

<b>AWARD/CONTRACT</b>		<b>1. This Contract Is A Rated Order Under DPAS (15 CFR 700)</b>	<b>Rating</b> DOA4	<b>Page</b> 1	<b>Of</b> 38	<b>Pages</b>
<b>2. Contract (Proc. Inst. Ident.) No.</b> W56HZV-13-C-0400		<b>3. Effective Date</b> 2013SEP25	<b>4. Requisition/Purchase Request/Project No.</b> SEE SCHEDULE			
<b>5. Issued By</b> U.S. ARMY CONTRACTING COMMAND D'ELLE V. REMSEY WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL		<b>Code</b> W56HZV	<b>6. Administered By (If Other Than Item 5)</b> DCMA DETROIT 35803 MOUND ROAD STERLING HEIGHTS MI 48310		<b>Code</b> S2305A	

**e-mail address:** DELLE.V.REMSEY@US.ARMY.MIL

<b>7. Name And Address Of Contractor (No., Street, City, County, State and Zip Code)</b> L-3 COMMUNICATIONS CORPORATION 76 S GETTY ST MUSKEGON, MI 49442-1242		<b>8. Delivery</b> <input type="checkbox"/> FOB Origin <input checked="" type="checkbox"/> Other (See Below)	
		<b>9. Discount For Prompt Payment</b>	
<b>Code</b> 02978		<b>10. Submit Invoices (4 Copies Unless Otherwise Specified)</b>	
<b>Facility Code</b>		<b>Item</b> 12	
		<b>To The Address Shown In:</b>	

<b>11. Ship To/Mark For</b> SEE SCHEDULE		<b>Code</b>	<b>12. Payment Will Be Made By</b> DFAS - COLUMBUS CENTER NORTH ENTITLEMENT OPERATIONS P.O. BOX 182266 COLUMBUS, OH 43218-2266		<b>Code</b> HQ0337
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<b>13. Authority For Using Other Than Full And Open Competition:</b> <input checked="" type="checkbox"/> 10 U.S.C. 2304(c)(1) <input type="checkbox"/> 41 U.S.C. 253(c)		<b>14. Accounting And Appropriation Data</b> SEE SECTION G			
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15A. Item No.	15B. Supplies/Services	15C. Quantity	15D. Unit	15E. Unit Price	15F. Amount
SEE SCHEDULE					
<b>15G. Total Amount Of Contract</b> →					\$19,653,434.00

(X)	Sec.	Description	Page(s)	(X)	Sec.	Description	Page(s)
Part I - The Schedule				Part II - Contract Clauses			
X	A	Solicitation/Contract Form	1	X	I	Contract Clauses	26
X	B	Supplies or Services and Prices/Costs	3	Part III - List Of Documents, Exhibits, And Other Attachments			
X	C	Description/Specs./Work Statement	9	X	J	List of Attachments	38
X	D	Packaging and Marking	18	Part IV - Representations And Instructions			
X	E	Inspection and Acceptance	19		K	Representations, Certifications, and Other Statements of Offerors	
X	F	Deliveries or Performance	20		L	Instrs., Conds., and Notices to Offerors	
X	G	Contract Administration Data	21		M	Evaluation Factors for Award	
X	H	Special Contract Requirements	24				

**Contracting Officer Will Complete Item 17 (Sealed-Bid or Negotiated Procurement) Or 18 (Sealed-Bid Procurement) As Applicable**

<b>17.</b> <input checked="" type="checkbox"/> Contractor's Negotiated Agreement (Contractor is required to sign this document and return 2 signed copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)	<b>18.</b> <input type="checkbox"/> Sealed-Bid Award (Contractor is not required to sign this document.) Your bid on Solicitation Number _____, including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your bid, and (b) this award/contract. No further contractual document is necessary. (Block 18 should be checked only when awarding a sealed-bid contract.)
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<b>19A. Name And Title Of Signer (Type Or Print)</b>		<b>20A. Name Of Contracting Officer</b>  JOHN M. HOPFNER JOHN.HOPFNER@US.ARMY.MIL (586)282-7359	
<b>19B. Name of Contractor</b>	<b>19c. Date Signed</b>	<b>20B. United States Of America</b>  By _____ /SIGNED/ (Signature of Contracting Officer)	<b>20C. Date Signed</b> 2013SEP25
By _____ (Signature of person authorized to sign)			

**AUTHORIZED FOR LOCAL REPRODUCTION**  
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Standard Form 26 (Rev. 5/2011)  
Prescribed By GSA - FAR (48 CFR) 53.214(a)

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>	<b>Page 2 of 38</b>
	PIIN/SIIN W56HZV-13-C-0400 MOD/AMD	

**Name of Offeror or Contractor:** L-3 COMMUNICATIONS CORPORATION

SECTION A - SUPPLEMENTAL INFORMATION

Buyer Name: D'ELLE V. REMSEY  
 Buyer Office Symbol/Telephone Number: CCTA-ASGB/(586)282-9597  
 Type of Contract: Cost Plus Fixed Fee  
 Kind of Contract: Research and Development Contracts  
 Type of Business: Large Business Performing in U.S.  
 Surveillance Criticality Designator: C  
 Weapon System: No Identified Army Weapons Systems

\*\*\* End of Narrative A0000 \*\*\*

<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
A-1 52.232-4087	PAYMENT UNDER WIDE AREA WORKFLOW (ACC WARREN)	JAN/2012

TACOM-Warren uses Wide Area Workflow, Receipt and Acceptance (WAWF-RA) to electronically process vendor requests for payment. (See DFARS clause 252.232-7003, entitled Electronic Submission of Payment Requests and Receiving Reports). Under WAWF-RA, vendors electronically submit (and track) invoices, and receipt/acceptance documents/reports. Submission of hard copy DD250/invoices is no longer acceptable for payment purposes.

The contractor shall register to use WAWF-RA at <https://wawf.eb.mil>. There is no charge to use WAWF. Direct any questions relating to system setup and vendor training to the Help Desk at Ogden, UT at 1-866-618-5988. Web-based training for WAWF is also available at <https://wawftraining.eb.mil>

To obtain payment, WAWF requires the contractor to input/indicate the various DoDAAC (Department of Defense Activity Address Code) codes that apply to the acquisition. These codes can be found on the cover page of contracts/orders as described below.

USE THE FOLLOWING CODES TO ROUTE YOUR INVOICES THROUGH WAWF:

- Your firms CAGE code (found in Block 15A of SF 33; Block 17a of SF 1449; Block 14 of SF 1442; Block 7 of SF 26)
- Issue and Admin DoDAAC Code (found in Block 7 of SF 33; Block 9 of SF 1449; Block 7 of SF 1442; Block 5 of SF 26)
- Ship-To DoDAAC Code (if deliverables are involved) (found in Section B of the contract where SF 33, SF 1442, or SF 26 is the cover page; Block 15 of SF 1449)
- Accept-By DoDAAC Code: If Inspection/Acceptance is Origin, use the Admin (DCMA)DoDAAC or the DoDAAC of the inspection/acceptance office if different than the Admin DoDAAC; if Destination, use the Ship-To DODAAC Code. If Accepted-By Other: enter the DoDAAC of the activity designated to perform acceptance.
- Payment DoDAAC Code. (found in Block 25 of SF 33; Block 18a of SF 1449; Block 27 of SF 1442; Block 12 of SF 26)

The paying office DoDAAC and mailing address is located on the first page of the award. To track the status of your invoice, click on the link, Pay status (myInvoice-External link) at the bottom of the left-hand menu.

If your paying office is Columbus, direct any payment-related questions to the Defense Finance Accounting Services (DFAS) Columbus at 1-888-756-4571. Please have your order number and invoice ready when calling about payment status. If your paying office is other than Columbus, contact your contract administrator for the customer service phone/fax numbers.

[End of Clause]

**CONTINUATION SHEET****Reference No. of Document Being Continued****Page 3 of 38****PIIN/SIIN** W56HZV-13-C-0400**MOD/AMD****Name of Offeror or Contractor:** L-3 COMMUNICATIONS CORPORATIONSECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS  
FUNDING DETAILS

Estimated Contract Value: \$ 19,653,434

Total Estimated Costs: \$ 17,877,845

Total Fee: \$ 1,775,589

Total Amount Currently Obligated: \$ 1,000,000

First Increment: \$ 1,000,000

\*\*\* END OF NARRATIVE B0004 \*\*\*





CONTINUATION SHEET

Reference No. of Document Being Continued  
 PIIN/SIIN W56HZV-13-C-0400 MOD/AMD

Name of Offeror or Contractor: L-3 COMMUNICATIONS CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT									
0004	<p>CONTRACT MANPOWER REPORTING (CMR)</p> <p>The Contractor shall provide the information required by the Contract Clause entitled CONTRACT MANPOWER REPORTING (CMR), TACOM Clause.</p> <p>Manpower Reporting Not Separately Priced (NSP)</p> <p>(End of narrative A001)</p>													
0004AA	<p><u>CONTRACT MANPOWER REPORTING (CMR)</u></p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td></td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>01-NOV-2017</td> </tr> </table>	DLVR SCH		PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	01-NOV-2017	1	SV		\$ ** NSP **
DLVR SCH		PERF COMPL												
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>												
001	1	01-NOV-2017												
0005	<p>CONTRACT DATA REQUIREMENTS LIST (CDRL)</p> <p>Data as set forth in Contract Data Requirements List (CDRL), herein after referred to as Exhibit A.</p> <p>Data Items - Not Separately Priced (NSP)</p> <p>(End of narrative A001)</p>													
0005AA	<p><u>CONTRACT DATA REQUIREMENTS LIST (CDRL)</u></p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td></td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>01-NOV-2017</td> </tr> </table>	DLVR SCH		PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	01-NOV-2017	1	SV		\$ ** NSP **
DLVR SCH		PERF COMPL												
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>												
001	1	01-NOV-2017												

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b> <b>PIIN/SIIN</b> W56HZV-13-C-0400 <b>MOD/AMD</b>	<b>Page</b> 7 <b>of</b> 38
<b>Name of Offeror or Contractor:</b> L-3 COMMUNICATIONS CORPORATION		

B.1 ESTIMATED COST & PAYMENT

B.1.1 The ESTIMATED COST for performance of the work required under this contract is stated in Section B under CLIN 0001, which shall constitute the estimated cost for the purpose of the Contract Clause entitled LIMITATION OF FUNDS, FAR 52.232-22.

B.1.2 The contractor will be paid for the fixed fee stated in Section B under CLINs 0001AA, 0001AB and 0001AC for the performance of work under the contract and in accordance with the terms of 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's service in connection with the work required and performed under this contract.

B.1.3 Allowable cost shall be determined, and payment thereof shall be provided, in accordance with the Contract Clause hereof entitled ALLOWABLE COST AND PAYMENT, FAR 52.216-7.

B.2 PAYMENT

B.2.1 The Contractors may submit vouchers MONTHLY for payment under this contract. The fee will be payable at the time of reimbursement of cost at the same rate to such cost as the total fee of this contract bears to the total estimated cost thereof, subject to any withholding pursuant to provisions of this contract.

B.3 FUNDING

B.3.1 The Government shall provide funds under this contract covering the estimated cost and fee hereof on an incremental basis as provided for in the following funding schedule and pursuant to the Contract Clause entitled LIMITATION OF FUNDS, FAR 52.232-22. It is estimated that the incremental amounts are sufficient for the performance of work in each of the cited periods. The Government may, at its discretion, allot such funds on an incremental basis within each fiscal year. The contractor shall so plan and execute the work required by this contract as to expend and/or commit funds compatible with the schedule set forth below. Whenever the contractor has reason to believe that the funds allotted to this contract for any fiscal year are either insufficient or excessive for the performance of work required in that fiscal year, the Government shall be so notified.

B.3.2 FUNDING SCHEDULE

Fiscal Year	Amount
Fiscal Year 13	\$1,000,000
Fiscal Year 14	\$4,000,000
Fiscal Year 15	\$5,000,000
Fiscal Year 16	\$5,000,000
Fiscal Year 17	\$4,653,434

B.4 Funds Allotted. The amount of funds currently allotted to this contract is \$1,000,000.

\*\*\* END OF NARRATIVE B0001 \*\*\*

TECHNICAL DATA - WITHHOLDING OF PAYMENT

The value to be withheld IAW DFARS 252.227-7030 (Technical Data - Withholding of Payment) is ten percent (10%) of the value of Exhibit A - A0006 deliverable (Technical Report Study/Services). The maximum amount to be withheld is \$67,256.

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\*\*\* END OF NARRATIVE B0002 \*\*\*

UNDERSTANDING IN REGARD TO USE OF MEI RATE

"The Government and Contractor understand and agree that the contract price incorporates a Major End Item (MEI) rate. The MEI rate is an indirect rate that the contractor has not used in prior Government contracts; it was disclosed in L-3's revised Disclosure Statement dated 01 OCT 2013, and will become effective 1 October 2013. However, as of the date of contract award, the use of the MEI rate was still under review as part of L-3's revised Disclosure Statement and had not yet been formally audited by DCAA or accepted by DCMA. Accordingly, during the course of contract performance, should L-3's revised Disclosure Statement not be accepted and approved by DCMA, or should the proposed MEI rate not be accepted for use in Government contracts, this will constitute a post-award change to the treatment of the MEI rate, which will be considered as a Government-directed change in contract terms, and the contractor will be entitled to submit a request for equitable adjustment in accordance with paragraph (b) of 52.243-2 CHANGES--COST REIMBURSEMENT."

