technical Specification;
- (d) Annex B, Basis of Payment;
- (e) Annex C, Insurance Requirements
- (f) Annex D, Consent to Criminal Verification Form
- (g) Annex E, Contractor's Representatives
- (h) the Contractor's bid dated _____ (*insert date of bid*)

11. SACC Manual Clauses

| | |
|---------------------------|--------|
| Electrical Equipment | B1501C |
| Excess Goods | B7500C |
| Electrical Equipment | B1501C |
| Workers Compensation | A0285C |
| Inspection and Acceptance | D5328C |

12. Insurance Requirements

The Contractor must comply with the insurance requirements specified in Annex C . The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an Insurer licensed to carry out business in Canada. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

**ANNEX A
TECHNICAL SPECIFICATION
AND
STATEMENT OF
REQUIREMENT**

TECHNICAL SPECIFICATIONS

The contractor shall indicate in the bid proposal the name, location and contact information of a company which will have responsibility for conducting "warranty work" on behalf of the contractor, and which will be capable of providing warranty service within 48 hours or request in Newfoundland and Labrador and the Maritime Provinces.

Length overall: 9 to 10 m
(does not include outboard)
Beam max. 9.00'max.
(inflated) 2.74 m
Draft 21 in
(engine tilted up) 0.53 m
Freeboard aft 24 in
(@ max. weight w/no crew) 0.61 m
Freeboard amidship 29 in
(@ max. weight / no crew) 0.74 m
Deadrise aft 24 deg
Deadrise amidship 25 deg
Deadrise forward 35 deg
Length rigid hull 20.75'
(from transom top to bow) 6.32 m
Cockpit length 17.17'
(not including motorwell) 5.23 m
Cockpit width 5.08'
V-berth 2 x 1.7m
(horizontal deck surface) 1.55 m
Cockpit depth 23 in
(top of tube to deck) 0.58 m
Tube diameter 22 in
0.56 m
Number of chambers 6
Tube volume 123 cu. ft.
3483 liters
Hull material GRP
Sponson material 1670 dtx
Max. Horsepower 300
Min. horsepower to plane 150
Transom height (sngl) 30 in
(twin) 25 in
Fuel capacity - main 85 US gal.
322 liters
Fuel capacity - auxillary 48 US gal.
182 liters
Person capacity 25

Weight capacity 4930 lb.
(including OBM & fuel) 2241 kg

Payload 3200 lb.
(excluding OBM & fuel) 1454 kg
Approx. holsting weight 4450 lb.
(max. weight w/ no crew) 2023 kg

7 METER CONSTRUCTION DETAILS

Manufacturing Facility is registered to ISO 9001:2000 (Cert. No.: 95-202)
Approved aluminum welding facility to Canadian Welding Bureau standard
W47.2

DESIGN DETAILS

24 degree dead rise aft
Full height transom
Removable deck sections to access fuel tank
Slide on removable inflatable collar - outboard slide on track is embedded in the hull
(tube cradle) to protect from damage

MODEL FEATURES

Hull extension engine outboard bracket, in 5086 alloy aluminum, bottom plate is 3/8",
side and top are 3/16" plate, rated to 2 x 150 HP
Enclosed fuel filter / oil tank area

GRP HULL / DECK

Molded hull & deck
Hand lay-up
Hull: 54 oz. woven roving, 4 oz. chop strand mat
Deck: 36 oz. woven roving, 3 oz. chop strand mat
Balsa core in hull
½" plywood or 4 mm Coremat core in deck
Design criteria includes withstanding 6 g's acceleration at full load.
Optional fire retardant vinylester resin
Hull/deck joint is above the static waterline
Internal hull/deck joint (less susceptible to damage)

PAINT

All above waterline external aluminum surfaces are protected with a linear polyurethane
paint system utilizing an epoxy primer.
Aluminum surfaces are sandblasted prior to paint application.

INFLATABLE COLLAR

Neoprene hypalon fabric (Black Color)
Hand buffed and hand glued
6 chambers
Non-marking neoprene rubbing strakes
Polyurethane sealant on all interior exposed fabric edges (seams, baffles, etc.)
Molded neoprene cone tips

Leifield C7 inflation valves
Mirada B51019 3.5 PSI relief valves

HULL FOAM

ISO 6185 approved block foam is utilized.

ELECTRICAL

All circuits protected w/ circuit breakers

All wire (tinned copper) is Underwriters Laboratories UL 1426 approved and meets
Lloyds Part 6, Chapter 2-1, Section 7.

FUEL SYSTEM

Fuel tanks are constructed of roto-molded polyethylene.

Fuel systems exceed CCG construction standards.

All fuel systems are pressure tested.

Fuel water separator (Racor 320) fitted for each outboard engine.

Fuel water separator (Racor 500MA) fitted for inboard engine.

Fuel hoses meet BS EN ISO 7840:1995

Maximum capacity is 1 X 181L + 1 X 320L

Fuel tanks vent overboard.

Diverter valves are fitted to allow either outboard motor to run off either fuel tank.

Fuel fill pod captures overflow fuel preventing spilt fuel from reaching the deck.

Fuel vents are fitted with back splash prevention.

CABIN

All Plate 5086 alloy

All extrusions 6061T6 alloy

Welding done in accordance with CSA W59.2-M1991 Welded Aluminum Construction.

All welding equipment and personnel are approved by Canadian Welding Bureau.

Windows - 1/4" safety glass in extruded aluminum frames.

Standard equipment includes exterior handrails, port and starboard: full length on roof.

Interior handrails, overhead the length of the roof, dome light, extra wide cable trough
overhead full cabin length, cabin drains, cabin interior carbon monoxide detector, positive pressure
ventilation, opening heavy duty acrylic roof hatch, Espar forced air
diesel heater with built-in ducting to windows and floor vents, windshield wiper / washer
system and sliding side windows

STAINLESS STEEL DECK INSERT SYSTEM

All bolt on componentry affixed to GRP deck (cabin, tow posts, aft frames, etc.) are installed by means
of our stainless steel insert system. Threaded 316 stainless steel inserts are drilled, tapped and sealed
with epoxy into the deck. Back nuts are utilized wherever possible.

Upgrade to include utilizing the stainless steel deck insert system to secure deck plates.

When ordered in conjunction with the optional stainless steel insert system upgrade for inboard tube
attachment, the entire boat is assembled without the use of lag bolts. This eliminates water ingress
potential, provides for easy access / maintenance and superior strength.

DESCRIPTION OF FWD BOW BOX - dimensions, size, hinges, latches.

All GRP parts are hand laminated with alternating layers of chop strand mat and woven roving.

Additional doubling in areas susceptible to stress (hinge and latch locations)

High quality marine grade stainless steel latches and cast stainless steel hinges.

The capacity is 6.8 cubic feet / 0.193 cubic meters. The bow box is affixed to the deck by means of a stainless steel insert system. Threaded stainless steel inserts are drilled, tapped and sealed with epoxy into the deck.

MISCILLANEOUS DATA

Bilge pump: Rule # 10, 2000 GPM

Flood lights: Jabsco 45900-0000

Accessory plugs: Seadog 426262

Horn: Ongaro 10028 SS

Shore power / charger system: Professional Mariner APM8-2 8-Amp charger, Marinco SS receptacle 30 amp 5-circuit breaker panel

and Professional Mariner galvanic isolator

Teleflex hydraulic steering system: HC5345 cylinder

HH5271 helm pump

Polyurethane padded wheel

Batteries: Series 31, 1000 cold cranking amps,

200 reserve cranking amps.

Maintenance free.

Insert with a hollow blind Bolt screws into the insert

DESIGN & CONSTRUCTION PRACTICES

Ergonomic Design

Electrical hazards - All DC and AC system wiring terminals are protected in accordance with ABYC requirements.

Mechanical hazards - outboard motors and steering system are located aft of the transom, well clear of the working deck reducing hazards from moving parts as well as reducing onboard sound levels.

Boat and accessories are designed for operation by crew in the 5% adult female to the 95% adult male range in accordance with ASTM F1166-88.

Crew efficiency and comfort - Handrails/lifelines are provided to allow safe movement of personnel for the whole length of the boat. Full-length lifelines are attached to the inflatable collar. Handrails are provided along the length of the cabin roof. Additional handrails are located along the port and starboard outer cabin corners and from deck to roof aft on both the port and starboard sides cabin sides. An overhead handrail runs fore to aft inside the cabin. The deck surface incorporates a molded in non-skid pattern.

Additional non-slip step treads are provided in 2 places on the collar top. Accessibility - Fuel system connections are accessed through aft hatch (fuel filters and selector valves) and through deck access plates (tank supply, vent and fill connections).

In the event of fuel tank damage, the fuel tanks can be removed through bolted in plaque deck panels. Electrical system components are mainly located inside the cabin console with access through a hinged access hatch.

Bilge pump/float switch are accessed through a deck access port.

Visibility - large windows are provided on the front and sides of the console w/blind spots minimized.

Twin wipers are provided for the front facing windows.

Readability - all gauges are arranged for easy viewing by the helmsman w/ tachometer and trim gauges mounted as high as possible to allow for viewing with least amount of line of sight change. Electronics and gauges are all fitted with dimmable illumination for night viewing.

Vibration

Because the boat is powered by outboard motors (which are equipped with the manufacturer's vibration reduction systems) installed in accordance with the manufacturer's requirements, no special provisions

are required to limit propulsion system vibration. All accessories are fastened with threaded lockable fasteners or latched appropriately to secure the item properly.

All ancillary equipment supplied is secured against movement or vibration.

Opening hatches are fitted with resilient material and either compression or draw type latches to prevent rattling.

All threaded fasteners are fitted with either Nylok style nuts or (if nuts are not fitted) compression type lock washers.

FABRICATION

Structural Integrity

The design criteria for this vessel must withstand 6 g's acceleration at full load.

Requirements

The use of stainless steel fasteners and hardware above the waterline must be sealed with marine sealant. Under no circumstances are electrolytically dissimilar metals to be used below the waterline.

Aluminum

All aluminum plate and sheet is 5086 H116. All aluminum extrusion is either 6061 T6 or 6063 T54. All ZHT designs utilizing extrusions have been designed specifically for the 6061 and 6063 series alloys.

Fasteners

All fasteners must be of marine grade corrosion resistance stainless steel. Machined stainless steel threaded inserts are utilized in GRP construction. All accessible inserts must be back nutted.

Permanently attached fittings (EG: bow post) are threaded into aluminum backing plates.

CONSTRUCTION PROCEDURES

General

Must meet the American Bureau of Shipping Standards for High Speed Planning Craft and Transport Canada TP 1332 Construction Standards for Small Vessels.

Welding

A valid Canadian Welding Bureau letter of validation certifying the company to CSA Standard W47.2M "Certification of Companies for Fusion Welding of Aluminum" is required. This encompasses CSA W59.2.

Weld Inspection

All welding associated with hoisting the standard equipment hoisting systems are subjected to third part certified testing. Additionally, arrangements associated with bow and tow posts are also subjected to 100% liquid penetrant inspection.

MAIN HULL AND APPENDAGES

Hull Form

The vessel comprises of a deep Vee rigid hull and an inflatable collar.

The hull incorporates 2 full-length spray / planning stakes per side in addition to a wide chine flat. These strakes in combination with the large diameter inflatable collar deflect spray away from onboard personnel. The planning strakes are located outboard of the propellers to prevent aeration of the propellers when underway.

