Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

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

SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Title - Sujet Docking CCGS Edward Cornwallis	
Solicitation No. - N° de l'invitation F5561-150333/A	**Amendment No. - N° modif.** 003
Client Reference No. - N° de référence du client F5561-15-0333	**Date** 2015-07-06
GETS Reference No. - N° de référence de SEAG PW-$HAL-302-9550	
File No. - N° de dossier HAL-5-75032 (302)	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-07-14	**Time Zone** **Fuseau horaire** Atlantic Daylight Saving Time ADT
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☑ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Gaudreau, Michel	**Buyer Id - Id de l'acheteur** hal302
Telephone No. - N° de téléphone (902) 496-5245 ( )	**FAX No. - N° de FAX** (902) 496-5016
Destination - of Goods, Services, and Construction: **Destination - des biens, services et construction:**	

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

Instructions: See Herein

Instructions: Voir aux présentes

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

Issuing Office - Bureau de distribution

Atlantic Region Acquisitions/Région de l'Atlantique Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 3C9
Nova Scot

Canada

Solicitation Amendment No 003 is issued for the following purposes:

1. To amend the Solicitation document to introduce the new Government-wide integrity regime;

2. To provide the minutes of the bidders' conference;

3. To provide answers to questions submitted to the Contracting Authority;

4. To provide a revised specification for item HD-03;

5. To provide Appendix 1 to Annex F, Pricing data Sheet.

<u>New Government wide Integrity Regime:</u>

Part 2, section 1, is amended to delete 2003 (2014-09-25) and insert 2003 (2015-07-03);

Part 7, section 2.1 is amended to delete 2030 (2014-09-25) and insert 2030 (2015-07-03);

Part 7, section 18 (c), is amended to delete 2030 (2014-09-25) and insert 2030 (2015-07-03);

MINUTES OF
THE BIDDERS CONFERENCE

Solicitation F5561-150333
Docking CCGS Edward Cornwallis

The Bidders Conference for CCGS Edward Cornwallis was convened onboard the ship in Dartmouth, Nova Scotia on 29 June 2015. The following persons attended:

Michel Gaudreau	PWGSC
Todd Smith	CCG
Darrel London	CCGS Edward Cornwallis
John Blagdon	CCGS Edward Cornwallis
Bill Sarty	CCGS Edward Cornwallis
Doug Roe	CCGS Edward Cornwallis
George Penney	Newdock
Mark Robothan	Newdock
Dave Williams	Heddle Marine

Solicitation Closing

The Tender will close at 2:00 P.M. local, on 14 July 2015.

Delivery

The work period is:

Commencement of Work	11 August 2015;
Completion of Work	No later than 17 September 2015.

The Contracting authority informed all present that there was an error in solicitation amendment No 002 that provided incorrect contract dates in Part 7, section 3.1.

It was asked of bidders present that if the quantity of work versus the time period made available for this refit is adequate? No concerns were raised from any of the contractors present.

Site Visit

There are no additional site visits planned for this docking. Bidders requiring additional information are to contact the Contract Authority.

Tender Deliverables

Bidders are reminded that in order for bids to be received, the following information must be included with the tender package, and received at PWGSC prior to the Solicitation closing date:

- Fully completed and signed Page 1 of the Bid Solicitation document;

- Fully completed Annex F, Financial Bid Presentation Sheet;
- Fully completed Appendix 1 to Annex F, Pricing Data Sheet.

As part of the evaluation process all certifications and other requirements contained in parts 5 and 6 of the solicitation will be requested from the lowest bid received and evaluated. All bids may not necessarily be fully evaluated.

Care and Custody

Subsequent to the bidders' conference, CCG has indicated that the crew will depart the shipyard on 12 August 2015. Therefore care and custody will be transferred to the contractor prior to departure of the crew, and will remain in the care and custody of the Contractor until the ship is re-floated. The vessel will be considered to be unmanned while in the care and custody of the contractor. Contractor shall provide 5 days minimum notice prior to undocking for the crew to return to the vessel.

Safety Program

While the ship is in the care and custody of the Contractor, work must be done in accordance with Canada Labour Code with respect to safety and security and this must be demonstrated in the Contractor's Safety Program.

While the vessel is under the care and custody of CCG; the contractor is to note that the Canadian Coast Guard ships are operating under the Coast Guard Safety Management Program (CGSMP) and that each ship has a FLEET SAFETY MANUAL onboard. When custody of the vessel is transferred to CCG, the contractor shall comply with the requirements as outlined in the CGSMP and the Canada Labour Code. In cases of discrepancies, the more stringent of the two will apply.

Solicitation Document

Bidders were asked if there were any questions or queries with regards to any of the Instructions, Requirements, or Resulting Contract Clauses contained in the Invitation to Tender Document. Nil clarifications were requested.

Pricing Data Sheet

The Pricing Data Sheet is provided with this Solicitation Amendment and is available for distribution on buyandsell.gc.ca.

Specification Items removed or added to the scope of work:

Specification item H-10 Condensate Cooler is deleted from the overall scope of work.

Specification Review:

IMPORTANT NOTICE:

Throughout the specification there are references to allowances for FSRs. In most cases these allowances are specific in that only authorized travel and living expenses will be reimbursed. For all FSR requirements contained in the specification, the following will apply:

Contractors shall be reimbursed all FSR costs related to labour, travel and living expenses when specifically requested by CCG throughout the specification document. The final costs will be adjusted accordingly by way of PWGSC 1379 action upon receipt of final FSR invoice. It is a shared responsibility of both CCG and the contractor to ensure that FSRs are requested to attend in a manner that will minimize costs while ensuring effectiveness for these services.

1 General Notes**:**

See bidder question 5.

2 Services**:**

No questions or comments.

3 Production Chart & Contractor Allowances

Section 2.1 (8) is deleted in its entirety.

HD-01 Drydocking

Section 2.1 (6) is deleted in its entirety.