\*\*\* END OF NARRATIVE B0003 \*\*\*

Name of Offeror or Contractor: L-3 COMMUNICATIONS CORPORATION

## SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

Gemini III Cross-drive Transmission Test, Development, & Integration

## C.1 Program Requirements

## C.1.1 Objective

This new contract effort is for the testing and development of a beta design of the Gemini III transmission. Under this effort, the Contractor shall further develop, integrate, and test the Gemini transmission design initiated under TARDEC's BAA Topic 24 program (contract #W56HZV-10-C-0382). The BAA Topic 24 program used novel transmission technology to meet a target power efficiency requirement, resulting in the Gemini III alpha transmission design. Under this new effort, the Contractor shall develop and incorporate these transmission technology components into a beta design of Gemini III to meet this programs metrics as outlined in Attachments 1, 2, & 3, by developing, integrating, testing, and delivering to the Government a total of three (3) prototype Gemini III beta transmissions, each incorporating and accompanied by additional hardware and software. This additional hardware and software shall include the transmission hardware required to meet scope section C.2.3 and the additional integration hardware and software required to meet scope sections C.2.1, C.2.2, C.2.4, C.4.1, C.4.2, & C.4.3. Under this effort, the Contractor shall provide onsite engineering and technical support for developing, configuring, modifying, installing, and performing a test program for hardware and software evaluation in a test vehicle onsite at TARDEC. The period of performance for this effort is 48 months.

## C.1.2 Description

(a) The scope of this effort requires the Contractor to develop, manufacture, test, and integrate transmission components, to include integration of the transmission range-pack developed under W56HZV-10-C-0382 to meet transmission requirements, per Attachments 1, 2, & 3. The transmission design resulting from this effort will be titled the Gemini III beta design. Additionally, this effort requires incorporation of the Gemini III beta design into a Bradley Fighting Vehicle (BFV) platform with electronics architecture for throttle control integration and mechanical characteristics compatible with the space-claim and interfaces of the Gemini III alpha design.

(b) One of the delivered Gemini III beta transmissions (C.2.3) along with the integration hardware and software (C.2.1, C.2.2, C.2.4, C.4.1, C.4.2, & C.4.3), developed for this effort will be assembled into a vehicle demonstrator by TARDEC with support of Program Manager (PM) Bradley vehicle efforts toward their Engineering Change Proposal (ECP) II program. The Contractor shall provide technical and engineering support during TARDECs installation of one of the delivered Gemini III beta transmissions and integration hardware and software developed for this effort.

(c) The additional two (2) Gemini III beta transmissions along with their integration hardware and software will undergo simultaneous testing by the Government at TARDEC and other military commands for evaluation.

(d) Using Government-furnished BFV ECP II hardware and data (reference paragraph C.1.2.e below), the Contractor shall leverage the ongoing ECP II program, which L-3 CPS is subcontracted to under contract # W56HZV-12-C-0358, in order to limit additional design and development costs for vehicle demonstration of the Gemini III beta transmission technology. However, where conflicts between BFV ECP II configuration requirements and requirements of this contract exist, the Contractor shall meet the requirements of this contract. These conflicts shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the contract.

(e) The Contractor shall design all items (C.2.1, C.2.2, C.2.3, C.4.1, C.4.2, & C.4.3) required to meet the scope of this contract, including Attachments 1, 2, & 3, to meet the durability requirements for 6000 mile vehicle testing. The Government will supply BFV ECP II hardware, software, and specifications necessary for integration.

## C.2 Powertrain Components

## C.2.1 Engine Configuration / Transmission Integration Requirements

(a) The Contractor shall integrate all Gemini III beta systems designed under this effort to be compatible with the Government-furnished ECP II upgraded Cummins 903 engine configuration. The Contractor shall define transmission input speed and torque requirements as a function of output speed, torque demand, and other variables based on previous transmission experience.

(b) These integration requirements between the ECP II upgraded Cummins 903 engine and the Gemini III beta transmission shall be documented IAW CDRL A009 and delivered to the Government 12 months after award of contract. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout duration of the task.

## C.2.2 Throttle Control

The Contractor shall incorporate into the Gemini III beta design the throttle software and hardware provided by TARDEC as Government Furnished Equipment (GFE). TARDEC will provide an ECP II-configured throttle system with a modified connector, which TARDEC is working on with the BFV OEM for the final configuration of this program. This will be provided to the Contractor 9 months after contract award.

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C.2.3 Transmission Configuration

(a) The Contractor shall reconfigure and develop the alpha design of the Ker-train model Gemini III transmission and its Transmission Control Module (TCM), designed per contract W56HZV-10-C-0382, into the Gemini III beta-transmission design for this effort as described in section C.3. The Contractor shall identify and provide all connectors and required devices that differ from the GFE ECP II transmission configuration to ensure effective integration of the beta-transmission design with the ECP II configured powertrain (reference paragraph C.2.1 and C.2.2 above and C.2.4 below).

(b) The Contractor shall design the Gemini III beta-transmission to integrate with drivers station per Section C.4,

(c) The Contractor shall perform the tasks identified in Section C.3 to complete the Gemini III beta-transmission development. This configuration shall be documented and written IAW CDRL A009 and delivered to the Government 18 months after contract award. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

C.2.4 Power Take-Off

The Contractor shall integrate all systems designed under this effort to be compatible with the current production M2A3 BFV Power Take-Off (PTO) drive. The Contractor shall design the beta-transmission to connect to and operate the production PTO drive

C.3 Transmission Development Gemini III Beta Transmission Design

(a) The Contractor shall develop the following technical documentation for the Gemini III beta transmission:

- (i) performance specification
- (ii) mechanical and electrical interface documents
- (iii) capabilities document

These documents shall cover all alpha-transmission subassemblies developed under contract W56HZV-10-C-0382 as well as all transmission modifications and enhancements, and all software and integration hardware developed and implemented as a result of this effort. These documents shall be written IAW CDRL A009 and delivered to the Government 18 months after contract award. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

(b) The Contractor shall manufacture, procure, and assemble all components necessary to complete and deliver the first fully configured Gemini III beta-transmission and its integration hardware 38 months after contract award.

(c) The Contractor shall manufacture or procure, and assemble all components necessary to complete the remaining two (2) fully configured Gemini III beta-transmissions and their integration hardware 44 months after contract award.

(d) The Contractor shall develop and provide a Software Design Description (SDD) IAW CDRL A012 with respect to all software written to the Transmission Control Module (TCM) and deliver it 38 months after contract award.

C.3.1 Hardware Development Analysis

C.3.1.1 The Contractor shall perform finite element analysis (FEA) on all clutch assembly designs, provided by the Government 60 days after contract award, as configured in the alpha design of the Ker-train model Gemini III transmission. This FEA shall include mechanical and thermal stress analysis for the clutch assemblies in each of their operating states across the speed and load range of the clutch assemblies. The clutch-assembly operating states subject to the FEA shall include both open and closed as well as during engagement and disengagement. The Contractor shall examine at least six (6) varying clutch-slip methods to achieve transmission launch during each of the following four (4) transmission-launch scenarios:

- (i) forward flat terrain
- (ii) reverse flat terrain
- (iii) forward +60% slope
- (iv) forward -60% slope

C.3.1.2 The Contractor shall perform FEA on all gear-set assembly designs, provided by the Government 60 days after contract award, as configured in the alpha design of the Ker-train model Gemini III transmission. This FEA shall include mechanical and thermal stress analysis for the gear-sets in each of their operating states across the speed and load range of the gear-sets. The operating states shall include the torque-multiplication ratio, 1-to-1 ratio. This FEA shall include engagement analysis for each component in the torque path to determine the point, line, or surface contact between mating components.

C.3.1.3 The Contractor shall perform FEA and computational fluid dynamics (CFD) analysis of the oil system design including the two brake pack assembly designs provided by the Government, 60 days after contract award, as configured in the alpha design of the Ker-train model Gemini III transmission. This FEA and CFD shall include mechanical and thermal stress analysis as well as flow analysis for the oil system and the brake pack assemblies in all operating states across the speed and load range of the oil system. This analysis shall also be performed for activation and deactivation of the brake system designs across the speed and load range of the brake pack assemblies, as well as across the engagement pressure range, to illustrate the continuous cooling performance.

C.3.1.4 Using the results of all FEA and CFD analysis in C.3.1.1 through C.3.1.3 above, the Contractor shall redesign the clutch assemblies, gear-set assemblies, oil system, brake pack assemblies, and their components to meet the requirements of Attachments 1, 2, &

Name of Offeror or Contractor: L-3 COMMUNICATIONS CORPORATION

3. The Contractor shall perform iterative FEA and CFD analysis on all component and assembly redesigns to meet these requirements. The Contractor shall complete this task 16 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.3.2 Hardware Development Testing

##### C.3.2.1 Coplanar Gear-Set Assembly Testing

(a) The Contractor shall design and perform durability testing of each complete coplanar gear-set assembly stack, which shall be manufactured and assembled to the final design iteration as a result of the analysis described in Section C.3.1(a, b, c, & d). The three coplanar gear-set assembly stacks include: (1) the first and second stage gear-sets in the propulsion transmission; (2) the third and fourth stage gear-sets in the propulsion transmission; (3) the five gear-sets in the steering bias transmission. The Contractor shall design and build test fixturing to house and support the test components and instrumentation for each test, as well as provide oil flow, lubrication, and control for solenoid clutch activation/deactivation.

(b) The Contractor shall generate test plans IAW CDRL A004 for durability testing of each complete coplanar gear-set assembly stack. This testing shall include gear shifting to evaluate the durability of the gear teeth, bearings, and clutches. The Contractor shall conduct this testing per the test plan, and make hardware improvements as necessary to demonstrate compliance with Attachments 1, 2, & 3. The Contractor shall complete this testing 30 months after contract award. The Contractor shall generate test reports IAW CDRL A006. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

##### C.3.2.2 Final Gear-Set Assembly Testing

(a) The Contractor shall design and perform durability testing of the final gear-set assembly consisting of the fifth gear-set in the propulsion transmission, the output differential gear-set, and the two-speed steering bias input gear-set to the differential. The Contractor shall design and build test fixturing to house and support the test components and instrumentation, as well as provide oil flow, lubrication, and control for solenoid clutch activation/deactivation.

(b) The Contractor shall generate a test plan IAW CDRL A004 for durability testing of this final gear-set assembly. This testing shall include gear shifting to evaluate the durability of the gear teeth, bearings, and clutches. The Contractor shall conduct this testing per the test plan, and make hardware improvements as necessary to demonstrate compliance with Attachments 1, 2, & 3. The Contractor shall complete this testing 28 months after contract award. The Contractor shall generate test reports IAW CDRL A006. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.3.3 Hardware Input/Output (I/O)

(a) The Contractor shall utilize the ETAS (Engineering Tools, Application and Services) controller hardware configuration for the TCM as developed under contract W56HZV-10-C-0382, making modifications and enhancements as necessary for the Gemini III beta configuration. The Government will provide this hardware as described in Section C.8(f). The Contractor shall provide a list of required sensors and actuators to meet the Input/Output (I/O) requirements of the TCM. The Contractor shall include in this list all shift solenoids, analog outputs, discrete inputs, electrical power requirements for each device, resistive inputs, frequency inputs, and any other specifications that define the beta-transmission I/O components. The Contractor shall additionally specify which items differ from the configuration developed for the alpha-transmission design effort under contract W56HZV-10-C-0382.

(b) This Hardware I/O document shall be written IAW CDRL A009 and delivered to the Government 12 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology and data used, and the analysis performed for this task. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.3.4 Driver Throttle Request

The Contractor shall develop the Gemini III beta-transmission TCM logic requirements (sections C.3.7, C.3.8, C.3.9, C.3.10) for throttle-request to meet the Government-furnished ECP II driver throttle configuration, including an analog input of 0-5VDC as well as logic that accepts Controller Area Network (CAN) messages from the Engine Control Module (ECM). The Contractor shall implement requirements for failure mode conditions into the TCM logic for shift management (C.3.7) equivalent to the ECP II (contract # W56HZV-12-C-0358) configuration for driver command override and TCM overrides for transmission hardware protections and throttle failures.

#### C.3.5 Transmission Brakes

(a) The Contractor shall design the Gemini III beta-transmission brakes with proper size and configuration for cooling and performance to meet the requirements outlined in Attachments 1, 2, & 3. The Contractor shall meet the space claim of the ECP II transmission configuration per paragraph C.1.2.

(b) The Contractor shall hold a Preliminary Design Review (PDR) for the Gemini III beta transmission braking system 6 months after contract award and a Critical Design Review (CDR) 12 months after contract award.