TECHNICAL DETAILS

PART 1 - HULL DESIGN AND CONSTRUCTION REQUIREMENTS

1. V-shape, straked design. Hull shall contain foam for buoyancy. Hull shall be commercial grade fiberglass lamination, dark gray in color. Self-bailing hull. Must be capable of supporting weight of boat in a completely swamped condition. Engine powerhead must remain above water in the swamped condition. The boat must be of a proven design with similar types of service.

A prototype will not be accepted.

The planning strakes are located outboard of the propellers to prevent aeration of the propellers when underway.

Length overall: 9-10 meters (+/- 0.3 m) The vessel has a Length Overall (not including outboard engines) of 9-10 meters.

Breadth Overall: 3 to 3.2 meters (+/- 15.64 cm) (per amendment # 001)

Vessel has a Beam Overall of 3 to 3.2 meters.

Draft: between 0.5m - 0.75m with two 250 hp outboard motors in raised position. Vessel shall be capable of operating in water depths of 1 meter with the outboard motors completely lowered.

Hull shall have a polished gel coat anti-fouling finish. Deck shall be molded glass reinforced plastic (GRP) color - Black.

The hull surface as offered is finished with polished gel coat fiberglass. Glass reinforced plastic desk has molded in non-skid surface. Color to be black.

Operational displacement: maximum fuel, and equipment, shall not exceed 3,000 kg. Contractor must ensure weight of all equipment, and full fuel is factored into the weight requirement.

Operational displacement including full fuel (322 + 182 litres) and equipment factored in will not exceed 3,000 kg. Estimated total weight of the vessel including full fuel (322 + 182 litres) and equipment factored in, is estimated at 2,600 kg.

Craft must be capable of traveling at of 50 knots at full operational displacement (including crew) with twin 250 hp outboard engines.

Craft shall contain a sufficient number of watertight compartments to provide adequate buoyancy and stability in a partially or fully flooded condition. Contractor to provide information on size and location of compartments including type of material contained in the compartments. Foam floatation is installed in the rigid hull cavity to provide the stability required in a damaged swamped condition, which provides for the intent implied in this requirement. Pour in place urethane foam floatation is utilized outboard of the Longitudinals and block EVA foam floatation is utilized inboard of the Longitudinals.

To facilitate internal repairs, the deck area covering the watertight compartments shall be attached to the frames by such means that will enable easy access without jeopardizing watertight integrity.

The molded glass reinforced plastic deck plates must be bolted into the stainless steel insert system.

This will facilitate easy access to the underdeck cavities for repairs.

Below deck cable routing is required.

All wires to be run below deck in plastic (PVC) conduit (open both ends) or bundled and supported as required. Marine grade watertight strain relief's of appropriate sizes are utilized whenever a cable of wire penetrates through a watertight boundary. Electrical equipment access is provided into consoles and other areas via watertight hatches.

Abrasive resistant grommets are utilized to protect against chafing. Neither wiring nor conduit is passed through block foam utilized in the hull foam upgrade.

Reinforced aluminum outboard crash-bar bracket constructed of 5086 aluminum alloy to protect outboard motors.

The outboard motors are protected with a heavy-duty aluminum guard / crash bar constructed of 5086 aluminum alloy.

Reinforced transom (including stern splashwell bulkhead) to include an aluminum bracket capable of accommodating two 250 hp motors. Vessel subject to full throttle starts from stopped position. A reinforced transom must include a hull extension engine outboard bracket of 5086 alloy aluminum, side and top plate thickness is 3/16", bottom and boat end plate is 3/8" and ½ " plate on the aft end where the outboard engines are mounted. Rated to 2 x 250 HP. Bracing and frames sufficient to prevent plate deformation are included.

316 stainless steel transom tie-down eyes and 316 stainless steel bow eye (suitable for trailering vessel at total capacity weight).

A pair of 316 stainless steel tie down eyes located outboard on the transom (port & starboard sides) must be included. Additionally, the 316 stainless steel bow eye must be suitable for trailering the vessel at total capacity weight and also suitable to tow the boat at total capacity from a larger vessel.

Must include a 3mm thick Kevlar shoe extending 200 mm either side of centerline for the full length of the stem and keel is available. The Kevlar shoe is laminated from 3 layers of needles punched Kevlar felt and high elongation rubber modified vinylester resin. The short fibers of the Kevlar felt combined with the high elongation resin make the shoe extremely resistant to abrasion damage.

Non-skid deck with self-draining high-capacity non-return freeing ports.

The non-skid molded deck must be self-draining by means of a pair of one way high volume 4" scupper trunks (freeing ports) located aft on the port and starboard outermost portion of the deck.

Removable 6 chamber (with relief valves) inflatable collar 1650 DTX Hypalon Coated Polyester (gray)[shall conform to TP 1324 - Material Specifications for Coated fabric used in Inflatable Liferrafts] with full-length lifelines (3/4" braided nylon rope) on grommets.

A 6-chamber inflatable collar with slide on flanging must be included with this vessel.

The fabric used for Black collars on on this vessel must be hypalon 1670 DTX polyester core. Leifield C7 fill valves and Mirada B51019 relief valves are fitted. Operating pressure is 3.5 PSI. All seams, baffles and valve doublers are hand buffed and glued. A bead of urethane caulking is applied to all seams, baffles and valve doublers. Collar as offered is interchangeable and is 560 mm in diameter.

Collar is retained to the hull on this vessel by means of a recessed flange outboard and aluminum flatbar inboard. The stainless steel insert system is used to capture the bolts utilized with the inboard flatbar. A tensioning system is installed aft at the transom.

Black, non-marking UV stable protective wear strips (between 50mm - 70mm wide) are installed around the perimeter of the collars offered. A total of 5 rows are provided. Two (2) pairs of step tread are included. They are made up of black, non-marking UV stable protective wear strip material, and mounted on the collar topside. Full-length ½ " nylon braided rope grab lines are affixed to lacing cuff installed on the collar top centerline.

Foot pump (with hose) for pumping up collar, repair kit for inflatable collar. A commercial grade foot pump with hose and an inflatable collar repair kit must be included. The repair kit must include assorted size fabric patches, a scuffing tool, scissors, a marking tool, glue, cleaning fluid, instructions and various size stopper plugs (life raft type).

Reinforced rear aluminum cruciform tow post capable of withstanding a minimum of 2000 kg of force (contractor to provide documentation to support capacity).

A welded aluminum tow post mounted to the deck and braced aft to the transom is included with this offer. It is fitted with double Norman pins.

Forward cruciform tow post capable of withstanding a minimum of 2000 kg of force must include a removable bow post in single bolt pin.

Secure, accessible storage compartment for anchor and rope (shall be provided in the bow). Compartment must be lockable and keyed to use same key as other compartments.

A water resistant GRP bow box (drains to bilge) of 6.8 cubic foot capacity must be bolted to the vessel forward deck utilizing the stainless steel insert system.

Secure, accessible stowage compartments forward of cabin.

Internal cabin storage location can be accessed from the forward deck via a hatch located on the cabin forward face.

PART II - ONBOARD CABIN REQUIREMENTS

All aluminum plate 1/8" 5086 alloy

All extrusions 6061 T6 alloy

Welding done in accordance with CSA W59.2-M1991 Welded Aluminum Construction.

All welding equipment and personnel are approved by Canadian Welding Bureau.

Windows - Watertight 1/4" safety glass in extruded aluminum frames that are bolted to the cabin.

Standard equipment includes exterior handrails, port and starboard: full length on roof.

Interior handrails, overhead the length of the roof, dome light, extra wide cable through overhead full cabin length, cabin drains, cabin interior carbon monoxide detector, positive pressure ventilation, opening heavy duty acrylic roof hatch, Espar forced air diesel heater with built-in ducting to windows and floor vents. A blower system allows the ducted flow of heated or unheated air to the cabin windows.

Self-locking sliding side windows are supplied on the port and standard cabin sides. Side windows are approximately level with the armrest of the helm position seat (slightly higher +/- 1").

A windshield wiper / washer system is provided for both of the forward facing windows.

Wiper washer system is of heavy duty marine grade construction including AFI MRV wiper motors (#34000), 12 V Speich E95P pantographic wiper arms Motormaster 15" wiper blades #21-1170-8 and UAP NAPA BOS ND1602005160 washer kit system (includes pump and tank).

A removable aft bulkhead of 5086 alloy 1/8" plate with an approx. 1/2" thickness lexan lockable door are also included. The weather-tight HINGED OUTWARD OPENING door is installed on the port side of the aft bulkhead, while a 10" x 18" safety glass (1/4" thickness) window is provided on the starboard side of the aft bulkhead. A safety catch is provided on the aft cabin bulkhead to secure the door in the open position. An optional adjustable suspension seat at the helm with an aluminum storage box support underneath is available. Located on the port hand side of the cabin are two jump seats that fold out from the cabin wall.

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The operators console is build into the cabin interior in the forward starboard position.

Two (2) cabin jump seats are included with this offer. The jump seats collapse into the port cabin wall allowing for a clear fore to aft work environment and basket litter.

Passage of personnel from aft to forward deck necessitates walking on a non-skid covered aluminum platform that overhangs the inflatable collar. Redundant ergonomic handrails are supplied to facilitate safe transition forward.

A v-berth will be included with 2 single person sleeping areas. Each sleeping area will have a covered pad. A flushable marine toilet will be in the forward section of the v-berth.

Inside cabin dimensions:

Height - maximum of 200 cm (measured from finished cabin deck to inside of top of cabin) width - minimum 140 cm, maximum 180 cm (inside measure of width at centerline of cabin).

Length - 240 cm (+/- 5 cm) (straight-line measured from inside corners of cabin along bulkhead from fore to aft).

Roof and sides of cabin shall extend 6 inches back from the aft bulkhead, to act as a wind/sea break for personnel outside the cabin. The bulkhead extensions shall be equipped with a 316 stainless steel grab bar extending from the top, down half the length of the bulkhead extension (integrated aluminum acceptable if cabin is aluminum).

Height - Cabin measurement is 1970 mm

Width - Cabin measurement is 1480 mm

Length - Cabin measurement is 2620 mm

The cabin height dimension supplied for the cabin is taken from the cabin deck to the bottom of the aluminum wiring trough located in the centre of the 733 cabin. Overhead clearance increases on either side of this trough. Length and width measurements are exceeded with the cabin.

The cabin roof extends 6" forward and aft of the cabin to act as a wind / sea break. The roof sides extend 4" beyond the cabin. An integrated handrail system allows fore to aft outboard transiting of the cabin. Additionally, an aluminum gutter system is provided on the sides and aft roof edge. The vertical aft handles on the port and starboard sides allow the aft roof area to drain to the deck, minimizing the amount of rain / sea that washes off the aft roof edge.

Inside dimensions of the v-berth at its widest point are 2x 1.7 m.

Cabin placement shall not jeopardize vessel stability (placement of two 250 hp outboard motors on stern to be taken into account for stability purposes).

The cabin design and placement on the reinforced deck takes weight distribution and handling characteristics into consideration.

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Fully enclosed 5086 H34 aluminum alloy or fiberglass cabin (black color) bolted to the deck with 316 stainless steel bolts. Deck to be fabricated and stiffened to allow for installation of cabin.

The aluminum cabin (aluminum plate 1/8" 5086 alloy, all extrusions 6061 T6 alloy) * is secured to reinforced deck by means of our stainless steel insert system and 316 stainless steel machine screws allowing for efficient maintenance should the cabin ever have to be removed from the deck.