Section 2.1 (7) is amended to add that if there is a delay in docking the vessel, there may be insufficient crew available to handle lines during docking operations. If this is the case the contractor will be responsible to supply the personnel to man the ships lines onboard.

Section 2.1 (11) is deleted in its entirety.

HD-02 Hull Inspection & Welding

See bidder question 6.

HD-03 Underwater Hull Inspection & Painting

This specification item is deleted and is replaced with HD-03 Rev 2 attached to this amendment. Changes from the original specification are highlighted in yellow.

HD-04 Cathodic Protection

FSR costs related to this specification item are to be included with FSR invoicing for specification item HD-13, Anode in Sea Chests.

HD-05 Ballast Tanks

Section 2.1 (2) is corrected to state that all ballast tanks have docking plugs.

Section 4.2 (2) is amended to state that contractors shall bid on both pneumatic and hydrostatic tests of each individual tank. Whichever method is not used will be credited back to the crown.

HD-06 Potable Water Tanks

No questions or comments.

HD-07 Fuel Tanks

Section 4.2 (2) is amended to delete the requirement for pneumatic testing on these tanks. Tanks shall be hydrostatically tested.

HD-08 Void Tanks

Section 4.2 (2) is amended to delete the requirement for hydrostatic testing on these tanks. Tanks shall be pneumatically tested.

HD-09 Rudder Survey

See bidder question 7.

HD-10 Propeller Boss Anodes

Bidders to refer to specification item ED-06 section 2.1(30-31) for additional information. Costs for the installation of the anodes shall be included in HD-10 and excluded from specification item ED-06.

HD-11 Sea Chest & Sea Bay Inspection

No questions or comments.

HD-12 Sea Water Piping

No questions or comments.

HD-13 Sea Bay Anodes

No questions or comments.

HD-15 Seawater Outlet Piping (Coolers)

Section 2.1. (4) is amended to state that materials in this paragraph are GSM.

See bidder question 8.

H-01 Berthing

No questions or comments.

H-02 Galley Deck Repairs

No questions or comments.

H-03 Galley Deck Tiles

Section 2.1 (6) is amended to indicate that CCG will supply all A-60 underlay material for specification items H-03, H-05 and H-06.

H-04 Galley Equipment

No questions or comments.

H-05 Cabin Flooring

No questions or comments.

H-06 Washroom Decks

Section 2.2 (1) is amended to add cabins M-42 and M-50 to the overall scope of work. Each area is 36 square feet.

H-07 Hydraulic Room Door

No questions or comments.

H-08 Upper Fan Room Plenum

No questions or comments.

H-09 Bilge Cleaning

See bidder question 9.

H-11 Copper Drain Repairs

No questions or comments.

H-12 Main Mast Painting

Section 2.1 (5-6). The allowance provide in section 6 is for the materials listed in section 5.

See bidder question 12.

H-13 Forward A-Frame Painting

Section 2.1 (6-7). The allowance provide in section 7 is for the materials listed in section 6.

See bidder question 13.

H-14 Aft A-Frame Painting

Section 2.1 (5-6). The allowance provide in section 6 is for the materials listed in section 5.

See bidder question 14.

H-15 Sewage Compartment Grating & Bilge

It is suggested that this work be completed in conjunction and on completion of specification item E-17.

ED-01 Sea Valves

The Chief Engineer indicated that crew will identify the valves before the vessel arrives at the shipyard.

ED-02 De-Icing Valve Lines

No questions or comments.

ED-03 Central Cooling Water Pump Strainer Renewal

No questions or comments.

ED-04 Bowthruster Oil Change

The oil is included as part of contractor supplied materials.

ED-05 Ballast Tank Transducer Installation

No questions or comments.

ED-06 Starboard Tailshaft

No questions or comments.

ED-07 Stern Tube Seal

No questions or comments.

ED-08 Stern Tube Weardown

Section 2.1(7) is clarified to state that the contractor shall include in the overall bid but quote separately the costs to fabricate new guards. If new guards are not required this cost will be credited back to the crown.

ED-10 Sea Water Pump valves

See bidder question 15.

E-01 Potable Water Chlorine Injection System

No questions or comments.

E-02 Thrust Blocks

No questions or comments.

E-03 Sewage Vent Renewal

No questions or comments.

E-04 Accomodation Vent Door Repairs

No questions or comments.

E-05 Ventilation Duct Cleaning

No questions or comments.

E-06 Engine Room Exhaust Repairs

No questions or comments.

E-07 Barge Davit Survey

CCG indicated that it is the intent to remove the barge before the vessel transits to the contractor facilities.

E-08 Miranda Davit Inspection & Motor

Section 2.1(3) is amended to state that the old motor shall be returned to the Chief Engineer.

E-09 Lifeboat Davit Inspection

No questions or comments.

E-10 Liferaft Annual Inspection

No questions or comments.

E-11 Starboard Mooring Winch

See bidder question 2.

E-12 Aviation Gas System Valves

Section 2.1(2) is amended to indicate that all openings shall be blanked to prevent dirt ingress.

E-13 Fixed Firefighting System

No questions or comments.

E-14 Foam Firefighting System

No questions or comments.

E-15 Incinerator Replacement

This specification item is clarified to state that the sludge tank and incinerator are GSM. An additional drawing has been uploaded to buyandsell.gc.ca

E-16 Boiler Control Panel Upgrade

No questions or comments.

E-17 Sewage Media Tank Wet Well

No questions or comments.

E-18 Fire Main Valve

No questions or comments.

E-19 Fire Extinguishers

No questions or comments.

L-01 Propulsion Multifunction Relay (MFR) Upgrade

Bids are to include and take into account for the contractor to provide an estimated 60 labour hours of assistance.

L-03 Fire Alarm Pull Stations

No questions or comments.

L-04 A-Frame Searchlight

It was discussed during the bidders' conference that the scope of work essentially required the searchlight to be removed and reinstalled by the contractor. All repairs were to be done by CCG. Subsequent to the bidders conference it has been determined that the full scope of work should be carefully read as there is also a requirement for the contractor to undertake other work as described in this specification.