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b> <b>PIIN/SIIN</b> W56HZV-13-C-0400 <b>MOD/AMD</b>	<b>Page 12 of 38</b>
<b>Name of Offeror or Contractor:</b> L-3 COMMUNICATIONS CORPORATION		

(c) The Contractor shall demonstrate the beta-transmission brakes as part of the functional testing described in Section C.5.1 performance testing described in Section C.5.2, and durability testing described in Section C.5.3.

(d) The Contractor shall document the Gemini III beta-transmission brake design IAW CDRL A009 and deliver it to the Government during CDR for this task. The Contractor shall complete this task 12 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.3.6 Transmission Oil System

(a) The Contractor shall design and configure the Gemini III beta-transmission oil system to meet the beta-transmission oil needs for lubrication, braking performance, clutch activation, transmission cooling, and configuration to meet the requirements of Attachments 1, 2, & 3. The Gemini III beta-transmission shall utilize oil conforming to MIL-PRF-2104H (15W-40).

(b) The Contractor shall hold a Preliminary Design Review (PDR) for the Gemini III beta-transmission oil system 6 months after contract award and a Critical Design Review (CDR) 16 months after contract award.

(c) The Contractor shall monitor, demonstrate, and evaluate the transmission oil system as part of the performance testing in Section C.5.2.

(d) The Contractor shall document the beta-transmission oil system design IAW CDRL A009 and deliver it to the Government 12 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.3.7 Shift Management

(a) The Contractor shall develop operational requirements for the Gemini III beta-transmission TCMs logic for shift management to meet the requirements of Attachments 1, 2, & 3 and to establish the TCM's software logic architecture. The Contractor shall establish control parameters and limits based on transmission input and output speed, the efficiency of each transmission gear-combination, oil temperature, and the driver throttle input. The Contractor shall develop a kinematic model over the entire operating range of the Gemini III beta-transmission.

(b) The Contractor shall develop the initial operational requirements for the TCM shift management logic IAW CDRL A011. The Contractor shall deliver the initial operational requirements to the Government 6 months after contract award and review and update the requirements at all In Process Reviews (IPRs).

(c) The Government will write the software code for the TCM shift management logic within the operational requirements provided by the Contractor. The Government will provide this code to the Contractor as GFI 18 months after contract award. The Contractor shall validate the Government-provided software code through a basic evaluation as described in Section C.5.1.

(d) This task shall be completed and delivered to the Government 24 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.3.8 Steer Control

(a) The Contractor shall develop operational requirements for the Gemini III beta-transmission TCM logic for steer control to meet the requirements of Attachments 1, 2, & 3 and to establish the TCM's software logic architecture. The Contractor shall establish control parameters and limits, including available steer range for a given speed as well as the speed limit for a given steer angle based on input received from the Steering System, described in Section C.4.1, transmission input and output speeds, oil temperature, and the driver throttle input.

(b) The Contractor shall develop the initial operational requirements for the TCM steer control logic IAW CDRL A011. The Contractor shall deliver the initial operational requirements to the Government 6 months after contract award and review and update the requirements at all IPRs.

(c) The Government will write the software code for the TCM steer control logic within the operational requirements provided by the Contractor. The Government will provide this code to the Contractor as GFI 18 months after contract award. The Contractor shall validate the Government-provided software code through a basic evaluation as described in Section C.5.1.

(d) This task shall be completed and delivered to the Government 24 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. This task shall be tracked and updated

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on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.3.9 Brake Control

(a) The Contractor shall develop operational requirements for the Gemini III beta-transmission TCM logic for brake control to determine the desired braking rate based on input received from the Braking System, described in Section C.4.3 and to establish the TRM's software logic architecture. The Contractor shall establish control parameters and limits based on the engine braking limit and the desired braking rate as a function of transmission input and output speed.

(b) The Contractor shall develop the initial operational requirements for the TCM brake control logic IAW CDRL A011. The Contractor shall deliver the initial operational requirements to the Government 6 months after contract award and review and update the requirements at all IPRs.

(c) The Government will write the software code for the TCM brake control logic within the operational requirements provided by the Contractor. The Government will provide this code to the Contractor as GFI 18 months after contract award. The Contractor shall validate the Government-provided software code through a basic evaluation as described in Section C.5.1.

(d) This task shall be completed and delivered to the Government 24 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.3.10 Transmission Diagnostics

(a) The Contractor shall develop operational requirements for the Gemini III beta-transmission TCM logic for diagnostics, compensation for failure modes to protect the hardware, prevention of catastrophic failure, and to establish the TCMS software logic architecture. The Contractor shall establish control parameters for sensor failures and TCM reporting requirements to the driver display described in Section C.4.2.

(b) The Contractor shall develop the initial operational requirements for the TCM diagnostics logic IAW CDRL A011. The Contractor shall deliver the initial operational requirements to the Government 6 months after contract award and review and update the requirements at all IPRs.

(c) The Government will write the software code for the TCM diagnostics logic within the operational requirements provided by the Contractor. The Government will provide this code to the Contractor as GFI 18 months after contract award. The Contractor shall validate the Government-provided software code through a basic evaluation as described in Section C.5.1.

(d) This task shall be completed and delivered to the Government 24 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.4 Driver Station

##### C.4.1 Steering System

(a) The Contractor shall perform an analysis of alternatives for the steering interface from the Gemini III beta-transmission to the driver. In each case, the steering interface shall output to the Steer Control (Section C.3.8) two analog values (0-5VDC), each from a discrete source, where 2.5VDC corresponds to 0 degrees at the steering wheel, 0.5VDC corresponds to 100% left steer, and 4.5VDC corresponds to 100% right steer.

(b) The Contractor shall demonstrate the steering system functionality as part of the functional testing described in Section C.5.

(c) Results with recommendations of this analysis of alternatives shall be completed IAW CDRL A006 and delivered to the Government COR 12 months after contract award. The Government COR will provide a response within 30 days on how to proceed.

(d) The Contractor shall submit the final steering system design IAW CDRL A009 and deliver it to the Government 30 months after contract award. The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

##### C.4.2 Driver Display

(a) The Contractor shall incorporate a Driver Display with CAN interface, provided by the Government 6 months after contract award. The Contractor shall configure the display to show the current transmission gear-combination, the desired steer angle (as described in Section C.3.8), the vehicle speed limit based on the desired steer angle, and the available steering range available for right and left steer based on the vehicle speed.

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(b) The Contractor shall demonstrate the Driver Display functionality as part of the functional testing described in Section C.5

(c) The Contractor shall complete this task 30 months after contract award. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.4.3 Brake Pedal

(a) The Contractor shall incorporate the ECP II brake pedal configuration into the Gemini III beta-transmission configuration, except that the Contractor shall modify this configuration where necessary to interface to the mechanical brake input of the beta-transmission. The Contractor shall fit the ECP II configuration with hardware necessary to output two analog values (0-5VDC) to the Brake Control (Section C.3.9) where 0.5VDC corresponds to 0% braking and 4.5VDC corresponds 100% braking. The Contractor shall submit any proposed modification to the brake pedal design IAW CDRL A009 and deliver it to the Government COR no later than 16 months after contract award.

(b) The Contractor shall demonstrate the brake pedal as part of the functional testing described in Section C.5.1, performance testing described in Section C.5.2, and durability testing described in Section C.5.3.

(c) The Contractor shall generate technical reports IAW CDRL A006 and include the methodology, data, and analysis for this task. The Contractor shall complete this task 30 months after contract award. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.5 Test Schedule

The Contractor shall demonstrate the functionality, performance, and durability, on a test stand, of the integrated engine and the Gemini III beta-transmission, to include its TCM, throttle control, steering system, and brake pedal. The Contractor shall prepare and submit test failure reports IAW CDRL A007 in the event of any failure resulting in a design, configuration, assembly, or other process change regarding the test article.

##### C.5.1 Functional Testing

The Contractor shall generate a test plan IAW CDRL A004 for a comprehensive functional test of all Gemini III beta-transmission systems and related subsystems designed, developed, and modified under this contract. The Contractor shall perform basic evaluations on each system as it becomes available. The Contractor shall conduct functional testing to demonstrate compliance with Attachment 1. The Contractor shall complete performing the comprehensive functional testing 30 months after contract award on the first set of hardware developed for this program, and 46 months after contract award for the remaining three sets. The Contractor shall generate test reports IAW CDRL A006. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

##### C.5.2 Performance Testing

The Contractor shall generate a test plan IAW CDRL A004 for performance evaluation of all Gemini III beta-transmission systems and subsystems designed, developed, and modified under this contract. The Contractor shall conduct transmission spin loss testing and efficiency testing in all gear ranges combinations allowable by the TCM to create a performance software model of the beta-transmission. The Contractor shall conduct performance testing to demonstrate compliance with Attachments 1 & 2. The Contractor shall complete performing the performance evaluation 38 months after contract award. The Contractor shall generate a test report IAW CDRL A006. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

##### C.5.3 Durability Testing

The Contractor shall generate a test plan IAW CDRL A004 for durability testing of the manufactured and assembled Gemini III beta-transmission design. The Contractor shall conduct a 602 hour duty cycle test of the Gemini III beta-transmission to demonstrate compliance with Attachment 3. The Contractor shall complete performing this testing 42 months after contract award. The Contractor shall generate a test report IAW CDRL A006. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

#### C.6 Component Cost and Manufacturability

(a) The Contractor shall consider the cost and manufacturability of all components included in the Gemini III beta-transmission design.

(b) The Contractor shall perform a study of all components in the design to determine the total production costs for production runs of 5, 50, 500 and 5,000 units.

(c) The target cost for a 5,000 unit production run of the Gemini III beta-transmission design is \$400,000 (threshold) and \$220,000

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(objective) per unit. Accordingly, the Contractor shall design and redesign components of the Gemini III beta-transmission design to the extent feasible so that production costs for a 5,000 unit manufacturing run would fall within this range, while maintaining the functionality, performance, and durability to meet this programs technical requirements as the primary objective.

(d) The Contractor shall generate a report IAW CDRL A006 for this cost and manufacturability study. The Contractor shall complete this task 32 months after contract award. This task shall be tracked and updated on the monthly reports, as specified in CDRL A001 throughout the duration of the task.

**C.7 Hardware and Software Deliverables**

(a) The Contractor shall manufacture and deliver three (3) prototype Gemini III beta transmissions, each incorporating and accompanied by the additional integration hardware and software required to meet scope sections C.2.1, C.2.2, C.2.4, C.4.1, C.4.2, & C.4.3. One of these 3 sets shall be used by the Contractor for durability testing (C.5.3 above) prior to delivery to the Government.

(b) The Contractor shall deliver engineering drawings and CAD models for all designs created to complete each task identified in this scope of work IAW CDRL A008.

(c) The Contractor shall deliver methodologies, data, and analysis created for all preliminary and final hardware and software designs to complete each task identified in this scope of work IAW CDRL A006.

(d) The Contractor shall deliver all interface, configuration, and performance specifications to complete each task identified in this scope of work IAW CDRL A009.

(e) The Contractor shall deliver drawings, models, and lists for all commercial, modified-commercial and noncommercial hardware and software used to complete each task identified in this scope of work IAW CDRL A010 and A008, as applicable.

(f) In the event that the Contractor, during the course of contract performance, has purchased any software licenses that are required to complete any tasks within this scope of work, such licenses must be transferrable to, or deliverable to, the Government. Accordingly, the Contractor shall deliver any software licenses for software that is incorporated in, or necessary to be used for, the requirements for each task under this contract at the completion of the corresponding task.

(g) The Contractor shall deliver all software specifications to complete each task identified in this scope of work IAW CDRL A011.

**C.8 Government Furnished Property (GFP)/Government Furnished Equipment (GFE)/Government Furnished Information (GFI)**

(a) The Government will provide CAD models and drawings of the alpha-transmission and its components developed under W56HZV-10-C-0382.

(b) The Government will provide existing transmission software code, when necessary and available. The Government will provide the alpha design software and control laws within 30 days of contract acceptance.

(c) The Government will supply existing military hardware, when necessary and available.

(d) The Government will supply a BFV ECP II upgraded Cummins engine, throttle system, driver display, and brake pedal, as well as specifications for each of these systems.

(e) The Government will supply three (3) ETAS controllers, one for each of the three (3) prototype transmissions being manufactured for this effort.

(f) The Government will maintain a list of all hardware and software provided to the Contractor under this contract. Any additional hardware and software, other than what is stated in Sections C.8.a, C.8.b, C.8.c, C.8.d and C.8.e that are provided for the Contractor will be added to this contract through modifications to Section C.8. Disposal or return of all furnished property will be specified as part of the contract modification.

**C.9 Support**

The Contractor shall provide up to 40 hours of phone support and 160 hours (4 man-weeks) of onsite technical engineering support to provide vehicle installation into a test cell at TARDEC's Ground Systems Power and Energy Laboratory (GSPEL) in Warren, MI. The technical support also will include providing engineering and technical support for the installation of all Gemini III beta-transmission hardware and software into the test vehicle at TARDEC. The Contractor shall provide engineering and technical support for developing a test plan for the TARDEC test. The Contractor shall provide engineering and technical support for configuring, modifying, installing, and performing the TARDEC test.