*Welding done in accordance with CSA W59.2-M1991 Welded Aluminum Construction. All welding equipment and personnel are approved by Canadian Welding Bureau.

Forward-facing cabin bulkhead shall be designed to reduce wind resistance.

The taper of the cabin must be designed to reduce wind resistance.

Weather-tight cabin door containing a window (occupying minimum 1/4 of door area) in the upper portion of the door. Full see-through acrylic door is acceptable.

A full height 1/2" thickness lexan (acrylic) lockable door is also included. The hinged, weather-tight, outward opening door is installed on the port side of the aft bulkhead, while a 10" x 18" safety glass (1/4" thickness) window is provided on the starboard side of the aft bulkhead.

Door will open outward (hinged) from back of cabin.

The cabin door swings open outward from the cabin.

Provide safety catch on rear exterior of cabin bulkhead to hold door open.

A safety catch is provided on the aft cabin bulkhead to secure the door in the open position.

Cabin shall contain 4 windows (in addition to door window): 2 in front of cabin, one on each side of cabin. The cabin must include four (4) each watertight 1/4" safety glass in extruded aluminum frames that are bolted to the cabin. Two (2) are forward facing and two are located on the sides of the cabin. The side windows are sliding type.

Additionally, there is a 10' x 18" sized safety glass (1/4" thickness) window provided on the starboard side of the aft bulkhead.

An Espar forced air diesel heater must be included with built-in ducting to windows and floor vents. The heater is fitted with a marine grade heavy-duty booster blower in the outlet ducts to provide defrost air to the front windows with the heater on or off. The outlets are fitted with directionally adjustable grills to allow heat to be directed at either the front or side windows. Two each (2) external fans are fitted to the front corners of the cabin to further direct air at either front or side windows.

Approximate dimensions of windows (larger size may be acceptable): Side windows: (Tapered) 60 cm high, top width - 110 cm, bottom width - 140 cm Front windows. 55 cm wide, 70 cm high (tapered if necessary to conform to cabin mold).

A windshield wiper / washer system is provided for both of the forward facing windows. Wiper washer system is of heavy duty marine grade construction including AFI MRV wiper motors (#34000), 12 V Speich E95P pantographic wiper arms Motomaster 15" wiper blades # 21-1170-8 and UAP NAPA BOS ND 1602005160 washer kit system (including pump and tank). 12) Forward and side facing cabin windows are watertight and constructed of 1/4" safety glass in extruded aluminum frames bolted to the cabin. The aft bulkhead window is 1/4" safety glass, sealed into the bulkhead with a rubber molding.

Both side windows shall slide to open and contain a mechanism for selflocking when closed. Watertight windows are required. The bottom of each side window shall be approximately level with the armrest of the captain's chair when it (captain's chair) is at the mid-height adjustment.

Self-locking sliding watertight side windows are supplied on the port and standard cabin sides. Locking mechanism also secures in several open positions. Side windows are approximately level with the armrest of the helm position seat (slightly higher +/-1").

The operator controls shall be located on the starboard side of the vessel.

The operators console is built into the cabin interior in the forward starboard position.

1 - wide-base foldable captain's chair: adjustable front to rear and height adjustable, two-foot rest, adjustable backrest, 2 folding armrests. Chair shall be mounted to the deck and located directly behind the operator controls on the starboard side. Chair shall be located back from the console at a distance that will allow comfortable standing room in front of the chair. The seat shall slide far enough ahead to

allow the operator to sit and operate the controls without having to lean forward. Suggested model is Sea Post high back helm chair or equivalent.

GARLICK CAPTAINS CHAIR - MODEL 24-000 or similar model installed with swivel pedestal and footrest. Includes underdeck support and stainless steel deck insert system.

Auxiliary folding seat(s) capable of accommodating two people shall be located to the port or behind the captain's chair but not block access to the doorway.

Full compliance -Two (2) each folding jump seats are included with this offer. Installation location is inline against the port side cabin wall.

Integrated aluminum grab handles must be included in the cabin interior. A full-length handrail is located overhead, running fore to aft. A horizontal full-length handrail is located on the port and starboard sides, under the windows. A handrail is located on the cabin centerline, running from the roof to the dash board.

An integrated handrail system allows fore to aft outboard transiting of the cabin. Additionally, an aluminum gutter system is provided on the sides and aft roof edge. The vertical aft handles on the port and starboard sides allow the aft roof area to drain to the deck, minimizing the amount of rain / sea that washes off the aft roof edge.

Rubber anti-fatigue matting must cover the complete inside cabin deck is also available. The matting is fit to allow easy removal for cleaning. 20) An Espar diesel "Forced Air" Furnace including fuel tank must be included with this vessel. Model is Airtronic D2.

Heat Output BTU/hr (KW)

7500 (2.2) Boost

6150 (1.8) High

4100 (1.2) Medium

2900 (0.8) Low

Furnace has hot-air blower lead to the two (2) forward windows. Two (2) each fans systems must be supplied to prevent fogging on the side windows. The fuel tank is plastic* and located in an enclosed accessible area inside the console. Furnace exhaust is vented outboard with a 3 foot long aluminum cover to dissipate heat and prevent sea spray from entering.

Access plates fitted to allow access to fuel tank sending units, pickup tubes and depth sounder. Access plates to be configured to allow removal of plates without the need to remove cabin.

8" deck access plates must be located as follows:

Depth sounder transducer and bilge pump float switch: Forward of transom (aft deck area) Aft fuel tank sending unit and pickup tubes: Unobstructed in cabin on centerline forward of aft bulkhead.

Forward tank sending unit and pick up tubes: Unobstructed in cabin on centerline forward.

Cabin deck drain system to allow water drainage from cabin and prevent water from flowing from aft deck area into cabin.

A cabin drain system must be included with this vessel. Cabin drains to bilge. Dimension from the aft deck to the bottom of the cabin doorframe is approximately 3" preventing deck wash from entering cabin.

All electrical wiring fuses, furnace, and switches to be located inside the cabin.

All above deck electrical wiring, fuses, furnace and switches must be located inside the cabin.

PART III - ELECTRICAL REQUIREMENTS

A 13-circuit electrical panel including switches and breakers must be included with this vessel. Panels must be constructed to ABYC standard and mounted inside the cabin at the operators' console.

Deck lights: 2 forward-facing and 2 stern facing 55 watt halogen mounted on top of cabin with adjustable mounts (FF and SF lights to be operated by individual switches located in the cabin.

Two (2) pairs of Jabsco 45900-0000 marine grade floodlights are included with this vessel. Location would be the cabin roof: one pair each installed facing forward and facing aft. Installation would include swivel mounts allowing for adjustment. Forward pair may be adjusted to illuminate the forward deck or to the sides. Aft pair may be adjusted to illuminate the aft deck or to the sides. 34) The fuel system as offered complies with Transport Canada guideline TP 1332.

Valves and fittings utilized in the fuel system are bronze or corrosion resistant steel. Each fuel vent is fitted with a fuel saver check valve. Fuel valves are located on the transom and clearly labeled with OVERSIZED labels clearly visible from the helm position inside the cabin. Fuel fill locations include standpipes that stand proud of the fill location at least 3 inches and are fitted with locking caps with keyed alike marine grade padlocks.

twin Fuel tank system includes cross over valves that allow any Cont engine to use fuel from any tank.

These valves are located aft on the transom, are readily accessible and are clearly labeled. Racor fuel / water separators are included (location aft inside transom, easily accessed through a large hatch).

Fuel tanks are constructed of roto-molded polyethylene.

Fuel tanks include baffles to stabilize fuel load.

Fuel systems exceed CCG construction standards.

All fuel systems are pressure tested.

Fuel water separator (Racor 320) fitted for each outboard engine.

Fuel hoses meet BS EN ISO 7840:1995

Maximum capacity exceeds the Request For Proposal requirement (322L main tank and 182L aux. Tank=504L total)

Fuel tanks vent overboard. Systems is compliant with Transport Canada and ABYC standards

Diverter valves are fitted to allow either outboard motor to run off either fuel tank.

Fuel fill pod captures overfill fuel preventing split fuel from reaching the deck.

Fuel vents are fitted with back splash prevention.

Statement of Requirement

General Supporting Information for Environment Canada - Environmental and Wildlife Enforcement Divisions Rigid Hull Inflatable Boat

1.0 Role and Functions:

1.1 Use of Rigid Hull Inflatable Craft within Environment Canada - Environmental and Wildlife Enforcement Divisions.

1.1.1 Environment Canada - Environmental and Wildlife Enforcement Division (EC-EED-WED) buys, manages and operates numerous small craft in support of Departmental Programs and other Missions, within its various regions.

1.1.2 One of the primary missions includes enforcement patrols and surveillance in support of investigation of contravention of Canadian federal law, as well as support to various other departments including, but not restricted to Department of Fisheries and Oceans (DFO), Royal Canadian Mounted Police (RCMP) and other federal and provincial agencies.

1.1.3 In carrying out these missions, the craft perform the following broad functions:

- 1.1.3.1 conduct patrols and inspections;
- 1.1.3.2 perform searches and surveillance by visual and electronic means;
- 1.1.3.3 recover able-bodied or incapacitated people from other vessels and
from the water;
- 1.1.3.4 tow equipment and other vessels (in emergencies only);
- 1.1.3.5 provide a platform for performing first aid; and
- 1.1.3.6 standby boat for diving operations

2.0 Utilization:

2.1 RHI Boats are used in all Canadian provinces and the Arctic territories.

2.2 The craft is used in all applications which EC-EED-WED operates its vessels and small craft, offshore, inshore and in sheltered water.

- 2.3 The craft often operate in conjunction with Department of Fisheries and Oceans (DFO) and RCMP vessels.
- 2.4 The craft may be launched and recovered by means of hoisting such as derricks, cranes utilizing bridle or single point lifting apparatus. Craft may also be deployed from a dock or launch and recovered by trailer.
- 3.0 Design and Construction Practices
- 3.1 Regulatory Requirements - Construction Standards
- 3.1.1 The vessel shall meet all applicable requirements made under the Canada Shipping Act 2001 as they apply to the vessel construction only, including but not limited to;
- (a) Small Vessel Regulations
 - (b) Construction Standard for Small Vessels - TP1332
 - (c) Collision Regulations
 - (d) Ship Station (Radio) Regulations
- 3.2 Transport Canada Marine Safety (TCMS) - Inspection Process
- 3.2.1 The local office of TCMS is to be contacted prior to the start of construction to review and discuss the design as it applies to the construction requirements made under the Canada Shipping Act 2001. The vessel is to be made available for routine visits by the TCMS inspector during the construction process. Milestone construction intervals agreed upon by the manufacture and TCMS inspector should be determined and the manufacture is to notify TCMS so this area may be inspected prior to moving on with the construction process.
- 3.2.2 Any areas where further construction may prevent easy access to an item on the vessel, shall remain open until the TCMS inspector is available to visit the vessel and inspect that area.
- 3.2.3 All safety equipment as required by the Small Vessel Regulations, not otherwise listed in this document will be supplied by EC-EED-WED.
- 3.2 Ergonomic Design-General
- 3.2.1 Hazardous operating conditions shall 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 be accidentally activated by contact of personnel.
- 3.2.2 Human Engineering factors considered in design shall include accessibility, visibility, readability, crew efficiency and comfort. All equipment shall be accessible for use, inspection, cleaning and maintenance.
- 3.3 Vibration
- 3.3.1 The boat and all components shall 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.

