

2. Amendment/Modification No. PZ0004	3. Effective Date 2004SEP03	4. Requisition/Purchase Req No. SEE SCHEDULE	5. Project No. (If applicable)
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6. Issued By TACOM WARREN AMSTA-LC-PHAA SHELLA DOLAN (586)574-5848 WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL EMAIL: DOLANS@TACOM.ARMY.MIL	Code	W56HZV	7. Administered By (If other than Item 6) DCMA NORTHERN EUROPE (UNITED KINGDOM) PCS 826, BOX 55 LOUDWATER UNITED KINGDOM FPO, AE 09420-0055	Code	SUK12A
			SCD C PAS NONE ADP PT HQ0339		

8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code) FBM BABCOCK MARINE LTD. 5 TOWN QUAY SOUTHAMPTON, HAMPSHIRE, GB UNITED KINGDOM TYPE BUSINESS: Foreign Concern/Entity	<input type="checkbox"/>	9A. Amendment Of Solicitation No.
	<input type="checkbox"/>	9B. Dated (See Item 11)
	<input checked="" type="checkbox"/>	10A. Modification Of Contract/Order No. W56HZV-04-C-0534
	<input type="checkbox"/>	10B. Dated (See Item 13) 2004JUN18
Code K3335	Facility Code	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing items 8 and 15, and returning _____ copies of the amendments; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting And Appropriation Data (If required)
SEE SECTION G

13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS

KIND MOD CODE: L It Modifies The Contract/Order No. As Described In Item 14.

<input type="checkbox"/>	A. This Change Order is Issued Pursuant To: The Contract/Order No. In Item 10A.	The Changes Set Forth In Item 14 Are Made In
<input type="checkbox"/>	B. The Above Numbered Contract/Order Is Modified To Reflect The Administrative Changes (such as changes in paying office, appropriation data, etc.) Set Forth In Item 14, Pursuant To The Authority of FAR 43.103(b).	
<input checked="" type="checkbox"/>	C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of: mutual consent of the parties	
<input type="checkbox"/>	D. Other (Specify type of modification and authority)	

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the Issuing Office.

14. Description Of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE SECOND PAGE FOR DESCRIPTION

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. Name And Title Of Signer (Type or print)	16A. Name And Title Of Contracting Officer (Type or print) REGINALD O. NICHOLAS NICHOLAR@TACOM.ARMY.MIL (586)574-3982
15B. Contractor/Offeror (Signature of person authorized to sign)	15C. Date Signed
	16B. United States Of America By _____ /SIGNED/ (Signature of Contracting Officer)
	16C. Date Signed 2004SEP03

CONTINUATION SHEET**Reference No. of Document Being Continued****Page 2 of 28****PIIN/SIIN** W56HZV-04-C-0534**MOD/AMD** PZ0004**Name of Offeror or Contractor:** FBM BABCOCK MARINE LTD.

SECTION A - SUPPLEMENTAL INFORMATION

CONTRACT FOR: 1 Configuration Boat, 14 Bridge Erection Boats (BEB), 5 Navigation Kits (NAVKITS), and BEB program data

PURPOSE OF MODIFICATION: To definitize letter contract W56HZV-04-C0534

PREVIOUS OBLIGATED AMOUNT: \$2,762,476.50

OBLIGATED AMOUNT OF THIS ACTION: \$2,164,178.00

CURRENT CONTRACT AMOUNT: \$4,926,654.50

1. Modification P00002 will not be used because it was initiated in error.
2. The purpose of this modification is to definitize the letter contract.
3. This contract is a rated order under DPAS (IS CFR 700) with a rating of DOA4.
4. Section B
 - a. The total obligated amount for CLIN 0001AA is hereby increased by \$653,372.50, from \$1,155,632.50 to \$1,809,005.00 to reflect the negotiated amount.
 - b. CLIN 1001AA is changed to two CLINS (1001AA and 1001BA) in order to adjust the price of 4 boats supplied with GFE:

The quantity on CLIN 1001AA is changed to 10 (10 BEBs without GFE). The total obligated amount is hereby increased by \$1,043,022.60, from \$1,603,252.00 to \$2,198,655.10 to reflect the negotiated amount.

CLIN 1001BA was added to reflect the adjustment for GFE on 4 BEBs. The total amount of the CLIN is \$745,462.04.
 - c. The total obligated amount for CLIN 1001AB is hereby increased by \$3,360.85, from \$3,592.00 to \$6,952.85 to reflect the negotiated amount.
 - d. CLIN 1001BB, Configuration Boat, is funded for a total amount of \$166,579.51.
5. Section C
 - a. The following paragraph is hereby added to the contract:

C.3.3 Configuration Boat
 - b. The Scope of Work in the basic contract is deleted and the attached Scope of Work with the added paragraph incorporated is substituted. Otherwise the Scope of Work remains unchanged.
6. Section E
 - a. The following clauses are hereby added to the contract:

52.246-4028, INSPECTION POINT: ORIGIN

52.246-4029, ACCEPTANCE POINT: ORIGIN
7. Section G
 - a. The following clause is hereby added to the contract:

252.201-7000, CONTRACTING OFFICER'S REPRESENTATIVE
8. Section H
 - a. The following clause is hereby deleted from the contract:

52.216-25, CONTRACT DEFINITIZATION
9. Section I

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a. The following clause is hereby changed:

52.216-24, LIMITATION OF GOVERNMENT LIABILITY

b. Attachment 004, Government Furnished Equipment, is subject to the the Government Furnished Property clause in the letter contract.

10. Section J

a. The following attachments are hereby added to the contract:

Attachment 003 MILESTONE BILLING SCHEDULE FOR ILS

Attachment 004 GOVERNMENT FURNISHED EQUIPMENT

Attachment 005 MILESTONE BILLING SCHEDULE FOR BEBS

*** END OF NARRATIVE A 005 ***

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Name of Offeror or Contractor: FBM BABCOCK MARINE LTD.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001AB	<p>SEE PACKAGING REQUIREMENTS CLAUSE LEVEL PRESERVATION: Commercial LEVEL PACKING: Commercial</p> <p><u>Inspection and Acceptance</u> INSPECTION: Origin ACCEPTANCE: Origin</p> <p><u>Deliveries or Performance</u> DOC SUPPL <u>REL CD MILSTRIP ADDR SIG CD MARK FOR TP CD</u> 001 W56HZV4077K068 Y00000 M 3 <u>DEL REL CD QUANTITY DEL DATE</u> 001 10 09-JUN-2005</p> <p>FOB POINT: Origin</p> <p>SHIP TO: <u>PARCEL POST ADDRESS</u> (Y00000) SHIPPING INSTRUCTIONS FOR CONSIGNEE (SHIP-TO) WILL BE FURNISHED PRIOR TO THE SCHEDULED DELIVERY DATE FOR ITEMS REQUIRED UNDER THIS REQUISITION.</p> <p><u>PRODUCTION QUANTITY</u></p> <p>NOUN: NAVKIT PRON: P146K0682T PRON AMD: 04 ACRN: AB AMS CD: 53153542120</p> <p>IN ACCORDANCE WITH SECTION C, PARAGRAPH C.8.1.A</p> <p>(End of narrative B001)</p> <p><u>Packaging and Marking</u> PACKAGING/PACKING/SPECIFICATIONS: SEE PACKAGING REQUIREMENTS CLAUSE LEVEL PRESERVATION: Commercial LEVEL PACKING: Commercial</p> <p><u>Inspection and Acceptance</u> INSPECTION: Origin ACCEPTANCE: Origin</p> <p><u>Deliveries or Performance</u> DOC SUPPL <u>REL CD MILSTRIP ADDR SIG CD MARK FOR TP CD</u> 001 W56HZV4077K068 Y00000 M 3 <u>DEL REL CD QUANTITY DEL DATE</u> 001 5 30-JUL-2005</p>	5	EA	\$ 1,390.57000	\$ 6,952.85

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Name of Offeror or Contractor: FBM BABCOCK MARINE LTD.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001BA	<p>FOB POINT: Origin</p> <p>SHIP TO: <u>PARCEL POST ADDRESS</u> (Y00000) SHIPPING INSTRUCTIONS FOR CONSIGNEE (SHIP-TO) WILL BE FURNISHED PRIOR TO THE SCHEDULED DELIVERY DATE FOR ITEMS REQUIRED UNDER THIS REQUISITION.</p> <p><u>PRODUCTION QUANTITY</u></p> <p>NOUN: BEB PRODUCTION PRON: P146K0682T PRON AMD: 04 ACRN: AB AMS CD: 53153542120</p> <p>PRICE ADJUSTMENT FOR GFE ON 4 BOATS</p> <p>TO BE BILLED IN ACCORDANCE WITH ATTACHMENT 005, MILESTONE BILLING SCHEDULE FOR BEBS</p> <p>(End of narrative B001)</p> <p><u>Packaging and Marking</u> PACKAGING/PACKING/SPECIFICATIONS: SEE PACKAGING REQUIREMENTS CLAUSE LEVEL PRESERVATION: Commercial LEVEL PACKING: Commercial</p> <p><u>Inspection and Acceptance</u> INSPECTION: Origin ACCEPTANCE: Origin</p> <p><u>Deliveries or Performance</u> DOC SUPPL <u>REL CD MILSTRIP ADDR SIG CD MARK FOR TP CD</u> 001 W56HZV4077K068 Y00000 M 3 <u>DEL REL CD QUANTITY DEL DATE</u> 001 4 09-JUN-2005</p> <p>FOB POINT: Origin</p> <p>SHIP TO: <u>PARCEL POST ADDRESS</u> (Y00000) SHIPPING INSTRUCTIONS FOR CONSIGNEE (SHIP-TO) WILL BE FURNISHED PRIOR TO THE SCHEDULED DELIVERY DATE FOR ITEMS REQUIRED UNDER THIS REQUISITION.</p>	4	EA	\$ 186,365.51000	\$ 745,462.04