**C.10 Project Management / Meetings / Reporting**

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C.10.1 Start of Work Meeting

The Contractor shall host a Start of Work meeting within 30 days after contract award. At the meeting, the Contractor shall present their proposed plan for accomplishing the contract requirements (including a draft Integrated Master Schedule (section C.10.3 below) and Contract Work Breakdown Structure (section C.10.4 below), as well as identify a senior governance structure).

C.10.2 In Process Reviews (IPR)

(a) The Contractor shall host quarterly IPRs, at locations mutually agreed upon by the Contractor and the COR. An agenda will be coordinated between the COR and Contractor prior to each Contractor-hosted review.

(b) At each IPR, the Contractor shall provide a summary of the program progress and status to include: overall Gemini III beta-transmission system development, technical performance, test, cost, schedule, and safety issues if any. The Contractor shall describe those accomplishments that have been achieved and problems that have occurred since the previous review, including the current status of unresolved problems carried over from a previous IPR.

(c) The final IPR will be considered a Final Review of this contract (to be held 30 days prior to completion of the contract). The Final Review shall summarize close-out efforts. The Contractor shall deliver the Final Technical Report at this meeting in accordance with CDRL data item A005.

C.10.3 Integrated Master Schedule (IMS)

The Contractor shall develop and maintain an IMS which shall be traceable through the Contract Work Breakdown Structure (CWBS) IAW CDRL data item A002. The IMS shall be used to verify attainability of contract objectives, evaluate progress toward meeting program objectives, integrate the program schedule activities with all related components, and will be reviewed at all IPRs. The Contractor shall prepare and submit a draft IMS at the Start of Work meeting and final IMS within 30 days after the Start of Work meeting.

C.10.4 Contract Work Breakdown Structure (CWBS)

The Contractor shall develop and maintain a CWBS which shall be traceable through the IMS in accordance with CDRL data item A003. The CWBS establishes a framework for program planning and cost tracking. The Contractors current performance against the CWBS will be reviewed at all IPRs. The Contractor shall prepare and submit a draft CWBS at the Start of Work meeting and a final CWBS within 30 days after the Start of Work meeting.

C.10.5 Progress Reports and Final Technical Report

(a) The Contractor shall prepare monthly progress, status, cost and management reports and prepare reviews in accordance with CDRL data item A001.

(b) The Contractor shall prepare a Final Technical Report in accordance with CDRL data item A005

C.11 Contractor Manpower Reporting

C.11.1 The contractor shall report all contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract for the U.S. Army via a secure data collection site. The contractor is required to completely fill in all required data fields using the Army CMR site, which you can access by clicking on the "Department of Army CMRA" link from the following gateway web address: <http://www.ecmra.mil/>

C.11.2 Reporting inputs will be for the labor executed during the period of performance during each Government fiscal year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year, beginning with 2013. Contractors may direct questions to the Army CMR help desk, which can be contacted using the "Send an email" link on the right side of the sign-in screen at the Army CMR site.

C.11.3 Additional information can be found in the clause in this contract entitled CONTRACTOR MANPOWER REPORTING (52.237-4000).

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<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
C-1 52.237-4000 (TACOM)	CONTRACTOR MANPOWER REPORTING (CMR)	FEB/2013

The Office of the Assistant Secretary of the Army (Manpower & Reserve Affairs) operates and maintains a secure Army data collection site where the contractor will report ALL contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract via secure data collection site. The contractor is required to completely fill in all required data fields in the format using the following web address: <https://cmra.army.mil> . The required information includes the following:

- (1) Contracting Office, Contracting Officer, Contracting Officer's Technical Representative;
- (2) Contract number, including task and delivery order number;
- (3) Beginning and ending dates covered by reporting period;
- (4) Contractor name, address, phone number, e-mail address, identity of contractor employee entering data;
- (5) Direct labor hours (including sub-contractors);
- (6) Direct labor dollars paid this reporting period (including sub-contractors);
- (7) Total payments (including sub-contractors);
- (8) Predominant Federal Service Code (FSC) reflecting services provided by contractor (and separate predominant FSC for each sub-contractor if different);
- (9) Data collection cost;
- (10) Organizational title associated with the Unit Identification Code (UIC) for the Army Requiring Activity (the Army Requiring Activity is responsible for providing the contractor with its UIC for the purposes of reporting this information);
- (11) Locations where contractor and sub-contractors perform the work (specified by zip code in the United States and nearest city, country, when in an overseas location, using standardized nomenclature provided on website);
- (12) Presence of deployment or contingency contract language; and
- (13) Number of contractor and sub-contractor employees deployed in theater this reporting period (by country).

Reporting inputs will be for the labor executed during the period of performance during each Government fiscal year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year, beginning with 2013. Contractors may direct questions to the help desk at : <https://cmra.army.mil>.

End of Clause]

**CONTINUATION SHEET****Reference No. of Document Being Continued****Page 18 of 38****PIIN/SIIN** W56HZV-13-C-0400**MOD/AMD****Name of Offeror or Contractor:** L-3 COMMUNICATIONS CORPORATIONSECTION D - PACKAGING AND MARKING  
PACKAGING AND MARKING

## D.1 Packaging and Packing:

The Contractor shall package and pack all items deliverable under this Contract in accordance with standard commercial practice to assure arrival at destination without damage or loss.

## D.2 Marking:

D.2.1 Technical Data Marking: The contractor shall ensure that all technical data, deliverable under this Contract, is identified by Contract number, contractor name and address and, where applicable, the name and address of the subcontractor who generated the data.

D.2.2 Materials and Hardware Marking: The Contractor shall mark or tag all materials and hardware required to be delivered under this Contract with the following information:

TACOM Contract and Task Order Number  
Contractor's Name  
Contractor's Address  
A Description of the Material or Hardware

\*\*\* END OF NARRATIVE D0001 \*\*\*

**CONTINUATION SHEET****Reference No. of Document Being Continued**

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## SECTION E - INSPECTION AND ACCEPTANCE

This document incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at these addresses:

<http://farsite.hill.af.mil/VFFARA.HTM> or <http://farsite.hill.af.mil/VDFDARA.HTM> or <http://farsite.hill.af.mil/VFAFARA.HTM>

If the clause requires additional or unique information, then that information is provided immediately after the clause title.

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
E-1	52.246-1	CONTRACTOR INSPECTION REQUIREMENTS	APR/1984
E-2	52.246-8	INSPECTION OF RESEARCH AND DEVELOPMENT--COST REIMBURSEMENT	MAY/2001
E-3	52.246-16	RESPONSIBILITY FOR SUPPLIES	APR/1984

\*\*\* END OF NARRATIVE E0001 \*\*\*

## INSPECTION AND ACCEPTANCE

Inspection and acceptance of all deliverables under this contract shall be made at DESTINATION by the Contracting Officer or his duly authorized representative. The determination that the deliverables are complete and conform to the requirements of the contract will be made by the Contracting Officer's Representative (COR), to assure the work and the results thereof are in accordance with the terms of the contract.

\*\*\* END OF NARRATIVE E0002 \*\*\*

**Name of Offeror or Contractor:** L-3 COMMUNICATIONS CORPORATION

SECTION F - DELIVERIES OR PERFORMANCE

F.1 DELIVERY

All deliveries shall be made in accordance with the Contract, or as otherwise directed by the Contracting Officer or authorized representative and shall be packaged and marked in accordance with Section D.

F.1.1 Any deliverables requiring a physical address shall be shipped to:

U.S. ARMY TARDEC  
 ANTHONY COMBI, COR  
 RDTA-RS, MAIL STOP 121  
 6501 EAST 11 MILE ROAD  
 WARREN, MI 48397-5000

F.2 METHOD OF DELIVERY

F.2.1 All deliveries shall be made on a FOB DESTINATION basis.

F.3 PERIOD OF PERFORMANCE

F.3.1 The base period of performance for the contract shall be 48 months from the contract award date.

\*\*\* END OF NARRATIVE F0001 \*\*\*

This document incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at these addresses:

<http://farsite.hill.af.mil/VFFARA.HTM> or <http://farsite.hill.af.mil/VDFARA.HTM> or <http://farsite.hill.af.mil/VFAFARA.HTM>

If the clause requires additional or unique information, then that information is provided immediately after the clause title.

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
F-1	52.242-15	STOP-WORK ORDER	AUG/1989
F-2	52.247-34	F.O.B. DESTINATION	NOV/1991

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SECTION G - CONTRACT ADMINISTRATION DATA

LINE	PRON/ AMS CD/ MIPR/ <u>GFEBBS ATA</u>	OBLG <u>STAT</u>	JO NO/ <u>ACCT ASSIGN</u>	<u>ACRN</u>	OBLIGATED <u>AMOUNT</u>
0001AA	R33MC055R3	1	R.0005719.2.9	AA	\$ 480,000.00
0002AA	R33MC055R3	1	R.0005719.2.9	AA	\$ 480,000.00
0003AA	R33MC055R3	1	R.0005719.2.9	AA	\$ 40,000.00
TOTAL					\$ 1,000,000.00

<u>ACRN</u>	<u>ACCOUNTING CLASSIFICATION</u>	OBLIGATED <u>AMOUNT</u>
AA	021 201320142040      A60FL 633005441RK20      2550 L033518751 R.0005719.2.9	021001 \$ 1,000,000.00
TOTAL		\$ 1,000,000.00

LINE <u>ITEM</u>	<u>ACRN</u>	<u>EDI/SFIS ACCOUNTING CLASSIFICATION</u>	OBLIGATED <u>AMOUNT</u>
0001AA	AA	021 201320142040      A60FL 633005441RK20      2550 L033518751 R.0005719.2.9	021001
0002AA	AA	021 201320142040      A60FL 633005441RK20      2550 L033518751 R.0005719.2.9	021001
0003AA	AA	021 201320142040      A60FL 633005441RK20      2550 L033518751 R.0005719.2.9	021001

<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
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G-1	252.232-7006      WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS	MAY/2013
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(a) Definitions. As used in this clause--

"Department of Defense Activity Address Code (DoDAAC)" is a six position code that uniquely identifies a unit, activity, or organization.

"Document type" means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

"Local processing office (LPO)" is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) Electronic invoicing. The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) WAWF access. To access WAWF, the Contractor shall--

(1) Have a designated electronic business point of contact in the System for Award Management at <https://www.acquisition.gov/> and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this Web site.

(d) WAWF training. The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the "Web Based Training" link on the WAWF home page at <https://wawf.eb.mil/>.

(e) WAWF methods of document submission. Document submissions may be via Web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) WAWF payment instructions. The Contractor must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order:

(1) Document type. The Contractor shall use the following document type(s).

**CONTINUATION SHEET****Reference No. of Document Being Continued**

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**Name of Offeror or Contractor:** L-3 COMMUNICATIONS CORPORATION

## Cost Vouchers

(2) Inspection/acceptance location. The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.

W91ATL

(3) Document routing. The Contractor shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table\*

Field Name in WAWF	Data to be entered in WAWF
Pay Official DoDAAC	HQ0337
Issue By DoDAAC	W56HZV
Admin DoDAAC	S2305A
Inspect By DoDAAC	W91ATL
Ship To Code	W91ATL
Ship From Code	02978
Mark For Code	W91ATL
Service Approver (DoDAAC)	W91ATL
Service Acceptor (DoDAAC)	W91ATL
Accept at Other DoDAAC	N/A
LPO DoDAAC	N/A
DCAA Auditor DoDAAC	HAA231
Other DoDAAC(s)	N/A

(4) Payment request and supporting documentation. The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(5) WAWF email notifications. The Contractor shall enter the email address identified below in the "Send Additional Email Notifications" field of WAWF once a document is submitted in the system.

anthony.j.combi.civ@mail.mil

(g) WAWF point of contact. (1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact.

delle.v.remsey.civ@mail.mil

(2) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.

(End of clause)

G-2

52.242-4016

COMMUNICATIONS

MAY/2000

Communications on technical matters pertaining to the contract shall be direct between the contractor and the Technical Representative. Communications for the Technical Representative shall be addressed to:

Name: Anthony Combi

E-mail: anthony.j.combi.civ@mail.mil

The Administrative Contracting Officer's (ACO) name and email address are also provided if known at this time:

ACO: Marla Armstrong

E-mail: marla.armstrong@dema.mil

Please see the appointment letters prepared at time of contract award for functions the Technical Representative and ACO will perform on this contract.

[End of Clause]

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G-3            252.204-0005            PAYMENT INSTRUCTIONS FOR THE DEFENSE FINANCE AND ACCOUNTING SERVICE            SEP/2009  
(DFARS PGI)            (DFAS) - Line Item Specific: by Cancellation Date

The payment office shall make payment using the ACRN with the earliest cancellation date first, exhausting all funds in that ACRN before disbursing funds from the next. In the event there is more than one ACRN associated with the same cancellation date, the payment amount shall be disbursed from each ACRN with the same cancellation date in the same proportion as the amount of funding obligated for each ACRN with the same cancellation date.

