AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. Contract ID Code	Page 1 Of 35
Cost Plus Fixed Fee	

2. Amendment/Modification No.	3. Effective Date	4. Requisition/Purchase Req No.	5. Project No. (If applicable)
P00017	2014JUN24	SEE SCHEDULE	

6. Issued By Code W56HZV

U.S. ARMY CONTRACTING COMMAND
RONDREA GREEN
WARREN, MICHIGAN 48397-5000
HTTP://CONTRACTING.TACOM.ARMY.MIL

EMAIL: RONDREA.M.GREEN.CIV@MAIL.MIL

7. Administered By (If other than Item 6) Code S0507A

DCMA LATHROP
P O BOX 232
700 EAST ROTH ROAD, BLDG 330
(LATHROP, CA)
FRENCH CAMP CA 95231-0232

8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code)

BAE SYSTEMS LAND & ARMAMENTS, L.P.
1205 COLEMAN AVE
SANTA CLARA, CA 95050-2619

Code 80212 | Facility Code

☐ **9A. Amendment Of Solicitation No.**

9B. Dated (See Item 11)

☒ **10A. Modification Of Contract/Order No.** W56HZV-13-C-0018

10B. Dated (See Item 13) 2012DEC18

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)

NO CHANGE TO OBLIGATION DATA

13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS
It Modifies The Contract/Order No. As Described In Item 14.

☐ **A. This Change Order is Issued Pursuant To: The Changes Set Forth In Item 14 Are Made In The Contract/Order No. In Item 10A.**

☐ **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).**

☒ **C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of:** Bilateral Agreement between parties

☐ **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) DOREEN J. COSTA DOREEN.J.COSTA.CIV@MAIL.MIL (586)282-7076	
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 2014JUN24

SECTION A - SUPPLEMENTAL INFORMATION

Buyer Name: RONDREA GREEN
Buyer Office Symbol/Telephone Number: CCTA-ACH-A/(586)282-2322
Type of Contract: Cost Plus Fixed Fee
Kind of Contract: Service Contracts
Type of Business: Large Business Performing in U.S.
Surveillance Criticality Designator: C
Weapon System: BFVS(M2, M2A1, M2A2),BFVS(M3, M3A1,M3A2)
Contract Expiration Date: 2015DEC17

*** End of Narrative A0000 ***

Modification P00017 to W56HZV-13-C-0018
Prepared by: RMGR

1. The purpose of Modification P00017 to Contract W56HZV-13-C-0018 is for the following:

a. The contract Level of Effort (LOE) option hours shall be increased by 440,127. No hours or dollars are being obligated at this time leaving the contract value unchanged as a result of this modification. As a result of the increase, there will be no change to the contract period of performance, terms or conditions. The award of this modification could potentially increase the contract value by $85,499,959; from $85,500,000 to $170,999,959 if all option hours are exercised. Section H.5 has been updated to reflect these changes.

b. SECTION B SUPPLIES OR SERVICES PRICES/COST:

B.2 WORK DIRECTIVES paragraph 4 has been updated from the following:
In the event of a mutually agreed upon change in scope of a Work Directive, the LOE hours, labor cost, ODCs, and associated fee may be adjusted accordingly. The contractor shall not be entitled to additional fee as a result of a cost overrun. The estimated cost for ODCs and associated fee are subject to a downward adjustment in the event of a projected or actual underrun in ODCs. Any unperformed labor hour options may also be reduced, along with associated fee.

B.2 WORK DIRECTIVES paragraph 4 has been updated to the following:
In the event of a mutually agreed upon change in scope of a Work Directive, the LOE hours, labor cost, ODCs, and associated fee may be adjusted accordingly. The contractor shall not be entitled to additional fee as a result of a cost overrun. The estimated cost for ODCs and associated fee are subject to a downward adjustment in the event of a projected or actual underrun in ODCs used to reallocate into the authorization of new hours. Any unperformed labor hour options may also be reduced, along with associated fee.

SECTION B.3 RATE SCHEDULE has been updated to incorporate rates effective after the award of modification P00017.

c. SECTION C WORK STATEMENT

SECTION C has been updated for the following:

C.1: Sustainment System Technical Support (SSTS) is incorporated
C.1.1: Vehicle Platforms
i. Multiple Launch Rocket System (MLRS), M2A3, M3A3, M7 A3 BFIST, M2A2 ODS with strap kit are incorporated
ii. M113 restriction to FMS only is removed
C.1.1.2 Bradley platforms for fielding only is removed

d. SECTION H SPECIAL CONTRACT REQUIREMENTS:

Section H.6.1 Subcontracting Plan is updated

2. In consideration of this Modification P00017 agreed to as complete equitable adjustment, the contractor releases the Government from any and all liability under this contract for any future equitable adjustment attributable to the facts or circumstances giving rise to this Modification P00017.

3. This Modification does not revise the contract obligation amount. The contractual action total is as set forth below.

	Prior	This Change	Total
Estimated Cost (including ODCs)	$ 70,773,582.00	$ 0.00	$ 70,773,582.00
Fixed Fee	$ 6,426,312.00	$ 0.00	$ 6,426,312.00
Cost Plus Fixed Fee (including ODCs)	$ 77,199,894.00	$ 0.00	$ 77,199,894.00

4. All other terms and conditions of contract W56HZV-13-C-0018 remain unchanged and in full force and effect.

*** END OF NARRATIVE A0018 ***

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 ESTIMATED COST, FIXED FEE AND PAYMENT

The estimated cost for the performance of work under this contract is established in Section B at the four-digit Contract Line Item Number (CLIN) level. The estimated cost and fixed fee is based upon the contractor furnishing the maximum level of effort (LOE) hours specified at the four-digit CLIN level for the specified Period of Performance (PoP). The estimated cost at the CLIN level shall constitute the estimated cost for the purpose of the Contract Clause entitled Limitation of Cost, FAR 52.232-20, but neither the Government nor the contractor guarantee the accuracy of said estimates. The contractor shall notify the Government in accordance with the contract clause hereof entitled Limitation of Cost, whenever there is reason to believe that the funds allotted to this contract are either insufficient or excessive for the performance of the work required. Allowable cost shall be determined, and payment shall be In Accordance With (IAW) FAR clause 52.216-7, Allowable Cost and Payment.

B.1.1 FIXED FEE

The contractor shall be paid the total fixed fee stated in Section B opposite the CLIN exercised for the performance of work IAW the contract clause entitled FIXED FEE, FAR 52.216-8. The fixed fee together with the reimbursement of cost shall constitute full and complete consideration for the contractor services in connection with the work required and performed under this contract.

During the performance of the Work Directive and the associated CLIN, the Government shall make interim payments of Fixed Fee with each invoice submitted per FAR 52.216-7, Allowable Cost and Payment, in the same ratio as the Fixed Fee is the Estimated Cost for the CLIN. Interim Fixed Fee payments shall be subject to the withholding provisions.

B.2 WORK DIRECTIVES

*Each Work Directive shall establish the Estimated Cost, Fixed Fee, and total CPFF for the associated CLIN through award of LOE hours. Prior to award of LOE hours, the contractor shall submit a basis of estimate (BOE) of the Estimated Cost for the Government evaluation of each Work Directive. The Estimated Cost shall consist of: 1) the estimated LOE hours and estimated cost using the Rate Schedule at B.3, the estimated Other Direct Costs (Material, Subcontracts, Travel), fully burdened, with sufficient detail to allow evaluation.

The estimated ODC cost at the time of Work Directive award will have a fixed fee commensurate to the ratio of fixed fee on the negotiated hourly rates in the Rate Schedule.

Each work directive will be authorized through award of LOE hours and, if applicable, any ODCs. The contractor is not authorized to begin work until the Government Procuring Contracting Officer (PCO) has executed a contract modification.

*In the event of a mutually agreed upon change in scope for a Work Directive, the LOE hours, labor cost, ODCs, and associated fee may be adjusted accordingly. The contractor shall not be entitled to additional fee as a result of a cost overrun. The estimated cost for ODCs and associated fee are subject to downward adjustment in the event of a projected or actual underrun in ODCs used to reallocate into the authorization of new hours. Any unperformed labor hour options may also be reduced, along with associated fee.

The rate schedule (See Section B.3) is for Work Directive estimating purposes only. Actual labor hours, labor costs, and ODC costs incurred in the performance of the Work Directive shall be recorded, reported, and invoiced in accordance with FAR 52.216-7, Allowable Cost and Payment. Fixed Fee will be invoiced in accordance with B.1.1 Fixed Fee.

B.3 RATE SCHEDULE

*B.3.1 For LOE hours awarded, from 18 December 2012 up to modification P00017, dollars will be obligated against the contract in accordance with the rate schedule set forth below:

The following rates shall be used for establishing the estimated cost and labor fee for each Work Directive. Work Directives that have a period of performance over multiple years shall be estimated using rates from each appropriate year.

Performance from 18 December 2012 through 17 December 2013:

	Estimated Hourly Cost	Hourly Fixed Fee	Total Cost
Program Support	$179.99	$16.35	$ 196.34
Senior Engineering	$174.20	$15.77	$ 189.97
Engineering	$104.47	$ 9.46	$ 113.93
Offsite	$ 66.78	$ 6.07	$ 72.85

Other	$154.36	$13.64	$ 168.00

Performance from 18 December 2013 through 17 December 2014:

	Estimated Hourly Cost	Hourly Fixed Fee	Total Cost
Program Support	$190.89	$17.34	$ 208.23
Senior Engineering	$182.42	$16.51	$ 198.93
Engineering	$109.41	$ 9.90	$ 119.31
Offsite	$ 72.97	$ 6.64	$ 79.61
Other	$155.28	$13.78	$ 169.06

Performance from 18 December 2014:

	Estimated Hourly Cost	Hourly Fixed Fee	Total Cost
Program Support	$193.69	$17.60	$ 211.29
Senior Engineering	$180.70	$16.36	$ 197.06
Engineering	$108.38	$ 9.82	$ 118.20
Offsite	$ 74.46	$ 6.78	$ 81.24
Other	$138.64	$12.39	$ 151.03

**B.3.2 For LOE hours awarded after modification P00017, dollars will be obligated against the contract in accordance with the rate schedule set forth below: The following rates shall be used for establishing the estimated cost and labor fee for each Work Directive. Work Directives that have a period of performance over multiple years shall be estimated using rates from each appropriate year.

Performance from Modification P00017 award through 17 December 2014:

	Estimated Hourly Cost	Hourly Fixed Fee	Total Cost
Program Support	$180.51	$16.38	$ 196.89
Senior Engineering	$170.35	$15.45	$ 185.80
Engineering	$103.86	$ 9.42	$ 113.27
Offsite	$ 74.02	$ 6.73	$ 80.76
Sr Offsite	$117.42	$10.68	$ 128.11
Other	$150.31	$13.56	$ 163.87

Performance from 18 December 2014:

	Estimated Hourly Cost	Hourly Fixed Fee	Total Cost
Program Support	$180.62	$16.39	$ 197.00
Senior Engineering	$176.79	$16.03	$ 192.82
Engineering	$107.43	$ 9.74	$ 117.17
Offsite	$ 80.79	$ 7.35	$ 88.14
Sr. Offsite	$129.93	$11.82	$ 141.75
Other	$188.19	$16.90	$ 205.09

* Updated per modification P00017
** Added per modification P00017

*** END OF NARRATIVE B0001 ***

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

*C.1 GENERAL. The contractor, as an independent contractor, and not as an agent of the Government or employee of the Government, shall provide System Technical Support (STS) and Sustainment System Technical Support (SSTS) as specified herein for modifications, changes, and/or improvements to the vehicle system and/or the derivative vehicle systems and subsystems of those vehicles in paragraph C.1.1.1. Efforts shall include program management, logistics support, engineering, product assurance and field service support for the following vehicle systems. It is understood that when directed to perform work on various subsystems, that effort may require access to or result in modifications, changes or improvements to systems other than those listed in C.1.1.1.

C.2 Work Directives
C.3 Program Management
C.4 Configuration Management
C.5 Engineering Change Proposal (ECP)
C.6 Systems Engineering
C.7 Software Engineering
C.8 Environment Compliance, Hazardous Substances, and Corrosion Compliance
C.9 MANPRINT
C.10 System Validation / Testing
C.11 Quality Engineering
C.12 Reliability / Maintainability
C.13 Failure Reporting, Analysis, and Corrective Action System (FRACAS)
C.14 Integrated Logistic Support
C.15 Training Devices
C.16 Security
C.17 Modification Kit Application
C.18 Use of Government Owned or Furnished Property

C.1.1 Vehicle Platforms. The following is a list of vehicle platform to be covered under this contract:

C.1.1.1 Bradley Fighting Vehicles System (BFVS) and M113:
M2/M3A2 ODS SA (Operation Desert Storm) Situational Awareness (SA). Hereafter referred to as ODS SA.
M7 Bradley Fire Support Team (BFIST) SA
A3 BFIST with FS3 Integration (A3 BFIST wFS3)
*M7 BFIST
*M113
Armored Gun System (AGS) (Incorporation of AGS is for the award of LOE hours in support of Phase 1 Technical Inspections only)
*M2A3
*M3A3
*A3 BFIST
*M2A2 ODS with strap kit
**Multiple Launch Rocket System (MLRS)

C.1.2 The requirements of this contract apply to effort acquired by the U.S. Government, NATO Maintenance & Supply Agency (NAMSA), and FMS models.

C.2 WORK DIRECTIVES

C.2.1 Work Directives (WDs) Requirements. All work under this contract shall be completed in accordance with Work Directives agreed to by the Government and contractor and only as approved by the Procuring Contracting Officer (PCO). No work shall commence until the contractor has received a fully executed Work Directive. The contractor shall provide all necessary labor, materials, supplies, services, facilities, and equipment to perform the specific work and services required by individual Work Directives. Language that includes unexplained acronyms shall not be used. The proposed Work Directive shall clearly and simply state the tasks that accomplish the requirements with a cross reference(s) to Section C, but without merely reiterating the language in Section C. Each Work Directive shall include the following information as a minimum:

a) Work Directive number (and Work Directive revision number, if applicable) and title.
b) Reference to the applicable paragraph(s) in Section C.
c) Objective of the Work Directive (and Work Directive revision, if applicable).
d) Maximum number of hours awarded and material dollars to accomplish the work.
e) Detailed description of work to be performed.
f) Required completion date(s) / Period of performance.
g) Identification of the Contract Line Item Number (CLIN) under which the work is to be performed
h) Identification of applicable contract number, contractors name and address.
i) Identification of deliverables (to include but not limited to reports, software, data, and/or prototype hardware) to the Government

as reference by Contract Data Requirements List (CDRL).
j) Security Requirements
k) Listing of GFM/GFE/GFI/GFP provided for the Work Directive.
l) Government Point of Contact (POC) and contractor POC
m) PCOs signature

C.2.2 All work under this contract shall be completed in accordance with Work Directives agreed by the Government and contractor. The contractor shall prepare and furnished proposed Work Directives as requested by the PCO. The contractor shall have a single centralized Point of Contacts (POCs) to submit proposed Work Directives. All Work Directives will describe clear end-result objectives to measure success. The proposed Work Directive shall also clearly and simply state tasks that accomplish the requirements with a cross reference(s) to the specific scope paragraph. Work Directives shall include a start-of-work meeting to determine schedule, cost, and performance goals.

C.2.3 The contractor shall notify the Contracting Officers Representative (COR) and the PCO immediately by telephone if the dates that the work must be performed or data to be delivered will not be met. The contractor shall follow-up this telephone call with a letter or email to the COR and PCO, detailing the reason why the requirements will not be met and proposed corrective actions.

C.2.4 As detailed by the Work Directives, the Government may provide to the contractor components, systems, vehicles, Government Furnished Material (GFM), or data as Government Furnished Equipment (GFE), or Government Furnished Information (GFI) for installation onto or into projects or programs for testing and evaluation.

C.2.5 The contractor is not authorized to incur hours, materials or subcontracting that exceed the estimate on each executed Work Directive and in total greater that the hours awarded in each CLIN without PCO approval. Any hours, materials or subcontracting in excess of that awarded is at the contractors risk and the Government has no obligation to accept the cost of hours, materials or subcontracting above that awarded. Anytime the contractor has reason to believe that the hours, materials or subcontracting that it expects to incur in the performance of a Work Directive shall exceed the awarded hours, materials or subcontracting on the Work Directive, the contactor shall notify the PCO in writing. Once the contractor reaches 100% of the hours on any CLIN, all work on all Work Directives assigned to that CLIN must cease.