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Name of Offeror or Contractor: FBM BABCOCK MARINE LTD.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001BB	<p><u>PRODUCTION QUANTITY</u></p> <p>NOUN: CONFIGURATION BOAT PRON: P146K0682T PRON AMD: 04 ACRN: AB AMS CD: 53153542120</p> <p>IN ACCORDANCE WITH SECTION C, PARAGRAPH C.3.3</p> <p>TO BE BILLED IN ACCORDANCE WITH ATTACHMENT 005, MILESTONE BILLING SCHEDULE FOR BEBS</p> <p>(End of narrative B001)</p> <p><u>Packaging and Marking</u></p> <p><u>Inspection and Acceptance</u> INSPECTION: Origin ACCEPTANCE: Origin</p> <p><u>Deliveries or Performance</u> DOC SUPPL <u>REL CD MILSTRIP ADDR SIG CD MARK FOR TP CD</u> 001 W56HZV4077K068 Y00000 M 3 <u>DEL REL CD QUANTITY DEL DATE</u> 001 1 30-SEP-2004</p> <p>FOB POINT: Origin</p> <p>SHIP TO: <u>PARCEL POST ADDRESS</u> (Y00000) SHIPPING INSTRUCTIONS FOR CONSIGNEE (SHIP-TO) WILL BE FURNISHED PRIOR TO THE SCHEDULED DELIVERY DATE FOR ITEMS REQUIRED UNDER THIS REQUISITION.</p>	1	EA	\$ 166,579.51000	\$ 166,579.51

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

Bridge Erection Boat
Scope of Work

C.1 General. The Bridge Erection Boat (BEB) is an aluminum-hulled, twin-diesel, twin-jet work boat that supports float bridging operations. It is used to build bridges and build and maneuver rafts. It is transported, launched and retrieved by the M1977 Common Bridge Transporter (CBT) truck and M14 Improved Boat Cradle (IBC). Its dimensions are roughly 27 feet long, 8 feet wide and 26 inches draft. The normal crew is one operator and one bridge crewman. The BEB is operated by and maintained using the personnel and equipment of the Multi-Role Bridge Company (MRBC).

C.1.1 Definitions. For this SOW the following definitions apply:

BEB:	The new Bridge Erection Boat
Mk I/Mk II:	The fielded Bridge Erection Boat
Contractor:	FBM Babcock
Government:	The US Army PM Bridging

C.1.2 Program Overview. The contractor is responsible for the overall design, development, component selection, integration, fabrication, contractor testing, Government test support, logistics product development and fielding support, configuration management, production planning and eventual full production of the BEB.

C.1.3 Program Management. The contractor shall be responsible for overall program management, which includes as a minimum, the allocation and control of contractor provided resources as well as the synchronization of Government provided resources to achieve program objectives and requirements.

C.1.3.1 Work Breakdown Structure (WBS). The contractor shall prepare and maintain a WBS and a WBS Dictionary using MIL-HDBK-881 as a guide for format and content. The Government reserves the right to review and approve the WBS Structure. The contractor shall define all subcontracted effort within the WBS. Contract change proposals require the same level of WBS identification, definitions, and SOW relationships as the basic contract. No WBS changes shall be made at or above the third level of the WBS without Government approval.

C.1.3.2 Master Integrated Program Schedule (MIPS). The contractor shall create and maintain a MIPS. The Government will approve the baseline and all revisions. The MIPS will assist in the measurement of risk management, performance, and program schedule. The contractor is responsible for explaining all program slippages and providing get-well plans within 30 days of discovery of a program slippage (Reference CDRL A001).

C.1.3.3 Meetings and Reviews. The Government and contractor shall conduct meetings and reviews either formally or informally as needed to ensure the success of the BEB. The contractor will host a Start of Work meeting within 30 days of contract award. The Start of Work meeting should be held either at or near his domestic production facility. Meetings may be either in-person or via teleconference. The contractor shall prepare minutes and maintain the status of action items generated in the course of each meeting or review. Minutes will be provided to all stakeholders no later than five working days from the meeting or review (Reference CDRL A002). Electronic delivery is acceptable. The Government or contractor shall provide notice of formal meetings or reviews at least ten days prior to the requested meeting/review.

C.1.3.3.1 Preliminary Design Review. The contractor shall conduct a preliminary design review in conjunction with the start of work meeting. During this review the contractor shall present his planned solutions to achieving the requirements of ATPD 2317 Performance Based Purchase Description, Bridge Erection Boat (Attachment 1). The preliminary design review is considered complete upon written Government approval of the minutes and all proposed design alternatives.

C.1.3.3.2 Critical Design Review. The Contractor shall conduct a Critical Design Review at his facility prior 60 days after the approval of the PDR. The contractor shall present his system design with supporting analysis. The critical design is considered complete upon written Government approval of the minutes and finalized requirements (specified, derived, and implied).

C.1.3.4 In-Process Reviews (IPR). The contractor shall conduct quarterly IPRs that address, at a minimum technical performance progress, technical data development, ILS development, cost and schedule status. The location of these IPRs will be the contractors facility unless otherwise agreed to by the parties.

C.1.3.5 Working Integrated Process Teams (IPT). The contractor shall form working IPTs as necessary to support the BEB effort. The working IPTs will be composed of contractor and Government personnel. The working IPTs will guide the direction and progress of the program. The working IPTs will be responsible for risk mitigation efforts.

C.1.3.6 Risk Monitoring. The government will manage risk by tracking completion status of important program elements. The contractor shall develop and submit a list of elements to be tracked. The list shall be based upon the requirements of the SOW, WBS, MIPS and

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CDRLs. The list shall identify a contractor POC and a recommended reporting period for each element. The Government will approve the list and establish a reporting period. The contractor shall submit a recurring report summarizing the completion status of agreed elements. The Government may add or delete elements from the list as the contract progresses (Reference CRDL A00W).

C.1.4 Data. The contractor shall provide access to Contract Data Requirements List (CDRL) and non-CDRL data containing management, financial, engineering, and logistics information electronically. The contractor may provide the access via a secure web site that he manages. Access to data shall be password protected and available only for contract purposes. This on-line access to contractor data shall be available to the Government via personal computers. All data to be delivered under this contract shall be available electronically and in contractor format unless otherwise specified in the contract.

C.2 Engineering. The contractor shall perform the engineering and design effort necessary to document, fabricate, test, deliver and support boats conforming to ATPD 2317 Performance Based Purchase Description, Bridge Erection Boat (Attachment 1).

C.2.1 Configuration Management and Control. The contractor shall establish and utilize configuration management tools and procedures in accordance with Attachment 2, Configuration Management and Technical Data Package (Reference CDRLs A003, A004, A005, A006, A007, A008, and A009).

C.2.2 Part Numbers. All components of the BEB shall have part numbers. These numbers will be used for component identification during manufacture and provisioning. Commercial or Original Equipment Manufacturer (OEM) part numbers shall be used. Part numbers shall be applied to items or to their packaging in accordance with the suppliers practices (for commercially available items) and in accordance with MIL-STD-130L (for contractor manufactured items).

C.2.2.1 Unique Identifiers (UID). The contractor shall develop and assign UID codes for components and assemblies in accordance with MIL-STD-130L. UID labeling shall be applied to items in accordance with MIL-STD-130L. At a minimum, UID codes shall be assigned and applied to all provisioned items with a value of at least \$5000 and to these specific items:

- Boat, complete
- Engine assembly, complete, as containerized
- Jet Assembly, complete, as containerized

The decision to assign a UID to any other item shall be made when the item is provisioned.

C.2.3 Specifications. Specification ATPD 2317 Performance Based Purchase Description, Bridge Erection Boat establishes the performance standards for the boat. This document will be developed and maintained by the Government.

C.2.3.1 The contractor shall develop second tier specifications for major components (engine, gears, and propulsion jet) to ensure their performance and maintainability characteristics comply with ATPD 2317. Such specifications shall be developed and maintained by the contractor. Specifications shall be included on or referenced by drawings as appropriate.

C.2.3.2 The contractor shall develop specifications to define or ensure the performance, quality and maintainability of purchased components and manufactured items. These specifications may be product specifications developed for this program. Nationally recognized standards and specifications (ISO, DIN, SAE, ASTM, etc.) shall be utilized as appropriate. These specifications shall be included on or references by drawings as appropriate.

C.2.4 Transportability Report. The contractor shall submit a transportability report that describes how the boat is transported and describes the boats compliance with the transportability requirements of ATPD 2317. The report shall include the data required by Data Item Description DI-PACK-80880B, limited to identification of differences between the MkII and the BEB and the effects of these differences on transportability. The report is due 30 days after the Critical Design Review is completed in accordance with CDRL A00A.

C.2.5 Preservation and Packaging.

C.2.5.1 Boat Preservation and Packaging, Short Term. The contractor shall develop materials, processes and procedures to protect the boat during shipment, handling, and temporary storage prior to shipment for fielding. The BEB shall be fielded in unit sets of 14. Adequate protection and security shall be given to equipment and components susceptible to loss or damage from pilferage, vandalism, vibration, corrosion, or other environmental deterioration and any other conditions incidental to the shipment of the boat. Commercial practices and standards are acceptable.

C.2.5.1.1 Shipboard Delivery Packaging. Boats designated for overseas delivery will be shipped as deck cargo. The short term preservation and packaging procedures shall contain a section identifying special procedures, if any, that apply to this mode of delivery (Reference CDRL A00B).

C.2.5.2 Boat Preservation and Packaging, Long Term. The contractor shall develop materials, processes and procedures to protect the boat during exterior storage in excess of 90 days. Adequate protection and security shall be given to equipment and components susceptible to loss or damage from pilferage, vandalism, vibration, corrosion, or other environmental deterioration and any other conditions incidental to the shipment of the boat. Commercial practices and standards are acceptable. The contractor shall provide

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drawings of containers designed specifically for the BEB components (Reference CDRL A00B).

C.2.5.3 Component Preservation and Packaging. The contractor shall develop preservation methods and packaging for components and assemblies that are provisioned as replacement items. This packaging shall be developed in accordance with commercial practice. Existing packaging shall be used to the maximum extent practical.

C.2.5.4 Reusable Container Development. The contractor shall develop reusable shipping and storage containers for the dressed power pack and dressed propulsion jet. These containers shall protect their contents against physical and environmental damage and pilferage of components. Commercial containers are acceptable. The contents of the dressed power pack and dressed propulsion jet shall be developed during the provisioning process (Reference CDRL A00B).

C.2.5.5 Packaging Schedule. Packaging for the boats and the reusable containers shall be developed prior to the delivery of the first production boat. Packaging for components shall be developed and submitted in conjunction with the development of provisioning data, per Section 4 of this SOW. Packaging shall be applied to boats in accordance with Section C.7.1 of this SOW (Reference CDRL A00B).

C.3 Production Planning.