[End of Clause]

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**Name of Offeror or Contractor:** L-3 COMMUNICATIONS CORPORATION

SECTION H - SPECIAL CONTRACT REQUIREMENTS

<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
H-1 52.204-4005	REQUIRED USE OF ELECTRONIC CONTRACTING	AUG/2012

(a) All contract awards, modifications and delivery orders issued by Army Contracting Command - Warren (DTA) will be issued electronically. The contractor has the option to receive these actions either via the Worldwide Web (WWW) or Electronic Data Interchange (EDI). Many provisions/clauses that appear "by reference," meaning only clause titles and regulation site are listed; their full texts can be found at the website <http://farsite.hill.af.mil/>

(b) In order to be eligible to receive an award under this solicitation, the successful offeror must be registered with the Department of Defense (DOD) System for Award Management (SAM). The SAM registration process may be done electronically at the World Wide Web (WWW) site: <https://www.sam.gov/portal/public/SAM>. (In order to be registered to use EDI, you must use the long form for registration. Certification information, including information on the EDI 838 TPP, must be furnished to the Contracting Officer within 60 calendar days after contract award to complete networking requirements within the Government.)

(c) Worldwide Web Distribution. The contractor will receive an electronic Notice of the Award, Modification, or Delivery Order via e-mail. If you choose the WWW option, you must download the file from the appropriate Army Contracting Command - Warren webpage:

- Warren: [http://contracting.tacom.army.mil/CFDATA/AWARDS/AWARD\\_RPT01.cfm](http://contracting.tacom.army.mil/CFDATA/AWARDS/AWARD_RPT01.cfm)
- Rock Island - JMTC: <https://acquisition.army.mil/asfi/>
- Red River Army Depot: <https://acquisition.army.mil/asfi/>
- Anniston Army Depot: <https://acquisition.army.mil/asfi/>

(d) Electronic Data Interchange. If you choose to receive contract awards, modifications and delivery orders through EDI, they will be delivered electronically via the Federal Acquisition Network (FACNET). Federal Standard Version 3050 of Standard X12 from the American National Standards Institute (ANSI) will be used as the format for these electronic transactions.

(1) You must complete the EDI 838 Trading Partner Profile, and must agree (i) to subcontract with a DoD certified VAN or Value Added Service (VAS) provider, or (ii) to become DoD certified as a Value Added Network (VAN). The EDI 838 Training Partner Profile is contained in the basic SAM registration form and includes portions of the registration form which are titled "Optional".

(2) You must select a VAN from the official DoD approved list. DoD Certified VANs are listed at <http://www.acq.osd.mil/dpap/ebiz/VANs.htm>. If your VAN is later removed from the official list, or if you voluntarily drop your initially selected VAN, then you must switch to a VAN that remains on the official DoD approved list. You must maintain an active account on a DoD approved VAN for the entire duration of the contract, beginning no later than the 60th day after award.

(e) Unless otherwise specified elsewhere in the contract, all data items you are required to provide under this contract must be submitted electronically. Please go to the following webpage for detailed information about submitting your offer electronically: <http://contracting.tacom.army.mil/acqinfo/ebidnotice.htm>

(f) Additional information can be obtained by sending a message to: [usarmy.detroit.acc.mbx.wrn-web-page@mail.mil](mailto:usarmy.detroit.acc.mbx.wrn-web-page@mail.mil) or by calling (586) 282-7059.

H.1 Government-Furnished Property

H.2.1 The Government may furnish Government-owned property to assist the Contractor in the performance of the contract requirements.

H.2.2 Upon completion of the contract or in the event of termination of the contract, either partial or complete, all Government-owned property, including both property furnished to the Contractor and property acquired by the Contractor on the account of the Government, which will have become surplus or excess to any remaining contract requirements, shall be reported immediately by the Contractor to the Contracting Officer at the US Army Contracting Command, TACOM Contracting Center, ATTN: CCTA-ASG-B, Warren, MI 48397-5000 for redistribution, shipping instructions, release for disposal, or other actions.

H.2.3 Specific Government-Furnished Property to be provided is/are as follows:

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Item: BFV ECP II Upgraded Cummins Engine, throttle system, driver display and brake pedal with specifications.

Qty: 1

Serial No./NSN: N/A

Acquisition Value: \$50,000

Item: ETAS Controllers

Qty: 3

Serial No./NSN: N/A

Acquisition Value: \$24,000 (\$8,000 each)

Item: Transmission Software Code

Qty: 1

Serial No./NSN: N/A

Acquisition Value: N/A

Item: CAD Models and Drawings of Alpha Transmission

Qty: Multiple

Serial No./NSN: N/A

Acquisition Value: N/A

\*\*\* END OF NARRATIVE H0001 \*\*\*

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## SECTION I - CONTRACT CLAUSES

This document incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at these addresses:

<http://farsite.hill.af.mil/VFFARA.HTM> or <http://farsite.hill.af.mil/VDFARA.HTM> or <http://farsite.hill.af.mil/VFAFARA.HTM>

If the clause requires additional or unique information, then that information is provided immediately after the clause title.

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-1	52.202-1	DEFINITIONS	JAN/2012
I-2	52.203-3	GRATUITIES	APR/1984
I-3	52.203-5	COVENANT AGAINST CONTINGENT FEES	APR/1984
I-4	52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	SEP/2006
I-5	52.203-7	ANTI-KICKBACK PROCEDURES	OCT/2010
I-6	52.203-8	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-7	52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-8	52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	OCT/2010
I-9	52.204-4	PRINTED OR COPIED DOUBLE-SIDED ON POSTCONSUMER FIBER CONTENT PAPER	MAY/2011
I-10	52.204-10	REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS	JUN/2013
I-11	52.204-13	CENTRAL CONTRACTOR REGISTRATION MAINTENANCE	DEC/2012
I-12	52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	DEC/2010
I-13	52.209-9	UPDATES OF PUBLICLY AVAILABLE INFORMATION REGARDING RESPONSIBILITY MATTERS	FEB/2012
I-14	52.211-5	MATERIAL REQUIREMENTS	AUG/2000
I-15	52.211-15	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS	APR/2008
I-16	52.215-2	AUDIT AND RECORDS--NEGOTIATIONS	OCT/2010
I-17	52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT	OCT/1997
I-18	52.215-14	INTEGRITY OF UNIT PRICES	OCT/2010
I-19	52.215-23	LIMITATIONS ON PASS-THROUGH CHARGES	OCT/2009
I-20	52.216-8	FIXED FEE	JUN/2011
I-21	52.222-19	CHILD LABOR--COOPERATION WITH AUTHORITIES AND REMEDIES	MAR/2012
I-22	52.222-20	WALSH-HEALEY PUBLIC CONTRACTS ACT	OCT/2010
I-23	52.222-21	PROHIBITION OF SEGREGATED FACILITIES	FEB/1999
I-24	52.222-26	EQUAL OPPORTUNITY	MAR/2007
I-25	52.222-35	EQUAL OPPORTUNITY FOR VETERANS	SEP/2010
I-26	52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES	OCT/2010
I-27	52.222-37	EMPLOYMENT REPORTS ON VETERANS	SEP/2010
I-28	52.222-40	NOTIFICATION OF EMPLOYEE RIGHTS UNDER THE NATIONAL LABOR RELATIONS ACT	DEC/2010
I-29	52.222-50	COMBATING TRAFFICKING IN PERSONS	FEB/2009
I-30	52.222-54	EMPLOYMENT ELIGIBILITY VERIFICATION	JUL/2012
I-31	52.223-6	DRUG-FREE WORKPLACE	MAY/2001
I-32	52.223-18	ENCOURAGING CONTRACTOR POLICIES TO BAN TEXT MESSAGING WHILE DRIVING	AUG/2011
I-33	52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	JUN/2008
I-34	52.227-1	AUTHORIZATION AND CONSENT (DEC 2007) -- ALTERNATE I (APR 1984)	APR/1984
I-35	52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	DEC/2007
I-36	52.228-7	INSURANCE--LIABILITY TO THIRD PERSONS	MAR/1996
I-37	52.229-4	FEDERAL, STATE, AND LOCAL TAXES (STATE AND LOCAL ADJUSTMENTS)	FEB/2013
I-38	52.232-1	PAYMENTS	APR/1984
I-39	52.232-8	DISCOUNTS FOR PROMPT PAYMENT	FEB/2002
I-40	52.232-9	LIMITATION ON WITHHOLDING OF PAYMENTS	APR/1984
I-41	52.232-11	EXTRAS	APR/1984
I-42	52.232-17	INTEREST	OCT/2010
I-43	52.232-22	LIMITATION OF FUNDS	APR/1984
I-44	52.232-23	ASSIGNMENT OF CLAIMS (JAN 1986) -- ALTERNATE I (APR 1984)	APR/1984
I-45	52.232-25	PROMPT PAYMENT	OCT/2008
I-46	52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER--CENTRAL CONTRACTOR REGISTRATION	OCT/2003
I-47	52.232-39	UNENFORCEABILITY OF UNAUTHORIZED OBLIGATIONS	JUN/2013
I-48	52.233-1	DISPUTES	JUL/2002

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I-49	52.233-3	PROTEST AFTER AWARD (AUG 1996) -- ALTERNATE I (JUN 1985)	JUN/1985
I-50	52.233-4	APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM	OCT/2004
I-51	52.242-1	NOTICE OF INTENT TO DISALLOW COSTS	APR/1984
I-52	52.242-3	PENALTIES FOR UNALLOWABLE COSTS	MAY/2001
I-53	52.242-13	BANKRUPTCY	JUL/1995
I-54	52.243-2	CHANGES--COST REIMBURSEMENT	AUG/1987
I-55	52.244-5	COMPETITION IN SUBCONTRACTING	DEC/1996
I-56	52.244-6	SUBCONTRACTS FOR COMMERCIAL ITEMS	DEC/2010
I-57	52.245-1	GOVERNMENT PROPERTY	APR/2012
I-58	52.247-63	PREFERENCE FOR U.S.-FLAG AIR CARRIERS	JUN/2003
I-59	52.249-6	TERMINATION (COST REIMBURSEMENT)	MAY/2004
I-60	52.249-14	EXCUSABLE DELAYS	APR/1984
I-61	52.253-1	COMPUTER GENERATED FORMS	JAN/1991
I-62	252.201-7000	CONTRACTING OFFICER'S REPRESENTATIVE	DEC/1991
I-63	252.203-7000	REQUIREMENTS RELATING TO COMPENSATION OF FORMER DOD OFFICIALS	SEP/2011
I-64	252.203-7001	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES	DEC/2008
I-65	252.203-7002	REQUIREMENT TO INFORM EMPLOYEES OF WHISTLEBLOWER RIGHTS	JAN/2009
I-66	252.204-7000	DISCLOSURE OF INFORMATION	DEC/1991
I-67	252.204-7003	CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT	APR/1992
I-68	252.204-7004	ALTERNATE A, SYSTEM FOR AWARD MANAGEMENT	MAY/2013
I-69	252.204-7006	BILLING INSTRUCTIONS	OCT/2005
I-70	252.209-7004	SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY	DEC/2006
I-71	252.215-7000	PRICING ADJUSTMENTS	DEC/2012
I-72	252.225-7001	BUY AMERICAN AND BALANCE OF PAYMENTS PROGRAM	DEC/2012
I-73	252.225-7002	QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS	DEC/2012
I-74	252.225-7006	QUARTERLY REPORTING OF ACTUAL CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES	OCT/2010
I-75	252.225-7012	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES	FEB/2013
I-76	252.225-7013	DUTY-FREE ENTRY	JUN/2012
I-77	252.225-7033	WAIVER OF UNITED KINGDOM LEVIES	APR/2003
I-78	252.225-7048	EXPORT-CONTROLLED ITEMS	JUN/2013
I-79	252.226-7001	UTILIZATION OF INDIAN ORGANIZATIONS, INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS	SEP/2004
I-80	252.227-7013	RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS	MAY/2013
I-81	252.227-7014	RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION	MAY/2013
I-82	252.227-7015	TECHNICAL DATA--COMMERCIAL ITEMS (MAY 2013) -- ALTERNATE I (DEC 2011)	DEC/2011
I-83	252.227-7019	VALIDATION OF ASSERTED RESTRICTIONS--COMPUTER SOFTWARE	SEP/2011
I-84	252.227-7030	TECHNICAL DATA--WITHHOLDING OF PAYMENT	MAR/2000
I-85	252.227-7037	VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA	JUN/2012
I-86	252.227-7039	PATENTS--REPORTING OF SUBJECT INVENTIONS	APR/1990
I-87	252.231-7000	SUPPLEMENTAL COST PRINCIPLES	DEC/1991
I-88	252.232-7003	ELECTRONIC SUBMISSION OF PAYMENT REQUESTS AND RECEIVING REPORTS	JUN/2012
I-89	252.232-7010	LEVIES ON CONTRACT PAYMENTS	DEC/2006
I-90	252.235-7011	FINAL SCIENTIFIC OR TECHNICAL REPORT	NOV/2004
I-91	252.237-7010	PROHIBITION ON INTERROGATION OF DETAINEES BY CONTRACTOR PERSONNEL	NOV/2010
I-92	252.243-7001	PRICING OF CONTRACT MODIFICATIONS	DEC/1991
I-93	252.243-7002	REQUESTS FOR EQUITABLE ADJUSTMENT	DEC/2012
I-94	252.244-7000	SUBCONTRACTS FOR COMMERCIAL ITEMS	JUN/2013
I-95	252.245-7001	TAGGING, LABELING, AND MARKING OF GOVERNMENT-FURNISHED PROPERTY	APR/2012
I-96	252.245-7002	REPORTING LOSS OF GOVERNMENT PROPERTY	APR/2012
I-97	252.245-7003	CONTRACTOR PROPERTY MANAGEMENT SYSTEM ADMINISTRATION	APR/2012
I-98	252.245-7004	REPORTING, REUTILIZATION, AND DISPOSAL	MAY/2013
I-99	252.246-7000	MATERIAL INSPECTION AND RECEIVING REPORT	MAR/2008
I-100	252.246-7001	WARRANTY OF DATA	DEC/1991
I-101	52.216-7	ALLOWABLE COST AND PAYMENT	JUN/2011

(a) Invoicing.