C.2.5.1 With regard to cost, the contractor shall provide a 75% notice against all cost reimbursement CLIN when the 75% of the dollars have been expanded. In the event the Estimate at Completion is greater than the funded amount, the contractor shall provide recommended course of actions to assure the funded estimate is not exceeded.

C.2.6 In accomplishing the effort under this contract, the contractor agrees that they shall not duplicate or otherwise provide efforts, present or future, required to be performed under any current or past contracts.

C.2.7 Meetings

C.2.7.1 Meetings. The contractor shall host, coordinate, and/or attend meetings as identified in the Work Directive. The contractor shall provide minutes and action items list of meetings to all Government attendees providing an electronic address as specified in Exhibit A, per DD Forms 1423 Contract Data Requirements List (CDRL) A001.

C.2.7.2 Post Award Start of Work Meeting. The contractor shall host a post award start of work meeting at its facility, unless some other location is agreed to by the parties, within 60 days after contract award, where required by a Work Directive. The contractor shall at a minimum invite the COR identified in Section G or in an appointment letter, the Contract Specialist identified on the face page of this document, and the ACO. The COR, Contract Specialist, and ACO shall be given at least 14 days advance notice of the time, date, and location of the start of work meeting. The preferred method of notification is by email.

C.2.7.3 Contract Performance In-Process Reviews (IPR). The contractor shall hold, In-Process Reviews under this contract to review cost, schedule, and performance as directed by the Work Directive. The contractor shall schedule the reviews with the COR. The reviews shall be held either at the contractor's facility, sub-contractor's facility or at the U.S. Army TACOM LCMC facility in Warren, Michigan. The agenda shall be coordinated in advance of each IPR between the contractor and the COR in accordance with CDRL A001. The reviews shall also include meeting minutes.

C.2.7.4 Contract Conference Call. A schedule for conference calls during the performance period shall be jointly established by the Government and contractor personnel to report on overall status and identify any issues related to specific Work Directive(s).

C.2.7.5 Other Meetings. The contractor shall attend, participate, arrange, and/or conduct meetings when required by individual Work Directive and in accordance with CDRL A001. The contractor shall be required to prepare agendas and meeting minutes for review and approval as specified in the individual Work Directive.

C.2.8 Specifications and Standards. All referenced Specifications and Standards shall be in accordance with the latest revisions at time of Contract award unless otherwise specified.

C.2.9 Problem Investigations (PIs). Problem investigations are short duration (up to 200 hours) efforts related to any PM issues,

problems or studies that are not yet identified. All PIs up to 200 hours must be concurred by the COR and approved by the PCO via email prior to commencement of work. The contractor shall provide a monthly list of the PIs to the COR and PCO.

C.3 PROGRAM MANAGEMENT

C.3.1 The contractor shall prepare, reproduce, assemble, package and deliver data items, including monthly progress and status reports (costs, schedule, contractual management and Work Directive status), Work Directive final technical reports, drawing: engineering & associated lists, meeting minutes, presentation materials and software in accordance with the requirements set forth in the Work Directives (WDs) and related CDRLs.

C.3.2 Access to Data. On request by the PCO or COR, the contractor agrees to provide access to records and data. The Government shall have access to all data (e.g. hard copy and computer files generated under this contract, and all underlying data and files) generated under this contract to include reports, assessments, software programs, technical reports and analyses.

C.3.3 Deliverable Documentation

C.3.3.1 Contract Performance & Monthly Status Reports

C.3.3.1.1 Cost and Performance Report (CPR). The CPR shall provide monthly and cumulative to date Budget, Performance, Expenditures and Earned Value Management information by Work Directive. This report shall be submitted electronically to the designated Government Point of Contact, PCO, and COR/COTR no later than the 12th business day of the following month. This report shall be in contractor format as agreed to by the Government in accordance with CDRL A002. Additionally, the Government requests that Other Direct Costs (ODCs) Work Breakdown Structure (WBS) in the CPR be further broken into to include Subcontract Labor Hours, Subcontract Labor cost, Subcontract Material cost, and Subcontract ODC cost. Reference Attachment 0014 for a sample Contract Performance Report (CPR) format.

C.4 CONFIGURATION MANAGEMENT (CM)

C.4.1 The contractor shall manage the configuration of the vehicle systems identified in paragraph C.1.1 using ANSI/EIA-649-A and MIL-HDBK-61A as guidance.

a) Identifying, documenting, and verifying the functional and physical characteristics of a configuration item, controlling changes to an item and its documentation, recording the configuration of actual items.

b) The Government reserves the right to review contents and verify the accuracy of the contractors configuration control system at any time during the Contract.

c) The Government reserves the right to review all Class 1 and Class 2 Engineering Change Proposals.

C.4.2 Product Configuration Identification. All performance/product specifications, product drawings, CAD drawings, models, approved changes, remanufacture documents, software documentation, computer software used for design, production, and test/validation of a vehicle shall constitute the Product Configuration Identification (PCI) for that system, and shall be delivered in accordance with CDRL A003.

C.4.2.1 Rights to Technical Data. All PCI data created or obtained under this Contract for use in the performance of the work designated by the Government shall be available to the Government at no additional cost and with those rights as described in the general provisions of this solicitation and resulting contract.

C.4.2.2 The contractor shall provide the services to maintain the PCI. This shall include the maintenance of changes to PCI baselines and the Engineering Release of changes, drawing revisions, and new drawings. All data shall be submitted by electronic means acceptable to the Government. Engineering changes to legacy data shall be made in accordance with the datas original standards.

C.4.2.3 Configuration Services. The contractor shall provide electronic copies of current drawings, Drawing Lists, Generation Breakdown List (GBLs), Gerber files, Artwork Masters, Technical Data Packages (TDPs), Engineering Release Records (ERR), Engineering Change Proposals (ECPs), as built documentation/BOMs and any other updates to the PCI data when requested by the Government. The contractor shall also supply PCI revisioning services to Foreign/Domestic Customers as authorized by the Government.

C.4.2.4 Technical configuration data required for delivery to the Government for procurement purposes shall be adequate for competitive acquisition. The data shall provide the information necessary to enable the Government to competitively procure an item identical to the original item, without additional engineering effort.

C.4.2.5 The contractor shall not prepare data for components or items for which Government release data exists.

C.5 ENGINEERING CHANGE PROPOSALS

C.5.1 Changes to any Government controlled data shall be accomplished through a formal Engineering Change Proposal (ECP) process or equivalent reflected in the contractors Configuration Management Plan ANSI/EIA-649-A and MIL-HDBK-61A. The contractor shall deliver electronic ECPs including Notice of Revisions (NORs), in accordance with CDRL A005 (ECP) and A006 (NOR). The contractor shall deliver an Engineering Release Record (ERR) in accordance with CDRL A007 for every ECP. ERRs must be approved by the Government. All ERR deliverable data must include the appropriate metadata attributes.

C.5.2 The contractor shall participate in the Government Configuration Control Board process to assess the impact of proposed ECPs to vehicles listed in paragraph C.1.1.

C.5.3 Value Engineering Change Proposal (VECP). VECPs shall be prepared in the same manner as ECPs. Contractor will assist the Government in achieving VECP goals. The contractor shall deliver a VECP in accordance with CDRL A005.

C.5.4 ECP Co-User Requirements. The contractor shall coordinate change concurrence with the Design Authority of any PCI data.

C.5.5 Drawing Number Assignment Report. The contractor shall maintain an internal Configuration Status Accounting (CSA) System that reflects all changes, change status and tracking those changes for planned, authorized and as built configuration. The contractor shall provide a copy of a drawing number assignment report when requested by the Government. The contractor shall use Government issued drawing numbers and cage codes as part of any vehicle or component configuration. The contractor shall obtain hull drawing numbers and cage code from US Army TACOM, Warren, MI. The contractor shall obtain turret drawing numbers and cage code from US Army ARDEC, Picatinny, NJ. Government furnished numbers shall be reported as requested in accordance with CDRL A008.

C.5.6 Drawing and Technical Data Custodianship. The contractor shall be responsible for all original documents in their possession. As custodian, the contractor shall not make any changes to the original documents without proper Government authorization.

C.5.7 Drawing Custodianship List and Turret Related Items. The contractor shall create and maintain the drawing custodianship list when requested by the Government. This list shall delineate between Chassis and Turret drawings. The contractor shall prepare and maintain a Turret Master List of original drawings.

C.5.8 Interface Control Documents. The contractor shall be responsible for maintaining all drawings for which it is the custodian. The contractor shall be responsible for Interface Control Drawings (ICD) for which it is the custodian. The contractor shall be responsible for coordinating and evaluating changes to any other ICD/drawings on/for the vehicle system, subsystem, special purpose kits or in support of the vehicle operation. ICDs developed under this contract will be delivered in accordance with CDRL A009 and A063.

C.5.9 Engineering Drawings and Specifications. For new drawings and redrawn drawings, the contractor shall deliver Product Drawings in accordance with MIL-STD-31000, Technical Data Packages, and the TDP Option Selection Worksheet in accordance with Attachment 0015. The drawings provided for procurement purposes shall provide the information necessary to enable the Government to competitively procure provision and catalog an item essentially identical to the original item, without additional engineering effort. The drawings shall be prepared in a Government approved format, using third angle projection, decimal-inch, English language, and meet the requirements of ASME Y14.100-2004, Engineering Drawing Practices in accordance with CDRL A010. The contractor shall select the drawing types needed to define an item, subject to Government approval. The drawings shall be in accordance with ASME Y14.24-1999, Types and Applications of Engineering Drawings. The drawings shall be dimensioned and toleranced in accordance with ASME Y14.5M-1994, Dimensioning and Tolerancing. The contractor shall revise existing drawings in accordance with the drawing preparation standards that the drawings were originally prepared to. For new product data or when existing drawings to be redrawn, product data will be prepared as 3D CAD in accordance with the TDP Option Selection Worksheet, Attachment 0015. The contractor shall prepare specifications in accordance with MIL-STD-961E-2008, Defense and Program Unique Specifications Format and Content (CDRL A011). When models are requested by the Government they shall be prepared in accordance with the TDP Option Selection Worksheet. All new data must be submitted to the Government for review/approval before an ERR is accepted.

C.5.10 Initial Data Submission for Format Compliancy Evaluation. The contractor shall deliver technical data packages for a review of the new data prior to ERR. The contractor shall coordinate the delivery to allow ample time for a complete format and engineering evaluation prior to ERR.

C.6 SYSTEMS ENGINEERING

C.6.1 The contractor shall be responsible for Systems Engineering, to include design, redesign, development, integration, validation, and testing, for all systems, and subsystems, hardware and software affected by the technical activities conducted under this Contract; to assure that optimum solutions are introduced into the vehicle design without sacrifice in areas of stability, total system (crew and vehicle) performance, reliability, durability, safety, cost, maintainability and quality. The contractor shall be required to conduct design studies, feasibility and trade-off studies, safety and human factors analyses, perform market surveys, fabricate hardware, prepare test plans, and perform testing. Such efforts shall be performed in order to correct known or potential deficiencies, improve performance, accomplish cost reductions, or analyze program alternatives. The contractor shall prepare engineering hardware cost and schedule estimates based on production quantities. In addition, the contractor shall prepare cost and schedule estimates for the application of such hardware at a specified location, such as depot. The contractor shall be required to resolve field problems and secondary item procurement problems and develop fixes for such problems as they arise. The contractor shall maintain Government Furnished Equipment (GFE) in accordance with established maintenance procedures found in appropriate technical manuals. Maintenance

shall include those design enhancements as required by Work Directive.

C.6.2 All work covered under this section of the contract shall be completed in accordance with Work Directives (WDs) agreed to by the Government and contractor and only as approved by the PCO. The contractor shall perform engineering activities that may include, but not be limited to, requirements development and maintenance, analysis, design, prototype build, and engineering tests. This review shall identify the need for specialty engineering involvement in support of design effort. The specialty engineering disciplines shall consist of but not limited to Systems Engineering, Quality, Product Support, Logistics, Training and Maintenance Engineering, System Test Integration, System Safety, Human Factors, RAM, System Assessment, System Validation and MANPRINT Integration, and Environmental Engineering.

C.6.3 The contractor shall participate in all design review meetings, review of design parameter documents for appropriate load conditions and safety factors, assisting in selection of safety critical items, and participation in safety review and failure analysis board meetings.

C.6.4 Cost Effectiveness Studies. When potential improvements or cost reduction areas are identified, the contractor shall conduct cost effectiveness studies and submit recommendations for each prospective improvement or cost reduction project as set forth in paragraph C.6.2.

C.6.5 Technical/Design Analysis. The contractor shall conduct technical/design analyses, as required, to confirm adequacy of component design and document the results. Analysis shall include manual and finite element evaluations of stress, fatigue, noise and vibration, control linkages, waterborne characteristics, waterway ingress and egress, stowage impact, and land mobility.

C.6.6 Qualification of Alternate Sources. When qualifications of alternate sources for selected components are identified, the contractor shall qualify alternate sources and submit reports with recommendations for each alternate source for qualification, and the alternate sources capabilities. The contractor and Government shall agree on the qualification requirements prior to Work Directive submittal. The Work Directive shall list the qualification requirements.

C.6.7 Producibility Analysis. The contractor shall conduct producibility analysis in the development of changes to Government controlled items performed under this Contract to ensure the systems, subsystems, and components are producible in the most effective manner consistent with quality, reliability, and design requirements.

C.6.8 Design For Six Sigma (DFSS). The contractor shall utilize Design For Six Sigma (DFSS) tools and techniques for work under this contract in a manner that is integral with the systems integration processes.. DFSS applications shall be prioritized for effective cost/schedule implementation. DFSS shall be integrated into the Systems Engineering Master Plan (SEMP). Design for Six Sigma shall be an incorporated into all documented procedures used by each project within the scope of the Work Directive.

C.6.9 Computer Software and Hardware Changes. The contractor shall integrate other Government specified/or furnished software and associated hardware onto the vehicle and shall ensure that the integration effort to be performed does not compromise system performance. Examples include Forward Observer Software (FOS), Force XXI Battle Command Brigade and Below (FBCB2), and Applique computer hardware. The integration effort shall include development of retrofit kits if specifically required by Work Directives.

C.6.10 Obsolescence Management (OM). The contractor shall resolve obsolescence issues with a scope of work, back up data, schedule, cost information, and conduct reviews and meetings with the Government. The contractor shall prepare and deliver meeting minutes for all meetings and reviews specifically required by Work Directive (CDRL A001). The contractor shall continuously identify or develop replacements for obsolete parts and components, proactively track and plan required redesigns including cost and schedule to preclude shortfalls/lapses in production or logistic support. The effort shall include identification, test and qualification necessary to justify adequate substitution or redesign in the applicable systems environment as identified by vehicle level specifications. Software schedule shall be considered as a major factor in the replacement plan of obsolete parts and shall be planned and tracked accordingly (i.e., software schedule shall not be delayed to accommodate new parts).

C.6.11 Systems Engineering Management Plan (SEMP). The SEMP shall described the contractors proposed efforts for planning, controlling and conducting a full integrated engineering effort The SEMP shall be prepared in contractors format for delivery to and approval by the Government (CDRL A012).

C.6.11.1 Integrated Master Plan (IMP)/Integrated Master Schedule (IMS). The IMP and IMS shall be submitted in accordance with CDRL A013.

C.6.11.1.1 Integrated Master Plan (IMP). The contractor shall develop and maintain an Integrated Master Plan (IMP). The IMP is an event-based plan consisting of a hierarchy of program events, with each event being supported by specific accomplishments, and each accomplishment associated with specific criteria to be satisfied for its completion.

C.6.11.1.2 The IMS shall flow directly from the IMP and supplements it with additional levels of detail. The contractor shall develop and maintain a resource-loaded Integrated Master Schedule (IMS) by logically networking detailed program activities. The schedule shall be consistent with the CWBS and contain the planned events and milestones, accomplishments, exit criteria, and activities from Contract award to the completion of the Contract. The IMS and time-phasing of the Performance Management Baseline shall be consistent. The IMS

shall clearly identify critical path activities and reflect those program risks identified and documented in the contractors risk management plan.

C.6.12 Counterfeit Prevention. The contractor shall notify the Government when critical items are not obtained from the Original Equipment Manufacturer (OEM), Original Component Manufacturer (OCM), or an authorized distributor, particularly where electronic parts are included.