L-05 Sea Water Pump Motors

Section 1 is amended to delete the requirement for this work to be completed in conjunction with ED-09 as this item is not part of the overall scope of work.

T-01 Fleet Broadband 500

Section T1-12 is amended to indicate that the cable lengths are 2 metres each.

Bidders are to prepare their bids on the basis that the required level of effort in support of this installation will be to provide a total of 80 labour hours, cranage and safety equipment to complete the work.

Open Discussion Items:

It was requested that Heddle Marine Service Inc. of Hamilton, ON be added to Section 9 of Part 2 of the Solicitation document. The manned vessel transfer costs for Heddle Marine Service Inc. is $67,938.00

There being no other issues the meeting was adjourned at 15:15 local.

QUESTIONS SUBMITTED TO THE CONTRACTING AUHTORITY

Question 1:

Can you advise the light ship displacement of the Cornwallis, or more importantly, the anticipated displacement on arrival at the shipyard?

Answer 1:

All potential bidders are to note that the vessel cannot be brought to a "lightship" condition. Bidders are to assume that the displacement upon arrival for docking will be 4350 (Metric) Tonnes. All established stability requirements are to be satisfied, and the Contractor is responsible for all costs related to safely dock and undock the vessel.

Question 2:

E-11-Stbd. Mooring Winch, Is it possible to get info on the type of winch motor? And are there any drawings of the winch available?

Answer 2:

The winch motor is Hagglund 43 series. The only available information has been uploaded to buyandsell.gc.ca.

Question 3:

E-07-Barge Davit, Is it possible to get the length of the cylinder, length of the stroke and rod diameter? Also can we get a copy of the Hydraulic Schematic?

Answer 3:

The stroke is 1630mm, closed centers 2305mm, bore 220mm, rod diameter 110mm. Additional information has been uploaded to buyandsell.gc.ca.

Question 4:

E-09-Lifeboat Davit, Is it possible to get the length of the cylinder, length of the stroke and rod diameter? Can we also get a copy of the Hydraulic Schematic?

Answer 4:

Approximate dimensions are, cylinder length 1100mm, stroke 900mm, bore 100mm. Additional information has been uploaded to buyandsell.gc.ca.

Question 5:

General Notes, Para 16, Inspection. It is stated that the contractor shall be responsible for calling in the services of TCMSB, but it is not stated who will be responsible for the associated costs. Who is responsible to cover these costs?

Answer 5:

The costs associated with the services of TCMSB are not the responsibility of the contractor. Costs will be invoiced directly to CCG.

Question 6:

HD-02 – Hull inspection and welding: For all welding requirements, section 4.2, testing; it is requested to include 10 non-destructive tests as directed by the attending TCMS Surveyor and, in the next sentence it is requested to provide a unit cost for each additional X-ray. According to TCMS, for butt and seam welding, only a visual inspection would be undertaken and x-ray inspections are not justified because in rebuilding the joints, there are no full penetration welds. Please indicate of there are any NDT requirements for this item and if yes, please specify which type of NDT inspection is required?

Answer 6:

Visual inspection only by TCMS will be acceptable. Additional NDT inspections will be considered unscheduled work.

Question 7:

HD-09 – Rudder Survey: Please provide the necessary drawings.

Answer 7:

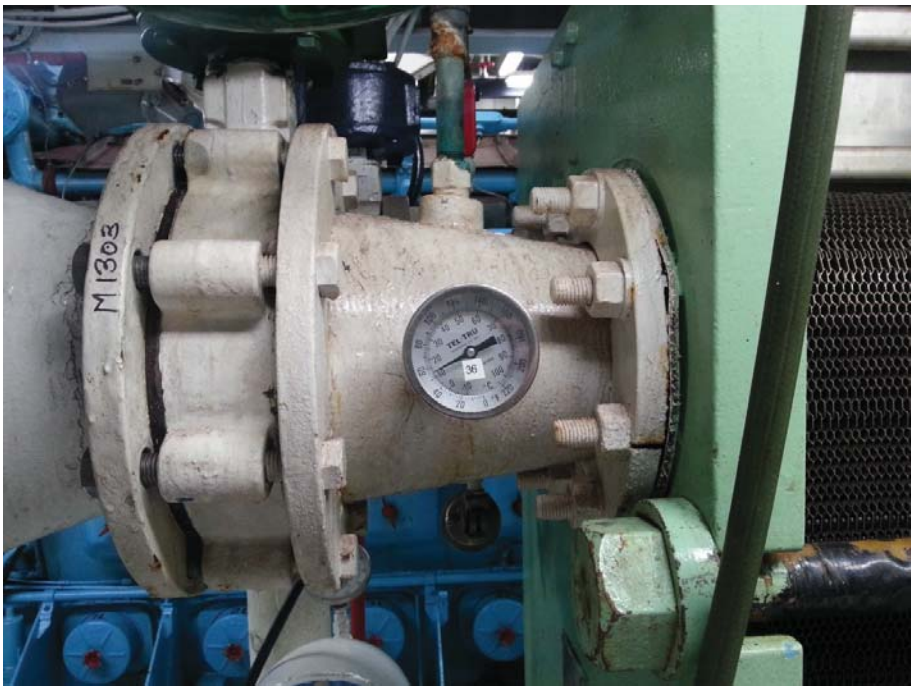
Additional information has been uploaded to buyandsell.gc.ca.

Question 8:

HD-15 – Seawater outlet piping from coolers: Please specify length, spool diameter to be replaced, fittings required, etc... Please attach pictures, drawings or associated information that would provide some information on this specification item.