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(1) The Government will make payments to the Contractor when requested as work progresses, but (except for small business concerns) not more often than once every 2 weeks, in amounts determined to be allowable by the Contracting Officer in accordance with Federal Acquisition Regulation (FAR) Subpart 31.2 in effect on the date of this contract and the terms of this contract. The Contractor may submit to an authorized representative of the Contracting Officer, in such form and reasonable detail as the representative may require, an invoice or voucher supported by a statement of the claimed allowable cost for performing this contract.

(2) Contract financing payments are not subject to the interest penalty provisions of the Prompt Payment Act. Interim payments made prior to the final payment under the contract are contract financing payments, except interim payments if this contract contains Alternate I to the clause at 52.232-25.

(3) The designated payment office will make interim payments for contract financing on the 30th day after the designated billing office receives a proper payment request. In the event that the Government requires an audit or other review of a specific payment request to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the specified due date.

(b) Reimbursing costs.

(1) For the purpose of reimbursing allowable costs (except as provided in subparagraph (b)(2) of this clause, with respect to pension, deferred profit sharing, and employee stock ownership plan contributions), the term costs includes only --

(i) Those recorded costs that, at the time of the request for reimbursement, the Contractor has paid by cash, check, or other form of actual payment for items or services purchased directly for the contract;

(ii) When the Contractor is not delinquent in paying costs of contract performance in the ordinary course of business, costs incurred, but not necessarily paid, for --

(A) Supplies and services purchased directly for the contract and associated financing payments to subcontractors, provided payments determined due will be made

(1) In accordance with the terms and conditions of a subcontract or invoice; and

(2) Ordinarily within 30 days of the submission of the Contractors payment request to the Government;

(B) Materials issued from the Contractors inventory and placed in the production process for use on the contract;

(C) Direct labor;

(D) Direct travel;

(E) Other direct in-house costs; and

(F) Properly allocable and allowable indirect costs, as shown in the records maintained by the Contractor for purposes of obtaining reimbursement under Government contracts; and

(iii) The amount of financing payments that have been paid by cash, check or other form of payment to subcontractors.

(2) Accrued costs of Contractor contributions under employee pension plans shall be excluded until actually paid unless

(i) The Contractors practice is to make contributions to the retirement fund quarterly or more frequently; and

(ii) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contribution remaining unpaid shall be excluded from the Contractors indirect costs for payment purposes).

(3) Notwithstanding the audit and adjustment of invoices or vouchers under paragraph (g) of this clause, allowable indirect costs under this contract shall be obtained by applying indirect cost rates established in accordance with paragraph (d) of this clause.

(4) Any statements in specifications or other documents incorporated in this contract by reference designating performance of services or furnishing of materials at the Contractors expense or at no cost to the Government shall be disregarded for purposes of cost-reimbursement under this clause.

(c) Small business concerns. A small business concern may receive more frequent payments than every 2 weeks.

(d) Final indirect cost rates.

(1) Final annual indirect cost rates and the appropriate bases shall be established in accordance with Subpart 42.7 of the Federal

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Acquisition Regulation (FAR) in effect for the period covered by the indirect cost rate proposal.

(2)(i) The Contractor shall submit an adequate final indirect cost rate proposal to the Contracting Officer (or cognizant Federal agency official) and auditor within the 6-month period following the expiration of each of its fiscal years. Reasonable extensions, for exceptional circumstances only, may be requested in writing by the Contractor and granted in writing by the Contracting Officer. The Contractor shall support its proposal with adequate supporting data.

(ii) The proposed rates shall be based on the Contractors actual cost experience for that period. The appropriate Government representative and the Contractor shall establish the final indirect cost rates as promptly as practical after receipt of the Contractors proposal.

(iii) An adequate indirect cost rate proposal shall include the following data unless otherwise specified by the cognizant Federal agency official:

(A) Summary of all claimed indirect expense rates, including pool, base, and calculated indirect rate.

(B) General and Administrative expenses (final indirect cost pool). Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts).

(C) Overhead expenses (final indirect cost pool). Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts) for each final indirect cost pool.

(D) Occupancy expenses (intermediate indirect cost pool). Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts) and expense reallocation to final indirect cost pools.

(E) Claimed allocation bases, by element of cost, used to distribute indirect costs.

(F) Facilities capital cost of money factors computation.

(G) Reconciliation of books of account (i.e., General Ledger) and claimed direct costs by major cost element.

(H) Schedule of direct costs by contract and subcontract and indirect expense applied at claimed rates, as well as a subsidiary schedule of Government participation percentages in each of the allocation base amounts.

(I) Schedule of cumulative direct and indirect costs claimed and billed by contract and subcontract.

(J) Subcontract information. Listing of subcontracts awarded to companies for which the contractor is the prime or upper-tier contractor (include prime and subcontract numbers; subcontract value and award type; amount claimed during the fiscal year; and the subcontractor name, address, and point of contact information).

(K) Summary of each time-and-materials and labor-hour contract information, including labor categories, labor rates, hours, and amounts; direct materials; other direct costs; and, indirect expense applied at claimed rates.

(L) Reconciliation of total payroll per IRS form 941 to total labor costs distribution.

(M) Listing of decisions/agreements/approvals and description of accounting/organizational changes.

(N) Certificate of final indirect costs (see 52.242-4, Certification of Final Indirect Costs).

(O) Contract closing information for contracts physically completed in this fiscal year (include contract number, period of performance, contract ceiling amounts, contract fee computations, level of effort, and indicate if the contract is ready to close).

(iv) The following supplemental information is not required to determine if a proposal is adequate, but may be required during the audit process:

(A) Comparative analysis of indirect expense pools detailed by account to prior fiscal year and budgetary data.

(B) General Organizational information and Executive compensation for the five most highly compensated executives. See 31.205-6(p). Additional salary reference information is available at [://www.whitehouse.gov/omb/procurement\\_index\\_exec\\_comp/](http://www.whitehouse.gov/omb/procurement_index_exec_comp/).

(C) Identification of prime contracts under which the contractor performs as a subcontractor.

(D) Description of accounting system (excludes contractors required to submit a CAS Disclosure Statement or contractors where the

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description of the accounting system has not changed from the previous year's submission).

- (E) Procedures for identifying and excluding unallowable costs from the costs claimed and billed (excludes contractors where the procedures have not changed from the previous year's submission).
- (F) Certified financial statements and other financial data (e.g., trial balance, compilation, review, etc.).
- (G) Management letter from outside CPAs concerning any internal control weaknesses.
- (H) Actions that have been and/or will be implemented to correct the weaknesses described in the management letter from subparagraph (G) of this section.
- (I) List of all internal audit reports issued since the last disclosure of internal audit reports to the Government.
- (J) Annual internal audit plan of scheduled audits to be performed in the fiscal year when the final indirect cost rate submission is made.
- (K) Federal and State income tax returns.
- (L) Securities and Exchange Commission 10-K annual report.
- (M) Minutes from board of directors meetings.
- (N) Listing of delay claims and termination claims submitted which contain costs relating to the subject fiscal year.
- (O) Contract briefings, which generally include a synopsis of all pertinent contract provisions, such as: Contract type, contract amount, product or service(s) to be provided, contract performance period, rate ceilings, advance approval requirements, pre-contract cost allowability limitations, and billing limitations.
- (v) The Contractor shall update the billings on all contracts to reflect the final settled rates and update the schedule of cumulative direct and indirect costs claimed and billed, as required in paragraph (d)(2)(iii)(I) of this section, within 60 days after settlement of final indirect cost rates.
- (3) The Contractor and the appropriate Government representative shall execute a written understanding setting forth the final indirect cost rates. The understanding shall specify
- (i) the agreed-upon final annual indirect cost rates,
  - (ii) the bases to which the rates apply,
  - (iii) the periods for which the rates apply,
  - (iv) any specific indirect cost items treated as direct costs in the settlement, and
  - (v) the affected contract and/or subcontract, identifying any with advance agreements or special terms and the applicable rates.
- The understanding shall not change any monetary ceiling, contract obligation, or specific cost allowance or disallowance provided for in this contract. The understanding is incorporated into this contract upon execution.
- (4) Failure by the parties to agree on a final annual indirect cost rate shall be a dispute within the meaning of the Disputes clause.
- (5) Within 120 days (or longer period if approved in writing by the Contracting Officer) after settlement of the final annual indirect cost rates for all years of a physically complete contract, Contractor shall submit a completion invoice or voucher to reflect the settled amounts and rates. The completion invoice or voucher shall include settled subcontract amounts and rates. The prime contractor is responsible for settling subcontractor amounts and rates included in the completion invoice or voucher and providing status of subcontractor audits to the contracting officer upon request.
- (6)(i) If the Contractor fails to submit a completion invoice or voucher within the time specified in paragraph (d)(5) of this clause, the Contracting Officer may--
- (A) Determine the amounts due to the Contractor under the contract; and
  - (B) Record this determination in a unilateral modification to the contract.

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(ii) This determination constitutes the final decision of the Contracting Officer in accordance with the Disputes clause.

(e) Billing rates. Until final annual indirect cost rates are established for any period, the Government shall reimburse the Contractor at billing rates established by the Contracting Officer or by an authorized representative (the cognizant auditor), subject to adjustment when the final rates are established. These billing rates --

(1) Shall be the anticipated final rates; and

(2) May be prospectively or retroactively revised by mutual agreement, at either partys request, to prevent substantial overpayment or underpayment.

(f) Quick-closeout procedures. Quick-closeout procedures are applicable when the conditions in FAR 42.708(a) are satisfied.

(g) Audit. At any time or times before final payment, the Contracting Officer may have the Contractors invoices or vouchers and statements of cost audited. Any payment may be --

(1) Reduced by amounts found by the Contracting Officer not to constitute allowable costs; or

(2) Adjusted for prior overpayments or underpayments.

(h) Final payment.

(1) Upon approval of a completion invoice or voucher submitted by the Contractor in accordance with paragraph (d)(5) of this clause, and upon the Contractors compliance with all terms of this contract, the Government shall promptly pay any balance of allowable costs and that part of the fee (if any) not previously paid.

(2) The Contractor shall pay to the Government any refunds, rebates, credits, or other amounts (including interest, if any) accruing to or received by the Contractor or any assignee under this contract, to the extent that those amounts are properly allocable to costs for which the Contractor has been reimbursed by the Government. Reasonable expenses incurred by the Contractor for securing refunds, rebates, credits, or other amounts shall be allowable costs if approved by the Contracting Officer. Before final payment under this contract, the Contractor and each assignee whose assignment is in effect at the time of final payment shall execute and deliver --

(i) An assignment to the Government, in form and substance satisfactory to the Contracting Officer, of refunds, rebates, credits, or other amounts (including interest, if any) properly allocable to costs for which the Contractor has been reimbursed by the Government under this contract; and

(ii) A release discharging the Government, its officers, agents, and employees from all liabilities, obligations, and claims arising out of or under this contract, except --

(A) Specified claims stated in exact amounts, or in estimated amounts when the exact amounts are not known;

(B) Claims (including reasonable incidental expenses) based upon liabilities of the Contractor to third parties arising out of the performance of this contract; provided, that the claims are not known to the Contractor on the date of the execution of the release, and that the Contractor gives notice of the claims in writing to the Contracting Officer within 6 years following the release date or notice of final payment date, whichever is earlier; and

(C) Claims for reimbursement of costs, including reasonable incidental expenses, incurred by the Contractor under the patent clauses of this contract, excluding, however, any expenses arising from the Contractors indemnification of the Government against patent liability.

(End of Clause)

I-102            52.243-7            NOTIFICATION OF CHANGES            APR/1984

(a) Definitions. Contracting Officer, as used in this clause, does not include any representative of the Contracting Officer.

Specifically Authorized Representative (SAR), as used in this clause, means any person the Contracting Officer has so designated by written notice (a copy of which shall be provided to the Contractor) which shall refer to this subparagraph and shall be issued to the designated representative before the SAR exercises such authority.