The Contractor shall be required to use a US-based shipyard for the production of the BEB. The contractor shall be responsible for the management and oversight of the shipyard ensuring that all requirements of the contract are met. The shipyard will be an integral member of all teams described in paragraph C.1.3.

C.3.1 Production Plan. The contractor shall develop a plan detailing his approach for the tear down, re-assembly, inspection, test, acceptance and delivery of boats during the production phase of the program. This plan shall become part of the contract and shall be used in managing that effort. The plan shall address all aspects of the production effort to include; facilities, physical resources, materials, personnel, tools and tooling, tests, test equipment, work flow, storage and control of vendor supplied items, and temporary storage and shipment of the completed boats. Risk areas shall be identified. Mitigation measures shall be identified for each risk. This plan shall be delivered, in contractor format for approval, to PM-Bridging no later than 90 days after contract award (Reference CDRL A00C). Department of Defense Directive 4245.7-M, Chapter 5 shall be used as a guide in preparing the Production Plan.

C.3.1.2 Disposition of Mk I/Mk II parts. The contractor shall remove and prepare for shipment unused Mk I and Mk II parts designated by the Government for use by the Government. As part of the PDR the contractor will identify for the Government those Mk I and Mk II parts they do not plan to reuse during the BEB effort. Within 30 days of notification the Government will identify those Mk I and Mk II parts it will take for use on other efforts. This list will be included in the contractors production plan. All other parts will be disposed of by the contractor.

C.3.2 Production Review (PR). The contractor shall hold a PR 100 days after contract award. The PR shall be held at the contractors facility. The PR shall address management and technical disciplines, design maturity, item configuration, facilities, equipment, production line status, and overall production readiness. The PR results will be used to determine if the design is ready for production, production problems have been resolved, and the contractor has accomplished adequate planning for the production phase. The PR is considered complete upon Government approval of the minutes and finalized requirements (specified, derived, and implied).

C.3.3 Configuration Boat. The contractor shall build a configuration boat to be used during the critical design review and modified to the current production configuration during the course of the contract. The purpose of the Configuration Boat is to provide a tangible review process for all interested parties from the U.S. Army, program management, engineering, Quality, human factors engineering and the soldier to review the proposed design and raise any issues. The configuration boat shall be used as a working demonstrator at the critical design review proving the contractor's concept for the BEB. The contractor shall be responsible for the maintenance and upkeep of the configuration boat as stated in the contract. Delivery of the configuration boat is at the critical design review.

C.4 Integrated Logistics Support.

C.4.1 Integrated Logistic Support (ILS) Program. The contractor shall develop and implement an ILS Program as part of the overall BEB Program.

C.4.1.1 ILS Plan: The Prime Contractor shall develop a plan describing how he intends to fulfill the requirements herein. The plan shall be as extensive as necessary to demonstrate that the Prime Contractor understands the requirements, allocates appropriate resources, and identifies risk areas. The plan will include internal procedures/controls that address ILS influence on design, data requirements, and schedule with milestones for Logistics Management Information (LMI, provisioning, technical manuals), and updates to the program. The plan is subject to Government approval and addresses supportability analysis, maintenance planning, training programs, technical manuals, supply support planning and support equipment. A single point of contact for ILS (Prime, Production Center, Subcontractors), shall be identified to the Government. The plan shall be submitted to the Government 75 days after contract award in accordance with CDRL A00D and requires written approval of PCO.

C.4.1.2 Contractor ILS Objectives:

- a. Develop the ILS concept with the Government.

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- b. Identify design changes to improve safety, improve ease of maintenance, and increase reliability.
- c. Accurately identify and document all logistics support resources to operate and maintain the system.
- d. Develop a cost effective maintenance plan and Logistics Support Package (technical manuals, repair parts, tools, test equipment, provisioning) incorporating engineering changes, test incident corrective actions, and validating and updating vendor information.
- e. Create and deliver Logistics Products to support test and logistics events. (logistics demonstration, validations and verifications, fielding, and training)

C.4.1.3 Maintenance Planning. The contractor shall review the complete configuration of the BEB. They shall identify all potential tasks required to place the BEB in operation, operate the BEB, perform scheduled services on the BEB, and maintain or repair the BEB and all its components. The maintenance concept will be oriented toward Army two-level maintenance.

C.4.1.3.1 Supportability Analysis. The Prime Contractor shall conduct a supportability analysis to determine the maintainability characteristics of the system. The contractors shall identify the Logistics Control Number (LCN), maintenance functions, level of maintenance, manpower, Source, Maintainability & Recoverability (SMR) codes, task times, annual maintenance manhours, spare parts, troubleshooting and diagnostics, support equipment, any scheduled maintenance requirements and steps to perform tasks for each repairable item. The analysis shall be conducted in end item hardware top-down, breakdown sequence. The contractor shall present this list to the Government for review and approval prior to creating logistics products (technical manuals, provisioning and training). The list may be submitted to the Government incrementally for review and in accordance with CDRL A00D.

C.4.1.3.2 Functional Requirements Identification. The Contractor shall:

- a. Develop and Maintain LCN structure to repair part level.
- b. Identify peculiar, unique and common tools, parts, equipment and additional authorized list (AAL) equipment.
- c. Develop and Update the Operator/Maintenance Task List.
- d. Furnish Oil Analysis data as required by DI-MISC-80390 (Reference CDRL A00E).

C.4.2 Repair Analysis. In creating the BEB Maintenance Task List, the Contractor shall perform a Level of Repair Analysis (LORA) to determine if it is economical to repair potentially reparable components. If the LORA indicates an item should be repaired, the LORA will recommend which entity within the Army Maintenance structure shall perform the repair. In absence of a suitable Army structure qualified for repair, the recommendation may include contractor logistics repair. The Contractor shall submit his LORA not later than 90 days after contract award in accordance with CDRL A00D. The contractor may use the Armys COMPASS LITE to perform this level of repair analysis or may offer an alternative LORA model to the Government for approval. (COMPASS LITE is available free of charge to Government Contractors on the LOGSA website, <http://www.logsa.army.mil/alc/lite.>)

C.4.3 Provisioning.

References: MIL-PRF-45906, dated 11 Nov 96
Quality Assurance Provisioning Guidance Book (QAPG)
Army Materiel Command (AMC) Pamphlet 700-25,
Guide to Provisioning

C.4.3.1 Provisioning Objectives. The contractor shall develop, maintain and deliver to the Government, provisioning data (Provisioning Master Record or PMR) IAW in MIL STD-1388-2B format (available upon request from the Contracting Officer). This requires development of the contractor database and continuous update of the Government PMR following the final provisioning conference. PMR shall include data for all major assemblies, assemblies, sub-assemblies, components, piece parts, their relational next higher assembly (NHA), mounting/attaching hardware and repair kits. Components of End Item (COEI), Basic Issue Items (BII), Additional Authorized Items List (AAL) and Special Tools/Test Equipment (STTE) and Test Measurement and Diagnostic Equipment (TMDE) required to support the BEB shall be included in the PMR. Common hand tools found in the Army Supply System shall not be included.

C.4.3.2 Provisioning Contract Control Number (PCCN). The PCCN for the BEB is C01911, Model Record AAAA. All provisioned items shall be identified with an Usable On Code (UOC) of DVW.

C.4.3.3 Provisioning Schedule and Conferences. Realizing that the PMR is a dynamic 'work-in-progress', the contractor shall, at the Start of Work meeting, deliver a schedule outlining his/her estimate of the total number of anticipated provisioned items and a sequential calendar time-line in which to review all necessary PMR data entries and required technical data associated with these items for the BEB. A minimum of 500 and maximum of 1500 lines of provisioning are the norm for any 40 hour period with a typical PMR record consisting of eight lines of provisioning.

C.4.3.4 Provisioning Data Quality Assurance. The contractor shall develop, maintain and continuously update/revise the PMR to reflect the most current and accurate configuration of the BEB, associated Engineering Data for Provisioning (EDFP), pricing, engineering changes and technical data throughout the life of the contract. The PMR shall be structured in a logical "top-down, disassembly" numeric PLISN sequence with ten (10) spaces between each four (4) character Provisioning List Item Sequence Number (PLISN.) The Government will approve/reject the PMR format and structure at the first scheduled provisioning conference. Once approved, no record shall be deleted from the PMR without Government approval. Changes, revisions shall be documented via creation of a new PLISN record. The Government's final acceptance of the PMR, associated EDPF and technical data shall be based in part on the contractor's compliance

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with the guidance in this SOW, the QAPG, and successful loading of the PMR data into the Government's recognized master data base with an error/reject percentage of less than 5 percent. Any PMR data submission exceeding 5 percent errors shall be rejected and returned to the contractor for correction within 30 working days after official notification.

C.4.3.5 Logistics Management Information (LMI) Data Products. The contractor shall develop and continuously update the following LMI data products. Current submittals are due at each scheduled provisioning conference and final submittals are delivered in accordance with CDRL A00F. Data products deemed inaccurate, incomplete or unacceptable will be rejected by the Government at the provisioning conference. The contractor shall have 30 working days to make corrections and electronically re-submit data for review/acceptance. Formal notice of acceptance/rejection will be made through the contracting officer. The following data constitutes LMI data products:

Provisioning Parts List (PPL) The PPL is structured in PMR format (see MIL-PRF-49506 for guidance), depicting the actual manufacturer's part number and Commercial Activity Government Entity (CAGE) code, with 10 spaces between four character PLISNs, depicting all items provisioned to date. Two paper copies of the PPL shall be delivered at each scheduled provisioning conference for Government use.

Pre-Procurement Screening - Each item provisioned shall be screened for the existence of a valid National Stock Number (NSN), using available screening tools (e.g. Haystack, Federal Logistics Information Service, etc.), along with the NATO Master Cross Reference List (NMCRL). One paper copy of the screening results shall be delivered at each scheduled provisioning conference for Government use. Where an item screen results in a valid NSN, the following data shall be validated:

- The Manufacturer's part reference number
- The Manufacturer's CAGE code
- The Item Nomenclature
- The Reference Number Category Code (RNCC)
- The Reference Number Variation Code (RNVC) - acceptable
 - Combinations of RNCC/RNVC are 2-2, 3-2
- The Item's Shelf Life Code (SL)
- The Actual Unit of Measure (UM)
- The Unit of Measure Price
- The Item's Essentiality Code (EC)
- The Item's Recoverability Code

C.4.3.5.1 Engineering Data for Provisioning (EDFP). Where no valid NSN is available, appropriate EDFP shall be developed supporting the provisioned item. The EDFP shall be in the English Language.