C.6.12.1 Contractor shall follow the Program Protection Plan Outline and Guidance, which includes the requirement to evaluate counterfeit risk and implement countermeasures for mission critical components.

C.7 SOFTWARE ENGINEERING

C.7.1 Software Requirement, Design, Development, Integration and Test.
The contractor shall perform the detailed planning required to requirement analysis, design, develop code, integrate, test, document, and deliver system and/or subsystem software and component firmware for any new or modified systems.

C.7.1.1 The contractor shall develop a software architecture in conjunction with the development of the system and system architecture. It shall satisfy the requirements specified in the system specification. It shall be developed, evaluated, and baselined prior to the initial incremental system build. The contractor shall develop software architecture with a Modular Open Systems Approach (MOSA). Results of the engineering efforts during the development of the software architecture, including all evaluations, will be documented, including rationale for both design decisions and changes to the baselined architecture. Documentation will support the architecture evaluation method and the tracking of changes to the baselined software architecture. Specific information must include, but not limited to, module structure, component interfaces, process structure, and data-flow structure. In each structure, the view-specific relationships among the entities must be documented. For the module structure, relationship information includes but is not limited to the unique information that is encapsulated in each module. For the process structure, the relationship information includes, but is not limited to, synchronization and concurrency relationships. For the data-flow structure, the relationship information shall consist of the high-level description of the data that is produced, stored, or consumed. (CDRL A063)

C.7.1.2 The contractors assessment of the software performance requirements shall ensure compliance in the following areas:

C.7.1.2.1 Completeness: Collectively, the software requirements shall specify the total product software and provide full implementation of all required functions.

C.7.1.2.2 Traceability: The software requirements shall be derived directly from higher level requirements contained in or traceable to system specifications. A cross reference shall be developed indicating where each of the high level requirements are implemented in the detailed requirements. All higher level requirements shall be completely satisfied but shall not exceed those requirements unless approved by the procuring agency.

C.7.1.2.3 Consistency: All requirements shall be consistent with one another, with interfacing systems/subsystems, and with those at the next higher level.

C.7.1.2.4 Realism: Each detailed requirement shall be reviewed to ensure that it can be achieved.

C.7.1.2.5 Testability: The contractor shall ensure that the software performance requirements are expressed in quantitative terms that can be directly translated into acceptance criteria.

C.7.1.2.6 Redundant, superfluous, and duplicate requirements shall not be specified.

C.7.1.3 The contractor shall conduct assessments of the software design during its development to ensure that all software requirements, as approved by the Government, are being satisfied and that the design is being documented in software design assessment/specification (CDRL A063).

C.7.1.4 The contractor shall provide schedule for all software milestones (requirement, design, development, integration, testing activities) as required by Work Directive.

C.7.1.5 The contractor shall establish and maintain detailed, complete Software Development Folders (SDPF) for all software developed and integrated, and deliver to the Government when agreed to by the parties when required by Work Directive. (CDRL A063).

C.7.1.6 Organizational Accreditation Requirements. The contractor shall obtain and provide certification through an independent Software Engineering Institute (SEI) SCAMPI. An assessment external to the contractor's business unit, division, site, or program office shall be performed to assess whether the contractor meets the Capability Maturity Model Integration (CMMI) Maturity Level 3 or higher. The contractor shall deliver proof of CMMI certification upon request the Government when agreed to by the parties in accordance with CDRL A063. The contractor shall be subjected to periodic process audit upon Government request.

C.7.1.7 Software Integrated Process Team (SWIPT). Upon contract award, the contractor and the Government shall jointly establish a

Software Integrated Process Team (SWIPT). This team shall consist of contractor and Government representative. The SWIPT, at a minimum, should contain the contractors Chief Software Engineer, and any subcontractor Chief Software Engineers, as appropriate. The SWIPT shall define, document, monitor, and improve the software development approach being used for the software effort.

C.7.1.7.1 The SWIPT shall monitor development progress, assess effectiveness of the development approach and monitor adherence to the defined process in accordance with the Software Development Plan (SDP).

C.7.1.7.2 The SWIPT shall monitor industry-wide lessons-learned, evolution of standards, advances in relevant technology, tool utility and availability, and other information that may prove to be valuable for the software work effort. Incorporation of change of process shall only occur where an Return on Investment (ROI) can be provided.

C.7.1.7.3 The SWIPT shall advise the Overarching Integrated Process Team (OIPT) in areas relating to the software effort.

C.7.1.7.4 The SWIPT and contractor is responsible for management of the software effort, for performing software quality assurance, or for acting as an Independent Verification and Validation (IV&V) agent for the software effort described in this Scope of Work (SOW). The SWIPT shall rely on existing Program Management and on the QA/IV&V function to provide sufficient information to facilitate their monitoring of progress and adherence to the SDP.

C.7.1.8 Software Reviews. The contractor shall conduct periodic software reviews with the Government to support this effort. For each review described in this section, a proposed agenda shall be submitted to the Government No Later Than (NLT) fifteen (15) working days prior to each review. The contractor shall provide minutes NLT three (3) business days after the meeting to the Government for approval (CDRL A063).

C.7.1.8.1 The contractor shall provide entrance and exit criteria for each review, and these criteria shall be reviewed and approved by Government. All entrance and exit criteria shall be met before entry to the next systems level event.

C.7.1.9 Subcontractor Management and Control. The contractor shall ensure that all requirements as defined in this SOW are flowed down to all suppliers performing software tasking under this effort, and is responsible for ensuring that the quality of all software, documentation, and programming materials procured from their subcontractors conform to the contract requirements. The contractor is responsible for imposing the software quality requirements on any and all subcontractors that are employed for the development of defense department software. Accordingly, the contractor shall conduct periodic audits of its subcontractors Software Quality Assessment (SQA) program, plan and execution thereof to ensure that all requirements are being satisfied and that the software being developed possesses a high degree of quality.

C.7.1.10 RESERVED

C.7.1.11 Software Documentation. Software documentation shall be utilized to plan, direct, explain, define, record, or provide information pertaining to the software development. The contractor shall prepare and maintain the software documentation and provide these documents to the Government electronically as applicable and specified in each Work Directive. In the event that the Government is unable to read the electronic media at the Government site, the contractor shall provide an alternate means for the Government to read the data.

C.7.1.11.1 The contractor shall provide the following documents per CDRL A063 or as directed by the specific Work Directives:

C.7.1.11.1.1 System/Subsystem Specification (SSS)
C.7.1.11.1.2 System/Subsystem Design Specification (SSDD)
C.7.1.11.1.3 Interface Control Document (ICD) including ICDs related to TMDE and training devices
C.7.1.11.1.4 Interface Requirement Specification (IRS)/Interface Design Requirement (IDR)
C.7.1.11.1.5 Software Design Document (SDD)
C.7.1.11.1.6 Interface Design Description/Specification (IDD/S)
C.7.1.11.1.7 Software Development Plan (SDP)
C.7.1.11.1.8 Software Requirement Specification (SRS)
C.7.1.11.1.10 Database Design Description (DBDD)
C.7.1.11.1.11 Software Test Plan (STP)
C.7.1.11.1.12 Software Test Description (STD) and procedures
C.7.1.11.1.13 Software Test Report (STR) development and functional SIL and vehicle reports
C.7.1.11.1.14 Software Product Specification (SPS) prime, subcontractors, and SIL models and test environment
C.7.1.11.1.15 Software Version Description (SVD)
C.7.1.11.1.16 Software User Manual (SUM)
C.7.1.11.1.17 Software Input/Output Manual (SIOM)
C.7.1.11.1.18 Firmware Support Plan/Manual (FSP/M)
C.7.1.11.1.19 Software Transition Plan (STrP)
C.7.1.11.1.20 Software Configuration Management Plan (SCMP)
C.7.1.11.1.21 Software Quality Assurance Plan (SQAP)
C.7.1.11.1.22 Software Safety-Related Risk Assessment/Analysis (SSRAA)

C.7.1.11.1.23 Software Metrics
C.7.1.11.1.24 Software Architecture
C.7.1.11.1.25 Software Schedule requirement, design, development, integration, testing
C.7.1.11.1.26 Software Correction Action Plan (SCAP)
C.7.1.11.1.28 Subcontractor Management Plan (SCMP)
C.7.1.11.1.29 Lifecycle Software Support Plan (LSSP)
C.7.1.11.1.30 System Integration Lab Plan (SILP)
C.7.1.11.1.31 Model and Simulation Plan (MSL)
C.7.1.11.1.32 Computer Software Product End Item (CSPEI)
C.7.1.11.1.33 Computer Operation Manual (COM)

C.7.1.12 Software Configuration and Data Management. The contractor shall develop and submit to the Government a SCMP. (CDRL A063)

C.7.1.12.1 Configuration Management Audit. The contractors procedures shall ensure the effective Configuration Management of the development baseline from the time of the contract award until final acceptance of the software and its associated documentation by the Government. Also to be included in these procedures is the independent auditing of the status accounting system to access effectiveness of tracking Software Trouble Reports (STR). The contractor shall ensure that such procedures are integrated with the Configuration Management procedures addressing the total defense system when the software is only a portion of the total system development. The contractor shall deliver audit reports to the Government when agreed to by the parties. (CDRL A063)

C.7.12.2 Configuration Audits. The contractor shall conduct formal audits of the Configuration Management function, as provided for in the Software Quality Assurance (SQA) Plan, to ensure strict compliance with the requirements of the contract, the approved SDP, and the approved SCMP. The contractor shall deliver audit reports to the Government when agreed to by the parties. (CDRL A063)

C.7.12.3 Software Quality Assurance (SQA) Program. The contractor shall plan, develop, document, and implement a SQA program to ensure that high levels of software quality are attained and all contractual requirements are fully complied with. The contractors SQA program shall have sufficient, well-defined lines of responsibility, accountability, and authority, as well as the organizational freedom to identify and evaluate quality problems and to initiate, recommend and/or provide solutions. (CDRL A063)

C.7.12.3.1 The contractor shall regularly review the status and adequacy of the program and realign the program to ensure the system requirements and those provided in this SOW will be satisfied.

C.7.12.3.2 Results of all SQA activities shall be documented in an established format and shall be promptly submitted to the Government. Failure by the contractor to report discovered discrepancies will be considered in non-compliance with contractual requirements. Program reporting shall be part of the management reporting system during all phases of software development. (CDRL A063)

C.7.13 Corrective Action. The contractor shall establish a corrective action process for reporting, correcting, and analyzing problems/failures occurring during all phases of this software effort. It shall address status tracking, failure analysis, corrective action, verification of implementation, and verification of corrective action.

C.7.13.1 The contractor shall conduct annual audits of this system to ensure its effectiveness.

C.7.13.2 The contractor shall perform an annual analysis of all software deficiencies for the purpose of identifying trends which disclose generic problem areas. The trend analysis shall include the study of the causes, magnitude of impact, frequency of occurrence, and preventive measures.

C.7.14 Modeling and Simulation Plan (MSP). The contractors MSP shall enumerate, describe and show how its modeling and simulation software items will be used to verify and validate requirements. The contractor shall include software simulation items to be used in performing or supporting operations or sustainment, as well as provide the architecture for models and simulators, including the plans for verifying and validating them prior to release. The contractor shall describe their approach for using software test beds and software simulators during the operational software development and show how resource contention will be avoided, if any. The contractor shall describe their approach to synchronize simulators, having operational software and support training functionality needs aligned with program milestones. The contractor shall describe the system technical baseline used to create the models and the contractor shall validate that the models have sufficient fidelity to be used in formal software test procedures. The contractor shall deliver the model baseline (Source and Executables), and verification test procedures, and complete functioning Computer Simulation Integration Lab (CSIL)/Vehicle Test Bed (VTB) test environment with documentation when agreed to by the parties to the Government. (CDRL A063)

C.8 ENVIRONMENTAL COMPLIANCE, HAZARDOUS SUBSTANCES, AND CORROSION COMPLIANCE

C.8.1 Environmental Compliance.

C.8.1.1 The contractor shall comply with all Federal, State, and local environmental laws, regulations, and policies.

C.8.1.2 Environmental Management Team (EMT). The EMT is a multidisciplinary group chartered by PM Armored Brigade Combat Team (ABCT)

dedicated to addressing environmental issues and supporting the PM ABCT environmental program. This team will include subject matter experts from Government and industry. The EMT shall set goals for environmental compliance, thresholds, priorities for hazardous materials elimination, and monitor contractor compliance in meeting reduction goals. The EMT shall work with the PM office to establish environmental compliance goals within program schedules and budgets. The contractor shall provide support to the EMT, to include attending meetings, completing assigned action items, providing information related to the development of program environmental documentation, and providing day-to-day guidance and information related to program environmental issues. The EMT meets on a semi-annual basis in order to adequately address and resolve current hazards associated with the vehicle system. There is a requirement for CONUS travel for the semi-annual meetings. Individual Work Directives will provide travel details for discreet projects.

C.8.2 Hazardous Substances

C.8.2.1 Hazardous Materials Management Program (HMMP). The contractor shall establish, implement, and maintain a HMMP using National Aerospace Standard 411, Hazardous Materials Management Program as a guide. The contractor shall prepare a Hazardous Material Management Report (HMMR) in accordance with CDRL A015 which, at a minimum, shall identify all hazardous materials required for system production and sustainment, including the parts that require them. The report shall also include a listing of prioritized hazardous materials for minimization/elimination and identify those hazardous materials/processes for which non-hazardous substitute materials/technologies may be available for implementation. This report shall be prepared in accordance with National Aerospace Standard 411, section 4.4.1. Current status, changes, or issues with the HMMR shall be discussed as a part of each technical review and program management review. This report will provide the basis for monitoring the reduction in hazardous materials used in the system. The HMMR shall be updated semi-annually in order to report reduction in hazmat use.

a) C.8.2.2 The contractor shall not use Class I or Class II Ozone-Depleting Substances. Exception to this requirement is as follows: Vehicles that were manufactured under previous contracts may be fielded with Halon 1301 to the extent that was allowed in the previous contract. No additional Halon 1301 may be added to these vehicles or systems without Government approval.

C.8.2.3 The contractor shall not use asbestos, cadmium (electroplating processes), hexavalent chromium (electroplating, and coatings processes), radioactive materials, beryllium, lead, or mercury in new (non-legacy) components without Governmental approval. Except for asbestos, no more than 0.1% by weight of the coating is acceptable. The contractor shall establish a database for components indicating the chemical make-up of each part to identify any hazardous materials. Lead in electronics and batteries are acceptable.

C.8.3 Corrosion Compliance

C.8.3.1 Corrosion Prevention Advisory Team (CPAT). The contractor shall provide support to the Governments CPAT, to include attending meetings and prepare meeting minutes (IAW CDRL A001), completing assigned action items, informing the CPAT of new environmental and corrosion issues, reviewing Engineering Change Proposals (ECPs) and their impact on the corrosion prevention and control of the system, and providing information to the CPAT regarding upcoming corrosion policy changes that may impact the program. The CPAT meets on a semi-annual basis in order to adequately address and resolve current hazards associated with the vehicle system. CONUS travel is required for the semi-annual meetings. Individual Work Directives will provide travel details for discreet projects.

C.9 MANPOWER & PERSONAL INTEGRATION (MANPRINT)

C.9.1 MANPRINT (Manpower and Personnel Integration) is a comprehensive management and technical program that focuses attention on human capabilities and limitations throughout the system life cycle. MANPRINT's goal is to optimize total system performance at acceptable cost and within human constraints. The MANPRINT program shall include aspects of all seven domains (Manpower, Personnel, Training, Human Factors Engineering, System Safety, Health Hazards, and Soldier Survivability).

C.9.2 Human Factors Engineering (HFE). The contractor shall perform necessary support to vehicles listed in C.1.1.1 and C.1.1.2 to include HFE on any design changes initiated during this contract.

C.9.3 System Safety

C.9.3.1 System Safety Program Requirements. The contractor shall establish and conduct a System Safety Program (SSP) in accordance with the requirements of the approved System Safety Program Plan outlined in DI-SAFT-81626 and in accordance with CDRL A018. All System Safety plans and actions will focus on the identification, assessment, mitigation, and continuous tracking, control, and documentation of environmental, safety, and health mishap risks encountered in the development, test, acquisition, use, and disposal of the vehicle weapon systems and subsystems. The system safety program is responsible for the implementation and monitoring of engineering and management principles, criteria, and techniques to achieve acceptable mishap risk, within the constraints of operational effectiveness, time, and cost, throughout all phases of the system life cycle. A safe design is a prerequisite for safe operations, with the goal being to produce an inherently safe product that will have the minimum safety-imposed operational restrictions in accordance with MIL STD 882D. The contractor shall establish approved list of critical safety items, and safety assessment reports for each system proposed and/or planned.