3.3.2 No component shall be permitted to vibrate unless designed and required by the vessels operation to do so. Mounts for moveable components, including items moved for stowage, towing or transport, shall be provided with resilient material as necessary to prevent rattling.

3.3.3 Loosening of fasteners under vibration shall be prevented by the use of self-locking fasteners, as applicable.

3.4 Equipment Protection

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

3.5 Site Hygiene

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

3.6 Facilities (applicable to GRP - glass reinforced plastic only)

3.6.1 It is mandatory that the contractor has a shop capable of maintaining temperature and humidity. It should be capable of maintaining temperature between 16 ° C and 25 ° C. It should be capable of maintaining relative humidity below 70 %.

3.7 Proven Design

3.7.1 Prototypes will not be accepted.

3.7.2 Demonstrator vessels with low usage, that meet or exceed the specifications set out in this document may be considered. PWGSC and TCMS inspectors are to be satisfied that the demonstrator vessel meets or exceeds the requirements before it will be considered a suitable substitution for a new vessel.

3.7.3 Used Vessels will not be accepted.

4.0 Integrated Logistic Supports

4.1 Components and Equipment Support

4.1.1 All components and all mechanical, auxiliary, electronic and electrical equipment installed on the boat, with the exception of the collar, shall be supported by parts and service within 30 days. All components and equipment shall be current production models.

4.2 Spare Parts

4.2.1 To facilitate replacement and interchange ability of parts, as well as maintenance procedures and operator training wherever practicable:

4.2.1.1 The contractor shall standardize on selection of equipment, fittings and fabrication methods within all boats supplied

4.2.1.3 Exceptions shall only be accepted where expressly agreed by the EC-EED-WED and in all cases where advances in technology have rendered previous counterparts obsolete.

4.3 Parts Depot

4.3.1 Contractor's parts depots shall be capable of efficiently supplying spare parts for all components of the vessel within 24 hours in the Atlantic Region.

4.4 Service Depots

4.4.1 Contractors shall have a factory authorized service depot capable of servicing within 24 hours of receiving a service call in the Atlantic Region.

4.5 Warranty

4.5.1 The contractor must provide a 1-year limited warranty on all equipment and parts installed. The contractor must provide a 2-year limited warranty against defects and deficiencies in construction. The two-year warranty will run concurrent with the one-year warranty.

5.0 Documentation

5.1 Technical Publication General

5.1.1 The contractor shall provide three (3) complete sets of technical publications that provide a physical and functional description of the craft, its machinery and equipment, as well as sea-trial testing and performance documentation. The technical publication shall include a General Information Book, Technical Manuals, and a Preventive Maintenance List.

5.2 General Information Book

5.2.1 The General Information Book (GIB) shall include;

5.2.1.1 A description of the arrangement and function of all structures, systems, fittings and accessories fitted on the vessel, with illustrations as appropriate.

5.2.1.2 Operating Procedures

5.2.1.3 Basic operating characteristics (such as temperatures, pressures, flow rates etc.)

5.2.1.4 Installation criteria and drawings, assembly and disassembly instructions with comprehensive illustrations showing each step (including instructions necessary for onboard repair of the collar).

5.2.1.5 Recommended planned maintenance (Engines only)

5.2.1.6 Complete troubleshooting procedures (Engines only)

5.3 Technical Manuals

5.3.1 The technical manuals shall consist of a complete set of detailed owners/operator's manuals, drawings, parts lists and supplemental data for all components of the boat (whether acquired from external sources or custom manufactured), including:

- 5.3.1.1 Hull
- 5.3.1.2 Collar
- 5.3.1.3 Engine(s) and outdrives
- 5.3.1.4 Systems (steering, fuel, electrical, etc.)
- 5.3.1.5 Electronics (if applicable)
- 5.3.1.6 Fittings, accessories and ancillary equipment
- 5.3.1.7 Stability Assessment (Report)

5.4 Initial Spare Parts List

5.4.1 The Technical Manuals shall also include a list of recommended initial onboard spare parts to be stocked for the craft. At a minimum this list shall include the following items (as applicable.)

- 5.4.1.1 Propulsion: propeller, injectors, filters, water pump impeller, starting battery, belts, throttle and shift cables, any special engine tools
- 5.4.1.2 Collar: air valve, foot pump, pressure gauge, patch kit
- 5.4.1.3 Electrical: fuses, light bulbs
- 5.4.1.4 Boat structures and fittings: miscellaneous commonly used fasteners

6.0 Test and Trials

6.1 The contractor shall inspect and test the items listed below 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 shall 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 boat.

- 6.1.1 Weight
- 6.1.2 Construction quality
- 6.1.3 Lifting gear
- 6.1.4 Propulsion system
- 6.1.5 Propulsion controls
- 6.1.6 Steering system
- 6.1.7 Fuel system
- 6.1.8 Electrical system
- 6.1.9 Starting system
- 6.1.10 Electronics
- 6.1.11 Emergency Towing Bits (also to be labelled with ratings)

6.2 Sea Trials - General

6.2.1 Sea trials shall be conducted by the Contractor to demonstrate the boat and its equipment conform to the requirements as stated in the contract and the performance requirements. All expenses incident to the trials shall be borne by the Contractor unless otherwise specified. A crew provided by the contractor shall operate the vessel during sea trials. The Contractor shall also carry out the break-in period of the propulsion system per the manufactures procedures. Sea trials shall be witnessed by, and to the satisfaction of, EC-EED-WED.

6.2.2 All Sea Trial instrumentation and equipment shall be furnished and operated by the Contractor. Trial instrumentation, where applicable, shall not replace the boat's instruments (e.g. engine tachometer, pressure gauges, thermometers). The Contractor shall furnish all necessary hardware and fittings and shall install the measuring devices. After satisfactory completion of the trials, all instrumentation shall be removed and all systems restored. The Contractor shall provide calibration data certifying the accuracy of the instrumentation for the tests.

6.2.3 The Contractor shall submit a Test & Trials Plan, including a description of all of the acceptance trials to be performed. As a minimum, the following test and trials shall be conducted:

6.2.3.1 Speed Trials - The speed trials shall be done over a certified measured course at least one nautical mile in length. Two runs shall be made over the course, one in each direction with the speeds for the two runs averaged.

6.2.3.2 Endurance Trial - The vessel shall operate at maximum speed for a minimum of sixty minutes in the Normal Operating Condition, giving consideration to the engine manufactures break in procedures. During the endurance trials, it shall be demonstrated that all parts of the propulsion system are in full operation. All systems shall be operated to check for proper lubrication, control and alignment. Fuel consumption shall be recorded for the one-hour trial.

6.2.3.3 Astern Propulsion - The vessel shall be operated and manoeuvred using astern propulsion to establish the astern performance. During the backing performance tests the throttles shall 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 engine mounting arrangements, the engines shall 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 shall be recorded.

6.2.3.4 Steering Gear - Tests shall be conducted on the steering gear to demonstrate the adequacy of the steering system under all conditions. Manoeuvring tests shall be performed to ensure that the boat meets the stated requirements. Manoeuvring trials shall be conducted in the Normal Operating Condition and repeated in the Full Load Conditions.

6.2.3.5 Lifting Gear Load Test - Lifting gear of each boat shall be load tested prior to shipment by loading the boat to 150% (Vessel weight plus 50%) of the Normal Operating Condition and lifting the boat from a single point hoist using the boats lifting gear. A visual inspection shall be made of all lifting gear components to ensure that there is no evidence of distortion, cracking or failure.

6.2.3.6 Stability Test (Assessment) - The vessel shall have its stability assessed against a recognized standard applicable to the vessel type and design. All stability tests shall be discussed with, witnessed by, and to the satisfaction of, the attending TCMS Inspector.

6.2.3.7 Public Works and Government Services Canada Marine Technical Inspection shall be notified no less than 24 hours prior to sea trials. The inspector reserves the right to witness or decline attendance of sea trials. Absence of the inspector at sea trials does not relieve the Contractor of its responsibility to conduct and record sea trials. Sea trials results will be forwarded to the Inspection Authority prior to delivery of the vessel.

6.2.3.8 At the conclusion of sea trials, the boat shall be thoroughly cleaned and inspected. The Contractor shall repair any damage to the vessel or ancillary equipment resulting from sea trials to the satisfaction of the PWGSC and TCMS Inspectors.

6.3 Final Inspection

6.3.1 Final Inspection shall not be performed until all tests have been satisfactorily completed with data available for review. The boat must be ready for delivery in all respects, except for final preparation for shipment. The Contractor shall provide personnel, as required, to resolve questions and to demonstrate equipment operation, maintenance, accessibility, removal and installation. The Contractor shall document the results of the final inspection and furnish these results to the Contracting Officer, a copy of the sea trial results shall be shipped with the deliverables for each boat. Where applicable, serial numbers and other identifying information shall be recorded for each boat and engine.

6.3.2 The vessels construction shall be confirmed in writing by the local Transport Canada Marine Safety Inspector. The confirmation letter shall outline the vessels compliance with the various regulations and standards made under CSA 2001 as they apply to the vessels construction only.

6.4 Acceptance

6.4.1 Upon delivery, TCMS and PWGSC will conduct the final delivery inspection. The Contractor shall repair any damage to the boat or ancillary equipment resulting from shipping, to the satisfaction of the PWGSC & TCMS Inspectors. Delivery will be FOB 45 Alderney Drive, Dartmouth, NS B2Y 2N6. Upon completion, Steve Smith at 902-426-1188 should be contacted for further details regarding the delivery.

6.5 Trial Records

6.5.1 The contractor shall prepare a testing check sheet that certifies that each test has been completed. The check sheet shall indicate the actual loaded weight of the boat in Light Conditions. The check sheet shall also indicate the total loaded weight and the data for the 150% (vessel weight plus 50%) load lifting gear test. This check sheet shall be included with the deliverables of each vessel.

7.0 Fabrication

7.1 General

7.1.1 Unless stated otherwise, all components, equipment and material shall be Contractor supplied.

7.1.2 The EC-EED/WED RHI Boats are to be constructed of glass-reinforced plastic using fire-retardant Vinylester Resin and a compatible gel-coat.

7.2 Structural Integrity

7.2.1 All structures and components (hull, deck, collar, console, seating cabin etc.) shall be of sufficient strength to withstand, when in the Fully Loaded Condition, the lateral and vertical impact, loading that equates to the conditions for the operational profile and mission requirements.

7.3 Materials - General

7.3.1 Environmental Exposure

7.3.1.1 All materials shall be corrosion resistant and suitable for use in a salt water environment as detailed in the environmental conditions portion of the Performance Requirements. All materials normally subjected to sunlight shall resist degradation caused by ultraviolet radiation.

7.3.2 Dissimilar Metals

7.3.2.1 Direct contact of electrolytically dissimilar metals is not permitted. Electrolytic corrosion shall be prevented by insulating dissimilar materials from each other with gaskets, washers, sleeves, or bushings of suitable insulating material.

7.3.3 Aluminium

7.3.3.1 Aluminium alloy 5086-H116 or 5456-H116 shall be used for plate; aluminium alloy 5086-112 or 5456-H111 shall be used for extruded shapes and welded tubing and pipe. Non-structural items of trim and outfit such as hatch frames, castings, and hardware items may be of other aluminium alloys suitable for commercial saltwater marine use.