C.4.3.5.2 Adequate EDFP may include an engineering drawing which completely identifies the item as to size, dimensions, special characteristics and material composition. The associated PLISN shall be annotated above the drawing's 'title block' and the actual manufacturer's CAGE code shall be depicted adjacent the drawing/part number. Any EDFP which is deemed "proprietary" in nature shall be clearly labeled as PROPRIETARY DATA-FOR PROVISIONING PURPOSES ONLY.

C.4.3.5.3 Two paper copies of EDFP shall be delivered at each scheduled provisioning conference for Government Use. Upon successful completion of the provisioning conference, one composite CD-R, containing all the EDFP submitted, in PLISN sequence, shall be delivered to the Government.

C.4.3.5.4 No EDFP shall be required where a provisioned item is identified by recognized, verifiable Government or industry standard/specification which results in an NSN. Nor will EDFP be required for items which have been identified and noted in the PMR as 'referenced' to a 'first-appearance' PLISN.

C.4.3.6 The Government may, at its discretion, submit Provisioning Technical Documentation (PTD) reports which identify data changes (part/reference number, Source, Maintenance and Recoverability (SMR) codes, etc. The contractor shall incorporate these data into the PMR.

C.4.3.7 As part of the PMR the following data elements shall be developed for Data Record H:

- Reference Number
- Provisioning System Identification Code (the PCC)
- CAGE code
- Reference Number Category Code (RNCC)
- Reference Number Variation Code (RNVC)
- Item Nomenclature
- Reference Number overflow (where required)
- National Stock Number (NSN)
- Unit of Issue (UI)
- Unit of Issue Price (initially, estimated prices may be used - iterative use of \$1.01 or \$0.99 is discouraged)

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Unit of Issue Conversion Factor
Shelf Life Code (where appropriate)
Additional Reference Number (where necessary)
Additional Reference Number CAGE code (where appropriate)
Additional Reference Number RNCC/RNVC (where appropriate)
Unit of Measure (UM)
Unit of Measure Price

C.4.3.7.1 As part of the PMR the following data elements shall be developed for Data Record H1:

Reference Number
Significant Character Code
LSA Control Number
Provisioning System Identification Code
Usable On Code (UOC) = DVW
Indenture Code
PLISN
Quantity per Assembly
Quantity per End Item
Next Higher Assembly (NHA) PLISN
Same As PLISN (SAP) (referenced items)
Source, Maintenance and Recoverability (SMR) code (manufacturer's recommendation)
Demilitarization Code (DEMIL)
Maintenance Replacement Rate (MRR) I
Maintenance Replacement Rate (MRR) II
Maintenance Replacement Rate Modifier
Maintenance Task Distribution (MTD)
Repair Cycle Time (RCT)
Essentiality Code (EC)
Functional Group Code (FGC), where applicable
Technical Manual (TM) Figure Number
TM Item Number
TM Code
Replacement Task Distribution (RTD)
Change Authority (for provisioned items requiring change)
Interchangeability Code (used with Change Authority)
Serial Number Affectivity (used with Change Authority)
Change Authority Number
Any additional data elements required by the contractor's automated system

C.4.4 Not Used

C.4.5 Not Used

C.4.6 Technical Publications.

C.4.6.1 Contractor shall develop equipment Technical Manuals (TM) listed below in accordance with the technical content requirements of MIL-STD-40051B. The Government will provide the TM Code at the Start Of Work meeting.

C.4.6.2 Contractor-developed TMs will be subdivided into volumes (if applicable), chapters, and work packages in accordance with MIL-STD 40051B. Individual work packages will not exceed 30 pages. The contractor will assign each work package a numeric work package number in accordance with MIL-STD 40051B. MIL-HDBK 1222B provides examples of typical work package style and format. Best commercial practice will govern work package type size, alignment, style, and spacing (Reference CDRL A00G).

C.4.6.3 All contractor-developed graphics will be delivered in one of the following graphic file formats in accordance with MIL-STD 40051B, in addition to one paper copy:

- a. Computer Graphic Metafile (CGM)
- b. Adobe Acrobat (PDF)
- c. Continuous Acquisition and Life-Cycle Support (CALS) Raster
- d. Initial Graphics Exchange Specification (IGES)
- e. Tagged Image File Format (TIFF)
- f. Joint Photographic Experts Group (JPEG) (preferred)

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C.4.6.4 Contractor shall ensure the Final Draft Equipment Publication (FDEP) delivered under this contract is consistent with the Government approved equipment configuration as a result of final tests. The contractor must validate technical manual data that changes as a result of this testing prior to FDEP delivery.

C.4.6.5 TM numbers for the BEB publications are:

- a. Operator Manual TM 5-1940-322-10
- b. Field and National Maintenance Manual TM 5-1940-322-25
- c. Repair Parts and Special Tools List TM 5-1940-322-25P

The contractor shall deliver copies of the publication electronically, in Microsoft Word? and editable PDF, in addition to one hard copy per CDRL A00G. Draft TM delivery shall adhere to the delivery dates specified during start of work meeting.

C.4.6.5.1 Contractor shall produce and deliver an editable (i.e. Adobe Acrobat) ETM file or word processing file (i.e. MS Word for Windows or equivalent) for each publication in paragraph C.4.6.5.

C.4.6.6 Battle Damage Assessment Repair (BDAR). As directed by the Contracting Officer, the Contractor shall prepare inventive and uncharacteristic repairs for battle time sustainment. BDAR instructions shall be developed to support the BEB and will be included as a dedicated chapter of the operator and unit maintenance manuals. Such repair instructions are to provide a basis for field expedient fixes during emergency or combat operations. Purpose is to rapidly return disabled boats to safety or to the operational commander by expediently fixing, bypassing or jury-rigging components to restore the minimal essential systems required for the support of the mission or to enable the boat to self-recover. Such repairs are temporary and may not restore full performance. Guidance for development of BDAR may be found in Army Field Manual, FM 20-22, "Vehicle Recovery Operations" or in TM 9-2320-356-BD. Copies of both of these documents will be provided to assist in applying BDAR principles to the BEB mechanical recovery procedures (Reference CDRL A00H).

C.4.6.7 Not Used

C.4.6.8 Not Used

C.4.6.9 The Contractor shall validate the accuracy of all publication deliverables. The Government has the right to review validation records and witness validation processes at any time during the contractor performance period. The Government reserves the right to verify all publication deliverables. Government reviews and verification may be done through statistical sampling, a mix of desktop review and actual performance. If the contractor has not adequately validated data, the Government may return products for rework. TM validation/verification will be accomplished as much as possible coincident with the combined Logistics Demonstration/Validation Verification (paragraph 4.7).

C.4.6.10 Two-Level Maintenance. The Army's two-level maintenance system consists of Field Maintenance and Sustainment Maintenance. These requirements will be further discussed at the Start of Work meeting.

C.4.6.10.1 Field Maintenance will consist of on-system repairs. It is mainly replacement of defective parts and preventive maintenance. Field maintenance is done by operators or at the unit level or near the unit. It returns repaired equipment to the soldier. It covers crew, unit and selected direct support maintenance tasks. It consists of tasks that do not require further disassembly of the component to accomplish repairs. Parts/components requiring disassembly or further repairs are replaced on the end item with failed parts to be evacuated to Sustainment Maintenance.

C.4.6.10.2 Sustainment Maintenance will consist of off-system repairs. It is mainly repair of defective equipment parts. Sustainment maintenance is designed to repair and return items to the supply system. Sustainment maintenance includes maintenance tasks required to return components, subassemblies and/or end item systems to serviceable condition in accordance with National Maintenance Standards.

C.4.6.11 Special Tools and Test Equipment (STTE). The contractor shall identify all special tools and test equipment required to service or repair the BEB. Special Tools are defined as tools not found in the U.S. Army's "General Mechanics" tool kit (NSN: 5180-01-454-3787), "Organizational Maintenance" Common #1 tool kit (NSN: 4910-00-754-0654), "Common #2" tool kit (NSN: 4910-00-754-0650), tool kit "Supplement #1" (NSN: 4910-00-754-0653) and Forward Repair System (NSN: 4940-01-463-7940). The Government will approve all recommendations for implementation.

C.4.6.12 Publication History File. The contractor shall maintain a file of all manual changes made during this contract to include engineering change proposals and post-fielding reports. It shall be available to Government representatives upon request.

C.4.6.13 Reproduction Rights. The Government shall have unlimited rights to reproduce technical manuals and all illustrations developed under this contract.

C.4.7 Combined Logistics Demonstration (LD)/Validation Verification (VV).

The LD is a hands-on verification of the Logistics Support Package carried out by performing selected tasks using actual hardware. The VV concentrates on the accuracy of tasks and accompanying illustrations. The LD/VV focus will be on improved maintainability, the

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identification of system design improvements, a reduction of special tools, improved safety procedures in maintaining the boat, and timed reduction of maintenance task performance.

C.4.7.1 Contractor Responsibilities. The Contractor shall act as a consultant to Government operators and mechanics in performing operator and maintenance tasks during the LD/VV. The LD/VV shall be conducted at the contractors production site. Contractor facilities will include adequate shop area, overhead lift capabilities, requisite common tools, special tools, and test and diagnostic equipment required to perform all identified BEB operator and maintenance tasks. The LD/VV will include physical performance of all PMCS and all scheduled maintenance tasks. The LD/VV will also include physical performance of not less than 35% non-scheduled maintenance tasks and a 100% desktop review of all remaining non-scheduled maintenance tasks.

C.4.7.1.1 Logistics Products and Support Equipment. The contractor shall supply all BEB technical manuals including a complete Repair Parts and Special Tools List (RPSTL), all mandatory replacement items, all consumable supplies, parts, safety items, and all approved STTE/TMDE identified for successful performance of the BEB LD/VV.

C.4.7.2 LD/VV Procedures. The Government shall provide the contractor with a draft Government TM verification plan no later than 90 days prior to the start of the LD/VV effort; this plan will include the specific maintenance tasks identified either hands-on or for desk-top review. Government reserves the right to require additional hands-on task performance of selected operator and maintenance procedures to determine TM quality. The contractor shall incorporate all comments resulting from LD/VV prior to submission of the final TMs.