C.9.3.2 Safety Hazard Analysis/Reports. The contractor shall subject equipment design changes to Safety Engineering Analysis and provide updated System Safety Hazard Analysis Reports (SSHA) when a hazard exists in accordance with CDRL A019. The report shall be tailored to include a list of recommended critical safety items developed in support of the critical safety item program.

C.9.3.3 Safety Assessment Reports (SAR). The contractor shall update the Safety Assessment Reports (SAR), as required by the Government for directed design changes of this contract in accordance with CDRL A020. The SAR shall be tailored to include a list of recommended Critical Safety Items developed in support of the Critical Safety Item Program, health hazard assessments, and reflect other system safety reports developed in conjunction with the development of a configuration design change.

C.9.3.4 Safety Review Board (SRB). The contractor shall participate in the SRB. The SRB is managed by the PM Armored Brigade Combat Team Safety SRB Chairman. At a minimum, there is one SRB member from the Systems Engineering Division, Logistics Management Division, Product Assurance and Test Division, and the TACOM Safety Office. The SRB meets on a (Bi-weekly) in order to adequately address and resolve current hazards associated with the vehicle system. The SRB addresses all current active hazards with a continual tracking process by which to show hazard reduction progress from meeting to meeting. Local members attend on site meetings and outlying members connect to the meeting using a telephone conference call system. There is no requirement to travel. Emergency meetings can be coordinated to address situations in immediate need of resolution, and may be held with as little as 2 hours notice. As hazards are resolved and closed from the SRB by a unanimous member vote, all hazards are laterally transferred to the System safety working Group (SSWG) database and formally closed by a specific determination at the appropriate command level that the hazards risk is acceptable.

C.9.3.5 System Safety Working Group (SSWG). The contractor shall support the SSWG. The SSWG functions as an element of the Program Management Office (PMO) and acts as an advisory group to the PM. The SSWG will meet on an annual basis for each vehicle system in order to adequately address and resolve current hazards associated with them. The SSWG will monitor the system safety program tasks, including identification and validation of System Safety Requirements, serve as the focal point for the System Safety Program (SSP) and document, track, and maintained respective vehicle systems hazard tracking database. The SSWG is proactive in organizing and planning the SSP to provide guidance and influence system design, testing, operation and maintenance. The SSWG membership includes Principle, Associate, and Advisory members as outlined in the applicable system charter. The SSWG also is responsible for periodic review and update of all program related policies, charters, plans and system reports. The contractor shall provide a summary of the meeting through the dissemination of meeting minutes in accordance with CDRL A001.

C.9.3.6 Critical Safety Items (CSI). CSI shall be part of the normal design and modification process and the contractors safety program. CSI shall be identified on the applicable drawings in accordance with MIL-STD-31000 and applicable software documentation.

C.9.3.6.1 Critical Safety Program. The Critical Safety Program described herein is applicable to all items designed under this contract and for those items to which drawings will be delivered to the Government.

C.9.3.6.2 CSI: A part, assembly, installation, or production system with one or more critical characteristics that, if not conforming to the design data or quality requirements, would result in an unsafe condition that could cause loss or serious damage to the end item or major component, loss of control, or serious injury to personnel.

C.9.3.6.3 Critical Safety Characteristics (CSC): Any feature (i.e. tolerance, finish, material composition, manufacturing, assembly, or inspection process) of product, material, or process, which if nonconforming or missing would cause the failure or malfunction of the critical safety item.

C.9.3.6.4 Identification of CSIs. The contractor shall clearly identify each CSI and assembly process as such on the engineering top drawing, part drawing, or assembly drawing. The contractor shall also clearly identify the CSC(s) for each CSI as such on the engineering parts, engineering top drawings, part drawings, assembly drawings, or process documentation. The contractor shall ensure that all designated or identified CSCs shall have an associated control method. The control method, as a minimum, shall be either a Statistical Process Control (SPC) Process Capability Index (Cpk) greater than or equal to 1.66, or 100% inspection. The contractor shall annotate the control method in the notes for all designated or identified CSCs. The specific method for marking drawings shall be as delineated in MIL-STD-31000 and ASME Y14.100.

C.9.3.6.4.1 Data Sources. Identification of CSIs shall be based on the following data sources:

C.9.3.6.4.1.1 Sound engineering analysis and judgment
C.9.3.6.4.1.2 Failure modes and effects, criticality analysis (MIL-STD-1629)
C.9.3.6.4.1.3 Safety assessment / safety hazard analysis (MIL-STD-882D)
C.9.3.6.4.1.4 Development testing / operational testing results
C.9.3.6.4.1.5 RAM engineering assessments
C.9.3.6.4.1.6 Previous experience using like items or designs
C.9.3.6.4.1.7 Logistics Support Analysis (LSA) data
C.9.3.6.4.1.8 Component qualification test results

C.9.3.6.4.2 Contractor shall validate the CSI requirements expressed herein to ensure that all critical safety aspects of the design are accurately depicted on deliverable drawings, and parts or materials operate well below fatigue limits or stress levels. The contractor shall ensure that the Government can verify these requirements without the use of destructive inspection equipment. The contractors validation shall be based on engineering analysis of the CSI characteristics and shall consider design changes, and deterioration through time from use, fatigue life, and operating conditions.

C.9.3.6.4.3 CSI Master List. A master list of CSIs and associated critical characteristics, including nomenclatures and Part Numbers shall be prepared and documented by the contractor and furnished to the procuring activity in accordance with CDRL A064, Critical Safety Item(s)/Characteristics Report. The contractor shall maintain and update the CSI list throughout the life of the contract. The contractor shall also reference the CSIs on the vehicle class and division drawing. contractor shall revise the list as experience and knowledge are obtained and design changes are incorporated into the system.

C.9.3.7 Occupational Health Hazard Assessment (OHHA). The contractor shall perform and document on OHHA, in accordance with MIL-STD-882D, to identify health hazards and recommend engineering controls, equipment, and/or protective procedures, to reduce the associated acceptable risk. The contractor shall provide a health hazard assessment for each vehicle system and/or design modification 60 days prior to test activities in accordance with CDRL A021. Issues to be addressed within the report shall include, but not be limited to:

a) Noise
b) Toxic gases
   i. Carbon Monoxide
   ii. Ammonia
   iii. Oxides of nitrogen and sulfur
c) Toxic chemicals
d) Ionizing and non-ionizing radiation
e) Heat and cold (to include heat stress)
f) Shock and Whole Body Vibration to crew members
g) Address the chemicals identified in the Materiel Safety Data Sheets to be provided in accordance SAE-AMS2825.

C.9.3.7.1 Health Hazard Tracking. The contractor shall update and maintain the current Health Hazards associated with all vehicle systems in the respective vehicle hazard tracking database.

C.9.3.7.2 The data for this report will be, as much as possible, collected from the vehicle(s) the contractor will submit for Government testing or contractor demonstration. Data will be identified as to its source; the format of the OHHA shall be in accordance with CDRL A021.

C.9.3.8 Radioactive Material. Radioactive material will not be utilized unless the Government has determined that operational requirements cannot be met without its use. If radioactive material is to be incorporated into the system the following information will be provided to the Government:

a) Listing of the radioactive material and their quantities
b) Subsystem location of the radioactive material
c) Purpose of the radioactive material
d) Nuclear Regulatory License

C.9.3.9 Software Engineering. The contractor shall design software controlled or monitored functions to minimize initiation of hazardous events or mishaps.

C.9.3.10 Hazard Notification. The contractor shall establish an incident alerting/notification, investigation, and reporting process, to include notification of the program manager.

C.9.4 Soldier Survivability. Per AR 602-2 guidance, the Commanding General (CG) of AMC will, through the Director of the U.S. Army Research Laboratory-Survivability/Lethality Analysis Directorate (ARL-SLAD), provide technical advice and assistance on survivability/lethality/vulnerability-related issues to Integrated Concept Teams (ICTs) and PM Integrated Product Teams (IPTs) as it pertains to Soldier Survivability in combat systems. These issues include, but are not limited to, (1) conventional ballistics, (2) nuclear, biological, and chemical (NBC), (3) NBC-contamination survivability (CBRN), (4) electronic warfare, (5) electronic warfare vulnerability of tactical communications systems, (6) information operations/information warfare, (7) atmospherics/obscurants, (8) directed energy weapons, (9) jamming, (10) electronic countermeasures, and (11) personnel vulnerability.

C.9.4.1 Therefore, the contractor shall work with ARL-SLAD/HRED, the material developer (Program Management Office), combat developer, and any other entity identified by the Program Management Office to conduct and provide Soldier Survivability (SSv) Assessments and Survivability Analyses. The contractor shall use a systems engineering approach to develop requirements, design, modify and produce vehicle systems and materiel modifications with soldier survivability as a consideration. The contractor shall apply, where feasible and appropriate, the outputs and recommendations from the Soldier Survivability (SSv) Assessment and Survivability Analysis, and principal and design standards in the vehicle system which will: (1) reduce fratricide; (2) reduce detection; (3) reduce attack; (4) reduce damage if attacked; (5) reduce medical injury; and (6) reduce physical and mental fatigue. The contractor shall provide a report based on the results of the SSv assessment in accordance with CDRL A022.

C.9.4.2 Survivability Analysis. The contractor shall use a survivability analysis process to evaluate equipment and personnel susceptibility to attack and physical injury. The analysis shall consider the integration of the soldier(s) and how the system affects the soldiers survivability. The analysis shall focus on the effects of threats that might reduce the ability of the system to complete its mission and establish the system's capability, limitations, and survivability. The contractor shall deliver the survivability

analysis in accordance with CDRL A023.

C.10 SYSTEM VALIDATION / TESTING

C.10.1 The contractor shall provide a system validation function, the responsibility of which is to determine overall validation needs for both the overall system and its components, plan and schedule validation activities, monitor and coordinate the actual testing or analysis used to validate designs, and accomplish any and all other tasks needed to ensure that contractor design and integration efforts are fully validated. The contractor shall track and record progress of designs and components undergoing validation testing as directed by the Government, at Government and contractor test sites. The contractor shall plan, coordinate, and control Lab Validation/Qualification Testing for Line Replaceable Unit (LRU) items, alternate source items, and new components as a result of Government directed ECPs or production associated changes or improvements. The contractor shall be responsible for providing the labor and materials for the purchase and/or construction of hardware and software for system validation, including any source code and documentation.

C.10.1.1 The contractor shall deliver to the Government any software executables and source code, including subcontractors software executables and source code, as well as any models and test environment developed for system validation.

C.10.1.2 The contractor shall deliver any hardware developed for system validation to the Government once all Validation/Qualification tests have been completed.

C.10.1.3 The contractor shall be responsible for generating any requirements or design specifications required to document the final design configuration of the hardware and software used in system validation. This shall include but not be limited to the following: wiring diagrams, software documentation (system product specification, software requirements specification, etc.), hardware documentation (system specification, detailed design specification, etc.), system architecture drawing, etc.

C.10.2 Qualification Test. The contractor shall conduct qualification testing on the quantity of individual parts to be tested, as well as the specific qualification tests to be performed, shall be identified in the Work Directive. The contractor shall plan, coordinate, and execute Lab verification/qualification testing for all items, alternate source items, and new components. Acceptance tests will not be accepted as a substitute for qualification testing.

C.10.2.1 Qualification Test Plans. The contractor shall develop and implement Qualification Test Plans for all qualification tests and shall provide final versions of the aforementioned test plans to the Government in accordance with CDRL A024. Qualification Tests shall be done in accordance with the correct applicable specifications and test plans. Exception can be taken on the Work Directive.

C.10.2.2 Qualification Test Reports. The contractor shall submit Test Reports to the Government for approval or rejection after test completion. Test Reports shall be submitted in accordance with CDRL A025. Exception can be taken on the Work Directive.

C.10.3 RESERVED

C.10.4 RESERVED

C.10.4.1 RESERVED

C.10.4.2 RESERVED

C.10.5 Highly Accelerated Life Tests (HALT). The contractor shall conduct a HALT for all LRUs that are new or redesigned. The contractor shall develop and implement HALT planning, coordination, and control of Lab HALT testing.

C.10.5.1 LRU HALT Plans. The contractor shall develop LRU HALT plans and shall provide final versions of the aforementioned test plans to the Government in accordance with CDRL A028.

C.10.5.2 LRU HALT Reports. The contractor shall submit LRU HALT Reports to the Government for review and approval after completion of the final LRU HALT. These test reports shall be submitted in accordance with CDRL A029.

C.10.6 Environmental Stress Screening (ESS). The contractor shall establish and implement an ESS program for all LRUs and/or Shop Replaceable Units (SRUs) that are subjected to the ESS process. The contractor shall develop ESS profiles to determine optimum screens. The objective of the ESS effort shall be to improve design, product quality, product reliability, increase production yields, and reduce ownership costs.

C.10.6.1 ESS Proof of Screen. The contractor shall develop and utilize a Proof of Screen (POS) with respect to the ESS program for all LRUs and SRUs as directed by the Work Directive. The objective of the POS is to determine that the best ESS profile is being used to successfully screen hardware while not overstressing hardware and not causing unnecessary or latent failures.

C.10.7 Test Support. The contractor shall supply test hardware, software, labor, parts, facilities, instrumentation, and other items necessary to perform tests as directed by the Government.

C.11 QUALITY ENGINEERING

C.11.1 Quality Engineering. Quality Engineering (QE) shall be involved in all design reviews, specification reviews, verification planning, conducting verification, and technical data finalization to ensure the objectives of the overall production quality programs are achieved and continuously improved upon. QE shall participate in engineering meetings and determine the type and amount of verification necessary to ensure all requirements are satisfied. QE shall ensure DFSS tools are utilized in the design and/or integration process.

C.11.2 Quality Engineering Review. The contractor shall perform QE reviews of all TDP documentation affected by Work Directive. These reviews are to decide the type and amount of process and product controls and tests necessary to achieve a quality product. The contractor shall define these required process and product controls and tests on engineering drawings if possible. If a separate document is required for the quality requirements due to complexity or criticality, it shall be prepared in the same format as existing Quality Assurance Provisions (QAP) per DRSTA-P-702-155, and called out on the Technical Data.

C.11.3 Quality Assurance. The contractor shall develop, implement, and maintain a Quality Management System (QMS) acceptable to the Government for all supplies and services to be provided under this contract. The quality system shall, as a minimum, meet the requirements of ANSI/ISO/ASQ Q9001-2008 or an equivalent standard. Government approval of the Quality System is not required, if at the time of modification award, the contractor is a Registrar Accreditation Board (RAB) certified/registered ANSI/ISO/ASQ Q9001-2008, QS 9000/TS 16949, or AS 9100 supplier. The contractor shall make all QMS documents/procedures available for review to the Government when agreed to by the parties.

C.12 RELIABILITY / MAINTAINABILITY (R/M)

C.12.1 Reliability Program. The contractor shall maintain a reliability program in order to improve overall system reliability. This reliability program shall follow DOD adopted industry standard GEIA-STD-0009. This program shall include, but not be limited to, the following tasks:

a) Monitor/Control of Subcontractors and Suppliers
b) Parts Control and Reliability
c) Reliability Critical Items
d) Reliability Predictions

C.12.2 Maintainability Program. A Maintainability Program shall be maintained by the contractor. This program shall Monitor/Control of Subcontractors and Vendors and Program Reviews.

C.12.3 Monitor/Control of Subcontractors and Suppliers. The contractor shall establish procedures and controls, which shall insure that products obtained from suppliers, will meet R/M requirements. In addition, the contractor shall provide the Government with reasonable notice of any special R/M review meetings scheduled with subcontractors so that Government representatives can attend at their discretion.

C.12.4 Parts Control and Reliability. All parts used shall be selected to emphasize reliability, preferably from standard, military, or qualified parts. If a standard, military, or qualified part is not available, a suitable equivalent part shall be selected and if a specification or drawing is prepared, the nearest equivalent military specification shall be used as a guide. Parts that are nonstandard shall require Government approval in accordance with CDRL A030.