7.3.4 Stainless Steel

7.3.4.1 Stainless steel type 316L or 316 shall be used for all stainless steel applications except as noted. Alloy 316 shall not be used in any welded components.

7.3.5 Fasteners

7.3.5.1 All fasteners shall be of corrosion resistant materials.

7.3.5.2 Cadmium plated parts and fasteners, including washers, shall not be used.

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

7.3.5.4 No fasteners shall be directly threaded into aluminium alloys or GRP. Steel backing plates must be used.

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

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

7.4 Construction Procedures

7.4.1 General

7.4.1.1 Hulls shall be fabricated as per the requirements quoted in Construction Standards of the Performance Requirements.

7.5 Main Hull and Appendages

7.5.1 Hull Form and Watertight and Tank Bulkheads

7.5.1.1 Hull shape shall not impede water flow to the propulsion units and must direct spray and waves away from onboard personnel.

7.5.1.2 Hull design shall be such that a sufficient number of watertight compartments that will allow for adequate stability and if there is more than one watertight compartment, each shall have its own designated pumping system.

7.5.1.3 A high-density protective shoe of stainless steel or equivalent composite shall be fitted the full length of the keel, to protect against damage from grounding or similar hazards. This shoe shall not detract from performance or sea keeping capabilities, and it shall be capable of withstanding the horizontal and vertical impact loading associated with the vessels operational requirements.

7.5.3 Stowage

7.5.3.1 Weather tight stowage for small items of equipment shall be provided. Include mission-related equipment as well as that defined in the Canada Shipping Act, Small Vessel Regulations. All stowage compartments shall be lockable, secured by positive means and operable by gloved or insensitive hands.

7.5.4 Painting and Preservation

7.5.5.1 Fibreglass components shall have a black coloured gel-coat finish on all surfaces. Prior to delivery, the Contractor shall ensure that all not-painted exposed aluminium is free of cosmetic blemishes, including construction marking, grinder marks, scratches, gouges and stains.

7.6 Propulsion Systems

7.6.1 Installation and alignment

7.6.1.1 The engines shall be installed in accordance with the engine manufacturer's recommendations. The use of engine manufacturer's approved accessories and equipment is required. Equipment and components shall not be used on the boat that would in any way void the engine manufacturer's warranties.

7.6.2 Warranty

7.6.2.1 All components of the propulsion system shall be warranted by the original equipment manufacturer.

7.6.3 Outboard Motors

7.6.3.1 Unless otherwise specified, propulsion shall be supplied by EC-EED/WED. EC-EED/WED shall supply two Yamaha 250 hp outboard engines, with props.

4-stroke

7.6.4 Propellers

7.6.4.1 Unless otherwise specified, propeller(s) will be stainless steel. Contractor shall inform the Technical Authority of appropriate pitch and diameter to meet the

Performance Requirements as determined by the Contractor developed design check.

7.7 Steering System

7.7.1 General

7.7.1.1 The steering system design, component selection and installation shall be in accordance with TP1332 "Construction Standards for Small Vessels" Section 9.

7.7.1.2 Steering system shall be remote hydraulic with self-contained oil reservoir, and replaceable seals on the rams.

7.7.1.3 The steering wheel shall be a robust design suitable for severe heavy-duty applications especially during rough water operations with no flexing of the wheel.

7.7.2 Hydraulic Hoses

7.7.2.1 Hoses shall 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.

7.8 Electrical System

7.8.1 General

7.8.1.1 The electrical system design, component selection and installation shall be in accordance with TP1332 "Construction Standards for Small Vessels" or the American Yacht and Boating Council (ABYC) as permitted by section 8.2 of TP1332. All fitted electrical equipment shall be capable of operating simultaneously with all fitted electronics equipment without causing interference to any electronic equipment or to the magnetic compass. The manufacture shall provide written confirmation as to what electrical construction standard was used and, if applicable, provide the installers electrical training certificates

7.8.2 Batteries & Switches

7.8.2.1 Battery switches shall be located to prevent snagging or accidental switching. A warning label shall be affixed at the battery switches indicating that the batteries must not be run simultaneously.

7.8.2.2 Battery compartments must be weathertight and fitted with a suitable means of gas venting. Batteries must be secured as required by TP1332 Section 8.

7.8.3 Power Distribution

7.8.3.1 Cabling Selection

7.8.3.1.1 Cables for all portions of power and lighting shall be heavy duty, marine grade, tinned boat cable.

7.8.3.2 Cabling Installation

7.8.3.2.1 Cables shall be grouped into wiring harnesses wherever possible. All wiring harnesses shall be routed below deck.

7.8.3.2.2 Cabling/conductors passing through watertight boundaries, decks, bulkheads or other exposed surfaces shall be installed to maintain watertight integrity of the structure. Cable entry into watertight shall be through watertight marine glands of suitable size. All equipment shall be readily accessible for performing

enclosures
electrical
maintenance.

7.8.3.2.3 All below deck cabling shall be through conduit pipe.

7.8.3.2.4 Cabling/conductors passing through decks, bulkheads or other structures shall be protected against chafing by the use of abrasive resistant grommets.

7.8.3.2.5 Routing cables through foamed spaces shall be avoided wherever possible. Cables that must be routed through foamed spaces shall be run in PVC conduit pipe. The pipe shall be arranged in a matter that prevents water from becoming entrapped in the pipe.

7.8.4 Navigation Lighting

7.8.4.1 All Navigation lighting, etc is to be in accordance with the Collision Regulations made under the Canada Shipping Act 2001.

7.8.4.2 Fixtures shall be of such a design as to resist the effects of vibration and and shall be provided with adequate protection from damage.

moisture

7.8.4.3 The navigation lights shall be mounted so as not to interfere with vision of operator

7.8.4.4 The sidelights shall be permanently mounted. The aft all around light or masthead light may be on a retractable or fold down mast.

allowing
range of

7.8.4.5 1 Rayline searchlight (1 million candela) mounted on top of cabin 360O coverage with remote control slew/tilt/focus capability in operator.

7.9 Communications Systems

7.9.1 General

7.9.1.1 VHF Radio / Hailer complete with antenna compatible with GMDSS to be supplied and installed. This unit is to be listed in the Transport Canada Marine Safety Approval Catalogue, see web link provided below. (http://www.tc.gc.ca/MarineSafety/APCIICPA/en/APCI_SelectGeneric.asp?cat=ARE)

7.9.1.2 All required antennas to be secured to top of cabin using heavy-duty marine ratcheted mounts so antennae can be folded down for transport.

7.9.1.3 Radar, plotter, and VHF/Hailer, computer interface model mounting area to be mounted and located as close to operator's position as possible. Radar and Plotter to be mounted in front of operator's position but must provide for total unobstructed forward, rear and side-to-side visibility for the operator.

7.9.1.4 The Contractor shall supply and install an electric horn that meets the requirements of the Collision Regulations. The horn shall be operated by a spring-loaded switch located on the operator's console.

7.9.1.5 Furuno Hailer/Siren with Fog signals (LH3000).

7.10 Navigation Systems

7.10.1 General

7.10.1.1 Contractors to install dedicated 1 ½" conduit pipe to allow wiring of electronic equipment that will include but not be limited to the Communication Equipment listed above as well as the following:

7.10.1.1.1 DGPS

7.10.1.1.2 Radar

7.10.1.1.3 Chart Plotter

7.10.1.1.4 Two Depth Sounders (Raymarine and Lowrance).

Transom mounted.

7.10.2 Navigation Equipment

7.10.2.1 Raymarine E120W Multifunction Navigation Display with 12.1"Sunlight Viewable Color display Model E02013; RD18"High Performance 2KW Raydome Antenna E-52067 with 15m cable; Raymarine Raystar 125 GPS Sensor E32042; Navionics Charts for the Atlantic Region; Raymarine Ray218 VHF Radio

7.10.2.2 Raymarine E66008 in Hull Depth Adjustable Transom Mount Transducer; Raymarine DSM300 Digital Sounder Module, model E63069; and Raymarine Smart Heading System for Pathfinder model E12102 Gyro Stabilized Fluxgate Compass System.

7.10.2 Magnetic Compass

7.10.2.1 The compass shall be mounted in easy view of the operator when facing forward and professionally swung to indicate the deviation. A deviation card is to be provided.

7.11 Control and Monitoring Systems

7.11.1 Gauges - Dimensions and Ergonomics

7.11.1.1 Unless otherwise specified, gauges shall be digital-style, approximately 2" diameter. Tachometer gauges shall be approximately 3" diameter. Gauges shall be installed so they are readily visible by the operator while operating the boat. Gauges should be compatible with the Yamaha 4-stroke outboard motors.

7.11.2 Gauges - Illumination

7.11.2.1 All gauges shall be backlit with an adjustable dimmer. Lighting for gauges and lighting for compass must use separate dimmers.

7.11.3 Control Requirements

7.11.3.1 Propulsion control system installation shall include Duel Binnacle engine control located at the operator's position on the starboard side of the wheelhouse. The Control shall conform to engine manufacturer's recommendations for commercial use.

7.12 Piping & Bilge Systems

7.12.1 Flexible Connections

7.12.1.1 The piping and bilge systems design, component selection and installation shall be in accordance with TP1332 "Construction Standards for Small Vessels" Section 9

7.12.1.2 Where flexible connections are required for steering and fuel systems, suitable hose with detachable reusable type fittings shall be used.

7.12.2 Fittings

7.12.2.1 Fittings and clamps shall be stainless steel. Bolts used in corrosion resistant steel shall, be similar material and not promote corrosion. Bolts used in bronze shall be monel or silicon bronze.

7.13 Ventilation Systems

7.13.1 The ventilation systems design, component selection and installation shall be in accordance with TP1332 "Construction Standards for Small Vessels" Section 6

7.13.2 The vessel shall be fitted with an underway ventilation system and a mechanical blower system as described in TP1332 Section 6

8.0 Packaging and Shipping

8.1 Shipping and Delivery

8.1.1 Prior to shipping, the boat shall be secured to a cradle or designated trailer as described in Section 19 of this document, with adequate tie-downs, preserved and covered in accordance with this section.

8.1.1.1 All areas of the boat shall be cleaned prior to covering for final shipping.

8.1.1.2 Bilges shall be dry and free of oil and debris and the fuel tanks shall be dry.

8.1.1.3 The propulsion system shall be preserved in accordance with the manufacturer's recommendations for storage of up to one year in an environment that will be subjected to freezing temperatures.

8.1.1.4 The batteries will be disconnected.

8.1.1.5 A durable warning plaque shall be wire tied to the steering wheel indicating that the boat has been preserved for shipping and storage and should not be started until the propulsion machinery has been reactivated.

8.1.1.6 The cradle (or trailer) shall be fitted to prevent any movement of, or damage to, the boat and equipment during shipment and storage. All contact points with the boat/trailer/cradle shall be padded where required.