Answer 8:

The spool length is approximately 9 inches from flange to flange. It reduces from 8 inch to 6 inch, and has a ¾ in NPT gauge connection and a ½ in NPT vent connection. The following pictures are provided for guidance:



Question 9:

H-09 – Bilge Cleaning. In section 2.1 (4), it is requested that bilge wells and frames be cleaned to SSPC-SP-2 (hand tooling) before pressure washing. Bilges will have already been pumped as per specification

item 2 Services, but there will be a substantial quantity of oily residue remaining. Would it not be preferable to complete the cleaning first, and then undertake surface preparation followed by local cleaning of debris (vacuum cleaner)?

Answer 9:

The suggested process would be considered acceptable if it saves the costs of pumping the bilges twice.

Question 10:

Would it be possible to get vessel plans because nothing is available on Merx?

Answer 10:

Additional information has been uploaded to buyandsell.gc.ca.

Question 11:

Specification item H-11 Grey Water Copper Drain Repairs: Could you provide photos, drawings showing the sections of piping to be replaced?

Answer 11:

The following photos are provided for guidance:

Question 12:

H-12 Main Mast Painting: Please provide drawing no 224-02 referenced in section 3.

Answer 12:

The drawing has been uploaded to buyandsell.

Question 13:

H-13 Forward A Frame Painting: Please provide drawing no 224-03 referenced in section 3.

Answer 13:

The drawing has been uploaded to buyandsell.

Question 14:

H-14 Aft A Frame Painting : Please provide drawing no 1477-30101 sheets 1 and 2.

Answer 14:

The drawing has been uploaded to buyandsell.

Question 15:

ED-10 Sea Water Pump Valves: Please provide the quantity of butterfly valves to be replaced?

Answer 15:

There are 6 valves to be replaced.

Question 16:

Services item 2, Protection. You are asking for 4500 square metres of ¼ in Masonite which is enormous in comparison with the 2013 refit that requested 4500 square feet of 1/8 in Masonite. Please confirm the area and thickness of deck protection required?

Answer 16:

The area is reduced to 800 square metres of ¼ in Masonite.

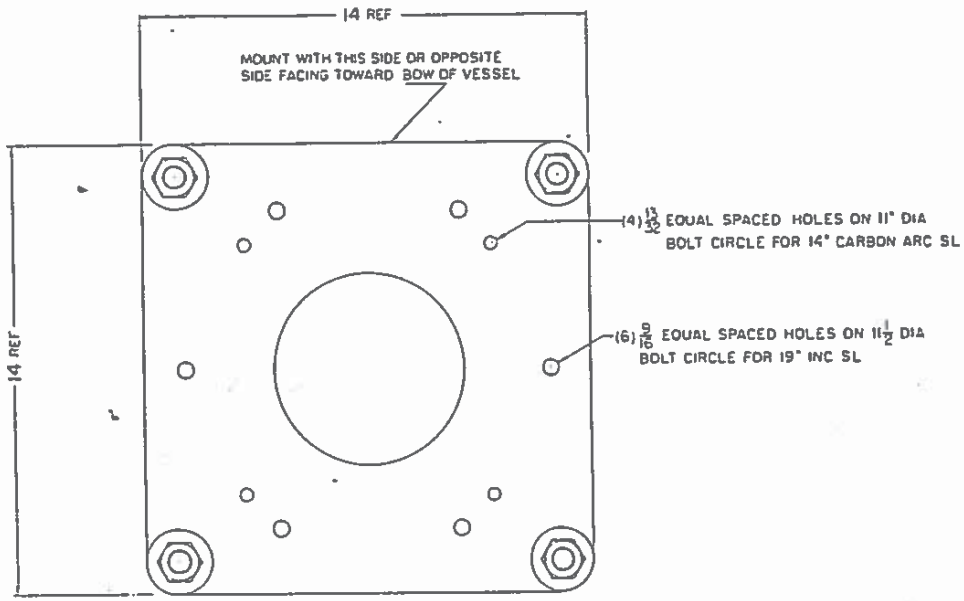
Question 17:

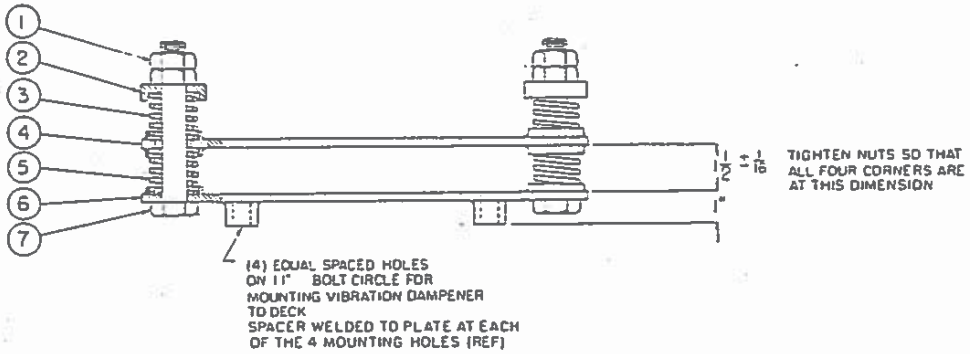
L-04 A-Frame Searchlight. Please provide drawing # 7225?

Answer 17:

The drawing is included on the following page.

SYM	REVISION	DATE	APPD
B	1B WAS 1B61210CA, B1 WAS 3B61210-CCA	2-12-81	





NOTES:

1. FINISH: LIGHT GRAY ENAMEL OVER PRIMER.
2. MOUNTING HOLES FOR OBSOLETE SEARCHLIGHTS OMITTED. IF USED FOR AN OBSOLETE SEARCHLIGHT INSTALLER SHOULD DRILL HOLES IN FLOATING PLATE (PC 4) TO MATCH MOUNTING & WIRE HOLES OF HIS SEARCHLIGHT.