C.12.5 Reliability Critical Items. The contractor shall identify and control reliability critical items. This task shall be coordinated with logistic support activities to insure that requirements and results are compatible and used in the Logistics Support Analysis Record (LSAR).

C.12.6 RESERVED

C.12.7 Design for Testability. The contractor shall design systems and subsystems (including hardware and software) that adhere to testability analysis using an array of detection methods. Data collection and testability improvement methods should be carried out as needed throughout program maturity.

C.12.8 The contractor shall capture and analyze information associated with performance and acceptability of produced vehicles, vehicles currently in test, and vehicles currently fielded. This may include identification of problematic issues, identifying emerging negative trends, and recommend potential cost saving solutions.

C.12.9 Data Collection. The contractor shall utilize the Governments PM ABCT Asset Management System (AMS) for all collection efforts of produced systems. The contractor shall be responsible for entering all required system (s) data into AMS as directed by the Government in the Work Directives. Each data collection effort shall have a detailed scope defined in the Work Directive.

C.13 FAILURE REPORTING, ANALYSIS, AND CORRECTIVE ACTION SYSTEM (FRACAS)

C. 13.1 The FRACAS shall consist of a documented comprehensive closed-loop corrective action system which requires the contractor to collect, quantify, perform root cause analysis, identify and verify/validate corrective action.

C.13.2 The contractor shall establish and maintain a system for analysis of TIRs generated during Government tests. The system shall be capable of tracking the status of TIRs to include necessary distribution, Corrective Action, Failure Analysis and Management reports, in accordance with the criteria set forth in the following paragraphs.

C.13.2.1 The contractor shall access all TIRs directly through Vision Digital Library System (VDLS).

C.13.2.2 The contractor shall furnish a written report for each TIR with an analysis of the failure in the form of a Failure Analysis and Corrective Action Report (FACAR). FACARs are to be prepared and submitted in the contractors format in accordance with DI-SISS-81315A, CDRL A031.

C.13.2.3 Responses to the TIRs are to be provided within the following time frames:

Critical - Electronic or magnetic media response within five days after each incident.
Major - Electronic or magnetic media response within thirty days of receipt of TIR.
Minor - Electronic or magnetic media response within forty-five days of receipt of TIR.

C.13.2.3.1 NOTE: For minor TIRs, the number of TIRs for which responses are required will be specified in the Work Directive. Information - As requested by the PCO.

C.13.2.4 Supplemental full FACARS may be submitted by the contractor after the initial submittal period to provide additional information on the failure analysis investigation and corrective actions required to ensure that the corrective action analysis are complete prior to close out.

C.13.2.5 FACARs are to be submitted to the Government via EPDM and then via the Asset Management System (AMS) when AMS become available. TIR (FACAR) responses for subcontractors shall be coordinated through the prime contractor. If the contractor's FACAR is rejected, the Government will notify the contractor within thirty (30) calendar days of submission of the FACAR to AMS. The contractor shall be required to resubmit a response with thirty (30) calendar days of that notification.

C.13.2.6 Failure Mode and Effects Analysis (FMEA). The contractor shall use and implement FMEA or a similar tool to evaluate potential failure modes and their causes. Priority should be made according to risk and drive actions to eliminate or reduce their likelihood of occurrence. contractor shall provide a discipline/methodology for documenting this analysis for future use and continuous process improvement and shall be made available to Government when agreed to by the parties. FMEA shall be done in accordance to CDRL A032.

C.14 INTEGRATED LOGISTIC SUPPORT (ILS)

C.14.1 ILS Management. The contractor shall develop, implement, perform and manage logistics support and analysis for the vehicle systems listed in C.1.1 in accordance with the following sections of the contract: Hazardous Material Management Program (in accordance with C.8); Test and Evaluation (in accordance with C.10); MANPRINT program (in accordance with C.9); Reliability and Maintainability Program (in accordance with C.12); Integrated Logistics Support (in accordance with C.14); and Training Devices (in accordance with paragraph C.15). The contractor shall make maximum use of ILS data developed under previous Government contracts and ensure that there is no duplication of effort in accomplishment of any of these ILS requirements. The contractor shall maintain control of subcontractor/vendor ILS accomplishments.

C.14.1.1 ILS Integrated Product Team (IPT). The IPT will be established by the Government to jointly manage the ILS program and to review progress. The contractor shall participate in the IPT, and meeting shall be held as agreed to by the parties.C.14.1.2 Life Cycle Support Plan (LCSP). The contractor shall support completion of the supportability strategy as required.

C.14.1.3 ILS Master Schedule. The contractor shall maintain schedules for each element of ILS (and any narrative required to clarify schedules) for the requirements of this Contract. All schedule changes require approval by the Government ILS Manager.

C.14.1.4 Depot Maintenance Support Plan. The contractor shall support completion of the depot maintenance support plan.

C.14.2 Logistics Analysis/Logistics Management Information (LMI)

C.14.2.1 Logistics Support Analysis Record (LSAR) or LMI. LSAR or LMI is required to enable appropriate planning for support and sustainment of the vehicle systems listed in C.1.1 and must be available to support the Logistics Demonstration. The contractor shall conduct Analyses and other efforts as follows:

a) Maintenance planning
b) Operator task analysis
c) Scheduled Maintenance tasks analysis

d) Unscheduled Maintenance task analysis
e) Support equipment identification
f) Tool and test equipment identification
g) Packaging, Handling, Storage and Transportation

C.14.2.2 ILS Design Change Tracking

C.14.2.2.1 The contractor shall maintain an ILS design change tracking system which provides logistics tracking data to include estimated cost to implement proposed design changes from Work Directive inception through Government approval. The tracking system shall relate back to the configuration control board and engineer change proposals.

C.14.2.3 Reliability, Availability and Maintainability (RAM)

C.14.2.3.1 Failure Mode Effects and Criticality Analysis (FMECA). The contractor shall conduct a FMECA to reflect all designs down to the subsystem indenture (except for commercial off the shelf items for which the FMECA shall be performed to the lowest level possible). Potential failure modes shall be identified and evaluated to determine their effect on mission success. The FMECA shall be performed either as a hardware analysis or as a combination of a hardware analysis with functional analysis as required for commercial off the shelf items. The criticality analysis shall be quantitative, incorporating the failure rates calculated in the reliability predictions and rank failure modes according to failure severity classification and its probability of occurrence. The FMECA Report shall be delivered in accordance with CDRL A032 and DI-ILSS-81495.

C.14.2.4 Maintenance

C.14.2.4.1 The contractor shall conduct Maintenance Planning and Supportability Analysis to develop logistics products based on two level maintenance policies in accordance with AR 750-1, Army Materiel Maintenance Policy and AR 700-127, Integrated Logistics Support. The contractor shall use MIL-PRF-49506 and ANSI GEIA-STD-0007 for new components in identifying content, format, delivery and related guidance for logistics data, except where otherwise identified in this contract. The contractor shall perform Logistics Support Analysis (LSA) to determine the most effective and efficient means for supporting design and supportability changes.

C.14.2.4.2 The contractor shall perform Level of Repair Analysis (LORA) based on the Army two-level maintenance policies in accordance with AR 750-1, Army Materiel Maintenance Policy. The contractor shall refer to existing LORA analysis for Armored Brigade Combat Team (ABCT) common items. The LORA report shall address both new and existing items. The LORA will be prepared and delivered in accordance with Section J, Attachment 0006 (LORA), CDRL A033 and DI-ALSS-81530.

C.14.2.4.3 Testability. The contractor shall update and implement the necessary testability tasks and activities of the contract to minimize Test Program Set (TPS) test time, hardware, and development time, and to optimize TPS fault detection and fault isolation performance. The contractor shall use MIL-HDBK-2165 as a guide to implement the necessary testability tasks and activities to achieve Fault Detection and Isolation, Prognostics, Built in Test (BIT), and Built in Test Equipment (BITE) requirements.

C.14.2.4.4 Provisioning Plan/Analysis. The contractor shall support completion of the Provisioning Plan. The contractor shall conduct analyses to support the provisioning requirements in C.14.2.6.

C.14.2.4.5 Maintenance Analysis. All design, modification and engineering change activity performed under this contract shall require maintenance analysis. Maintenance analysis shall be performed by the contractor in response to Government furnished Test Incident Reports (TIR), Recommended Changes to Publications and Blank Forms (DA Form 2028), Product Quality Deficiency Reports (PQDR) (Standard Form 368), Field Service Representative Reports or other deficiency reports. In performance of maintenance analysis, the contractor shall:

a) As applicable, disassemble and reassemble the item under analysis to the extent required for effective review of the design for training and maintenance activities.
b) Provide sequential narrative instructions or procedures (maintenance source data) for application, installation or maintainability.
c) As a result of the maintenance analysis, recommend revisions in repair parts and special tool requirements, technical manuals, kits, tools, support equipment and test equipment.
d) Use maintainability Design Criteria information in MIL-HDBK-470 for guidance in making design decisions.

C.14.2.4.6 Logistics Studies. The contractor shall conduct and perform logistics studies to include trade-off analysis, level of repair analysis, and integration of Government logistics data, as directed by the Government. Results of those studies shall be provided in accordance with CDRL A034.

C.14.2.4.7 Operating and Support (O&S) Cost Data. The contractor shall capture and produce O&S cost data and reports as specified in the associated Work Directives. The O&S cost reports shall be provided in accordance with CDRL A035.

C.14.2.5 Logistics Support Package

C.14.2.5.1 LSAR/LMI. The contractor shall maintain a LSAR or LMI database for all vehicles to include a Provisioning Bill of Material (P-BOM).

C.14.2.5.2 The contractor shall develop recommended Basic Issue Items (BII) lists, Components of End Item (COEI) lists and Additional Authorization Lists (AAL), and deliver them in accordance with A037.

C.14.2.5.3 System Support Package Component Lists (SSPCL). The contractor shall prepare and deliver SSPCL for test, demonstrations and other program activities requiring other than normal organic logistic support in accordance with CDRL A036.

C.14.2.5.4 Maintenance Task Analysis. The maintenance analysis shall be documented in the contractors format as an LMI summary entitled Maintenance Analysis, and will identify the maintenance functions, level of maintenance, manpower, spare and repair parts and support equipment required for each replaceable and repairable item. The Maintenance Analysis shall include a maintenance task file documented in contractor format, and will serve as source data for development of the Maintenance Allocation Chart (MAC), Provisioning Parts Lists, Technical Manuals and Army Manpower and Requirements Criteria (MARC). The Maintenance Analysis shall be documented in end item hardware breakdown sequence (top-down breakdown), using LSA Control Numbers (LCN). The Maintenance Analysis Summary shall be prepared and delivered in accordance with Section J, Attachment 0007 (LMI Summary Worksheet: Maintenance Analysis), CDRL A037 and DI-ALSS-81530.

C.14.2.5.5 Item Classification. To determine packaging requirements, items shall be classified as either selective or special group items.

C.14.2.5.5.1 Selective Group Items. Selective Group items are those that do not require a drawing, sketch, illustration, narrative type instructions, do not exceed 40 pounds, or have any one dimension which exceeds 40 inches or have a length and girth of over 84 inches. These items shall be considered Selective Group items if appropriate packaging can be defined by the codes in MIL-STD-2073-1D.

C.14.2.5.5.2 Special Group Items. Items shall be considered Special Group Items if:

a) Narrative instructions or figures are needed to describe packaging requirements.
b) They are kits, sets, or items consisting of separate parts.
c) They are items that require disassembly for packaging.
d) They are items requiring special handling or condemnation procedures.
e) They are items considered Hazardous for Transport.
f) They are items considered to have a shelf-life.
g) They are items excluded from the Selective Group.

C.14.2.6 Provisioning

C.14.2.6.1 Provisioning Parts List (PPL)

C.14.2.6.1.1 Provisioning Bill of Material Master File. The contractor shall build, maintain and update an LSAR database capable of electronic data transfer to the Government on a quarterly basis for all assigned vehicles updating the Provisioning Bill of Materials (P-BOM). The contractor shall provide up-to-date approved data to include part number changes, Engineering Change Proposal (ECP) information and reflect all approved changes to other P-BOM data elements as required. Prime part numbers and Commercial and Government Entity (CAGE) Codes will reflect the original equipment manufacturers information unless that part is modified, changing form, fit, and function. The PPL shall include all parts, special tools, BII, COEI, AAL items and expendable and durable items. The contractor shall provide reports addressing discrepancies between the LSAR database and the P-BOM. Also, the contractor shall host Provisioning Conferences for approximately five Government Representatives and provide contractor services as agreed to by the parties. Each submission of the PPL shall have no more than 1,500 lines, unless approved in advance by the Government.

C.14.2.6.1.2 Logistics Management Information Provisioning Data. The contractor shall prepare and submit LMI provisioning data (PPL) in accordance with MIL-PRF-49506, Section J: Attachment 0008 (Provisioning Requirements Statement), Attachment 0009 (LMI Data Worksheet Provisioning Data Requirements), CDRL A038 and DI-ALSS-81529.

C.14.2.6.2 Engineering Data for Provisioning (EDFP)

C.14.2.6.2.1 EDFP. The contractor shall maintain electronic access to Military and Federal Specifications and Standards. EDFP to include the top assembly drawings shall be submitted in accordance with Section J, Attachment 0008 (Provisioning Requirements Statement), CDRL A039 and DI-ALSS-81529. The contractor shall deliver all drawings and data in English.

C.14.2.6.2.2 All approved vendor Commercial and Government Entity (CAGE) codes are to be cited by the contractor (typed, stamped, or in legible writing with authorized signature and date) on drawings when furnished concurrently with each submitted increment of the provisioning parts list for each "P" coded item.

C.14.2.6.3 The contractor shall maintain and continuously update his provisioning file with the P-BOM feedback data provided by the Government (i.e., changes, additions or deletions to part numbers, source, maintenance and recoverability codes, and failure factors) throughout the term of the contract.

C.14.2.6.4 The contractor shall correct validation rejects within thirty (30) days of receipt.

C.14.2.6.5 The contractor shall submit provisioning reports and supporting documentation, in accordance with A037,compatible with the Logistics Modernization Program (LMP) and shall be able to mutually exchange provisioning data with the Government as directed.

C.14.2.6.6 Design Change Notice (DCN). The contractor shall notify the Government of those design or part changes which modify, add, delete or supersede any of the operating, maintenance or repair parts information that was previously provided.

C.14.2.6.7 Provisioning and Pre-Procurement Screening Data

C.14.2.6.7.1 It is required that the contractor standardize commercial items selected as repair parts. There is a precedential ranking of preferred part numbers as follows: Government or industry association specifications, drawings, or standards number is the preferred (Prime) reference number.

C.14.2.6.7.2 The contractor shall conduct provisioning and pre-procurement screening for standardization of all commercial items selected as repair parts. The contractor shall perform provisioning and pre-procurement screening for non-standard new or changed spare/repair parts to determine if the item or data already exists to preclude duplication of documentation. This screening shall be used to select valid part numbers for input to the P-BOM for total support of the end item. All vendor source information identified on the drawing shall be screened. Results of provisioning and pre-procurement screening for standardization and component selection shall be used to update the contractors provisioning file. The screening results shall be available to review at each provisioning conference.

C.14.2.6.7.3 The contractors submittals shall be updated to reflect the current prime part numbers that have a National Stock Number (NSN) resulting from the screening process.

C.14.2.6.8 Maintenance Replacement Rates

C.14.2.6.8.1 Results from the reliability and maintainability program shall be used to determine Maintenance Replacement Rates I and II (or Failure Factors) as required by the contract. These rates may be different due to model and configuration of the end item. If the application requires only one record build Provisioning Line Item Sequence Number (PLISN), the Maintenance Replacement Rate (MRR) shall be a consolidation of all known reliability and maintainability information.

C.14.2.6.8.2 The contractor shall develop rationale and methodology for determining MRR in accordance with MIL-PRF-49506 or Failure Factors (FF) using the following data:

a) Engineering Data
b) Warranty Data
c) Testing and Developmental Documentation
d) Historical Data of a Similar Piece of Equipment

C.14.2.6.8.3 MRR 2/FF 2 (Failure Factor two) is the wartime failure rate and shall be, at a minimum, 2.5 times greater than that of MRR 1/FF 1 (peacetime).