8.1.1.7 A shrink-wrap cover shall be provided to protect the boat during shipping and storage.

PERFORMANCE REQUIREMENTS FOR EC-EED/WED RIGID HULL INFLATABLE BOAT

9.0 Physical Characteristics

9.1.1 Length overall between 9.0 and 10 metres (does not include outboards).

9.1.2 Breadth overall between 3.0 and 3.2 metres.

9.1.3 Maximum draft (outboard motor lowered) between 0.80 and 0.90 metres.

9.1.4 Maximum draft (outboard motor raised) between 0.5 and 0.8 metres.

9.1.5 Maximum freeboard (from top of collar at midship, in normal load condition) 0.70 metres.

9.1.6 Maximum height of collar above deck 0.80 metres.

9.1.7 Displacement (in normal load condition) between 3000 and 3500 kg.

9.1.8 Normal load conditions:

9.1.8.1 Minimum crew of 2 = 300kg

9.1.8.2 Maximum crew of 8 = 1200kg

9.1.8.3 Equipment & supplies =900kg

9.1.8.4 Minimum Fuel = 322 litres with integrated fuel fill, vent system and an optional tank of 182 litres.

10.0 Operational Performance

10.1 Unless otherwise stated, performance shall be for the conditions of zero sea state and no wind, in salt water with full load and complement. The craft shall be designed and constructed for ease of maintenance and repair, long life, and to be easily supportable by local commercial facilities and suppliers. The craft is expected to have a service life of at least 7 years, with an expected usage of between 300 and 1500 hours per year.

10.1.1 Minimum speed: 45knots

10.1.2 Minimum speed: 20 knots in a sea state 6 with 35 knot wind.

10.1.3 Endurance: 35 knots for 6 hours.

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

10.1.5 Steering:

10.1.5.1 Capable of steering 15° from heading, in sea state 6, with seas from any direction.

10.1.5.2 Steer and manoeuvre effectively at least 3 knots in sea state 6.

10.1.5.3 Maintain course, make good over ground, when proceeding at 3 knots with relative crosswinds of 35 knots.

10.1.5.4 Capable of turning its own length in sea state 6.

10.1.5.5 Capable of steering effectively in sea state 6 with winds of 35 knots while towing a 15 tonne (displacement) vessel at 5 knots.

10.1.6 Beaching:

10.1.6.1 Capable of beaching on soft (sand, earth or clay) surfaces at a speed of up to 5 knots without damage to the hull.

10.1.6.2 Capable of beaching on hard (stone or concrete) surfaces at speeds of up to 3 knots without damage to the hull.

10.2 Depth under Keel:

10.2.1 Operate fully in depths of 1 metre with outboard motor lowered.

10.2.2 Basic manoeuvring in depths of 0.80 metres with outboard motor in the partially raised position.

11.0 Environmental Conditions

11.1 Capable of operating in day or night in the following conditions;

11.1.1 Average ambient air temperature range: -15°C to + 30°C.

11.1.2 Average water temperature: 0°C to +20°C.

11.1.3 Wave heights of 4 metres to 6 metres (WMO Sea-State 6).

11.1.4 Wind speeds of 35 knots to 50 knots.

12.0 Onboard Cabin Requirements:

12.1. General

12.1.1 Vessels Cabin shall be constructed of glass-reinforced plastic using fire-retardant Vinylester Resin or marine-grade aluminum and a compatible gel-coat.

12.1.2 All doors, windows, hatches, etc are to be hose tested for watertightness as required by TP1332 Section 3.4.1.

12.1.3 The operator controls are to be located on the Starboard side of the vessel.

12.2 Inside cabin dimensions:

12.2.1 Height: 200cm (measured from finished cabin deck to inside of top of cabin)

12.2.2 Width: 150 cm (+/- 5cm inside measure) (width at centerline of cabin)

12.2.3 Depth: 240cm (+/- 5cm) (straight-line measure from inside corners of cabin bulkhead from fore to aft) Roof and sides of cabin shall extend 6 inches from the aft bulkhead, to act as a wind/sea break for personnel outside the cabin. The bulkhead extensions shall be equipped with a grab bar extending top, down half the length of the bulkhead extension.

12.3 Location

12.3.1 Cabin placement shall not jeopardize vessel stability fore and aft, or port to starboard (placement of two 250hp motors on stern to be taken into account for stability purposes) Fully enclosed cabin bolted to the deck with 316 stainless steel bolts. Deck to be fabricated and stiffened to allow for installation of cabin.

12.3.2 Forward-facing cabin bulkhead shall be designed to reduce wind resistance

12.4 Door

12.4.1 Weather-tight self-locking cabin door containing a window fitted with Safety Glass.

12.4.2 Door will open outward (hinged) and lead aft from back of cabin or slide to port or starboard.

12.4.3 Provide safety catch on rear exterior of cabin bulkhead to hold door open

12.5 Windows

12.5.1 Cabin shall contain a minimum of 6 windows (in addition to door window), two (2) in front of cabin, and two (2) in aft of cabin, one (1) on each side of cabin.

12.5.2 Forward windows shall have a heated blower affixed in a position that is capable of preventing fogging and moisture accumulation on the interior side of the complete area of the window.

12.5.3 The approximate dimensions for windows are:

Side windows - (tapered) 60cm high, top width - 110cm, bottom width - 140 cm

Front windows - 55cm wide, 70cm high

12.5.4 Forward-facing windows shall be equipped with heavy-duty marine wipers, with window washing features, complete with pump and tank.

12.5.5 All windows shall be 1/4" (6mm) marine safety glass (Plexiglas is not acceptable). Glass shall be contained within a frame, bolted to the cabin.

12.5.6 Both side windows shall slide to open and contain a mechanism for self-locking when closed.

12.6 Seating

12.6.1 Two (2) wide-base foldable captain's chairs: adjustable front to rear and height adjustable, two-foot rest, adjustable backrest, and 2 folding armrests. Chairs shall be mounted to the deck and located directly behind the "Operator Controls" on the starboard side and directly adjacent to it on the port side. Chairs shall be located back from the console at a distance that will allow comfortable standing room in front of the chair. The seat shall slide far enough ahead to allow the operator to sit and operate the controls without having to lean forward.

12.6.2 Auxiliary folding seat(s) capable of accommodating two people shall be located to the port and behind the captain's chair but not block access to the doorway.

12.6.2 An alternative seating arrangement that that described in section 12.6.1 and 12.6.2 may be considered. The alternative shall be presented to TCMS, by the manufacture, in writing with a sketch outlining the proposed alternative arrangement to be considered prior to approval.

12.7 Grab rails

12.7.1 Grab Rails complete with reinforced attachments shall be located along sections of the interior cabin bulkheads. Located as required to maintain safe movement around the vessel while underway.

12.7.2 Grab rails complete with reinforced attachments shall be installed on exterior cabin bulkheads. Located as required to maintain safe movement around the vessel while underway.

12.8 Onboard-cabin anti fatigue deck matting shall be fitted for the complete cabin deck area. Any deck accesses covered by the matting shall be made accessible and in doing so shall not create tripping hazards.

12.9 A diesel forced air furnace including fuel tank. BTU output rating 7,500B, 6,150H, 4,100M; 2900L. Furnace shall have hot-air blower leads to all forward windows to prevent fogging. The fuel tank shall be aluminium (or equivalent) and shall be located in an enclosed accessible area in the vicinity of the cabin. The furnace fuel tank is to meet the fuel tank requirements as described in TP1332 section 7. Furnace shall exhaust away from all air intakes and access ways into the vessel. All electrical wiring, fuses, and switches to be located in an easy access location. The furnace fuel fill is to be located to allow easy fill without the removal of the tank or removal of the vessels equipment and / or structure.

12.10 Access plates fitted to allow access to fuel tank sending units, pickup tubes and for the depth sounder transducer to be configured to allow removal of access plates without the need to remove the cabin.

12.11 Cabin deck drain system to allow water drainage from cabin and prevent water from flowing from aft deck area into cabin

13.0 Seating and Console Configuration

13.1 Helm Console

13.1.2 Engine controls shall be situated on the dash to the starboard side, or to the starboard of the operator's console, and shall be situated in such a manner that the operation of one control, or the steering wheel, shall not inadvertently activate or deactivate any of the other controls

13.1.3 The helm position must be outfitted as follows:

- 13.1.3.1 Tachometer for each engine,
- 13.1.3.2 Fuel gauge for each tank
- 13.1.3.3 Cooling water temperature gauge for each engine
- 13.1.3.4 Water pressure gauge for each engine
- 13.1.3.5 Tilt/trim gauge for each outdrive,
- 13.1.3.6 An hour meter for each engine,
- 13.1.3.7 A minimum 15 breaker circuit panel,

13.1.3.8 A efficient compass with a means of illumination.

13.1.3.9 Separate waterproof dimmer switches for the compass and engine instruments.

13.1.3.10 Remote oil tank level gauges will be mounted at the helm position.

13.1.3.11 Navigation, Communication Equipment as outlined in General

Requirements

13.1.3.12 A marine safety glass windshield, with wiper and defroster. The edges of the windshield shall be polished/rounded

13.1.3.13 Auto/Manual Bilge Pump switches in accordance with TP1332 Section 9

13.1.3.14 High Bilge Alarm in accordance with TP1332 Section 9. Located so the audible and visual alarm can be easily seen / heard during typical operations of the vessel.

14.0 Construction References:

14.1 Canada Shipping Act 2001

<http://www.tc.gc.ca/acts-regulations/GENERAL/C/csa2001/act/csa2001-menu.htm>

14.2 Transport Canada Marine Safety

Small Vessel Regulations

<http://www.tc.gc.ca/acts-regulations/GENERAL/C/csa/regulations/070/csa076/csa76.html>

14.3 Transport Canada Marine Safety

Collision Regulations

<http://www.tc.gc.ca/acts-regulations/GENERAL/C/csa/regulations/010/csa014/csa14.html>

14.4 Transport Canada Marine Safety

Construction Standards for Small Vessels. (TP1332) 2004 Edition

<http://www.tc.gc.ca/MarineSafety/Directorate/TP/tp1332/tp1332e.htm>

14.5 Transport Canada Marine Safety

Ships Electrical Systems TP 127 - Sections 50 to 58 (less than 55 volts)

<http://www.tc.gc.ca/MarineSafety/tp/Tp127/menu.htm>

14.6 Transport Canada Marine Safety

Ship Station (Radio) Regulations

<http://www.tc.gc.ca/acts-regulations/GENERAL/C/csa/regulations/060/csa063/csa63.html>

14.7 Transport Canada Marine Safety

Approved Products Catalogue

http://www.tc.gc.ca/MarineSafety/APCI-ICPA/en/APCI_Main.asp?DefaultLang=E

15.0 Construction Requirements

15.1 General:

15.1.1 Unless stated otherwise all components, equipment and material shall be Contractor supplied.

15.2 Deliverables:

15.1.4.1 Manuals: A detailed operator manual shall be provided for all equipment, fittings and systems.

15.1.4.2 Test & Trial results.

15.1.4.3 Acceptance Certificats, i.e. Life saving appliances, lifting appliances, engine test reports, calibration certificates and Stability Report (Assessment)

15.1.4.4 Testing Check Sheet

15.2 Hull

15.2.1 Material:

15.2.1.1 Rigid hulls shall be constructed of glass-reinforced plastic using fire-retardant Vinylester Resin and a compatible gel-coat.

| | | |
|--------------------------|-------------------|--|
| to | 15.2.1.2 | The deck and hull shall be constructed of similar materials and the deck shall have a moulded non-skid finish. |
| | 15.2.1.3 | The colour shall be black to a depth of 21-22 mils. |
| | 15.2.1.4 | The core material is to be Polyvinyl Chloride foam. The core is to be installed as per the manufacturer's specifications. |
| | 15.2.1.5 | The Transom is to be reinforced using Plum Creek 2" treated plywood or equivalent, laminated as per manufacturer's specifications. http://www.plumcreek.com/product/plywood.html |
| | 15.2.2 Deck: | |
| | 15.2.2.1 | The deck is to be moulded not GRP laminated over plywood. |
| | 15.2.2.2 | Decks shall be self draining, by means of non-return freeing ports or similar. |
| | 15.2.2.3 | The deck above the watertight compartments shall be bolted for easy removal to allow access for repair of buoyancy compartments beneath. |
| | 15.2.2.4 | The fore deck is to have certified (6:1 safety ratio) recessed lifting lugs installed, capable of lifting the boat with its full complement. |
| | 15.2.3 Tie Downs: | |
| area for approx. 1 Metre | 15.2.3.1 | Flush mounted deck tie downs will be fitted on the forward deck the securing of deck cargo (minimum of 4 required, spaced apart). |
| steel bow weight) | 15.2.3.2 | 316 stainless steel transom tie-down eyes and 316 stainless eye (suitable for trailering vessel at total capacity |
| | 15.2.4 Stowage: | |
| | 15.2.4.1 | Watertight storage shall be provided of approx. 7 cu. ft capacity and securely fastened. The lid shall be covered in non-skid to prevent slipping. |
| | 15.2.4.2 | Arrangements shall be provided for safe, secure and accessible stowage of an anchor and cable, paddles, and other equipment. |
| | 15.2.5 Towing: | |
| | 15.2.5.1 | A system is to be designed and incorporated into the construction of the stem that allows for the bowline and/or trailering hook to be attached to the bow. The fitting must be of a non-corrosive material and of sufficient strength to allow for towing the vessel at a speed of 5 knots in calm water in the |

normal loaded condition, on an even keel without damaging the vessel or causing undue chafing to the towline.