C.4.8 System Support.

C.4.8.1 System Support Package (SSP). The contractor shall support the LD/VV and test events with a logistics support package that includes parts, manuals, engineering data and training documents as required herein.

C.4.8.1.1 LD/VV System Support Package (SSP). The Operator and Maintainer LD/VV Task List will be provided to the contractor 90 days after contract award. The contractor shall provide a draft SSP List (SSPL) to the Government within 30 days of LD/VV Task List receipt (Reference CDRL A00K). The Contractor shall review the LD/VV task list and determine what items will be needed (consumed, used, referenced) to successfully complete the tasks. At a minimum, it should include, but not be limited to: repair parts, unique and special tools, common tools, draft technical manuals (with RPSTL), all associated BEB drawings which may be required. The Government will review and approve the draft SSPL with comments 15 days after receipt from the contractor. The approved SSPL shall be ordered and delivered to the LD/VV site prior to the event.

C.4.8.1.2 Test SSP. When directed by a delivery order, and if testing is required away from the contractors facility, the contractor shall determine which items will be needed to successfully support testing. The test SSP will include repair parts, unique and special tools, common tools, draft technical manuals (with RPSTL), all associated BEB drawings which may be required, and Training Course One Program of Instruction. The test SSP is contractor-generated and Government-approved. The test SSP shall be delivered to the test site prior to the start of Government testing. The SSP will be inspected by the Government for completeness prior to the start of test. The SSP shall be replenished as required throughout the duration of the test. If any testing requires re-test, the SSP will be updated and made available at the time of re-test.

C.4.8.2 Not Used

C.4.8.3 Contractor Field Support Initial Fielding. The contractor shall provide one or more technical specialists who individually know all aspects of the boat: hydraulic, electrical, hull to act as field service representatives. They will provide fielding support as the Government issues boats. Their duties will include assistance with boat repair and minor unit training. These representatives shall also assist the materiel fielding team as needed. The contractor shall also work to support total package fielding requirements in emergency cases. For six months after the initial fielding (the first unit equipped) the contractor shall provide one field service representative who will ensure that the BEBs are properly serviced and trouble free. The field service representative shall maintain a log of required service and problems encountered along with the resolution of the problem. The contractor shall provide a copy of the log to the Government on a weekly basis.

C.4.8.4 Contractor Technical Support. The Contractor or subcontractor shall provide technical representatives on site at the test and logistics events as necessary to support the Government objectives. Support can include technical assistance, user training, technical data collection and reporting, operating, troubleshooting, component and system fault isolation and repair. It may also include post-fielding modification programs. Estimated support should not exceed 60 days per event.

C.4.8.5 Contractor Fielding Support. The contractor shall provide one or more technical specialists who individually know all aspects of the boat: hydraulic, electrical, hull to act as field service representatives. They will be on call and designated for fielding support as the PM issues boats. Their duties will include assistance with boat repair, minor unit training. These representatives will also assist the materiel fielding team as needed. The contractor shall also work to support total package fielding requirements in emergency cases. Estimated contractor support should not exceed 60 days per fielding.

C.4.8.7 Facility Boat Support. The contractor shall ensure the first production unit boat is in good working condition throughout the program. The contractor shall provide parts, facilities, technical and maintenance support for the facility boat. The facility boat

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shall have all configuration changes incorporated as a result of test changes, contractor initiated changes, or Government direct changes. This includes restoration following logistics events, conferences (static operations), and test. The contractor shall provide transportation for the boat to and from such events.

C.4.8.8 Contractor Logistics Support (CLS). Contractor Logistics Support is essentially using a commercial source to provide support for materiel employed by Army field units in the form of field service, maintenance, supply and distribution, training, and rebuild/overhaul of specified items. When directed by the Contracting Officer, through issuance of a delivery order, the contractor agrees to participate in contractor logistics support. The CLS effort will be negotiated in a separate contract with the contractor and may require participation in direct vendor delivery, training, and repair/maintenance. The maintenance portion of the CLS may require field service representative diagnosis, repair, or upgrade. The supply portion of the CLS contract may require contractor evacuation, and return of items/ components that fail. The CLS Contract may be for multi-year support of the system.

C.4.8.9 Direct Vendor Delivery (DVD) Contract. When directed by the Contracting Officer, through issuance of a delivery order, the contractor agrees to participate in a DVD contract for spare parts with TACOM, Defense Logistics Agency (DLA), or other support service agencies to maintain the BEB. The DVD effort will be negotiated in a separate contract with the contractor and the DVD Contract will require the delivery of parts directly from the contractor to the unit. The requisition and electronic data integration will be transparent to the field units in that requisitions will be dropped through routine unit channels. The requisition will pass electronically through the supply center to the contractor to fill the requisition direct ship to the unit. The DVD Contract may be for multi-year support of the system.

C.4.9 MANPRINT

C.4.9.1 The contractor shall address MANPRINT considerations using Government resources/experts and incorporate them throughout the design and fabrication processes of the BEB to maximize soldier-machine interface. The contractors MANPRINT program shall be designed to ensure MANPRINT requirements by domain are considered throughout the design process. The contractor shall also coordinate MANPRINT decisions with the applicable logistics and systems engineering activities. The contractor shall ensure lessons learned from the previous BEB and human factors design guidelines and criteria have been incorporated into the system design, if available. Human factors engineering design guidelines, along with the definition of strength requirements of 5th percentile female soldiers are found in MIL-STD-1472F. Also included are the strength requirements for a Military Occupational Specialty (MOS) 21C soldier (reference AR 6-11). All tasks shall be designed to be performed by soldiers with skill and strength levels as defined by the MOS 21C. The contractor shall present MANPRINT efforts and status as part of the IPT process or as requested by the Government.

C.4.9.2 Logistics Human Factors Engineering (HFE). The contractor shall subject all design changes/modifications that will have an impact on the soldier machine interface to Human Factors Engineering (HFE) evaluations/assessments. The soldier machine interface design shall facilitate the BEB crews rapid and easy deployment of the BEB under all required operational conditions within the prescribed deployment times. The 5th percentile female through the 95th percentile male soldier wearing (1) arctic and (2) Mission Orientated Protective Posture (MOPP Ensemble) clothing shall be capable of operating the BEB.

C.4.9.3 Manpower. The BEB shall not require any additional manpower, beyond that required for the MK II BEB, for maintenance, recovery or deployment under all operational conditions.

C.4.9.4 Personnel. The bridge crew shall easily maintain, deploy and recover the BEB. Cognitive and physical requirements for the crew shall be less or similar to present BEB. The BEB shall require no new Military Occupational Specialty (MOS) or Additional Skill Identifier (ASI).

C.4.9.5 Training. The contractor shall optimize BEB component commonality to avoid an increase in course length over what engineer soldiers currently undergo.

C.4.9.6 Safety. The contractor shall establish a means of identifying, tracking and eliminating safety hazards that occur during the operation and maintenance of the BEB. Guidelines for the establishment of a safety system and for the identifying, tracking and reporting safety hazards are found in MIL-STD-882.

C.4.9.6.1 The contractor shall identify hazards and assign to them a rating of the probability of occurrence and severity of occurrence. Mitigation efforts shall be identified to lessen the probability of occurrence and severity of resulting injury / damage.

C.4.9.6.2 The contractor shall submit a Safety Assessment Report (SAR) to the Government (Reference CDRL A00L). This report will identify the hazards, their likelihood of occurrence, the severity of resulting injury / damage and the mitigation actions taken. Hazards that have severe consequences and cannot be eliminated by design changes shall be clearly identified. A report shall be submitted 30 days after the Preliminary Design Review. An assessment of static (initial) stability, reserve buoyancy, and estimation of operational limitations resulting from stability and buoyancy shall be included in the report. Additional reports will be prepared as needed and directed by the System Safety Working Group to support hazard tracking and analyses.

C.4.9.7 Health Hazards. The contractor shall identify potential health hazards that are indigenous to and generated by the BEB. Health hazards shall be reported as part of the SAR. The contractor shall take steps to eliminate hazards or reduce them to a level acceptable to the Government.

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C.4.9.8 Soldier Survivability. The contractor shall develop and implement a Soldier Survivability program to identify and manage these issues:

- a. Detectability
- b. Fratricide
- c. Attack avoidance
- d. Attack induced damage
- e. System induced soldier injury
- f. System induced soldier fatigue

Management of these issues includes (as appropriate) analysis, simulation, test, evaluation and impact reduction. The contractor shall identify soldier survivability shortfalls or issues and shall implement corrective action as directed by the Government. Soldier survivability issues may be reported separately or included in the SAR. Soldier survivability issues shall be reported in the same schedule as the SAR.

C.4.10 TRAINING REQUIREMENTS

C.4.10.1 Training Courses. The contractor shall develop two training courses for the BEB. The first shall cover the skills necessary to perform the tasks in TM 5-1940-322-10 (Operator). The second shall cover the skills necessary to perform the tasks in TM 5-1940-322-25 (Field and National Maintenance). Training materials shall be developed in two forms: Instructor-Based and Self-Taught.

C.4.10.1.1 Training Plan. The contractor shall develop a training plan that presents his approach to providing the materials described herein. The training plan shall be developed in contractor format and shall be delivered to the Government, electronically, 75 days after contract award. The training plan shall include a schedule for the development of materials; it shall identify milestones and risk factors. The training plan will be discussed and the training program established at the next scheduled ILS meeting, approximately 90 days after contract award. Training materials shall then be developed in accordance with the approved training plan. The Training Plan shall be developed and submitted in accordance with CDRL A00M.

C.4.10.2 Instructor-Based Training. The contractor shall develop two stand-alone courses, one for Operators and one for Maintainers. Training materials shall consist of a Training Course Outline, Program of Instruction (POI), Instructor Training Guide, Student Training Guide and Media Package (supplemental materials). Each course shall be 40 hours in length. Hands-on training shall constitute at least 70% of the instructional time. If the course of instruction runs less than 40 hours, the additional time shall be devoted to hands-on activities.

C.4.10.2.1 Training and Visual Aids. The contractor is encouraged to use a variety of media and forms of materials as training aids. Computer technology (such as streaming videos, Internet links, slide shows and digital photographs) may be used in addition to traditional materials (such as charts, transparencies, pamphlets and diagrams). The Contractor shall identify, in the training plan, the computer hardware and software required to conduct the courses. The Government will advise the contractor what resources are available, and what formats are acceptable at each training location. Training materials shall be provided in editable format when practicable. Materials shall be delivered free of restrictions on use and duplication.