	DWG 4087	PROPOSED MOUNTING			NOT SHOWN	
	7	3CCR1210-80	CAP SCR. 3/4-10-5	4	SST	
	6	V988A	PLATE, BASE	1	STL	
	5	V473	SPRING	4	SST	
	4	V988B	PLATE, FLOATING	1	STL	
	3	V1078	SPRING	4	SST	
	2	V468	END CUP	4	STL	
	1	11CR1210	NUT, HEX. 3/4-10, JAM	8	SST	

PARTS LIST

DRAWN	DATE	THE CARLISLE & FINCH CO. CINCINNATI, OHIO		SCALE
A.J.M.	10-10-80			1/2 = 1
CHECK		VIBRATION DAMPENER		
APPD		CATALOG NO. V2440X	FIRST SERIAL NO.	LAST SERIAL NO.	DRAWING NO. 7225	REV. B

CCGS Edward Cornwallis
August, 2015 Refit

HD-03 – Underwater Hull Cleaning & Painting – Revision 2

1: SCOPE:

The intent of this specification is to clean the ship's underwater hull, properly prepare the surfaces, and recoat as necessary with a high performance icebreaker coating. This work shall be carried out in conjunction with all other dry-docking items.

2: TECHNICAL DESCRIPTION:

2.1 General

1. Within two hours of docking, the entire underwater hull, including the areas above the waterline up to the top of the bulwarks, rudders, propellers and the thruster tube shall be cleaned by high pressure fresh water washing (10000 PSI minimum) to remove all marine growth and allow a preliminary hull inspection.
2. All marine growth, salts, and surface contaminants shall be removed and disposed in accordance with local regulations. Contractor responsible for removal and costs associated with the growth.
3. Prior to commencing hydroblasting, all hull mounted equipment and openings shall be fully protected from physical and water damage. This includes (but is not limited to): anodes (4), reference electrodes (2), echo sounders (2), speed log (1), etc. shall be suitably protected against damage during cleaning of the hull, abrasive blasting and application of new coatings.
    a. Masonite, greases and mastic compounds shall not be used.
    b. Contractor shall include in the quote the cost of supply and install hull filler putty around the echo sounder plates, speed logs, anodes and cathodes. International Interguard 822 shall be used as the filler putty.
    c. All protective coverings shall be removed upon completion of all work.
    d. Contractor will be responsible for repair/replacement of any damaged items to the satisfaction of the Chief Engineer, at the expense of the Contractor.
4. The Owner's representative and the attending TCMS Surveyor shall inspect the entire hull.
5. Contractor shall include an allowance of $5,000 to cover expenses of an International Paint Representative FSR. The FSR will be reimbursed by the Contractor from this allowance, for his services, authorized travel and living expenses reasonably and properly incurred in the performance of the work. The allowance shall form part of the overall bid and shall be adjusted by PWGSC 1379 action upon proof of final invoice.
6. Contractor shall inspect the Anodes and Reference cells as per HD-04.
7. An Owner's representative and a representative of PWGSC shall view the ship and agree upon the total area of the underwater hull which shall be grit blasted and touched up.
8. Contractor shall take precautions to ensure that no damage, unnecessary cleaning, or repairs shall accrue from abrasive blasting and/or the application of coatings.
9. Grit used for blasting shall not be allowed to enter any part of the vessel or its exposed equipment, and where such ingress may occur, the equipment shall be suitably protected.

HD-03 – Underwater Hull Cleaning & Painting – Revision 2

10. Prior to grit blasting the hull, Contractor shall temporarily mark the original location of each hull symbol so that the owner supplied decals can be applied, upon completion of all work, in their subsequent original locations.
11. Contractor shall plug deck scuppers and discharges, as well as taking other measures necessary to prevent any liquids from contaminating areas being prepared or coated.
12. Measures shall be taken to ensure that surfaces and equipment other than those specified are not coated and that any inlets or discharges will not be blocked by the coating or grit. Contractor is responsible for removing any over spray on the vessel as a result of this work, at the Contractor's expense. Deck machinery and other gear, susceptible to damage by grit or coating material, is also to be protected as necessary.
13. Areas of obvious concern include but are not limited to:
    a. stern tubes
    b. sea bay and chests
    c. overboard discharge valves
    d. machinery spaces
    e. funnel outlets
    f. searchlights
    g. navigation equipment
    h. air intake plenums and air intake and exhaust trunking;
    i. accommodations air intake and exhaust plenums and trunking
    j. barge, lifeboat, FRC
    k. deck machinery including crane and winches
    l. exposed steel wires for davits, winches, etc.
    m. rudder trunk void
14. Sea bay grids shall be protected during application of all coatings. Orifice diameters shall be verified by Contractor as original before undocking (i.e. not blocked or reduced). Scuppers and overboard discharges in use shall be fitted with extension tubes to prevent liquid run off onto the ship's hull while coatings are curing.
15. After grit blasting, but prior to hull coating, any slot welds in the stern post or rudder requiring fairing shall be filled flush with Intergard 822 filler.
16. Contractor shall be responsible and liable for ensuring that the hull is clear and clean prior to, during, and immediately after the coating application.
17. All staging, cranage, screens, lighting and any other support services, equipment, paint and materials necessary to carry out these specifications shall be Contractor-supplied.
18. If, due to steel and air temperature, enclosures and forced air heaters are required, Contractor shall allow $15,000 to supply and install/remove, which will be adjusted up or down by 1379 action upon completion of all items in this specification.

HD-03 – Underwater Hull Cleaning & Painting – Revision 2

UNDERWATER HULL

19. Ship's underwater hull and anchor pocket area is approximately 2,100 square meters and painting is broken down into two parts. Part A is the Keel to Ice Belt and Part B is the Ice Belt.
20. The underwater area of the ship's hull and rudder is presently coated with International Intershield 300 coating from the keel to the Ice Belt. The ice belt then continues from the anchor pocket. The current coating on the Ice Belt is Inerta 163.
21. New coatings shall be applied with atmospheric and steel conditions acceptable to paint manufacturer and Chief Engineer. Application conditions shall be recorded by Contractor and/or paint manufacturer's representative for inclusion in Report to be submitted to Chief Engineer.