C.14.2.6.9 Documentation of Parts Pricing

C.14.2.6.9.1 The contractor shall screen the Government databases for data on all parts of the Contract Item and shall utilize the price(s) cited there whenever available. In the event the price is not contained in the Government databases, the contractor shall develop a LSAR Unit of Measure Price. The contractor shall enter the most economical price in the LSAR data base as the unit of measure price.

C.14.2.6.9.2 Next Higher Assembly PLISN and Overhaul Quantities. Next Higher Assembly (NHA) PLISN and Overhaul Quantities (OVHL QTY) are used to identify and forecast repair parts requirements for all assemblies or subassemblies or components. The contractor shall enter overhaul quantities for each item, in accordance with MIL-PRF-49506:

a) Identify the immediate NHA PLISN. Enter an overhaul quantity.
b) Identify all subsequent assemblies proceeding, using the LSA Control Number (LCN) structure, the down part. Enter NHA PLISN and OVHL QTY.
c) Identify the model record PLISN as a NHA PLISN and enter an OVHL QTY, if called for by the Government.

C.14.2.6.10 Provisioning Quality Acceptance Standards

C.14.2.6.10.1 The quality standards outlined in the Quality Assurance Provisioning Process Guidebook apply to all phases of the provisioning effort.

C.14.2.6.10.2 During the term of the contract, changes may occur that are due to formal program or process requirements. The contractor

will be formally notified of these provisioning changes through the PCO. These changes will be in effect from that date forward.

C.14.2.7 Transportability

C.14.2.7.1 Transportability Report. The contractor shall update and deliver a final Transportability Report, Transportability Plans, Load Plans and Shipping and Clearance Diagrams in accordance with CDRL A040 and DI-PACK-80880C.

C.14.2.7.2 The contractor shall provide a system physical shipment configuration procedure and information necessary to support the US Army in obtaining an Air Transportability Certificate.

C.14.2.8 Performance Based Logistics (PBL)

C.14.2.9 Item Unique Identification (IUID)

C.14.2.9.1 The contractor shall provide engineering support to establish a multifunctional IPT to plan for and implement IUID markings on the vehicle systems listed in C.1.1.

C.14.2.9.2 The contractor shall propose and deliver an Implementation Plan in accordance with CDRL A041 and DI-MGMT-81737, to include:

a) A list of all components or spares for which a IUID would be required by the DOD Guide to Uniquely Identifying Items, Assuring Valuation, Accountability and Control of Government Property (version 2 dated 1 Oct 2008 or later revision) and MIL0-STD-130N or later revision.

b) A recommended prioritization of IUID marking on components or spares based on Government input with respect to prioritization criteria.

c) A recommended list of components that require IUID markings.

C.14.2.9.3 The contractor shall conduct a review session with the Government approximately 30-45 days after submission of the proposed implementation plan to finalize the implementation plan and an approved list of components for which to pursue IUID markings.

C.14.2.9.4 The contractor shall assess approved components as identified and selected in the final implementation plan to determine:

a) The location of the marking on the component or part.
b) The means for marking the component or part.
c) Possible impacts of the IUID marking on the use and function of the item (e.g., does not interfere with component operation).

C.14.2.9.5 The contractor shall identify technical data revisions, such as drawings, technical manuals, etc., required to enable the application of the IUID markings on approved components. The contractor shall revise technical data for the approved components upon Government concurrence on the IUID implementation for each of the approved components.

C.14.3 Logistics Support Package

C.14.3.1 Technical Publications

C.14.3.1.1 Equipment Publications. The contractor shall prepare and deliver all applicable publications or source material, to include, Department of the Army Technical Manuals (TM), Repair Parts and Special Tools Lists (RPSTL), Depot Maintenance Work Requirements (DMWR), National Maintenance Work Requirements (NMWR), Modification Work Orders (MWO), Battle Damage Assessment and Repairs (BDAR), and Hand Receipts (HR), in accordance with Government approved Work Directives. The contractor shall update and deliver all applicable publications and source material to reflect design changes, DD Form 2028 comments, user jury input, and changes to the P-BOM, in accordance with Section J, Attachment 0010 (Technical Publications) and CDRL A042 A048.

C.14.3.1.1.1 Publication Files. The contractor shall maintain a digital master file for each publication. This master file shall contain the source data (text and illustrations) and all subsequent changes made to each publication during this Contract. The master file shall be delivered to the Government in accordance with CDRL A042 A048.

C.14.3.1.1.2 Delivery Rights. Technical Manuals, including any software technical manuals, prepared and delivered under this Contract entitle the Government to unlimited rights as described in the general provisions of the contract. The contractor shall furnish an appropriate copyright release for any manual containing commercial copyright information that is delivered under this Contract. This requirement applies to all copyrighted data within delivered manuals, including vendor- or subcontractor-held copyrighted information. The contractor shall be responsible for obtaining a copyright release from the vendor or subcontractor and furnishing such release to the Government. The contractor shall provide publication data to the Government when agreed to by the parties. The Government reserves the right to use the data for future updates, to conduct tests on periodic updates of Government Furnished Equipment (GFE) software (e.g., Electronic Maintenance System (EMS) Next Generation software updates), and to reproduce vendor or subcontractor commercial manuals, in hard copy, Electronic Technical Manual (ETM), and Interactive Electronic Technical Manual (IETM) format.

C.14.3.1.1.3 Electronic Technical Manuals (ETM)

C.14.3.1.1.3.1 ETM Specifications. The specifications shown below shall be used to develop ETMs. Contractor shall respond to the latest version at date of contract award. Copies can be obtained from the Government PCO.

a) MIL-STD-40051-2 or later revision, Preparation of Digital Technical Information for Page-Based Technical Manuals
b) MIL-STD-2361C or later revision, Digital Publications Development
c) MIL-HDBK-1222D or later revision, Guide to the General Style and Format of US Army Work Package Technical Manuals

C.14.3.1.1.3.2 ETM Preparation Instructions. Contractor shall deliver Technical Manuals (TM), National Maintenance Work Requirements (NMWR), Depot Maintenance Work Requirements (DMWR), Modification Work Orders (MWO), Battle Damage Assessment and Repairs (BDAR), and Hand Receipts (HR), in accordance with the Work Directive and guidance in paragraph C.14.3.1.1.5.

C.14.3.1.1.4 Interactive Electronic Technical Manuals (IETMs)

C.14.3.1.1.4.1 IETM Specifications. The specifications shown below shall be used to develop IETMs. Contractor shall respond to the latest version at date of contract award. Copies can be obtained from the Government PCO.

a) MIL-STD-40051-1 or later revision, Preparation of Digital Technical Information for Interactive Electronic Technical Manuals (IETM)
b) MIL-STD-2361C or later revision, Digital Publications Development
c) MIL-HDBK-1222D or later revision, Guide to the General Style and Format of US Army Work Package Technical Manuals
d) S1000D or later revision, International Specification for Technical Publications Utilizing a Common Source Database

C.14.3.1.1.4.2 IETM Preparation Instructions. The contractor shall develop, maintain, update, and deliver as required the Interactive Electronic Technical Manuals (IETM) for the vehicle. IETM shall be Computer-aided Acquisition and Logistics Support (CALS)-compliant, Extensible Markup Language (XML)-based, and meet requirements of MIL-STD-40051-1 or latest revision, MIL-DTL-87268C or latest revision or S1000D or latest revision. CD ROM or DVD containing the un-compiled source files shall be delivered in accordance with the Work Directive. CD ROM or DVD containing the compiled version with presentation application and hard copy instructions as an insert to the case for the CD ROM or DVD and shall be delivered in accordance with the Work Directive and guidance in paragraph C.14.3.1.1.5.

C.14.3.1.1.5 Publication deliveries. The contractor shall use MIL-STD-40051 for required TM content and format that meet Army requirements. MIL-STD-40051 is an all-inclusive standard which includes information on technical manual preparation and assembly, and introductory, theory, operator, troubleshooting, maintenance, repair parts and special tools lists, and supporting information. Contractor shall reference existing DA equipment publications, when possible, to avoid duplication of system component information, unless components are unique. Parameters for each delivery are described below:

a) Draft Equipment Publication (DEP). For DEP ETM/IETM deliveries, the contractor shall provide complete publications, that is, validated draft TM after Government-approved First Article Test. DEP manuals shall be representative of the final product. DEP ETM deliveries shall be delivered via DVD or CD as Adobe Acrobat compliant Portable Document Format (PDF) files which can be read in the Adobe Acrobat Reader and edited and searched with Adobe Acrobat Professional software. DEP IETM deliveries shall be delivered via DVD or CD, as directed by Government.

b) Final Draft Equipment Publication (FDEP). For FDEP ETM/IETM deliveries, contractor shall provide complete publications, that is, edited DEP ETM/IETM. FDEP shall include all changes and final resolutions resulting from our reviews and tests, as well as contractor quality reviews and final edit. All changes and corrections as a result of validation/verification should be included in each FDEP. FDEP ETM deliveries shall be delivered via DVD or CD as Adobe Acrobat compliant PDF files which can be read in the Adobe Acrobat Reader and edited and searched with Adobe Acrobat Professional software. FDEP IETM deliveries shall be delivered via DVD or CD, as directed by Government.

c) Final Reproducible Copy (FRC). For FRC ETM deliveries, contractor shall provide DVD or CD as Adobe Acrobat compliant PDF files which can be read in the Adobe Acrobat Reader. Source data of ETM shall also be provided upon Government request. FRC IETM deliveries shall be via DVD or CD, as directed by Government.

C.14.3.1.1.6 Publication Quality Assurance

a) Contractor shall be responsible for the quality of the ETM, IETM, and for developing effective processes to develop, test and inspect the deliverables, ensuring technical accuracy, usability, completeness (within the scope of the contract), consistency, and that the publications generally meet contract requirements prior to delivery. ANSI/ISO/ASQC Q9001 may be used as guidance.

b) The contractor shall validate all technical and equipment publications and verify them for completeness, accuracy, usability and adequacy of content against the related system or equipment. The contractor shall ensure completeness, clarity and usability of digital products before delivery to the Government and shall provide certification of publications validation when agreed to by the parties. Validated data shall be re-validated when changes result from (e.g., testing and approved ECP), or when contractor fails to validate.

c) Validation is a process where the contractor shall physically perform one hundred percent of the procedures developed to support the vehicle configurations being procured. Validation is an action performed on text and illustrations developed to meet contract requirements; therefore development and validation of data cannot be done simultaneously. Validation also includes contractors comparative review of all other technical data to the configuration of the item being procured. The validation effort shall assure that both text and illustrations are mutually supportive and accurately describe and reflect the vehicle configurations being procured. The Government may choose to witness the Validation of the ETM and IETM. The contractor shall develop and deliver logistics support package Validation and Verification plans and conduct and support validation and verification efforts in accordance with CDRL A049 and DI-TMSS-81818. The contractor shall provide a Technical Manual Validation Certificate in accordance with CDRL A050 and DI-TMSS-81819.

d) Contractor shall provide appropriate personnel for rendering services at the Government Verification. A pre-determined location will be agreed upon. Contractor shall provide all necessary hardware and support equipment that will be required during the Verification.

e) Contractor shall perform services at In-Process Reviews (IPR) by providing samples of work accomplished to date or other requested data and identify improvements to the manuals, or QA process required as a result of IPR comments.

C.14.3.2 Packaging, Handling, Storage & Transportation (PHS&T)

C.14.3.2.1 Packaging Data Requirements. The contractor shall provide packaging instructions for provisioned items in accordance with A051. The contractor shall assess engineering and logistic changes for packaging impact and provide packaging impact statements with the ECP. The contractor shall provide draft packaging revisions and additions when there is a packaging impact. Packaging data entries, Special Packaging Instructions (SPI) images and configuration data shall be electronically transmitted. Packaging design validation shall be done in accordance with ASTM D4169, Distribution Cycle 18. Packaging data entries should be forwarded to the TACOM Packaging File (PACQ) in ASCII text format.

C.14.3.2.1.1 The contractor shall, for items pertaining to vehicle models under this contract, develop and provide packaging data for all provisioned items lacking packaging data, and maintain and update packaging data for each provisioned item. The contractor shall assess changes to engineering and logistic data for impact on packaging data, and shall provide packaging impact statements with the ECP. For each change, the contractor shall determine if additional items require packaging data and if existing packaging data requires revision. The contractor shall provide new and revised packaging data if sufficient data is not present in the TACOM Packaging File. TACOM- managed items that are being considered for packaging development shall be specifically identified to the Government PCO prior to any packaging effort being initiated. The contractor shall provide facilities, equipment, materials, and access to the provisioned items for packaging development. The contractor shall include information for each of the items, which shall be provided concurrently with each packaging data submittal, so that the Government can determine the adequacy of the contractor-prepared packaging analysis and data submittal. This includes item drawings and data such as: Source, Maintenance, and Recoverability (SMR) codes, Unit of Issue codes, Unit of Measure and Measurement Quantity, and copies of any applicable Material Safety Data Sheets.

C.14.3.2.1.1.1 The contractor shall be responsible for packaging development status. This includes engineering and logistic changes showing the status of packaging development for these changes. The contractor shall make available the packaging development status of each provisioned item. The contractor shall provide the electronic data interface.

C.14.3.2.1.1.2 Packaging/Logistics Data Entry. The contractor shall develop, maintain and update packaging data in accordance with Section J: Attachment 0011 (LMI Data Worksheet: Packaging Data Products), Attachment 0012 (LMI Data Worksheet: Packaging Data Transaction Format), CDRL A051 and DI-ALSS-81529. LMI packaging data is required IAW MIL-PRF-49506 and will provide for the entry of information to the computer data base known as the TACOM Packaging Data File. The TACOM approved Packaging Data Entry shall be in an ASCII delimited text format using commas as delimiters. Quotation marks may be used as text qualifiers but are not required.

C.14.3.2.1.2 Special Packaging Instructions (SPI). The contractor shall develop, maintain and update the SPI for each Special Group Item. Packaging processes and materials shall be described for cleaning, drying, preserving, packing, marking, and unitization. Figures and narrative data shall be developed to describe the form, fit, and function of packaging in sufficient detail for production. The format and content of SPI shall be in accordance with CDRL A052 and DI-PACK-80121B.

C.14.3.2.1.3 Validation Testing of Preservation Processing and Packaging. The contractor shall validate packaging for Special group items in accordance with Appendix F of Standard Practice for Military Packaging MIL-STD-2073-1D or later revision. The test report shall be provided concurrently with the packaging data submittal, and shall include photographic records of package and testing. For Long Life Reusable Containers (LLRC), and Shipment and Storage Instructions, the contractor shall provide notification to the Government of when validation and testing shall be conducted, and concurrently submit a proposal for associated costs. A Government Representative will verify and witness the contractor validation.

C.14.3.2.1.4 Shipment and Storage (S&S) instructions. The contractor shall develop and maintain instructions for preservation processing of the vehicles. Consideration shall be made for disassembly procedures to meet clearance requirements for land, air, and sea shipments and to assure economical transportation. Packaging requirements for Basic Issue Items (BII) and Components of the End Item (COEI) shall be evaluated for impact as a result of potential revisions to the S&S instructions. The BII shall be packed separately from the COEI. The contractor shall consider stowage locations and securing provisions. Stowage requirements shall deter pilferage and shall

not interfere with lifting, tiedown, or other transportation handling. With each ECP, the contractor shall enclose a draft of each required S&S instruction within 60 days of ECP approval. Each S&S instruction shall be delivered in accordance with CDRL A053 and OT-93-1226.

C.14.3.2.1.5 Container Design Retrieval System (CDRS) Search Request. This management system program provides a DOD a centralized, automated data-base system for storing, retrieving, and analyzing existing container designs and test information concerning specialized containers. The contractor shall use this system when making search requests for any reusable container designs in accordance with CDRL A054 and DI-PACK-80683A.

C.14.3.2.1.5.1 Guidelines for determining when reusable containers are desirable includes, but is not limited to the following:

a) The container can serve two purposes; either as a shipping and storage container or as a case while the item is in use.

b) The cost of a reusable container is offset through multiple reuse as compared to the cost of a single shipment disposable container. The item may be recovered, repaired, or returned.

c) The need for periodic inspection or exercising the contained item justifies a reusable container. Item fragility dictates the level of shock absorbing system to be used?. Economics of package and shipping costs versus damage costs for each of several different package designs.