C.4.10.2.2 Governing Documents. Instructor-Based training materials shall be developed and submitted in accordance with CDRL A00N.

C.4.10.3 Self-Taught Training. When directed by the Contracting Officer, through issuance of a delivery order, the contractor shall revise the Training Plan to include Self-Taught (Distance Learning) course development. The contractor shall provide two Distance Learning stand-alone courses with Computer-Based Interactive Training (CBIT) training materials. Course materials shall be formatted so that they can be viewed on standard computers loaded with the Windows operating system and Microsoft Suite products. These materials must be developed in the following format so that they are compatible with Government computer systems.

C.4.10.3.1 General Format. ToolBook, version 8.5 shall be utilized. No open scripting is allowed. Effects shall be developed using the Actions Editor, so that web enabling is possible. The final product shall be packaged to auto-install upon insertion of the CD. CBIT backgrounds shall be 9600 x 7200 pixels per page. Interactive Multimedia Instructor (IMI) backgrounds shall be 12000 x 9000 pixels per page. Digitized video shall be in Moving Picture Experts Group-1 (MPEG-1) format. Products shall be provided in editable format without proprietary locks. Products shall meet Joint Technical Architecture (JTA) version 6.5 guidelines for electronic media format. All products shall be delivered free of use restrictions and shall become the property of the Government upon delivery.

C.4.10.3.2 Registration Format. In the Properties for Book Menu, these selections shall apply:

1. General Tab: Save on close? Never. Prompt for reset? Yes (or check)
2. Book Title Tab: Distance Learning Course for Bridge Erection Boat, Operator or Distance Learning Course for Bridge Erection Boat, Maintainer as appropriate.
3. Author: PM Bridging
4. Description: Date published (mmddyy) PM Bridging.

C.4.10.3.3 CBIT Course Organization. Each course shall consist of two sections, a Demonstration Section, where information is

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presented, and an Evaluation Section, where comprehension is tested.

C.4.10.3.4 Operator Course Content. The Demonstration Section of the Operator course shall cover, at a minimum, these topics:

- a. Introduction to the program
- b. Navigation through the program
- c. BEB operation safety
- d. Location and description of major components
- e. Location and description of controls
- f. Operator PMCS and before and after operation checks
- g. Boat operations to include:
 1. Loading and unloading the boat from the cradle
 2. Launching from the IBC
 3. Raft building, and raft maneuvering (both methods)
 4. Bridge building and bridge anchoring
 5. Operation of the kits
 6. Methods to recover a swimmer from the water
 7. Recovery into the IBC
 8. Operation under unusual conditions

C.4.10.3.5 Maintainer Course Content. The Demonstration Section of the Maintainer course shall cover, at a minimum, these topics:

- a. Introduction to the program
- b. Navigation through the program
- c. BEB safety during maintenance
- d. Basic operation and use of controls.
- e. Description of these systems, component identification and operations:
 1. Engine
 2. Transmission and shafting
 3. Propulsion jets and scoops
 4. Steering
 5. Battery charging and main power components
 6. Console controls, gauges and alarms
 7. Bilge pumps, fire extinguisher and safety systems
 8. Fuel system
- f. Maintenance Tasks
- g. Troubleshooting techniques unique to the BEB

C.4.10.3.6 Governing Documents. Distance Learning training materials shall be developed and submitted in accordance with CDRL A00P.

C.4.10.4 Contractor Conducted Training.

C.4.10.4.1 Training Course One. The contractor shall provide the personnel and materials to conduct one Operator and one Maintenance class. The courses shall be conducted at the contractors facility. The contractor shall provide all instructors, course materials, facilities, aids and consumables. The contractor shall provide all computers and software required. A class shall consist of two contractor-provided instructors and a maximum of 20 students. Each student shall receive a hard copy of the training materials.

C.4.10.4.2 Instructor and Key Personnel Training (I&KPT). The contractor shall provide the personnel and materials to conduct one Operator and one Maintenance class in support of I&KPT. The courses shall be conducted at the contractors facility. The contractor shall provide all instructors, course materials, facilities, aids and consumables. The contractor shall provide all computers and software required. A class shall consist of two contractor-provided instructors and a maximum of 12 students. Each student shall receive a hard copy and an electronic copy of the training materials.

C.4.10.4.3 Initial New Equipment Training (NET). The contractor shall provide the personnel and materials to conduct one Operator and one Maintenance class in support of the first fielding. Courses shall be conducted at a Government facility. The contractor shall provide instructors and course materials (C.4.10.2). Facilities will be provided by the Government. The contractor shall advise the Government what support is required beyond basic physical facilities (such as computers, black boards). A class shall consist of two contractor provided instructors and a maximum of 14 students. Each student shall receive a hard copy of the training materials.

C.4.10.4.4 Follow-on NET. At the direction of the Contracting Officer, through issuance of a delivery order, the Contractor shall provide the personnel and materials to conduct Operator and Maintenance classes in support of system fielding as directed. Courses shall be conducted at Government facilities. The contractor shall provide instructors and course materials (C.4.10.2). Facilities will be provided by the Government. The contractor shall advise the Government what support is required beyond basic physical facilities (such as computers, black boards). A class shall consist of two contractor-provided instructors and a maximum of 14 students. Each student shall receive a hard copy of the training materials. Courses will be called-up in any quantity and mixture of types at the Governments descretion.

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C.4.10.5 Schedule. The contractor shall submit draft training materials for review 270 days after contract award. The Government will review the materials. The contractor shall update the materials, including the Government comments, and use them for Training Course One. The contractor shall mark up the training materials after Training Course One and submit them within 30 days. The Government will review the materials. The contractor shall update the materials, including the Government comments, within 60 days. The updated materials shall be used for I&KPT. The contractor shall mark up the training materials after I&KPT and submit them within 30 days. The Government will review the materials. The contractor shall update the materials, including the Government comments, within 60 days, and deliver them to the Government. This final form of the training materials shall be utilized for optional NET training.

C.4.10.5.1 Training Material Updates. The contractor shall update training materials after Shakedown Test training and I&KPT. Updates shall be based upon feedback from the students and shall include changes directed by the Government. Training materials shall be updated after NET training only if directed by the Government as an option.

C.4.10.5.2 Government Reviews. The contractor shall provide training material development status updates at program review meetings. The Government will perform spot checks of materials under development to verify that schedules and technical standards are being maintained.

C.5 Testing and Evaluation

C.5.1 The contractor shall examine, inspect and test the materials and components of the BEB as necessary to ensure compliance with ATPD 2317. The contractor shall also support Government testing as specified herein.

C.5.2 In order to minimize the risk of deterioration of the performance and reliability of the BEB as a result of modification to various BEB systems, the contractor shall perform, with government participation, a subsystem design Failure Mode and Effects Analysis (FMEA) followed by component level analyses, using SAE J1739 as a guide. These subsystems shall include those with new and unique components such as, but not limited to, the Hydrojet and its hydraulic control, the new transmission, the engine cooling system, and the electrical charging system. Initial subsystem analyses shall be presented at the PDR with final results by the CDR. FMEA component level analyses and mitigating strategies shall be available by the CDR.

C.5.3 Test Planning. The contractor shall form a test planning team with the Government to examine all test issues, plan test activities, identify testing to be conducted, publish a Test Plan and participate in the execution of tests in order to provide sufficient data concerning the BEB capabilities to make pertinent development decisions relative to the program. The draft Test Plan shall be delivered at the CDR in contractor format. Specific test requirements follow.

C.5.3.1 Builders Trials (BT). The contractor shall, jointly with the Government, develop a BT that incorporates the requirements of ATPD 2317 and provides sufficient BEB physical operation through various operating loads and speeds to demonstrate satisfactory BEB operation. The goal is a total test duration of approximately 8 hours on each BEB prior to Government acceptance.

C.5.3.2 Shakedown Test (ST). Shakedown Test will be conducted on two (2) BEBs. This test shall be conducted by the contractor at a site mutually acceptable to the government and the contractor. It shall be of not less than 100 hours duration on each boat and shall simulate the following types of operation: Rafting, Bridging, Temporary Anchorage and Free Running. The contractor, jointly with the Government shall devise test procedures to accomplish the 100 hour/boat test. The Government will provide a data collector/observer to tabulate test incidents occurring during the test.

C.5.3.3 Transportability Test. The Government may conduct a rail impact test on the BEB with the IBC. The contractor shall support this test to ensure the BEB with the IBC successfully passes the rail impact test. All other transportation regulations shall be verified by inspection and analysis by the contractor.

C.5.4 Contractor Test Schedule. The contractor shall prepare and maintain an integrated test schedule showing all contractor tests to be performed during the contract (component level, hardware/software, integration, system shakedown and others necessary as determined by the contractor). The contractor Test Schedule shall be made available at CDR. The contractor shall notify the Government of the date, time, location and point of contact for each contractor test at least 10 days prior to start of test so that the Government may observe, participate and collect data.

C.5.5 Test and Test Support Requirement. The contractor shall perform all testing necessary to support the BEB program. All testing shall be performed at a site mutually agreeable to the government and contractor. The contractor shall implement test preparations for the BEB test program. The contractor shall provide all resources and equipment to complete the required tests.

C.5.5.1 Contractor test support shall include:

- a. Failed parts tracking and failure analysis
- b. Corrective action
- c. Personnel

C.5.5.2 Transportation for Testing. The contractor shall coordinate shipping of BEBs to and from test sites and other locations to meet test schedules and requirements for BEB availability at the direction of the Government. Specific requirements will be coordinated between the Government and contractor. Delivery of boats to and from test sites will be at the contractors expense.

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C.5.6 Test Results and Corrective Actions. The contractor shall provide test reports in contractor format and make them available via electronic means within 10 working days from test completion. The Government shall have continuous access to all test data. In addition, the contractor shall develop and maintain a failure reporting system to prioritize, track and manage failure analysis and corrective action activities resulting from failures detected during testing of the BEB. This database shall be in contractor format and be made electronically available to the Government to facilitate proactive management of the performance and reliability of the BEB. The contractor shall provide corrective action response to all test incidents as follows:

Major & Critical test incidents (causing mission failure or loss of essential function); Initial response 48 hours, Final response 30 days.