15.3 Collars

15.3.1 Collar shall be an inflatable type with at least 6 separate chambers of approximately equal volume; each fitted with a suitable inflation system and over-pressure relief valves calibrated to 3 psi.

15.3.2 The Inflatable collar shall be Hypalon 1670 Dtex or equal and shall be black in colour.

15.3.3 Collars shall be interchangeable and have a diameter of between 600 and 610 millimeters so that custom fitting of spare collars is not required.

15.3.4 Inflatable collars shall be attached to the hull using mechanical fasteners in such a manner that the collar can be easily removed for repair or replacement. The use of screws and lag bolts or glue-on type collars are not acceptable.

15.3.5 Collar to be supplied with two pairs of step treads installed.

15.3.6 Collar must be supplied with a tensioner.

15.3.7 Inflatable collars shall be provided with protective wear strips all around. At least five extruded neoprene rubber, or equivalent, rubbing strakes (50 mm - 75 mm wide) shall be glued along the entire length of the outboard side of the collar to provide protection against abrasion and puncture.

15.3.8 Grab lines of nylon braided rope (colour black) construction ½" diameter, shall be fitted along the collar on both the port and starboard sides to provide access from both within the boat and for persons in the water. Grab lines shall be mounted on the centerline of the collar, by means of a heavy duty lacing cuff (not by D-Ring attachment).

15.3.9 A repair kit shall be provided for inflatable collars and GRP hulls.

15.3.10 All seams are to be hand buffed and glued.

15.3.11 Polyurethane sealant should be used on all interior seams and baffle edge.

16.0 Outfitting

16.1 Towing: (Emergency Situations Only)

16.1.1 Sufficient barrier protection shall be provided to protect control station from potential recoil of towline.

- 16.1.2 A crusiform tow post shall be fitted aft, ahead of the thrust point of the craft. (tow capacity 2,200 lb. minimum)
- diameter 16.1.3 A hand cranked tow reel shall be required, with 50m of buoyant 3/4 inch towline.
- 16.1.4 A removable crusiform tow post (tow capacity 750 lb. minimum) is to be fitted forward.
- 16.1.5 A removable cover (colour black) is to be supplied for the towing reel with a fastening system that would allow for quick removal.
- 16.2 Lifting:
- 16.2.1 Multi Point Lifting
- 16.2.1.1 The vessel shall be equipped with a four leg flexible fabric lifting bridle. The location and arrangement of lifting gear shall be such that it does not pose a safety hazard to the operator or crews nor interfere with boat operation. All bridle lifting lugs shall be reinforced and proof tested in accordance with TCMS Tackle Regulations. Lifting points shall not be located below the deck or within lockers or compartments. Lifting points shall be located so that the bridle does not snag on the boat structure, console, outfit or machinery. Lifting slings provided shall be flexible fabric strap type certified to safely lift the vessel in the fully loaded condition
- 16.3 Electrical:
- easily 16.3.1.1 The electrical system shall be completely waterproofed and accessible, incorporating a waterproof breaker panel with a minimum of 15 circuits fitted.
- 16.3.2 Twelve (12) volt DC distribution system shall be provided to power the engine starting and boat service loads including:
- 16.3.2.1 Navigation lights.
- 16.3.2.2 Navigational equipment.
- 16.3.2.3 Instrumentation.
- 16.3.2.4 Communications.
- 16.3.2 Shore power shall be designed and installed in accordance with TP1332 (ABYC) or the TCMS standard - Ships Electrical Systems TP127 for systems under 55 volts as it relates to shore power only. The charging systems shall be capable of handling the power requirements of the vessel.
- 16.3.3 Batteries
- 16.3.3.1 Boat shall have a heavy-duty dual-battery system with dual-battery selector switch mounted in a position that conforms to engine manufacturer's specifications and battery warming blankets.

16.3.3.2 Batteries shall be marine grade with rollover caps and a minimum 1000 deep-cycle cranking amps.

16.3.4 Cable Installation:

16.3.4.1 Cables and conductors shall be supported with clamps or straps at least every 18 inches on horizontal runs and every 14 inches on vertical runs.

16.3.5 Alarms

16.3.5.1 Audible alarms and visual warning lights shall be installed in accordance with the manufacturer's recommendations and the Construction for Small Vessels (TP1332) 2004 Edition. To indicate such items as; high Bilge, etc.

16.4 Depth Sounder

16.4.1 A contractor supplied depth sounder shall be installed with the display at the operator position and complete with a transom mount transducer mounted as per manufacturer's specifications (Lowrance Model 3800 digital readout).

16.5 Lighting

16.5.1 Progressive dimmers of marine grade shall be fitted wherever practicable, with the capability of dimming engine monitoring gauges and other indicators separately from compass illumination.

16.5.2 Craft shall be fitted with four (4) marine grade floodlights of a minimum 55 watt halogen. Mounted on top of cabin with adjustable mounts (all lights to be operated by individual switches located in the cabin). One facing port, one facing starboard, one facing forward and one facing aft, suitable for illuminating the exterior of the vessel.

16.5.3 A blue flashing light (strobe light) shall be fitted. (The Whalen 2519LP strobe light meets this requirement).

16.5.4 Navigation Lighting

16.5.4.1 All navigation lights shall display the arc and range of visibility as defined in the Canada Shipping Act, Collision Regulations. <http://www.tc.gc.ca/Actregs/sca-lmmc/csa14.html>

16.5.4.2 Navigation lights shall be permanently fitted with protected wiring and shall be waterproofed. The fitting of a combined lantern on the inflatable collar will not be acceptable.

16.5.4.3 The fixtures shall be of such a design as to resist the effects of vibration and shall be provided with adequate protection from damage, which may occur, when lying alongside a vessel or a pier. Fixtures shall be suitable for the marine environment and be of a robust design to withstand the typical operations of the vessel.

16.5.5 Fitted Search Light

16.5.5.1 The searchlight should be a deck mounted spot/flood light. Installed on the top of the wheelhouse; operational from the helm position.

16.5.5.2 Three accessory plugs (with watertight caps) will be installed on the boat, one on the operator console / Helm position and two on the port side of the wheelhouse console.

16.6 Pumping and Drainage

16.6.1 An electric bilge pump, in accordance with TP1332 section 9, shall be fitted in each watertight division as well as a fixed manual operated bilge pump of the diaphragm type. The bilge pump shall be located so that it takes suction from the lowest point of the hull. Piping shall be installed which will allow the bilge pump to discharge directly overboard. An automatic control shall be fitted that turns on the electric bilge pump when water is present in the bilge. The electric bilge pump control switch shall be located on the operator's console, with settings for 'on', 'off' and 'automatic' operation. An indicator light shall be provided at the console that lights when the bilge pump is operating.

16.6.2 Hull drainage - a non-corrosive threaded plug shall be provided in the lowest point to drain the hull when out of the water.

16.6.3 Valves and handles shall be corrosion resistant and shall be located where they are readily accessible for operation, maintenance or removal. Each shall be labelled indicating it's operation.

16.7 Radar Arch

16.7.1 A Radar Arch shall be installed on which may be mounted antennae(s), lights, radar reflector, and other fittings.

16.8 Magnetic Compass

16.8.1 The contractor shall provide and install a 4" (min) diameter damped card magnetic compass.

16.8.2 Non-white (red or green) lighting shall be connected to the 12 volt DC electrical system.

16.8.3 The compass shall be supplied with its own waterproof marine-grade dimmer switch

16.8.4 The compass must be adjustable for deviation

16.9 Colour

16.9.1 The standard Colour of the hull, deck and console of the craft shall be black. Upholstery on the seats shall be black.

16.10 Lifesaving Emergency Equipment

16.10.1 The following items shall be provided with appropriate stowage/securing arrangements (as appropriate for each item). All contractor supplied fittings, shall be heavy duty

corrosion resistant steel fittings. All items shall be readily accessible (the foot pump and the repair kits shall be stored in a stowage locker).

16.10.2 Contractor will supply and shall outfit the boat with the following items of emergency equipment:

- 16.10.2.1 Fire extinguisher (Class 5BC, Marine type)
- 16.10.2.2 Boat hook, 8 feet long, retractable
- 16.10.2.3 Two (2) paddles
- 16.10.2.4 Anchor, Fortress model 7X or equivalent, and line with chain
- 16.10.2.5 Drogue sea anchor and line
- 16.10.2.6 Mooring lines
- 16.10.2.7 Collar patch kit, for inflatable collar
- 16.10.2.8 Hull repair kit
- 16.10.2.9 Foot pump, bellows type for floatation collar

17.0 Propulsion

17.1 General

17.1.1 Unless otherwise specified, outboard propulsion package shall be supplied by EC-EED-WED and installed by the contractor.

17.1.2 Kill Switch - Engine packages shall incorporate an automatic shutdown feature for each engine to be mounted near the ignition switches

17.2 Fuel System

17.2.1 Fuel systems shall meet with all requirements of TP 1332 Construction Standards for Small Vessels Section 7. In addition, the following features shall be provided:

17.2.1.1 Valves and fittings used in the fuel system shall be bronze

17.2.1.2 Each fuel vent shall be fitted with a ball check valve

17.2.1.3 All fuel valves and connections shall be readily accessible and labelled.

17.2.1.4 Fuel filling pipes shall have a standpipe that stands proud of the deck at least 50mm to avoid contamination entering and shall prevent spilled fuel from entering the vessel as required by TP1332 section 7.

17.2.1.5 Remote fuel shut off valve shall be fitted, remote from the fuel tanks and engine compartments

17.2.1.6 All Fuel hoses are to be USCG Type A Hoses, Fuel supply shall be USCG Type A1 and fuel fill and fuel vent shall be either USCG Type A1 or A2. Fuel hoses shall also meet the requirements of, and be labelled with, the Society of Automotive Engineers (SAE) J1527 Standard.