(b) Notice. The primary purpose of this clause is to obtain prompt reporting of Government conduct that the Contractor considers to

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constitute a change to this contract. Except for changes identified as such in writing and signed by the Contracting Officer, the Contractor shall notify the Administrative Contracting Officer in writing promptly, within 30 calendar days from the date that the Contractor identifies any Government conduct (including actions, inactions, and written or oral communications) that the Contractor regards as a change to the contract terms and conditions. On the basis of the most accurate information available to the Contractor, the notice shall state --

- (1) The date, nature, and circumstances of the conduct regarded as a change;
- (2) The name, function, and activity of each Government individual and Contractor official or employee involved in or knowledgeable about such conduct;
- (3) The identification of any documents and the substance of any oral communication involved in such conduct;
- (4) In the instance of alleged acceleration of scheduled performance or delivery, the basis upon which it arose;
- (5) The particular elements of contract performance for which the Contractor may seek an equitable adjustment under this clause, including --
  - (i) What contract line items have been or may be affected by the alleged change;
  - (ii) What labor or materials or both have been or may be added, deleted, or wasted by the alleged change;
  - (iii) To the extent practicable, what delay and disruption in the manner and sequence of performance and effect on continued performance have been or may be caused by the alleged change;
  - (iv) What adjustments to contract price, delivery schedule, and other provisions affected by the alleged change are estimated; and
- (6) The Contractors estimate of the time by which the Government must respond to the Contractors notice to minimize cost, delay or disruption of performance.

(c) Continued performance. Following submission of the notice required by paragraph (b) of this clause, the Contractor shall diligently continue performance of this contract to the maximum extent possible in accordance with its terms and conditions as construed by the Contractor, unless the notice reports a direction of the Contracting Officer or a communication from a SAR of the Contracting Officer, in either of which events the Contractor shall continue performance; provided, however, that if the Contractor regards the direction or communication as a change as described in paragraph (b) of this clause, notice shall be given in the manner provided. All directions, communications, interpretations, orders and similar actions of the SAR shall be reduced to writing promptly and copies furnished to the Contractor and to the Contracting Officer. The Contracting Officer shall promptly countermand any action which exceeds the authority of the SAR.

(d) Government response. The Contracting Officer shall promptly, within 30 calendar days after receipt of notice, respond to the notice in writing. In responding, the Contracting Officer shall either --

- (1) Confirm that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance;
- (2) Countermand any communication regarded as a change;
- (3) Deny that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance; or
- (4) In the event the Contractors notice information is inadequate to make a decision under subparagraphs (d)(1), (2), or (3) of this clause, advise the Contractor what additional information is required, and establish the date by which it should be furnished and the date thereafter by which the Government will respond.

(e) Equitable adjustments.

(1) If the Contracting Officer confirms that Government conduct effected a change as alleged by the Contractor, and the conduct causes an increase or decrease in the Contractors cost of, or the time required for, performance of any part of the work under this contract, whether changed or not changed by such conduct, an equitable adjustment shall be made --

- (i) In the contract price or delivery schedule or both; and
  - (ii) In such other provisions of the contract as may be affected.
- (2) The contract shall be modified in writing accordingly. In the case of drawings, designs or specifications which are defective and

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for which the Government is responsible, the equitable adjustment shall include the cost and time extension for delay reasonably incurred by the Contractor in attempting to comply with the defective drawings, designs or specifications before the Contractor identified, or reasonably should have identified, such defect. When the cost of property made obsolete or excess as a result of a change confirmed by the Contracting Officer under this clause is included in the equitable adjustment, the Contracting Officer shall have the right to prescribe the manner of disposition of the property. The equitable adjustment shall not include increased costs or time extensions for delay resulting from the Contractors failure to provide notice or to continue performance as provided, respectively, in paragraphs (b) and (c) of this clause.

NOTE: The phrases contract price and cost wherever they appear in the clause, may be appropriately modified to apply to cost-reimbursement or incentive contracts, or to combinations thereof.

(End of Clause)

I-103            52.244-2            SUBCONTRACTS            OCT/2010

(a) Definitions. As used in this clause

Approved purchasing system means a Contractors purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR)

Consent to subcontract means the Contracting Officers written consent for the Contractor to enter into a particular subcontract.

Subcontract means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (c) or (d) or this clause.

(c) If the contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor-hour type; or

(2) Is fixed-price and exceeds

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the national Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For contracts awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(d) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officers written consent before placing the following subcontracts: (TBD)

(e)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (b), (c), or (d) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractors current, complete, and accurate certified cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractors Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

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(vii) A negotiation memorandum reflecting --

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason certified cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractors certified cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractors certified cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractors price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (c), (d), or (e) or this clause.

(f) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractors purchasing system shall constitute a determination --

(1) Of the acceptability of any subcontract terms or conditions;

(2) Of the allowability of any cost under this contract; or

(3) To relieve the Contractor of any responsibility for performing this contract.

(g) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).

(h) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(i) The Government reserves the right to review the Contractors purchasing system as set forth in FAR Subpart 44.3.i

(j) Paragraphs (c) and (e) of this clause do not apply to the following subcontracts, which were evaluated during negotiations: (TBD)

I-104

252.232-7007

LIMITATION OF GOVERNMENT'S OBLIGATION

MAY/2006

(a) Contract line item(s) 0001AA, 0001AB and 0001AC are incrementally funded. For these item(s), the sum of \$ 1,000,000 of the total price is presently available for payment and allotted to this contract. An allotment schedule is set forth in paragraph (j) of this clause.

(b) For item(s) identified in paragraph (a) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those item(s) for the Governments convenience, approximates the total amount currently allotted to the contract. The Contractor is not authorized to continue work on those item(s) beyond that point. The Government will not be obligated in any event to reimburse the Contractor in excess of the amount allotted to the contract for those item(s) regardless of anything to the contrary in the clause entitled Termination for Convenience of the Government. As used in this clause, the total amount payable by the Government in the event of termination of applicable contract line item(s) for convenience includes costs, profit, and estimated termination settlement costs for those item(s).

(c) Notwithstanding the dates specified in the allotment schedule in paragraph (j) of this clause, the Contractor will notify the Contracting Officer in writing at least ninety days prior to the date when, in the Contractors best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate 85 percent of the total amount then allotted to the contract for performance of the applicable item(s). The notification will state (1) the

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estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of applicable line items up to the next scheduled date for allotment of funds identified in paragraph (j) of this clause, or to a mutually agreed upon substitute date. The notification will also advise the Contracting Officer of the estimated amount of additional funds that will be required for the timely performance of the item(s) funded pursuant to this clause, for a subsequent period as may be specified in the allotment schedule in paragraph (j) of this clause or otherwise agreed to by the parties. If after such notification additional funds are not allotted by the date identified in the Contractors notification, or by an agreed substitute date, the Contracting Officer will terminate any item(s) for which additional funds have not been allotted, pursuant to the clause of this contract entitled Termination for Convenience of the Government.

(d) When additional funds are allotted for continued performance of the contract line item(s) identified in paragraph (a) of this clause, the parties will agree as to the period of contract performance which will be covered by the funds. The provisions of paragraphs (b) through (d) of this clause will apply in like manner to the additional allotted funds and agreed substitute date, and the contract will be modified accordingly.

(e) If, solely by reason of failure of the Government to allot additional funds, by the dates indicated below, in amounts sufficient for timely performance of the contract line item(s) identified in paragraph (a) of this clause, the Contractor incurs additional costs or is delayed in the performance of the work under this contract and if additional funds are allotted, an equitable adjustment will be made in the price or prices (including appropriate target, billing, and ceiling prices where applicable) of the item(s), or in the time of delivery, or both. Failure to agree to any such equitable adjustment hereunder will be a dispute concerning a question of fact within the meaning of the clause entitled Disputes.

(f) The Government may at any time prior to termination allot additional funds for the performance of the contract line item(s) identified in paragraph (a) of this clause.

(g) The termination provisions of this clause do not limit the rights of the Government under the clause entitled Default. The provisions of this clause are limited to the work and allotment of funds for the contract line item(s) set forth in paragraph (a) of this clause. This clause no longer applies once the contract is fully funded except with regard to the rights or obligations of the parties concerning equitable adjustments negotiated under paragraphs (d) and (e) of this clause.

(h) Nothing in this clause affects the right of the Government to terminate this contract pursuant to the clause of this contract entitled Termination for Convenience of the Government.

(i) Nothing in this clause shall be construed as authorization of voluntary services whose acceptance is otherwise prohibited under 31 U.S.C. 1342.

(j) The parties contemplate that the Government will allot funds to this contract in accordance with the following schedule:

Fiscal Year	Amount
Fiscal Year 13	\$1,000,000
Fiscal Year 14	\$4,000,000
Fiscal Year 15	\$5,000,000
Fiscal Year 16	\$5,000,000
Fiscal Year 17	\$4,653,434

(End of clause)

I-105      252.235-7010      ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER      MAY/1995

(a) The Contractor shall include an acknowledgment of the Governments support in the publication of any material based on or developed under this contract, stated in the following terms: This material is based upon work supported by the Army Contracting Command - Warren under Contract No. W56HZV-13-C-0400.

(b) All material, except scientific articles or papers published in scientific journals, must, in addition to any notices or disclaimers by the Contractor, also contain the following disclaimer: Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Army Contracting Command - Warren.

(End of clause)

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I-106            52.252-2            CLAUSES INCORPORATED BY REFERENCE            FEB/1998

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address:

<http://www.acq.osd.mil/dpap/dars/far.html> or <http://www.acq.osd.mil/dpap/dars/index.htm> or <http://farsite.hill.af.mil/VFAFARA.HTM>

(End of Clause)

I-107            52.204-4009            MANDATORY USE OF CONTRACTOR TO GOVERNMENT ELECTRONIC COMMUNICATION            MAR/2005

(a) All references in the contract to the submission of written documentation shall mean electronic submission. All electronic submissions shall be in the formats and media described in the website:

<http://contracting.tacom.army.mil/acqinfo/ebidnotice.htm>

(b) This shall include all written unclassified communications between the Government and the Contractor except contract awards and contract modifications which shall be posted on the internet. Return receipt shall be used if a commercial application is available. Classified information shall be handled in full accordance with the appropriate security requirements.

(c) In order to be contractually binding, all Government communications requiring a Contracting Officer signature must be sent from the Contracting Officer's e-mail address. The Contractor shall designate the personnel with signature authority who can contractually bind the contractor. All binding contractor communication shall be sent from this contractor e-mail address(es).

(d) Upon award, the Contractor shall provide the Contracting Officer with a list of e-mail addresses for all administrative and technical personnel assigned to this contract.

(e) Unless exempted by the Procuring Contracting Officer in writing, all unclassified written communication after contract award shall be transmitted electronically.

[End of Clause]

I-108            52.219-4070            PILOT MENTOR-PROTEGE PROGRAM            APR/2006

(a) The Pilot Mentor-Protege Program does not apply to small business concerns.

(b) Utilization of the Pilot Mentor-Protege Program (hereafter referred to as the Program) is encouraged. Under the Program, eligible companies approved as mentor firms enter into a mentor-protege agreement with eligible protege firms. The goal of the program is to provide appropriate developmental assistance to enhance the capabilities of the protege firm. The Mentor firm may be eligible for cost reimbursement or credit against their applicable subcontracting goals.

(c) Mentor firms are encouraged to identify and select concerns that are defined as emerging small business concerns, small disadvantaged business, women-owned small business, HUBZone small business, service-disabled veteran-owned small business, veteran-owned small business or an eligible entity employing the severely disabled.

(d) Full details of the program are located at [http://www.acq.osd.mil/sadbu/mentor protege/](http://www.acq.osd.mil/sadbu/mentor%20protege/)

or

<http://sellingtoarmy.info/User/ShowPage.aspx?SectionID=12>

(e) For additional questions after reviewing the information provided, contact the Office of Small Business Programs serving your area.