All Other incidents; Initial response 5 days, Final response 30 days

C.5.6.1 All approved configuration changes resulting from testing shall be incorporated into all production boats and documented per Attachment 2 at no additional cost.

C.5.7 Boat Refurbishment. Repair and upgrade of boats during tests shall focus on achievement of functions necessary to complete testing. After ST, the boats shall be updated to the approved final configuration and refurbished to like new condition. For planning purposes the ST boats will be delivered to the first fielded unit. Refurbishment will occur after the transportability test and will include the IBC.

C.5.8 Retest. The Government reserves the right to conduct additional inspections and tests prior to acceptance of any item containing new components, or if satisfactory resolution of any deficiency has not been completed. Costs for additional testing, if required, shall be the responsibility of the contractor. If testing fails, the contractor shall make appropriate corrections and retest at no additional cost to the Government.

C.6 Product Assurance

C.6.1 Quality Program. The contractor shall develop, implement and maintain a quality system acceptable to the government that ensures the functional and physical conformity of all products or services furnished under this SOW. The quality system shall achieve defect prevention and process control, providing adequate quality controls throughout all areas of SOW performance. The quality system shall be based on international quality standards such as the ISO 9000 series, or commercial, or national quality standards and shall be applicable to all areas of the contractors organization. At any point during SOW performance, the Government has the right to review the quality system to assess its effectiveness in meeting SOW requirements.

C.6.1.1 Required Inspections/Tests. Every boat shall receive the following inspections / tests. The results of these inspections / tests shall be entered into the boat Final Inspection Record. (FIR)

Receiving inspection of the Mk I/Mk II hulls. Document the degree of repair needed prior to installation of the upgrade package.

Documentation of serial numbers of major items and items with a manufacturers warranty. (Engines, Transmissions, Propulsion system), (Allows for future traceability)

Configuration inspection for completeness and compliance with the manufacturing standard.

Operational test/demonstration of all systems to ensure proper operation and hull integrity. (BT)

Government acceptance

C.6.2 Certifications. The contractor shall prepare and submit certifications for those items identified in Table I of the Purchase Description. The contractor shall make available to the government, upon request, quality certifications for vendor supplied components and material. All certifications provided by the contractor shall include appropriate supporting documentation such as, but not limited to; test data, material analysis, drawings, purchase orders, specifications, etc. In the event that particular certifications are not acceptable to the government, the contractor shall conduct additional examinations and tests and/or provide additional documentation as required to verify conformance. A contractors Certificate of Safety and Seaworthiness shall also be provided.

C.6.2.1 Re-Certification. The contractor shall provide a new certification whenever a change is made to any item (process, product or material). Sub-contracting does not relieve the contractor from providing the required certifications.

C.6.2.2 Welder Qualification. The contractor shall provide certifications that the welder/welding equipment has passed qualifications. Copies of the certifications shall be provided to the Government upon request.

C.6.2.3 Weld Inspector Qualification. Weld quality and workmanship shall be verified by certified welding inspectors.

C.6.3 Final Inspection Record (FIR). In accordance with DI-QCIC-81068, and CDRL A00S the contractor shall develop and maintain a FIR for each boat produced under this contract. The FIR shall list each system characteristic or function to be inspected from the requirements of ATPD 2317, along with any changes made elsewhere in the contract. The contractor may prepare the FIR in contractor format. As a minimum the FIR shall have blocks for the contractor inspectors initials indicating that each characteristic or

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function was inspected and either accepted or rejected. Additionally, any rejected characteristic of function shall have another block for re-inspection and acceptance. Final review and acceptability shall be indicated by a signature block containing the full name and title of the company official rendering approval. The FIR will be reviewed and approved by the Government prior to implementation. The FIR shall be available for review prior to First Production Unit Inspection (FPUI) and First Article Evaluation. The contractor shall update the FIR to reflect all engineering and/or manufacturing changes. Each update shall require Government review and concurrence prior to implementation. No boat shall be offered to the government for inspection and acceptance prior to completion of the FIR.

C.6.3.1 Validation/Verification of the FIR. The contractor and government shall conduct a joint final inspection of the first boat produced utilizing the newly developed FIR. The purpose of this inspection is to perform a final validation and verification of the FIR.

C.6.3.2 Boat Final Inspection. The contractor shall utilize the FIR to inspect each boat produced. Deficiencies detected shall be noted on the FIR deficiency sheet, and corrected by the contractor prior to offering the boat to the Government for final acceptance. The original FIR and a copy shall be submitted along with each boat.

C.6.4 Test and Production Location. The contractor shall produce the first production unit and the production quantity at the same location and facility. If any boats are impacted by a change of the contractors manufacturing facility, a complete FPUI and ST, as a minimum, may be required at no increase in contract cost.

C.6.5 Change of Suppliers. If the contractor elects to change sources of supply for any component after conditional acceptance of the FPUI boat, the Government reserves the right to conduct additional inspections and tests prior to acceptance of any item containing the new component. The contractor shall notify the Government 30 days prior to a change in suppliers.

C. 6.6 Configuration. The BEB shall comply with all the requirements of this SOW including but not limited to the ATPD 2317. All systems delivered under this SOW shall be identical in configuration. The unit configuration shall consist of all Government approved product specifications, product drawings, and associated documents. The contractor shall identify and document all configuration changes between the FPUI through final approved configuration of the boat.

C.6.7 Shakedown Test (ST). As required by contract, the ST is a test of the end item conducted by the contractor at a contractor test site with Government oversight. The ST evaluates the complete boat with all kits installed for conformance to technical requirements and confirms that the design is ready for production. The ST is conducted in accordance with an approved test plan. Table 1 of ATPD 2317 identifies the system and functions that will be evaluated. The ST may be repeated or continued to verify that corrective actions resulting from the initial ST are effective.

C.6.8 Follow-on Production Test (FPT). When required by the contract, one production unit shall undergo follow-on production testing by the contractor at the contractors test site to evaluate continued conformance to Section 3, ST requirements as referenced in Table I of ATPD 2317. The test shall be similar to ST but will be limited in scope. The government will select the test unit. Any deficiencies found during or as a result of the FPT, may result in Government stopping acceptance on subsequent boats until the contractor has corrected the conditions causing the failures. All corrective actions carried out as a result of the deficiencies found during or as a result of FPT, may be successfully demonstrated during a full retest to the portion of the FPT as directed by the government at no additional cost to the government.

C.6.9 First Production Unit Inspection (FPUI). The contractor shall perform a final inspection of the first produced boat in accordance with the requirement specified in ATPD 2317. All deficiencies detected during FPUI will be corrected prior to acceptance by the government. All deficiencies corrected as a result of FPUI will be completed by the contractor at no additional cost to the government. In the event of a major component change (engine, transmission, or propulsion system) an additional FPUI will be conducted consisting of inspecting and verifying the new component and their associated hardware.

C.6.9.1 First Production Unit Acceptance. The contractor shall submit an inspection report that provides detailed results of the FPUI in accordance with DI-NDTI-80809B, and CDRL A00T. The contracting officer will notify the contractor of approval or disapproval of the FPUI. If FPUI is disapproved and additional inspections are required, the contractor shall resubmit an inspection report. All costs related to additional FPUI shall be borne by the contractor.

C.6.9.2 Manufacturing Standard. The FPUI unit shall be retained by the contractor as the manufacturing standard (facility boat) and may be shipped as part of the contract quantity at a later date. All approved changes throughout the life of the contract will be incorporated into this boat. At the discretion of the Government, a newly produced unit with the latest configuration (of incorporated changes) may be selected to represent the manufacturing standard (FPUI). The Government will verify that the latest ECP changes are incorporated into this unit.

C.6.10 In Process Inspections. During production of the BEB, in-process inspections shall be performed on every boat produced by the contractor, to evaluate conformance to the Section 3 requirements referenced in Table I of ATPD2317. These inspections may be witnessed by government representatives. The contractor shall identify and establish in-process inspection points and inspections where the absence of such inspections could adversely affect quality. In addition, evaluation of process controls and workmanship will be made at this time. During the inspection, the contractor shall have available for review and evaluation the following records: quality manual (or appropriate document), work instructions, process procedures, inspection records, and welder certifications. All processing and

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welding procedures, inspection records, calibration procedures and welder certifications shall be available for review and evaluation. When required by the government, these inspections shall be made prior to the application of primer and paint. Each assembly operation shall have a process sheet that calls out what operation takes place at each station. A completed process sheet will be signed off by the operator /assembler prior to movement to the next station. A routing sheet (traveler) reflecting these operations will be attached to each hull throughout its entire build process.

C.6.11 Inspection Equipment. The contractor shall supply, maintain and calibrate all inspection and test equipment necessary to assure the boat system and components conform to SOW requirements. All inspection equipment shall be available for use at the start of production, and shall be available to the Government inspector when required for verification purposes.

C.6.12 Inspection Records. The contractor shall maintain and make available to the Government all records of examinations and tests performed on material used to produce each boat. This documentation shall describe deficiencies found during inspection and all corrective action undertaken to correct these deficiencies. These records shall be maintained for a period of four years following completion of the contract.

C.6.13 Government Furnished Material. The contractor shall conduct an inspection on Government Furnished Material and provide for its secure storage. Any deficiencies should be reported on the Product Quality Deficiency Report (PQDR) SF-368 (reference CDRL A00U). A detailed list of Government Furnished Material will be provided 10 days after award.

C.6.14 Component Interchangeability. The contractor and his sub-contractors shall not make any changes to any component part or end item without the governments approval after acceptance of the First Production Unit Inspection (FPUI). In order to determine whether proposed changes should be approved, the government reserves the right to conduct another test similar to the ST at the contractors expense.

C.6.14.1 Additional Testing. The Government reserves the right to require additional testing at contractor expense in the event any contractor-proposed engineering change is felt to have a potential impact on the ability to meet the requirements of ATPD 2317.

C.6.14.2 Control Test. Control tests may be performed at any time if there is reason to believe that production boats do not meet the technical requirements of ATPD 2317. Control tests are the responsibility of the contractor.