17.2.1.7 Each fuel tank shall be fitted with a debris and water separating filter system that is accessible for ease of maintenance and valves fitted to allow easy removal of the filter (s) without complete drainage to the fuel system.

17.2.2 There shall be two tanks fitted, each manufactured from aluminium with sufficient strapping to prevent any movement of the tank. There shall be inspection hatches (8") to allow access to the fuel pick-ups, tank level indicators, and all connections related to the fuel system. The fuel tank shall be designed and tested in accordance with TP1332 Section 7. Custom one of design tanks shall submit drawings of the tank(s) to TCMS for approval prior to building, testing and obtaining TCMS inspection acceptance.

17.3 Outboard Engines

17.3.1 EC-EED/WED is to supply engines and contractor to install. Motors are to be installed in accordance with manufacturers' specifications.

17.3.2 Contractor to supply and install the following equipment:

| | |
|----------|--|
| 17.3.2.1 | Tachometer for each engine |
| 17.3.2.2 | Water pressure gauge |
| 17.3.2.3 | Trim gauge |
| 17.3.2.4 | Controls, cables |
| 17.3.2.5 | Ignition harnesses, mounted so that the key cannot collect water |
| 17.3.2.6 | Fuel gauge for each tank with indicator which tank is in use. |
| 17.3.2.7 | Hour meter for each engine |
| 17.3.2.8 | Engine Temperature gauge for each engine |
| 17.3.2.9 | Engine Charging Indicator for each engine |

18.0 Steering

18.1 Steering systems must be hydraulic with a maximum of 3.5 turns from hard over to hard over.

18.2 All hydraulic steering hoses must be routed below deck and all hoses must be routed so that there are no pinch points on the hoses.

18.3 The wheel/console connections shall be of robust construction to eliminate fore and aft or lateral movement of wheel/steering shaft fixture.

18.4 The steering wheel shall 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; the steering wheel shall not be bare metal).

Trailer

19.0 Trailer

19.1 Three Axle, roller trailer, fully galvanized axles and welded frame, galvanized rims, galvanized brakes. The length and width of the trailer shall be of suitable dimensions to properly support and transport the vessel. The trailer capacity shall be 1000 lbs over the vessels travel / road ready weight. Wheel size is to be 16 inch complete with two speed galvanized winch, cable and web strap, Electro-Hydraulic braking system, "Bearing Buddy" axle greasing system complete with covers and brake flushing kit.

Solicitation No. - N° de l'invitation

K4B20-120196/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

hal122

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

K4B20-12-0196

File No. - N° du dossier

HAL-2-68039

CCC No./N° CCC - FMS No/ N° VME

Miscellaneous

20.0 Tube Bow Skirt

20.1 Supply a tube bow skirt.

Solicitation No. - N° de l'invitation

K4B20-120196/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

hal122

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

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

K4B20-12-0196

HAL-2-68039

ANNEX "B"

BASIS OF PAYMENT

Contract award date to March 15, 2012

| Column A Description of Work | Column B Unit of measurement | Column C |
|---|---------------------------------|----------|
| Supply and Delivery of one (1) Rigid Hull Boat, 9-10 meters and trailer in accordance with Annex A- Statement of Requirement and Technical Specification | LOT | \$ _____ |
| Total Amount | | \$ _____ |

Total Amount = \$ _____

The Total amount, will be the amount that will be considered during evaluation of all bids tendered.

ANNEX "C"

INSURANCE REQUIREMENTS

Commercial General Liability Insurance

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.

The Commercial General Liability policy must include the following:

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.

Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.

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.

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.

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.

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.

Employees and, if applicable, Volunteers must be included as Additional Insured.

Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)

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.

Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.

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.

Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.

Non-Owned Automobile Liability - Coverage for suits against the Contractor resulting from the use of hired or non-owned vehicles.

Sudden and Accidental Pollution Liability (minimum 120 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.

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.

Automobile Liability Insurance

The Contractor must obtain Automobile 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.

The policy must include the following:

Third Party Liability - \$2,000,000 Minimum Limit per Accident or Occurrence

Accident Benefits - all jurisdictional statutes

Uninsured Motorist Protection

Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of cancellation.

OPCF/SEF/QEF #6a - Permission to Carry Passengers for Compensation or Hire

ANNEX "D"**CONSENT TO A CRIMINAL VERIFICATION FORM
(See Attached)****Code of Conduct Certifications - Consent to a Criminal Record Verification**

Bidders must submit with their bid, by the bid solicitation closing date:

- (a) a complete list of names of all individuals who are currently directors of the Bidder;
- (b) a properly completed and signed form Consent to a Criminal Record Verification (PWGSC-TPSGC 229), for each individual named in the list.

Bidder's List of Directors below: Please **MUST** provide a list of names of all individuals who are currently Directors **in** accordance with **PART 5-CERTIFICATION**.

Directors: (Please print clearly)

| NAME | NAME | NAME | NAME |
|------|------|------|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional names on a separate sheet if required.

BIDDER'S THAT DO NOT SUBMIT A COMPLETE LIST OF INDIVIDUALS WHO ARE CURRENTLY DIRECTORS AND A PROPERLY COMPLETED AND SIGNED CONSENT TO A CRIMINAL RECORD VERIFICATION FORM (PWGSC-TPSGC 229) WITH THEIR BID AS DESCRIBED IN PART 5-CERTIFICATION BY BID CLOSING DATE WILL BE DEEMED NON- RESPONSIVE AND GIVEN NO FURTHER CONSIDERATION

ANNEX E
Contractor's Representatives
(Complete the table below)

Bidder's shall indicate in the table below the name, location and contact information for a company which will have responsibility for conducting "warranty work" on behalf of the contractor, and which will be capable of providing warranty service with 48 hours of request in Newfoundland and Labrador and the Maritime Provinces.

Nova Scotia

| Company Name | Company email address | Phone Number and Fax number |
|--------------|-----------------------|-----------------------------|
| | | |
| | | |
| | | |

New Brunswick

| Company Name | Company email address | Phone Number and Fax number |
|--------------|-----------------------|-----------------------------|
| | | |
| | | |
| | | |

Prince Edward Island

| Company Name | Company email address | Phone Number and Fax number |
|--------------|-----------------------|-----------------------------|
| | | |
| | | |
| | | |

Newfoundland and Labrador

| Company Name | Company email address | Phone Number and Fax number |
|--------------|-----------------------|-----------------------------|
| | | |
| | | |
| | | |



**FOR GOVERNMENT USE ONLY
POUR USAGE DU GOUVERNEMENT SEULEMENT**

Special Investigations Directorate File No.
N° de dossier de la Direction des enquêtes spéciales

Date Received (Y-A M D-J)
Date de réception

**CONSENT TO A CRIMINAL RECORD VERIFICATION
CONSENTEMENT À LA VÉRIFICATION DE L'EXISTENCE D'UN CASIER JUDICIAIRE**

This form must be completed and signed by each individual who is currently on the Board of Directors of the Bidder/Offeror/Supplier and provided with the Bid/Offer/Arrangement.
Le présent formulaire doit être rempli et signé par chaque membre du conseil d'administration du soumissionnaire/de l'offrant/du fournisseur et fourni avec la soumission/l'offre/l'arrangement.

**A PRIVACY ACT STATEMENT
ÉNONCÉ CONCERNANT LA LOI SUR LA PROTECTION DES RENSEIGNEMENTS PERSONNELS**

The personal information requested on this form is collected under the authority of subsection 750(3) of the *Criminal Code*, paragraph 42(1(c)) of the *Financial Administration Act*, and sections 7 and 21 of the *Department of Public Works and Government Services Act*. The information will be used for validating the criminal conviction certifications necessary for obtaining or maintaining a procurement instrument. It may be shared with other government departments, agencies, as well as provincial, territorial, and federal courts, within the limits of what is required to conduct the criminal conviction verification.

A refusal to provide information will result in the bid/offer/arrangement being rejected or the contract terminated, the standing offer being set-aside or the supply arrangement being cancelled, as applicable.

The personal information is described in personal information bank PWGSC PPU 184 - Integrity Assessment Program. Individuals have a right of access to, correction of and protection of their information in accordance with the *Privacy Act*.

Les renseignements personnels demandés dans le présent formulaire sont recueillis en vertu du paragraphe 750(3) du *Code criminel*, du paragraphe 42(1(c)) de la *Loi sur la gestion des finances publiques* et des articles 7 et 21 de la *Loi sur le ministère des Travaux publics et des Services gouvernementaux*. Ces renseignements seront utilisés pour valider les attestations de condamnation au criminel nécessaires pour obtenir ou conserver un instrument d'approvisionnement. Les renseignements peuvent être diffusés à d'autres ministères et organismes fédéraux, ainsi qu'à des tribunaux provinciaux, territoriaux et fédéraux, dans les limites de ce qui est requis pour la vérification des condamnations au criminel.

À défaut de fournir les renseignements demandés, la soumission/l'offre/l'arrangement sera rejeté ou le contrat résilié, l'offre à commandes sera mise de côté ou l'arrangement en matière d'approvisionnement sera annulé, selon le cas.

Les renseignements personnels sont décrits dans les fichiers de renseignement personnels n° TPSGC PPU 184 - Programme de l'évaluation de l'intégrité. Les personnes ont le droit d'accéder aux renseignements personnels qui les concernent, ainsi que de les faire corriger ou protéger, conformément à la *Loi sur la protection des renseignements personnels*.

**B BIOGRAPHICAL INFORMATION - Must be completed by the individual
RENSEIGNEMENTS BIOGRAPHIQUES - À remplir par l'individu**

Family Name (Last Name) - Nom (de famille)

Family Name at Birth - Nom de famille à la naissance

Full Given Names (No Initials) - Prénoms au complet (aucune initiale)

All other previously used names (i.e. maiden name, previously married names, legal name change, nicknames)
Tout autre nom utilisé (tel que nom de jeune fille, noms maritaux précédents, changement de nom légaux, sobriquets)

Gender - Sexe

☐ Male
Masculin

☐ Female
Féminin

Date of Birth - Date de naissance (Y-A M D-J)

**Current Residential Information
Information résidentielle actuelle**

Apartment No. - N° d'appartement

Street No. - N° civique

Street Name - Nom de la rue

City - Ville

Province

Postal Code - Code postal

| | |
|----------|---|
| C | CONSENT - Must be signed by the individual CONSENTEMENT - Doit être signé par l'individu |
|----------|---|

I, the undersigned, confirm that I have read and understand the above *Privacy Act* statement and that I consent to the collection and use of my personal Information as described therein.

Je, soussigné, confirme avoir pris connaissance de l'Énoncé concernant la *Loi sur la protection des renseignements personnels* et consens à la collecte et à l'utilisation des renseignements personnels fournis aux présentes.

| | |
|-------------------------------------|------------------|
| Signature | |
| Print Name - Nom en lettres moulées | Date (Y-A M D-J) |

| | | |
|--|---|---|
| D | ADMINISTRATIVE INFORMATION - Internal Government Use Only RENSEIGNEMENTS ADMINISTRATIFS - Pour usage interne du gouvernement seulement | |
| Requesting Branch/Sector/Directorate/Division - Direction générale/Secteur/Direction/Division requérante | | |
| Solicitation/Proposed Contract No. - N° de la demande de soumission/N° du contrat | | Date of Request (Y-A M D-J) Date de la demande |
| Requesting Contact Person - Personne-ressource requérante | | Contact Person Tel. No. - N° de tél. de la personne-ressource |