C.14.3.2.1.5.2 For repairable items where retrograde shipments will be required and for items requiring special handling or condemnation procedures, the contractor shall identify to TACOM those items that are candidates for Long Life Reusable Containers (LLRC) in accordance with CDRL A055 and DI-ILSS-80870. The contractor shall make Search Requests for all reusable container designs for those items identified to TACOM (or identified to the contractor by TACOM) and approved by TACOM as LLRC candidates. The purpose of the CDRS is to avoid duplication in container designs, minimize the number of new container designs being developed and promote reuse of existing DOD reusable containers for new item development and procurement.

C.14.3.2.1.5.3 The contractor shall conduct and deliver to the Government an assessment, in accordance with A053,to determine whether existing container designs are suitable. The contractor shall assess the form, fit and function of existing containers and compare costs of modifications to existing designs and alternate new designs. Assessment data shall include analysis justifying the need for a new or modified LLRC is required.

C.14.3.2.1.6 Reusable Container Development. Upon approval, the contractor shall make a reusable container proposal for each new repairable item which, by the application of engineering, economic, and other factors, could be reasonably restored to a serviceable condition through regular repair procedures. The proposal shall include cost of development and design, validation, completion of the technical data package for competitive procurement, and container production and life cycle cost. A life cycle cost analysis shall be made and compared with a container that protects the item from damage and deterioration when exposed to the standard storage and distribution requirements defined in ASTM D4169, distribution cycle 18, assurance level I, criterion 3.

C.14.3.2.1.6.1 Upon approval of the validation testing proposals, the contractor shall validate Reusable Container designs. Notice of validation testing shall be provided at least 30 days prior to the proposed test date. Validation testing of containers and instrument records shall establish the capability of the containers to protect the integrity and serviceability of the items for which the containers are designed. Containers of this type frequently incorporate energy absorbing systems, dehumidification systems, and other special features to insure protection for the item. Containers can be repaired and retrofitted to prolong their life or modified to adapt them for shipment of items other than that for which they were originally intended. A Government representative will verify validation.

C.14.3.2.1.6.2 The contractor shall provide validation testing reports and photographic records for the container tests. The report shall contain, as appropriate, a description of the tests performed, results, shock and vibration recordings, static and dynamic clearances within the container, and conclusions.

C.14.3.3 Core Logistics Analysis (CLA). The contractor shall perform depot maintenance analysis in sufficient scope to satisfy all depot maintenance ILS requirements. The contractor shall develop, update and maintain a CLA for the vehicle systems listed in C.1.1.1 in accordance with AR 700-127, Integrated Logistics Support.

C.14.3.3.1 Core Depot Assessment (CDA). The contractor shall participate in an SIPT splinter team whose responsibility will be to plan for the establishment of an organic depot level maintenance capability and assist in conducting a CDA in accordance with AR 700-127, Integrated Logistics Support.

C.14.3.3.2 Source of Repair Analysis (SORA). The contractor shall conduct a SORA to determine the best source of repair for complete repair or restoration vehicle systems and its components per AR 700-127, Integrated Logistics Support.

C.14.3.4 Support Equipment

C.14.3.4.1 Test Measurement and Diagnostic Equipment (TMDE)

C.14.3.4.1.1 The contractor shall maintain currency of all Interface Control Documents (ICD) related to TMDE. The contractor shall coordinate changes with appropriate TMDE contractors and Government agencies prior to finalization of changes. An impact statement shall be submitted for changes that impact TMDE as part of ECP submissions.

C.14.3.4.1.2 The contractor shall provide services, technical data and information for the TMDE program.

C.14.3.4.1.3 The contractor shall respond to TMDE related field incidents and ensure an internal record of closeout following the resolution of each problem.

C.14.3.5 Training

C.14.3.5.1 New Equipment Training(NET) Materials. The contractor shall develop and document training and training materials. The contractor shall furnish qualified and experienced personnel per the below listed Instructor Standards, and provide facilities, supplies and services necessary to conduct Operator New Equipment Training (OPNET) and Field Maintenance New Equipment Training (FMNET). OPNET and FMNET activities include but are not limited to the development of Materiel Fielding Team support packages such as Program of Instruction (POI), Lesson Plans, handouts and student surveys. The contractor shall also prepare and conduct New Equipment Materiel in Brief (NMIB) at various fielding locations.

C.14.3.5.1.1 OPNET Instructor Requirements:

a) Army Basic Instructor Course Certified (Or equivalent)
b) OPNET Training Support Package (TSP) Certified
c) Experience - 11B, 13F, 19D and 21B
d) Preferred Additional Skills - J3 Identifier
e) No Performance Limiting Medical Conditions
f) Shall be able to perform all training tasks

C.14.3.5.1.2 MNET Instructor Requirements:

a) Army Basic Instructor Course Certified (Or equivalent)
b) FMNET Training Support Package (TSP) Certified
c) Experience - 91M
d) Secondary Experience - 91G, 91F and 25U
e) Preferred Additional Skills - B9 Identifier
f) No Performance Limiting Medical Conditions
g) Shall be able to perform all training tasks

C.14.3.5.2 New Equipment Training (NET). The contractor shall conduct NET for all operators and maintenance personnel. The contractor shall provide input and recommended changes to the Government NET and shall conduct NET with assistance from military/Government reps for all operators and maintenance training. The contractor shall conduct training in accordance with the NET Program of Instructions (POI). The Government will deliver the finalized NET POI to the contractor 60 days prior to the start of the NET. The NET shall include NET on TADSS (Training, Aids, Devices, Simulators, and Simulations). Training shall be consolidated at the fielding or receiving units home station and shall utilize their existing training ranges and facilities whenever feasible. The contractor shall provide all items required for conducting training in accordance with the NET except Special Tools and Test Equipment (STTE), ammunition, Petroleum Oil and Lubricants (POL), and facilities. The training support packages, delivered at the end of each Brigade NET/Fielding, shall be used to conduct training at the subsequent sites of the receiving unit. The training support packages shall be provided to the units as a stay behind training packet. For the contractor conducted training courses, the contractor shall provide a completion report in accordance with CDRL A056 and DI-ILSS-80872.

C.14.3.5.3 Additional Training. The contractor shall recommend to the Government additional training requirements resulting from design changes via the Logistics Support Analysis, Logistics Review and System Assessment processes. The contractor shall prepare changes to training materials as directed by the Government.

C.14.3.5.4 Training Material and Documentation. For each NET course, the contractor shall develop, prepare and deliver course documentation and training materials in accordance with CDRL A057-A058 and DI-ILSS-80872.

C.14.4 Logistic Support Package Validation/Verification

C.14.4.1 Facility Vehicle/Government Furnished Equipment (GFE) Support. The contractor shall provide maintenance and replacement parts to maintain facility vehicles and GFE to the Army maintenance standard, TM XX-10/20, in accordance with AR 750-1, Army Materiel Maintenance Policy. The contractor shall maintain and upgrade facility vehicles to the current TDP configuration. Equipment Support shall include the movement of the vehicles and GFE.

C.14.4.1.1 Facility Vehicle/ GFE Disposition. The contractor shall correct discrepancies, provide repairs, perform modifications, and update vehicle software to perform LSP validation and verification.

C.14.4.2 Logistics Demonstration. The contractor shall conduct non-destructive Logistics Demonstrations to validate new or changed tasks and to verify supportability of the logistics support package to include Automatic Test Equipment (ATE), Built in Test (BIT), Built in Test Equipment (BITE) and peculiar support equipment. Results and corrective actions shall be reported back to the Government.

C.14.4.3 Test Support

C.14.4.3.1 Test Support Package Component List. The contractor shall develop a recommended support package list to support Government test of the prototype vehicles. The list shall be refined as Government test progresses and is completed in accordance with CDRL A059.

C.14.4.3.2 Test Support Package. The contractor shall provide a system support package to include parts that are necessary to support Government testing of vehicles in accordance with CDRL A060.

C.14.4.3.3 Field Service Representatives (FSR)

C.14.4.3.3.1 General. The contractor shall provide Field Service Representative technical services [both Continental United States (CONUS) and Outside the Continental United States (OCONUS)], during contingency and non-contingency operations. Also, the contractor shall provide FSRs as specified in individual Work Directives for all vehicle engineering test and all efforts at locations specified by the Government. Technical support includes technical assistance and advice, operating Government vehicles, user training, technical data collection and reporting, troubleshooting, repairing, deprocessing, storing and assisting in shipping vehicles and their respective components during transition, training and unit hand-off. User training consists of assembly and subassembly troubleshooting, component and system fault isolation and repair. This training may be informal in nature and done principally by demonstrating the function. The FSR shall be experienced personnel and qualified to advise, make recommendations, and to orient, and instruct key Government personnel with respect to operation, maintenance, and repair of the vehicle systems listed in C.1.1 and their components. The effort consists of investigation and diagnosis of problems or issues in the field related to vehicle performance, maintenance, and training. Instructions and established itineraries will be provided in the Work Directive.

C.14.4.3.3.1.1 Government Provisions. The Government shall provide the following for the support of FSR, when available:

a) TMDE and field authorized common, special and peculiar support equipment to include tools.

b) Appropriate office space and furnishings.

C.14.4.3.3.1.2 Contractor Provisions. The contractor shall provide all support of each FSR not provided by the Government.

C.14.4.3.3.2 Field Service Reporting (FSR). Each FSR shall prepare and submit, via e-mail, Field Service Reports in accordance with CDRL A061 and DI-MGMT-81238, covering their activities.

C.14.4.3.3.3 FSR Personal Data. The contractor shall make available personal data related to the FSR including documentary evidence such as birth certification and other evidence requested by the local Government installation or area in which services are to be performed.

C.14.4.3.3.4 FSR Labor

C.14.4.3.3.4.1 CONUS and Non-contingency OCONUS

C.14.4.3.3.4.1.1 For this Contract, CONUS is defined as any location in the continental United States. OCONUS is defined as any location outside the continental United States. Contingency is defined as operations in locations in support of deployments in hostile areas. Non-contingency is defined as operations in fielding or deployments in support of normal operations in CONUS or OCONUS.

C.14.4.3.3.4.1.2 For emergency deployments, the contractor shall arrive at the designated location within two weeks of Work Directive issuance. For a regular deployment, the contractor shall arrive within thirty days of Work Directive issuance. For CONUS non-contingency efforts, the period of performance will be negotiated in the Work Directive.

C.14.4.3.3.4.1.3 Man-Days of Service. A Man-Day of service includes any period during which the representative is delayed or prevented from performing any task only if the delay or non-performance is solely the Government's fault. Man-Day(s) of service includes travel time for initial travel from contractor's facility to site of work, for travel between sites of work, and to contractor's facility. It also includes any time that the FSR is preparing required reports at the work site and we can verify the time involved in writing the report. The Government is not responsible for vacation and holidays and sick leave pay. The Government is not responsible for any emergency leave that the contractor shall grant to the FSR while performing work under this contract. The Government is responsible for actual days worked by any qualified contractor FSR. It is immaterial whether the same FSR completes the assignment. The travel costs, if necessary, will be negotiated at the time the Work Directive is issued, on a cost plus (no fee) basis, and not to exceed that permitted by the Government Joint Travel Regulations. The negotiated price for travel costs will include only one complete round-trip transportation and travel costs between sites of work per assignment. contractor travel will be all inclusive, with a proposal to

reflect air travel, ground travel, lodging, per diem, etc., as individual line items. Individual Work Directives will provide travel details for discreet projects. Field Service Representatives may be called up in one of two ways:

a) A CONUS Man-Day is eight hours and the representative is to work no more than 40 hours per week, unless otherwise negotiated at Work Directive issuance.

b) An OCONUS non-contingency Man-Day is 10 hours a day, seven days a week, unless otherwise negotiated at Work Directive issuance.

C.14.4.3.3.4.2 OCONUS Contingency

C.14.4.3.3.4.2.1 OCONUS contingency deployments require contractor personnel to process and de-process through the National Deployment Center (NDC). The Government will schedule the NDC processing dates.

C.14.4.3.3.4.2.2 FSR Rest and Relaxation (R&R) Requirement. Deployed FSR will be given two weeks of non-paid R&R leave per every six months in the Area of Responsibility (AOR). The Government shall provide transportation from the AOR to the Point of Debarkation and from the Point of Debarkation to the AOR. Airfare from the Point of Debarkation to the U.S., and return trip, will be funded as described in paragraph C.15.4.3.3.4.2.4.2 below. FSR shall NOT receive a labor rate while on R&R. The contractor shall schedule arrangements for R&R travel. All leave must be coordinated with and approved by the PCO or Designated Contracting Officer's Representative (COR).

C.14.4.3.3.4.2.3 OCONUS FSR Processing

C.14.4.3.3.4.2.3.1 Contracted Employees Processing through the National Deployment Center (NDC). All FSR must participate in training through the NDC for deployment to contingency locations. The contractor shall provide to the Government the names of the employees deploying to the AOR no later than one week after Work Directive award. The contractor shall fill out the information required at Attachment 0013 (Section J), NDC Personal Information Data Requirements. The Government will in turn issue a Letter of Authorization (LOA) for those employees deploying. The LOA will contain all the information that is needed to request a Call Forward and data to input information into the Synchronized Pre-deployment & Operational Tracker (SPOT) system. The contractor is required to track their employees in the SPOT system. The FSR shall be scheduled for processing through NDC in Camp Atterbury, IN, no later than four weeks before deploying. This schedule is subject to change based on space availability at NDC.

C.14.4.3.3.4.2.3.2 Transportation to and from NDC. The contractor shall provide transportation for their personnel from point of origin to NDC, Camp Atterbury, IN, and return, except for the initial and final trips. The Government will provide transportation from NDC to the area of operation (theater) and return upon completion on the mission. If Government travel is unavailable, travel for these trips will be in accordance with the applicable Work Directive.

C.14.4.3.3.4.2.4 Living Conditions

C.14.4.3.3.4.2.4.1 Housing. The Government will provide housing for contractor employees at OCONUS locations in which contingency operations are being conducted, except Kuwait.

C.14.4.3.3.4.2.4.2 Subsistence. Contractor employees will be provided Government subsistence which includes meals, billeting, emergency medical care, emergency dental, and access to morale and welfare activities and available chaplains as authorized in the Letter of Agreement (LOA) or elsewhere in this contract. If subsistence changes during deployment (e.g., the Combatant Commander or subordinate Commander changes the authorizations), the contractor must notify the PCO.

C.14.4.3.3.4.2.5 Support and Force Protection. As OCONUS performance for this effort will be located in various locations in contingency operations, the PM ABCT is identified as the entity that will provide all support for the FSR, including routine medical and dental care, transportation between bases and airport locations, billeting, security and logistical needs to support this effort. The Government will not provide a vehicle for use within an installation. While performing duties in accordance with terms and conditions of the contract, the Service Theater Commander will provide force protection to the contractor employees commensurate with that given to Service and Agency (e.g., Army, Navy) civilians in the operations area.

C.14.4.3.3.4.2.6 Relocation/Evacuation. The Government may, at its discretion, relocate personnel (who are citizens of the United States, aliens in resident in the United States, or third country nationals, not residents in the host nation) to a safe area or evacuate them from the area of operations as required by the operational situation. The U.S. State Department has responsibility for evacuation of non-essential personnel.

C.14.4.3.3.4.2.7 Contractor Memorandum of Understanding for Deployed Employees. The contractor shall ensure that each employee hired by or for the contractor (including subcontractors) acknowledges in writing that they understand the danger, stress, physical hardships, and field living conditions that are possible if the employee deploys in support of military operations. The contractor shall ensure that contents of this paragraph are included in all subcontracts.

C.14.4.3.3.4.2.8 Security Background Check. The contractor shall maintain a completed background check on file for each employee that will be deployed.

C.14.4.3.3.4.2.9 Medical Information

C.14.4.3.3.4.2.9.1 Physical Requirement. Prior to deployment, the contractor shall ensure that all deployable personnel are medically and physically fit to endure the rigors of deployment in support of a military operation. Contractor employees who fail to meet medical or fitness standards, or who become unfit through their own actions, will be removed from the area of operations and replaced at the contractors expense. Medical or fitness standards can be found at http://www.campatterbury.in.ng.mil/NationalDeploymentCenter/tabid/1101/Default.aspx. All personnel must have a complete set of immunizations and inoculations for entry into the deployment location.

C.14.4.3.3.4.2.9.2 Medications. Deploying contractor employees shall carry with them a 90 day supply of any medication they require. Military facilities will not be able to replace many medications required for routine treatment of chronic medical conditions such as high blood pressure, heart conditions, asthma, and arthritis. Contractor employees shall review both the amount of the medication and its suitability in the foreign area with their personal physician and make any necessary adjustments prior to deployment.