C.6.15 Deficiencies. All deficiencies detected by either the contractor or the government shall be presumed to be present on all boats produced since the last acceptable test. The Government may stop acceptance of additional boats until satisfactory evidence has been provided that indicates the deficiencies are not present on all boats produced since the last acceptable test and corrective action has been taken to repair deficiencies and preclude recurrence. Failure to provide corrective action or request an extension within five working days after detection of the deficiency(s) may result in the Government stopping acceptance on subsequent boats until the conditions causing failures have been corrected and approved by the Government. Request for extensions, at a minimum, shall state purpose of the extension and establish a completion date for determining the extent of the deficiency. Approval of the request will be at the discretion of the Contracting Officer. At the Governments discretion, another boat with corrective actions implemented may be subjected to re-test to verify the corrective actions.

C.6.16 Quality Deficiency Reports (QDRs). Quality Deficiency Reports (QDRs), Standard Form 368, are generated by users to report problems with equipment. The contractor shall investigate and provide failure analysis and corrective action to all QDRs generated against product/supplies produced under this SOW. The contractor shall provide a report in accordance DI-RELI-81315, and CDRL A00V. The contractor shall perform the investigation; identify probable cause of failure, and corrective action. The contractor shall provide replacement parts for all components determined to be deficient in design, workmanship or product conformance. Corrective action shall be at no additional cost to the government. Corrective action requiring configuration changes shall not be implemented without government approval.

C.6.16.1 The contractor shall respond to Category 1 QDRs within 48 hours. Category 1 defects are items relating to:
Death, injury or job-related illnesses
Loss or major damage to the system

C.6.16.2 The contractor shall respond to Category 2 QDRs within 30 days using SF 368.

C.6.17 Warranties. The contractor shall manage a warranty program and provide a warranty on the boat and its components for 12 months starting on the date of customer handoff. Defects in the manufacturing and/or assembly shall be corrected at the contractors expense for a period of one year after customer handoff. If boats are placed in storage before being put in service, the warranty period shall not start until each such boat is withdrawn from storage and issued to a customer. The contractor shall provide the Government with warranty coverage for components beyond one year from the date of customer handoff to the extent that the contractors supplier customarily provides warranty coverage beyond 12 months to their commercial customers. The details of the warranty coverage shall be contained in the technical manuals. The contractor shall provide a point of contact for warranty issues.

C.7 Preparation for Delivery

C.7.1 Packaging. Each BEB shall be delivered complete, with all components and Basic Issue Items (BII). The mast shall be secured in

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the lowered position. The cabin cover shall be off and secured within the forward cockpit. The searchlight, BII and easily pilferable items shall be packaged and secured for rail shipment. Packaging requirements shall be as specified in the contract.

C.7.2 Packaging for Shipment. The boat shall be prepared for shipment by the Government to the fielding location(s). The contractor shall ensure that all items of the BEB are securely stored and the BEBs ready for loading on either trucks or railcar (this will depend on the location of the shipyard and the convenience of a railhead). The contractor shall be responsible for ensuring the BEBs are properly loaded onto the conveyance method used by the Government.

C.7.3 Shipment Condition. Each BEB shall be serviced prior to shipment as follows, unless otherwise specified in the contract. The BEB shall be shipped ready for storage.

C.7.3.1 Fluids, Lubricants and Fuel. The cooling, lubricating and hydraulic systems shall be filled to the manufacturers recommended levels. The fuel system shall be dry. Dry means essentially no fuel, with the system purged to the degree necessary to ship the BEB by rail. Preservative-type oils shall be used when the boat will be subjected to long-term storage. Preservative-type oils shall be used only when directed by the Government. Raw water systems shall be drained down to prevent corrosion and growth of fouling.

C.7.3.2 Electrical System. The batteries shall be disconnected and the terminals protected against shorting. Exposed connectors shall be protected against weather damage by wrapping, plugs or caps.

C.7.3.3 Bilges. The bilges shall be clean and dry. The drain plug shall be open.

C.7.4 Storage Prior to Shipment. The contractor shall be responsible for storing the BEBs at his facility prior to shipment by the Government. The Government will be fielding the BEBs in a unit set of 14. The contractor shall be responsible for ensuring that the BEBs are properly stored and any special care and storage requirements are accomplished while the BEBs are at the contractors facility awaiting shipment. The contractor shall be responsible for the physical security of the BEB and all equipment specified in C.7.1.

C.8 Other Requirements

C.8.1 Kits. The contractor shall provide all provisions (electrical, mounting locations, etc.) on each BEB to accept the kits required in the ATPD 2317 (NAVKIT, Radio, Heater). The contractor shall provide the NAVKIT on 5 BEBs installed.

C.8.3 Optional Painting and Markings. Boats shall be provided in solid-color green topcoat unless otherwise required by Section B of the contract. The Government may order boats in the colors listed below at the price established in Section B of the contract:

Solid Tan 686, color chip 33446 IAW FED-STD-595.

Three-color woodland Camouflage, consisting of Green 383, chip 34094, Brown 383, chip 30051 and Black, chip 37030.

C.8.3.1 The three-color camouflage pattern is shown on drawing 97403-13226E7222. The Government will provide this drawing when camouflage topcoat is required. The contractor shall apply the topcoat, with the color demarcations within +/- one inch of the indicated pattern. The contractor shall develop templates and work instructions, as necessary, to ensure that the pattern conforms to the drawing. Painted informational markings shall be Black when applied over Tan, Green or Brown backgrounds. Informational markings shall be Green when applied over a Black background. The NAVKIT components, label plates, information tags and decals shall be the same colors regardless of background paint color.

C.8.4 Conversion of Mk I BEB hulls to Mk II BEB hull standards. The contractor shall convert Mk I BEB hulls to Mk II hull standards in accordance with Attachment 3 to this Statement of Work at the price established in Section B. The Government will identify at time of call-up the quantity of Mk I BEB hulls to be converted.

C.9 Correction of Design Deficiencies

C.9.1 In recognition of the limited Government testing of the BEB, the contractor agrees that design deficiencies discovered during the first six months after initial fielding will be the responsibility of the contractor to correct and incorporate into all BEBs produced under this contract.

C.9.2 The contractor shall be responsible for any additional testing required as well as the submission of updated configuration management documents (drawings, specifications, etc.) and logistics products related to the correction.

*** END OF NARRATIVE C 001 ***

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SECTION E - INSPECTION AND ACCEPTANCE

<u>Status</u>	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
E-1 CHANGED (TACOM)	52.246-4028	INSPECTION POINT: ORIGIN	FEB/1994

We will inspect the supplies as described elsewhere in this solicitation/contract before acceptance. Fill-in the location, contractor's or subcontractor's plant, where origin inspection will occur.

SUBCONTRACTOR'S PLANT: SILVER SHIPS
THEODORE, AL 36590

[End of Clause]

E-2 CHANGED (TACOM)	52.246-4029	ACCEPTANCE POINT: ORIGIN	OCT/2002
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We will accept these supplies at the address or addresses designated in the Section E clause entitled INSPECTION POINT.

[End of Clause]

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SECTION G - CONTRACT ADMINISTRATION DATA

LINE	PRON/ AMS CD/ <u>ITEM</u> <u>MIPR</u>	<u>ACRN</u>	<u>OBLG STAT/</u> <u>JOB ORD NO</u>	<u>PRIOR AMOUNT</u>	<u>INCREASE/DECREASE</u> <u>AMOUNT</u>	<u>CUMULATIVE</u> <u>AMOUNT</u>
0001AA	P146K0722T 53153542120 A14P51201CBB	AA	2 4ZCB04	\$ 1,155,632.50	\$ 653,372.50	\$ 1,809,005.00
1001AA	P146K0682T 53153542120 A14P51201CBB	AB	2 4ZCB04	\$ 1,603,252.00	\$ 595,403.10	\$ 2,198,655.10
1001AB	P146K0682T 53153542120 A14P51201CBB	AB	2 4ZCB04	\$ 3,592.00	\$ 3,360.85	\$ 6,952.85
1001BA	P146K0682T 53153542120 A14P51201CBB	AB	2 4ZCB04	\$ 0.00	\$ 745,462.04	\$ 745,462.04
1001BB	P146K0682T 53153542120 A14P51201CBB	AB	2 4ZCB04	\$ 0.00	\$ 166,579.51	\$ 166,579.51
				NET CHANGE	\$ 2,164,178.00	

<u>SERVICE</u> <u>NAME</u>	<u>NET CHANGE</u> <u>BY ACRN</u>	<u>ACCOUNTING CLASSIFICATION</u>	<u>ACCOUNTING</u> <u>STATION</u>	<u>INCREASE/DECREASE</u> <u>AMOUNT</u>
Army	AA	21 42035000041C1C09P531535252G S20113	W56HZV	\$ 653,372.50
Army	AB	21 42035000041C1C09P53153531E1 S20113	W56HZV	\$ 1,510,805.50
NET CHANGE				\$ 2,164,178.00

<u>PRIOR AMOUNT</u> <u>OF AWARD</u>	<u>INCREASE/DECREASE</u> <u>AMOUNT</u>	<u>CUMULATIVE</u> <u>OBLIG AMT</u>
NET CHANGE FOR AWARD: \$ 2,762,476.50	\$ 2,164,178.00	\$ 4,926,654.50

<u>Status</u>	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
G-1 ADDED	252.201-7000	CONTRACTING OFFICER'S REPRESENTATIVE	DEC/1991

(a) Definition. Contracting Officer's Representative means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

[End of Clause]

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SECTION H - SPECIAL CONTRACT REQUIREMENTS

<u>Status</u>	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
H-1 DELETED	52.216-25	CONTRACT DEFINITIZATION	OCT/1997

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SECTION I - CONTRACT CLAUSES

<u>Status</u>	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-1 CHANGED	52.216-24	LIMITATION OF GOVERNMENT LIABILITY	APR/1984
(a) In performing this contract, the Contractor is not authorized to make expenditures or incur obligations exceeding \$4,926,654.50.			
(b) The maximum amount for which the Government shall be liable if this contract is terminated is 4,926,654.50. (End of clause)			
I-2 DELETED	252.217-7027	CONTRACT DEFINITIZATION	OCT/1998

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SECTION J - LIST OF ATTACHMENTS

<u>List of Addenda</u>	<u>Title</u>	<u>Date</u>	<u>Number of Pages</u>	<u>Transmitted By</u>
Attachment 003	MILESTONE BILLING SCHEDULE FOR ILS	22-JUL-2004	002	EMAIL
Attachment 004	GOVERNMENT FURNISHED EQUIPMENT	10-AUG-2004	001	EMAIL
Attachment 005	MILESTONE BILLING SCHEDULE FOR BEBS	24-AUG-2004	001	EMAIL