Part A – KEEL TO ICE BELT

22. The underwater hull area is defined as the area from the keel to the 4.7m draft mark (forward and aft) shall be prepared and painted as follows:
    a. Contractor shall bid on dry abrasive blasting to bare steel condition of SSPC-SP10 standards, the entire underwater hull (Approximately 2000 square metres).
    b. 100% of the total underwater hull area (Approximately 2000 square metres) shall be prepared and painted. Contractor shall quote on a unit price per square meter for adjustment purposes.
    c. The hull shall be swept clean of all traces of grit with compressed air. The surface profile shall have a minimum roughness of 3 mils.
    d. Paint the entire underwater hull area with Black Inerta 160 as per International Paint Rep recommendations, to 20 mils DFT in all areas.

PART B – ICE BELT INCLUDING ANCHOR POCKET

23. "Ice belt" is defined as the area between the draft marks of 7.2m to 4.7m (forward) following along the hull in a line to the aft draft marks of 7.2m and 4.2m (aft).
24. Contractor shall prepare and paint an ice belt strip as follows:
    a. Contractor shall bid on dry abrasive blasting to bare steel condition of SSPC-SP10 standards, all shell areas containing loose paint and/or bared steel.
    b. For bidding purposes, approximately 400 square meters (50% of the total ice belt area) shall be prepared as required in section 2.1.24.a and painted. Contractor shall quote on a unit price per square meter for adjustment purposes.
    c. All coating edges shall be feathered back a minimum of 300mm. The hull shall be swept clean of all traces of grit with compressed air. The surface profile shall have a minimum roughness of 3 mils.
    d. Non damaged areas shall receive an additional hard grit sweep to produce a 3 mils surface profile.
    e. Paint the ice belt and anchor pocket with Coast Guard Red (RAL 3000) Inerta 160 as per International Paint Rep recommendations:
        i. 20 mils DFT to all areas of bared steel (400 m^2);
        ii. 10 mils DFT in way of intact coatings (400 m^2)

25. Contractor shall ensure all coatings are applied in strict accordance with the manufacturer's instructions and FSR recommendations.
26. Contractor shall quote a unit rate per square meter for both Part A and Part B painting coverage for adjustment purposes.

ABOVE WATERLINE HULL AREAS

27. Ship's above water hull area is approximately 825 square meters, and is defined as all hull areas above the 7.2m draft mark, minus the anchor pocket.
28. The entire above waterline hull shall be cleaned by high pressure fresh water washing (10,000 PSI minimum).
29. Contractor shall remove the helicopter deck net and stanchions, and fit temporary stanchions to helicopter deck and fit rope to protect yard/ship personnel from falling overboard.
30. Contractor shall grit blast and paint all the 27 stanchions to SSPC-SP7 standards, having a minimum profile of 3 mils, in preparation for application of coatings as follows:
    a. One Stripe Coat of Intershield 300 (5 mil DFT)
    b. One Full Coat of Intershield 300 (5 mil DFT)
    c. One Stripe Coat of White (RAL 9003) Interthane 990 (2.5 mil DFT)
    d. One Full Coat of White (RAL 9003) Interthane 990 (2.5 mil DFT)
31. All traces of grit used for blast cleaning shall be removed by Contractor. Contractor shall be responsible for ensuring that the hull is clear and clean prior to, during, and immediately after the coating application.
32. The above waterline hull from the water line to the top of the bulwarks as well as the fishplate apron shall be sand swept to SSPC-SP6 standards having a minimum profile of 3 mils in preparation for application of coatings as follows:
    a. One full coat of Intershield 300 to entire above water hull (5-6mil).
    b. Two full coats of RAL 3000 (CG Red) Interthane 990 (2.5-3 mil).
33. Contractor shall refer to the CCG Fleet Federal Identity Program Guide to verify all markings and symbols required on the vessel.
34. Contractor shall add a White (RAL 9003) diagonal stripe, joining the forward end of the superstructure, extending 5.66m aft. The stripe shall extend to the waterline, on a 30° vertical angle, tilted aft. The product used for this stripe shall be two coats of Interthane 990 at 2 mil DFT.
35. A 19cm wide Black (RAL 9004) line shall be painted along the forward and aft edges of the white stripe. The product used for this line shall be two coats of Interthane 990 at 2 mil DFT, per coat.
36. Contractor shall install the four Coast Guard supplied hull symbol decals.
37. Contractor shall quote on the painting the hull symbols on by hand. This quote shall form part of the overall bid. Draft marks, load lines, thruster symbols, and all government symbols and icons shall be painted white using White (RAL 9003) Interthane 990. Apply two coats at 2 mils DFT per coat.

38. Contractor shall remove all protective materials from the machinery, equipment and hull openings on completion of the coating work. All grit, dirt, debris, rust, scale, etc shall be removed from all decks and areas of accumulation and disposed of ashore by Contractor
39. All staging, cranes, screens, lighting and any other support services, equipment, paint and materials necessary to carry out these specifications shall be Contractor supplied, installed, and removed upon completion of all work.
40. Suitable storage facilities shall be provided close to the work site by Contractor for the material and equipment, to ensure they will be maintained at the recommended temperature of the coating manufacturer for ease of preparation and proper application. All coatings shall be applied in strict accordance with the manufacturer's instructions and recommendations.

2.2 Location

1. Ship's outer hull

2.3 Interferences

1. Contractor is responsible for the identification of any interference items.
2. Contractor is responsible for protecting surrounding area and equipment while carrying out this work.

3: REFERENCES:

3.1 Guidance Drawings/Nameplate Data

1. CCG Fleet – Federal Identity Program Guide (CCG/6016)
2. Recommended FSR:
    a. Nicole Hart, Technical Sales
    b. AkzoNobel Coatings, Ltd.
    c. (902) 468-1401
    d. nicole.hart@akzonobel.com

3.2 Standards and Regulations

1. Contractor to be responsible and liable for ensuring that the hull is clear and clean prior to, during, and immediately after the coating application.
2. Suitable storage facilities shall be provided close to the work site for the material and equipment, to ensure they will be maintained at the recommended temperature of the coating manufacturer for ease of preparation and proper application.