C.14.4.3.3.4.2.9.3 Eyeglasses. If glasses are required, the contractor employees shall deploy with two pairs of glasses and a current prescription. Copies of the prescription shall be provided by the employee to the NDC so that eyeglass inserts for use in a compatible chemical protective mask can be prepared.

C.14.4.3.3.4.2.9.4 Medical Screening. The Government does require a medical screening at the NDC for FDA approved immunizations, which shall include DNA sampling.

C.14.4.3.3.4.2.10 Additional Deployment Information

C.14.4.3.3.4.2.10.1 Chemical Defensive Equipment (CDE) Training. The Government shall provide the contractor employees with Chemical Defensive Equipment (CDE) familiarization training commensurate with the training provided to Department of Defense civilian employees. The training and equipment will be provided at the NDC for employees traveling from CONUS.

C.14.4.3.3.4.2.10.2 Isolated Personnel Report (ISOPREP) and Survival Evasion Resistance Escape (SERE). The Government shall provide the contractor employees with the necessary ISOPREP and SERE training. This training will be conducted at the NDC.

C.14.4.3.3.4.2.10.3 Identification Tags, Geneva Convention and Common Access Cards. The contractor shall ensure that all deploying individuals have the required identification tags and cards prior to deployment. In addition to the DD FM 489 (Geneva Convention Card) issued at the point of deployment, all contractor employees will be issued personal identification tags and Common Access Cards (CAC), if available before deployment. Personal identification tags will include the following information: full name, social security number, blood type, and religious preference. Contractor employees shall maintain all issued cards and tags on their person at all times while OCONUS. These cards and tags shall be obtained through NDC, and shall be promptly returned to the Government upon redeployment.

C.14.4.3.3.4.2.10.4 VISA. The contractor shall ensure that their employees obtain any appropriate VISA before they will be allowed to enter NDC.

C.14.4.3.3.4.2.10.5 Organizational Clothing and Individual Equipment. Contractor employees accompanying the force are not authorized to wear military uniform, except for specific items required for safety and security. The Combatant Commander, subordinate Joint Force Commander (JFC), or Army Force (ARFOR) Commander may require that contractor employees be issued and be prepared to wear Organizational Clothing and Individual Equipment (OCIE), to include Chemical, Biological, and Radiological Element (CBRE) and High-Yield Explosive defensive equipment, necessary to ensure contractor personnel safety and security. The contractor employees shall sign for all issued OCIE to acknowledge receipt and acceptance of responsibility for the proper maintenance and accountability of the OCIE. The contractor employees shall return all issued OCIE to the Government at the place of issue unless directed otherwise by the PCO. The PCO shall require the contractor to reimburse the Government for OCIE lost, stolen, or damaged due to contractor negligence or misconduct.

C.14.4.3.3.4.2.10.6 Operator Vehicle Licenses. The contractor shall ensure that deployed employees possess the required licenses to operate all vehicles and equipment necessary to perform contract tasks in the theater of operations. Before operating any military owned or leased vehicles or equipment, the contractor employee shall provide proof of license (issued by an appropriate Governmental authority) to the unit or agency issuing the vehicles or equipment.

C.14.4.3.3.4.2.10.7 Firearms. Contractor employees in support of U.S. military operations are not permitted to carry personally owned firearms. Contractor employees normally shall not be armed during active military operations; however, the Combatant Commander may authorize issue of standard military side arms and ammunition to selected personnel for personal self-defense. In this case, weapons familiarization, qualification, and briefings on rules of engagement, shall be provided to the contractor employees, completed at the NDC. Even if authorized, acceptance of weapons by the personnel is voluntary, and must also be permitted by the contractor.

C.14.4.3.3.4.2.10.8 Employees Emergency Contact Data. Before deployment, the contractor shall ensure that each of its employees complete at least three DD Forms 93, Record of Emergency Data Cards. One completed form is for the NDC, one copy for the Armys Casualty & Memorial Affairs Operations Center (CMAOC), and one copy for the Army Materiel Command (AMC) Logistics Support Element (LSE)

contractor Coordination Cell (CCC) or other designated liaison.

C.14.4.3.3.4.2.10.9 Next of Kin (NOK) Information. As Executive Agent for mortuary affairs, the Army will facilitate the notification of Next of Kin (NOK) in the event that a U.S. citizen contractor employee accompanying the force OCONUS dies, requires evacuation due to injury, or is reported missing. The contractor shall notify the employees primary and secondary NOK. In some cases, an Army Notification Officer may accompany the contractors representative. Notification support by the Army is dependent upon each contractor employee completing and updating as necessary, the DD Form 93, Record of Emergency Data Card. The contractor is responsible for the evacuation of contractor employee remains from Kuwait.

C.14.4.3.3.4.2.10.10 Employees Health and Life Insurance. The contractor shall ensure that health and life insurance benefits provided to its deploying employees are in effect in the theater of operations. .

C.14.4.3.3.4.2.10.11 Letter of Agreement (LOA) for Deployed contractor Employees. Unless prohibited by international agreement, the PCO shall provide a LOA for deployed contractor personnel. This is the document contractor employees must carry with them as authorization for use of Government transportation, medical facilities, billeting, and other entitlements. Contractor employees are not authorized to use Invitational Travel Orders.

C.14.4.3.3.4.2.10.12 Contractor Employee Personal Conduct. The contractor shall at all times remain responsible for the conduct of its employees. The contractor shall promptly resolve to the satisfaction of the Government, all contractor employees performance and conduct problems identified by the Government. Failure to correct such problems may result in the Government directing the contractor, at the contractors own expense, to replace and, where applicable, repatriate any employee who fails to comply with this requirement to adhere to instructions and general orders issued by the Combatant Commander or his/her designated representative. Such action may be taken at the Governments discretion without prejudice to its rights under any other provision of this contract, including the Termination for Default Clause.

C.14.5 DEPROCESSING

C.14.5.1 Deprocessing is the checkout of vehicles at the deprocessing or handoff site(s) upon arrival from production facilities. The contractor shall deprocess all equipment after delivery to the deprocessing site. Deprocessing is the checkout of vehicles at the deprocessing or handoff site(s) upon arrival from production facilities. The contractor shall assure it is ready to operate prior to issue to the receiving unit. Deprocessing actions consists of:

a) Removing all preservative coatings, grease, tape, and packing materials.
b) Inspecting for any damage from shipment.
c) Checkouts are to be performed in accordance with the contractors procedures and include the following: review of vehicle operations, oil analysis, road testing (if applicable), and replacement of failed or discrepant components.
d) All aspects of vehicle operation are checked and verified, and all known deficiencies are corrected to ensure vehicle is fully operational for issue.

C.14.5.1.1 The contractor shall ensure all work activities are properly resourced and controls established to monitor activity and cost to ensure the project is completed within time and budget constraints.

C.14.5.1..1.1 The contractor shall plan, coordinate, attend, and/or conduct meetings, reviews, and conference calls.

C.14.5.1.1.2 The contractor shall prepare both reports and track action items to make available to the Government upon request.

C.14.5.1.2 Per approved PCO or designated COR direction, the deprocessing activities shall be performed at either a centralized location with a final inspection at the vehicle issue site, or will take place in its entirety at the vehicle issue site.

C.14.5.1.3 The contractor shall have appropriate personnel present at the deprocessing site per approved PCO or designated COR schedule.

C.14.5.1.4 Per approved PCO or designated COR direction, the contractor shall assist with loading or off-loading vehicles onto trucks or rail transport, and movement of vehicles to or from designated rail hub.

C.14.5.1.5 The contractor shall adjust, repair, clean, or replace any items found discrepant or missing during the inspection of vehicles and joint inventory with the Gaining Unit.

C.14.5.1.6 The contractor shall prepare and provide Supply Discrepancy Reports for material found to be damaged, non-conforming, or missing during deprocessing in accordance with CDRL A062 and DI-MGMT-80503.

C.15 TRAINING DEVICES

C.15.1 The contractor shall maintain currency of all Interface Control Document (ICD) related to Training Devices. To ensure compatibility, the contractor shall coordinate changes with appropriate Training Device contractors and Government agencies prior to

finalization of changes. An impact statement shall be submitted for changes that impact Training Devices as part of ECP submission.

C.15.2 The contractor shall provide assistance and technical data/information as required in support of the Training Device program.

C.15.3 The contractor shall respond to Training Device related field incidents and ensure an internal record of closeout following resolution of each problem.

C.16 SECURITY

C.16.1 The contractor shall provide for the security of classified and unclassified information, data, and software generated for the program or provided to the program. The contractor shall adhere to the requirements of DD Form 254 (Section J, Attachment 0001) (Contract Security Classification Specification) for the protection of the unclassified, Controlled Unclassified Information (CUI), and classified information. To preserve national security interest, the contractor shall ensure all aspects of the contract and work performed are evaluated for conformance with security procedures and standards. The contractor shall evaluate all products for security implications and prepare appropriate security documents and plans.

C.16.2 The highest classification associated with this contract is SECRET. The contractor shall comply with and provide security procedures and processes to satisfy the security requirements identified in Attachment 0001 DD Form 254.

C.17 MODIFICATION KIT APPLICATION

C.17.1 The contractor shall provide coordination, as required, to procure and install, for the vehicle systems listed in C.1.1.1, the required vehicle modification kits in accordance with applicable Work Directive and AR 750-10, Army Modification Program.

C.18 USE OF GOVERNMENT OWNED OR FURNISHED PROPERTY

C.18.1 The contractor is authorized to utilize Government Owned or Furnished Property provided under this contract for any task purposes, which will benefit the covered programs under this contract and/or further the mission of the Project Manager Armored Brigade Combat Team (PM ABCT). Use will include the shipment of Government property to other appropriate locations, with the required shipping documentation. All property furnished pursuant to this paragraph or Section H.2 shall be subject to the provisions of the Government Property clause FAR 52.245-1 of this contract. Use of Government property provided under this clause will be on a non-interference basis, and will be at no additional cost to the Government. Prior notification or approval by the COR is not required by the contractor.

C.18.2 Government assets intended for other uses shall not be redirected or loaned to STS activities without written concurrence from the COTR. Authorized use will include the shipment of Government property to other appropriate locations, with the required shipping documentation. Use of Government property provided under this clause will be on a non-interference basis, and will be at no additional cost to the Government.

C.18.3 Use of any Government owned vehicle accountable to this contract, other than facility vehicles (C.14.4), will be on a non-interference basis, and will be at no additional cost to the Government. Vehicle usage may occur at other locations as well as at contractors site. The contractor shall not use vehicles for demonstrations or shows that are strictly for marketing purposes without prior approval from the ACO or PCO. Government property used under this clause shall be under the control of the contract at all times. The contractor shall be responsible for the asset while it is in their possession, shall perform any required maintenance, and shall return the asset to the Government in as good a condition as when it was received. The Government shall not be liable or responsible for damage to the property of the Government or to the property of others, including the contractor, or for personal injuries to contractor personnel or to any other persons arising from or incident to the use of the asset. Prior approval from the COR is required by the contractor.

C.18.4 The contractor is authorized use of facility vehicles on a rent free/non interference basis for on-site contractor events including, but not limited to, static displays and engineers drivers training. The contractor assumes all risk for the vehicle during these events. The contractor shall also provide written notification to the COTR/PCO prior to each event.

* Updated per modification P00017
**Added per modification P00017

*** END OF NARRATIVE C0001 ***

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 USE OF GOVERNMENT PROPERTY AND FACILITIES
The Contractor based this contract price on rent-free use of property and facilities that were initially made available under other contracts (see below). The Government property and facilities are in the possession of the Contractor and subcontractors accountable under the below listed Government contracts. Rent-free, non-interference use of Government property accountable under these contracts is approved.

CONTRACT
a) DAAE07-95-C-X030 BFV STS
b) DAAE07-96-C-X036 BFV Production Contract
c) DAAE07-01-C-M011 HBCT STS
d) W56HZV-07-C-0096 HBCT STS/SSTS
e) W56HZV-05-G-0005 Bradley Family of Vehicles
f) W56HZV-10-G-0003 Bradley Family of Vehicles
g) W56HZV-12-C-0358 Bradley ECP2

H.2 GOVERMENT PROPERTY

The Government shall furnish to the Contractor the items listed in Attachment 0005 in support of the contract.

H.3 GOVERNMENT RIGHT TO FURNISH PROPERTY, MATERIAL, AND/OR EQUIPMENT

H.3.1 In addition to the Government furnished property, material and/or equipment describes in Attachment 0005 of this contract, the Government may furnish to the Contractor other items of Government property, material and/or equipment or increase the quantities in Attachment 0005.

H.3.2 All property furnished pursuant to this paragraph shall be subject to the provisions of the "Government Property", FAR 52.245-1 clause of this contract.

H.3.3 The contractor is authorized to obtain test support/services from Major Range and Test Facility Base (MRTFB) Installations. The contractor is to be given Government rates at MRTFB in performance of this contract.

H.4 ASSERTION OF RESTRICTIONS

H.4.1 The Government acknowledges the submission of BAE Systems' Assertion of Restrictions, Attachment 0016 under Solicitation W56HZV-12-R-0294 / Contract W56HZV-13-C-0018 in accordance with DFARS 252.227-7017. Physical receipt of the Assertions listing and the requisite Attachment 0016 of the Assertions to the contract by the Government does not bind the Government to an agreement about the substance of those representations. Per DFARS 252.227-7019 Validation of Markings Non-Commercial software and 252.227-7037 Validation of Markings Non-Commercial Technical Data, the Government reserves the right to challenge any contract deliverables marked with these asserted restrictions up to three years after the later of delivery or contract close out.

H.5 LOE HOURS AND CONTRACT DOLLARS DURING CONTRACT PERIOD OF PERFORMANCE
*The Government will not obligate more than $170,999,959 or award more than 844,720 total LOE hours on this contract, with the exception of the Other authorizations outlined in Section H.5.2.

Further, Modification P00017 has estimated the following costs for Material, Travel and Other Direct Costs (ODCs) associated with the additional 440,127 LOE hours with the following limits:

Material: $21,909,953
Travel/ODCs: $ 9,245,646

H.5.1 AWARD OF LOE HOURS DURING CONTRACT PERIOD OF PERFORMANCE

*As of Modification P00017, the total number of LOE hours currently awarded by the Government under this contract are 358,930. The Government is not required to, but shall have the option to award 485,790 additional LOE hours under this contract in increments and at its discretion over period of performance outlined in Section F.1.

H.5.2 AWARD OF LOE HOURS PURSUANT TO OTHER AUTHORIZATIONS
As of Modification P00011, the total number of hours authorized pursuant to other authorizations is 3,903 hours and $ 1,988,929 as detailed:

H.5.2.1 FOREIGN MILITARY SALES (FMS) CASES DURING CONTRACT PERIOD OF PERFORMANCE

As a result of Modification P00004, and in addition to the available LOE hours and contract dollars allowed under H.5, the Government has authorized and awarded an additional 3,162 LOE hours and an additional $1,854,917 contract dollars in support of FMS Case IQ-B-UDT

Modification 2 Line 043, Field Service Representatives for M113.

H.5.2.2 ARMORED GUN SYSTEM (AGS) PLATFORM
As a result of Modification P00011, and in addition to the available LOE hours and contract dollars allowed under H.5, the Government has authorized and awarded an additional 741 LOE hours and an additional $134,012 contract dollars in support AGS Platform Phase 1 technical inspections.

H.5.3 AWARD OF CONTRACT DOLLARS

The current contract obligation amount is $77,199,894, which represents $75,210,965 contract dollars pursuant to H.5.1, and $1,988,929 contract dollars pursuant to H.5.2.

H.6 SUBCONTRACTING PLAN
The contractor's Subcontracting Plan dated 30 Nov 2012 is incorporated into this contract (Attachment 0004).
*H.6.1 The contractor's Subcontracting Plan Revision 2 dated 02 June 2014 is incorporated into this contract.

H.7 WAGE DETERMINATION
Attachment 0017, Nationwide Contract Field Team (WD 99-0316 Rev 37) Wage Determination is incorporated into this contract pursuant to FAR 22.1007.
Attachment 0017a, Wage Determination CBA-2014-6419 is incorporated into this contract pursuant to FAR 22.1002-3.

* Updated per Modification P00017

*** END OF NARRATIVE H0001 ***