3.4 Owner Furnished Equipment

1. All staging, cranage, screens, lighting and any other support services, equipment, paint and materials necessary to carry out these specifications shall be Contractor-supplied. If, due to steel and air temperature, enclosures and forced air heaters are required, the Contractor shall allow $15,000 to supply and install/remove, which will be adjusted up or down by 1379 action.
2. Unless otherwise specified, all labour, materials, and equipment required to complete all tasks required in this specification shall be Contractor supplied.

4: PROOF OF PERFORMANCE:

4.1 Inspection

1. Contractor shall follow the inspection regime outlined in General Notes, and provide documentation to support all inspections and tests performed.

4.2 Testing

1. Contractor and/or paint manufacturer's representative shall take sixty (60) wet film thickness measurements; thirty (30) per side, in areas where hull has been cleaned to bare steel. The measurements shall be witnessed by the PWGSC Inspector and recorded with locations referenced to the attached shell expansion drawing. Unwitnessed measurement shall not be accepted.
2. Using a calibrated DFT gauge, fifteen (15) measurements per 100 square ft. shall be taken and recorded, at an agreed upon consistency with the Chief Engineer.

4.3 Certification

1. Contractor shall provide certification for all hull coatings applied.

5: DELIVERABLES:

5.1 Reports, Drawings, and Manuals

1. Contractor shall maintain a Quality Assurance reporting program, which shall at minimum include the following points:
    a. The areas on the ice belt and above waterline hull that were repaired.
    b. Which areas were blasted and indicate the blast media type and air pressure
    c. Which areas were coated, with what product, and the volume of coating used.
    d. Provide a list of batch numbers with corresponding dates of manufacture.
    e. Record the quantity and type of any solvent added.
    f. Measure and record all ambient conditions (Temperature, Humidity, Barometric pressure).
    g. Hull temperature
    h. Record all details of spray tips and pressures.
    i. All WFT and DFT readings taken as prescribed in section 4.2 of this specification.
2. All recorded information shall be typewritten in English and three (3) copies shall be given to the Chief Engineer.

5.2 Spares

N/A

5.3Training

N/A

APPENDIX 1 TO ANNEX F

PRICING DATA SHEET

2- Services (38 Days) to be adjusted in accordance with Annex F of Solicitation Document, Daily Services Fees)		1	$_____
Electric Power Unit Cost / kWh for adjustment	$_____		
Cranage unit cost / hour	$_____		
Potable & Sanitary water unit cost / 1000 litres for adjustment	$_____		
Waste management cost per removal	$_____		
Deck protection unit cost / square metre	$_____		
Fluids removal unit cost / 1000 litres	$_____		
Cooling water unit cost / 1000 litres	$_____		
Overboard discharges unit cost disposal / 1000 litres	$_____		
3 – Production Chart & Subcontractors Allowances		2	$_____
HD-01 – Drydocking		3	$_____
2.1 (12) unit cost removal and insertion of keel block	$_____		
HD-02 – Hull Inspection & Welding		4	$_____
2.1 (3) preparation and repairs to 100 linear feet		5	$_____
2.1 (4) Unit cost welding / bead foot	$_____		
2.1 (4) Unit cost gouging / linear foot	$_____		
HD-03 – Underwater Hull Cleaning & Painting – Revision 2		6	$_____
2.1 (5) FSR allowance		7	$5,000.00
2.1 (18) Enclosures and heaters allowance		8	$15,000.00
2.1 (22 a) Unit cost / square metre	$_____		
2.1 (24 b) Unit cost / square metre	$_____		
2.1 (24) Unit cost / square metre part A	$_____		
2.1 (24) Unit cost / square metre part B	$_____		
HD-04 – Cathodic Protection		9	$_____
HD-05 – Ballast Tanks		10	$_____
2.1 (7) Unit cost prep and touch up / square metre	$_____		
2.1 (8) Unit cost supply & install one anode	$_____		
2.1 (10) Unit cost replace one broken stud	$_____		
4.2 (2) Cost to pneumatic test eight (8) tanks		11	$_____
4.2 (2) Cost to Hydrostatically test eight (8) tanks		12	$_____
HD-06 – Potable Water Tanks		13	$_____
2.1 (13) Unit cost / square metre preparation and painting	$_____		
2.1 (20) Unit cost replace one broken stud	$_____		
4.1 (4) Allowance NACE Inspector		14	$5,000.00
HD-07 – Fuel Tank Survey		15	$_____
2.1 (4) Unit cost fuel disposal / 1000 litre	$_____		
2.1 (13) Unit cost replace one broken stud	$_____		
4.2 (2) Cost to Hydrostatically test seven (7) tanks		16	$_____
HD-08 – Void Space Survey		17	$_____
2.1 (6) unit cost preparation and touch up / square metre	$_____		
2.1 (9) Unit cost replace one broken stud	$_____		
HD-09 – Rudder Survey		18	$_____

2.1 (11) Remove / reinstall Pintles		19	$_____
2.1 (12) Renew GSM Pintle Bushings		20	$_____
2.1.(14) unit cost renew M40 zinc anodes / anode	$_____		
2.2 (23) Allowance Wagner FSR		21	$10,000.00
HD-10 – Propeller Boss Anodes		22	$_____
HD-11 – Sea Bay & Sea Chest Inspections		23	$_____
2.1 (13) Unit cost to for one (1) M24 anode	$_____		
2.1 (18) Unit cost to for one (1) defective stainless steel fastener	$_____		
2.1 (20) Unit cost to for one (1) M24 anode	$_____		
2.1 (26) Unit cost additional removal/installation	$_____		
HD-12 – Sea Water Piping		24	$_____
HD-13 – Anodes in Sea Chests		25	$_____
2.1 (2) FSR allowance		26	$10,000.00
2.1 (6) Unit cost replacement anode	$_____		
HD-15 – Seawater Outlet Piping from Coolers		27	$_____
H-01 – Berthing		28	$_____
H-02 – Galley Deck Repairs		29	$_____
2.1 (12) Unit cost / square foot	$_____		
2.1 (13) Unit cost / linear foot	$_____		
H-03 – Galley Deck Tile		30	$_____
2.1 (2) Unit cost / square foot	$_____		
2.1 (3) Unit cost / linear foot	$_____		
H-04 – Galley Equipment		31	$_____
2.1 (1) FSR allowance		32	$35,000.00
2.1 (7) Unit cost / Stauff fitted clamp	$_____		
2.1 (23) new breakers allowance		33	$1,500.00
2.1 (26) FSR allowance		34	$5,000.00
2.1 (28) FSR allowance		35	$5,000.00
H-05 – Cabin Flooring		36	$_____
H-06 – Washroom & Shower Deck Repairs		37	$_____
H-07 – Hydraulic Room Door Replacement		38	$_____
H-08 – Upper Fan Room Plenum Repairs		39	$_____
H-09 – Bilge Cleaning		40	$_____
H-11 – Grey Water Copper Drain Repairs		41	$_____
H-12 – Main Mast Painting		42	$_____
2.1 (6) Hardware allowance		43	$2,500.00
H-13 – Forward A Frame Painting		44	$_____
2.1 (7) Hardware allowance		45	$2,500.00
H-14 – Aft A-Frame Painting		46	$_____

2.1 (6) Hardware allowance		47	$2,500.00
H-15 – Sewage Compartment Grating & Bilge		48	$_____
ED-01 – Sea Valve Survey		49	$_____
2.1 (15) Unit cost / de-icing valve	$_____		
ED-02 – De-Icing Valve Lines		50	$_____
ED-03 – Central Cooling Water Pump Strainer Renewal		51	$_____
ED-04 – Bowthruster Oil Change		52	$_____
ED-05 – Transducer Installation		53	$_____
2.1 (4) Unit cost / hanger	$_____		
ED-06 – Tailshaft Inspection and Measurements		54	$_____
2.1 (7) Unit cost / chase threads	$_____		
2.1 (8) Unit cost / fabricate fitted nut and bolt set	$_____		
2.1 (18) FSR allowance		55	$5,000.00
2.1 (19) Allowance dressing both shaft keys and keyways		56	$5,000.00
2.1 (24) Supply & apply 6 Kgs of Belzona to each stern tube		57	$_____
2.1 (26) Unit cost / additional fit	$_____		
ED-07 – Stern Tube Seal		58	$_____
2.1 (1) FSR allowance		59	$20,000.00
ED-08 – Stern Tube Bearing Weardown		60	$_____
2.1 (7) fabricate new rope guards		61	$_____
ED-10 – Sea Water Pump Valves		62	$_____
E-01 – Potable Water Chlorine Injection System Installation		63	$_____
2.1 (9) Unit cost / foot of pipe	$_____		
E-02 – Thrust Blocks		64	$_____
2.1 (14) Unit cost replacement of individual shaft oil seal	$_____		
E-03 – Sewage Vent Renewal		65	$_____
2.1 (6) Unit cost supply and fitting of a flange set	$_____		
2.1 (8) Unit cost / bracket set	$_____		
E-04 – Machinery/Accommodation Vent Door Repairs		66	$_____
2.1 (10) Unit cost replace one hinge assembly	$_____		
E-05 – Ventilation Duct Cleaning		67	$_____
E-06 – Engine Room Exhaust Fan Repairs		68	$_____
2.1 (8) cost per trail balancing fan impeller	$_____		
E-07 – Barge Davit Survey		69	$_____
2.1 (2) FSR allowance		70	$10,000.00
2.1 (14) Allowance hoses, fittings and hardware		71	$9,000.00
2.1 (35) Allowance cylinder rods		72	$8,000.00
4.2 (5) Unit cost / additional foot NDT testing	$_____		
E-08 – Miranda Davit New Motor & Annual Survey		73	$_____

2.1 (2) FSR allowance	74	$15,000.00
E-09 – Lifeboat Davit	75	$_____
2.1 (2) FSR allowance	76	$10,000.00
2.1 (35) Allowance hoses, fittings and hardware	77	$7,000.00
2.1 (43) Allowance cylinder rods	78	$8,000.00
4.2 (6) Unit cost / additional foot NDT testing $_____		
E-10 – Liferaft Annual Inspection	79	$_____
2.1 (3) Subcontractor allowance	80	$15,000.00
E-11 – Starboard Mooring Winch	81	$_____
E-12 – Aviation Gas System Valves	82	$_____
E-13 – Fixed Fire Fighting Systems	83	$_____
E-14 – Foam Firefighting System	84	$_____
2.1 (4) Allowance tank manhole gaskets	85	$500.00
E-15 Incinerator renewal and sludge tank installation	86	$_____
E-15.1 FSR allowance	87	$20,000.00
E-15.21 Materials and supplies allowance	88	$5,000.00
E-16 Port & Stbd boiler controls renewal	89	$_____
E-16.1 FSR allowance	90	$25,000.00
E-16.11 Materials and supplies allowance	91	$5,000.00
E-17 – Sewage Media Tank & Wet Well	92	$_____
E-18 – Fire Main Valve	93	$_____
E-19 – Portable Fire Extinguishers	94	$_____
L-01 – Propulsion Multifunction Relay (MFR) Upgrade	95	$_____
2.1 (6) FSR allowance	96	$50,000.00
L-03 – Fire alarm pull stations	97	$_____
2.1 (8) Materials allowance	98	$2,000.00
L-04 – A-Frame Searchlight Repairs	99	$_____
L-05 – Sea Water Pump Motors	100	$_____
T1 Fleet Broadband 500 (FBB500) Installation	101	$_____
TOTAL TAXES NOT INCLUDED (items 1 to 101) This is the price for Known Work in Annex F	$_____	