[End of Clause]

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SECTION J - LIST OF ATTACHMENTS

<u>List of</u> <u>Addenda</u>	<u>Title</u>	<u>Date</u>	<u>Number</u> <u>of Pages</u>	<u>Transmitted By</u>
Exhibit A	CONTRACT DATA REQUIREMENTS LIST			

1. DATA ITEM NO.A001
2. TITLE OF DATA ITEM: Contractors Progress, Status and Management Report
3. SUBTITLE:
4. AUTHORITY DI-MGMT-80227
5. CONTRACT REFERENCE: C.2.1, C.2.3, C.3, C.3.1, C.3.2, C.3.3, C.3.5, C.3.6, C.3.7, C.3.8, C.3.9  
.3.10, C.4.1, C.4.2, C.4.3, C.10.5
6. REQUIRING OFFICE: RDTA-RS
7. DD250 REQ: LT
8. APP CODE: A
9. DIST. STATEMENT REQUIRED: E
10. FREQUENCY: See block 16
11. AS OF DATE: See block 16
12. DATE OF FIRST SUB: See block 16
13. DATE OF SUBS. SUB: See block 16
14. DISTRIBUTION: Submit reports electronically to the email addresses shown below:

	Draft	Final
Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE, E-MAIL: mailto:anthony.j.combi.civ@mail.mil	0	1 (per month)
Delle Ramsey, Contract Specialist E-MAIL: delle.v.remsey.civ@mail.mil	0	1 (per month)

15. TOTAL: 0 1 (per month)
16. REMARKS: The Contractor shall submit the Contractors Progress, Status, Cost, and Management Reports and prepare reviews. The status reports shall summarize the work completed; the contract tasks not completed and significant accomplishments, problems or delays. The reports shall include the status of on-going studies and studies completed during the reporting time period, as well as test results and their analysis and impact. The status reports will also report total costs projected and incurred to date, with specific reference to the costs incurred since the last status report. MS Project software should be used to follow the progress of the program, and an electronic copy of the file will be provided to the COR with each progress report. The first report shall be due approximately 30 days after contract award. Each subsequent monthly progress report shall be provided to the COR 10 days after the start of each month during the program.
17. PRICE GROUP: N/A
18. ESTIMATED TOTAL PRICE: N/A

1. DATA ITEM NO.A002
2. TITLE OF DATA ITEM: Integrated Program Management Report (IPMR)
3. SUBTITLE: Integrated Master Schedule (IMS)
4. AUTHORITY DI-MGMT-81861
5. CONTRACT REFERENCE: C.10.3
6. REQUIRING OFFICE: RDTA-RS
7. DD250 REQ: LT
8. APP CODE: A
9. DIST. STATEMENT REQUIRED: E
10. FREQUENCY: See block 16
11. AS OF DATE: See block 16
12. DATE OF FIRST SUB: See block 16
13. DATE OF SUBS. SUB: See block 16
14. DISTRIBUTION: Submit reports electronically to the email addresses shown below:

	Draft	Final
Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE, E-MAIL: mailto:anthony.j.combi.civ@mail.mil	1	1

15. TOTAL: 1 1
16. REMARKS: The Contractor shall prepare a draft Integrated Master Schedule (IMS) for the Start of Work Meeting. The Contractor will then incorporate any changes and/or updates required to the IMS as a result of the Start of Work meeting and resubmit the IMS to the COR within 30 days after the Start of Work Meeting. The IMS shall be reviewed at every quarterly IPR and updated with any changes proposed at the quarterly IPRs.
17. PRICE GROUP: N/A

1. DATA ITEM NO.A003
2. TITLE OF DATA ITEM: Contract Work Breakdown Structure

- 3. SUBTITLE:
- 4. AUTHORITY DI-MGMT-81334D
- 5. CONTRACT REFERENCE: C.10.4
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: LT
- 8. APP CODE: A
- 9. DIST. STATEMENT REQUIRED: E
- 10. FREQUENCY: See block 16
- 11. AS OF DATE: See block 16
- 12. DATE OF FIRST SUB: See block 16
- 13. DATE OF SUBS. SUB: See block 16
- 14. DISTRIBUTION: Submit reports electronically to the email addresses shown below

Draft		Final
	1	1

Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE,  
E-MAIL: mailto:anthony.j.combi.civ@mail.mil

- 15. TOTAL: 1 1
- 16. REMARKS: The Contractor shall prepare a draft Contract Work Breakdown Structure (CWBS) for the Start of Work Meeting. The Contractor will then incorporate any changes and/or updates required to the CWBS as a result of the Start of Work meeting and resubmit the CWBS to the COR within 30 days after the Start of Work Meeting. The CWBS shall be reviewed at every quarterly IPR and updated with any changes proposed at the quarterly IPRs.
- 17. PRICE GROUP: N/A

- 1. DATA ITEM NO.A004
- 2. TITLE OF DATA ITEM: Test Plan
- 3. SUBTITLE:
- 4. AUTHORITY DI-NDTI-80566A
- 5. CONTRACT REFERENCE: C.3.2, C.5.1, C.5.2, C.5.3
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: LT
- 8. APP CODE: A
- 9. DIST. STATEMENT REQUIRED: E
- 10. FREQUENCY: See block 16
- 11. AS OF DATE: See block 16
- 12. DATE OF FIRST SUB: See block 16
- 13. DATE OF SUBS. SUB: See block 16
- 14. DISTRIBUTION: Submit reports electronically to the email addresses shown below

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	1	1

Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE,  
E-MAIL: mailto:anthony.j.combi.civ@mail.mil

- 15. TOTAL: 1 1
- 16. REMARKS: The Contractor shall prepare and deliver to the government a draft Test Plan for each component and assembly test. The Test Plan shall be submitted 30 days prior to the estimated start date of testing. The Government shall review and provide comments within fourteen (14) days. The Contractor shall incorporate the Governments comments and submit one (1) final Test Plan within sixteen (16) days after receipt of the draft comments.
- 17. PRICE GROUP: N/A

- 1. DATA ITEM NO.A005
- 2. TITLE OF DATA ITEM: Scientific Technical Reports
- 3. SUBTITLE: Final Technical Report
- 4. AUTHORITY DI-MISC-80711A
- 5. CONTRACT REFERENCE: C.10.2, C.10.5
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: DD
- 8. APP CODE: A
- 9. DIST. STATEMENT REQUIRED: E
- 10. FREQUENCY: See block 16
- 11. AS OF DATE: See block 16
- 12. DATE OF FIRST SUB: See block 16
- 13. DATE OF SUBS. SUB: See block 16
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Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE,  
E-MAIL: mailto:anthony.j.combi.civ@mail.mil

15. TOTAL: 1 1

16. REMARKS: The Contractor shall prepare and deliver to the government a draft Scientific and Technical Report. no later than 60 days prior to the contract end date. The draft report shall include a completed Standard Form (SF) 298 (Report Documentation Page) as the reports cover sheet, a cost analysis, a summary of technical information gathered or created, test data and conclusions. The Government shall review and provide comments within 30 days. The Contractor shall incorporate the Governments comments and submit one (1) final Scientific and Technical Report (with the completed SF 298) within thirty (30) days after receipt of draft comments IAW DID DI-MISC 80711. DD 250 is required for the final version.

17. PRICE GROUP: N/A

1. DATA ITEM NO.A006
2. TITLE OF DATA ITEM: Technical Report Study/Services
3. SUBTITLE:
4. AUTHORITY DI-MISC-80508A
5. CONTRACT REFERENCE: C.3.1, C.3.2, C.3.3, C.3.5, C.3.6, C.3.7, C.3.8, C.3.9, C.3.10, C.4.1, .4.3, C.5.1, C.5.2, C.5.3, C.6, C.7
6. REQUIRING OFFICE: RDTA-RS
7. DD250 REQ: LT
8. APP CODE: N/A
9. DIST. STATEMENT REQUIRED: E
10. FREQUENCY: See block 16
11. AS OF DATE: See block 16
12. DATE OF FIRST SUB: See block 16
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Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE,  
E-MAIL: mailto:anthony.j.combi.civ@mail.mil

15. TOTAL: 0 1

16. REMARKS: The Contractor shall prepare and submit monthly all the data required from the sections outlined in Item 5 above. The Contractor shall prepare and provide all data in an electronic format that the COR is capable of graphing, sorting, analyzing, performing calculations on and manipulating electronically. The first electronic data exchange shall be due approximately 30 days after contract award. Each data exchange shall be provided to the COR 10 days after the start of each month during the program. The Contractor shall prepare and submit Technical Reports required from the sections outlined in Item 5 above thirty (30) days after task completion. The Government shall review and provide comments within fourteen (14) days. The Contractor shall incorporate the Governments comments and submit one (1) final Technical Report sixteen (16) days after receipt of the draft comments.

17. PRICE GROUP: N/A)

1. DATA ITEM NO.A007
2. TITLE OF DATA ITEM: Failure Summary and Analysis Report
3. SUBTITLE:
4. AUTHORITY DI-RELI-80255
5. CONTRACT REFERENCE: C.5
6. REQUIRING OFFICE: RDTA-RS
7. DD250 REQ: LT
8. APP CODE: A
9. DIST. STATEMENT REQUIRED: E
10. FREQUENCY: See block 16
11. AS OF DATE: See block 16
12. DATE OF FIRST SUB: See block 16
13. DATE OF SUBS. SUB: See block 16

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E-MAIL: mailto:anthony.j.combi.civ@mail.mil

15. TOTAL: 1 1

16. REMARKS: The Contractor shall prepare and submit a Failure Summary and Analysis Report thirty (30) days after a testing failure, which will be determined in conjunction between the Contractor and the COR. The Government shall review and provide comments within fourteen (14) days. The Contractor shall incorporate the Governments comments and submit one (1) final Failure Summary and Analysis Report within sixteen (16) days after receipt of the draft comments.  
17. PRICE GROUP: N/A

1. DATA ITEM NO.A008
2. TITLE OF DATA ITEM: Engineering Drawings
3. SUBTITLE:
4. AUTHORITY DI-DRPR-80651
5. CONTRACT REFERENCE: C.7
6. REQUIRING OFFICE: RDTA-RS
7. DD250 REQ: DD
8. APP CODE: A
9. DIST. STATEMENT REQUIRED: E
10. FREQUENCY: See block 16
11. AS OF DATE: See block 16
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Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE,  
E-MAIL: mailto:anthony.j.combi.civ@mail.mil

15. TOTAL: 1 1
16. REMARKS: The Contractor shall prepare and submit Engineering Drawings for all designs created to complete each task identified under the contract. The Contractor shall prepare and submit a draft copy sixty (60) days prior to the task completion date. The Government shall review and provide comments within thirty (30) days. The Contractor shall incorporate the Governments comments and submit one (1) final Engineering Drawing within thirty (30) days after receipt of the draft comments.  
17. PRICE GROUP: N/A

1. DATA ITEM NO.A009
2. TITLE OF DATA ITEM: System/Subsystem Specification Data Item Description
3. SUBTITLE:
4. AUTHORITY DI-IPSC-81431
5. CONTRACT REFERENCE: C.2.1 C.2.3, C.3, C.3.3, C.3.5, C.3.6, C.3.8, C.4.1, C.4.3, C.7
6. REQUIRING OFFICE: RDTA-RS
7. DD250 REQ: LT
8. APP CODE: N/A
9. DIST. STATEMENT REQUIRED: E
10. FREQUENCY: See block 16
11. AS OF DATE: See block 16
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E-MAIL: mailto:anthony.j.combi.civ@mail.mil

15. TOTAL: 1 1
16. REMARKS: The Contractor shall prepare and submit Technical Specifications to the COR forty-five (45) days prior to final submission date specified within the contract scope. The Government shall review and provide comments within fifteen (15) days. The Contractor shall incorporate the Governments comments and submit one (1) final Technical Specification thirty (30) days after receipt of the draft comments.  
17. PRICE GROUP: N/A

1. DATA ITEM NO.A010

- 2. TITLE OF DATA ITEM: Commercial Drawings/Models and Associated Lists
- 3. SUBTITLE:
- 4. AUTHORITY DI-SESS-81003D and MIL-STD-31000
- 5. CONTRACT REFERENCE: C.7
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: DD
- 8. APP CODE: A
- 9. DIST. STATEMENT REQUIRED: E
- 10. FREQUENCY: See block 16
- 11. AS OF DATE: See block 16
- 12. DATE OF FIRST SUB: See block 16
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Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE,  
E-MAIL: <mailto:anthony.j.combi.civ@mail.mil>

- 15. TOTAL: 1 1
- 16. REMARKS: The Contractor shall prepare and submit Commercial Drawings, Models, and Associated Lists written to complete each task identified under the contract. The Contractor shall prepare and submit a draft copy thirty (60) days prior to the task completion date specified within the contract scope. The Government shall review and provide comments within thirty (30) days. The Contractor shall incorporate the governments comments and submit one (1) final Commercial Drawing, Model, or Associated List within thirty (30) days after receipt of the draft comments.
- 17. PRICE GROUP: N/A

- 1. DATA ITEM NO.A011
- 2. TITLE OF DATA ITEM: Software Product Specification
- 3. SUBTITLE:
- 4. AUTHORITY DI-IPSC-81441A
- 5. CONTRACT REFERENCE: C.3.7, C.3.8, C.3.9, C.3.10
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: DD
- 8. APP CODE: A
- 9. DIST. STATEMENT REQUIRED: E
- 10. FREQUENCY: See block 16
- 11. AS OF DATE: See block 16
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Anthony Combi, CONTRACTING OFFICERS REPRESENTATIVE,  
E-MAIL: <mailto:anthony.j.combi.civ@mail.mil>

- 15. TOTAL: 1 1
- 16. REMARKS: The Contractor shall prepare and submit Software Product Specification no later than sixty (60) days prior to final submission date specified within the contract. The Government shall review and provide comments within thirty (30) days. The Contractor shall incorporate the Governments comments and submit one (1) final Software Product Specification within thirty (30) days after receipt of the draft comments.
- 17. PRICE GROUP: N/A

- 1. DATA ITEM NO.A012
- 2. TITLE OF DATA ITEM: Software Design Description (SDD)
- 3. SUBTITLE:
- 4. AUTHORITY DI-IPSC-81435A
- 5. CONTRACT REFERENCE: C.3
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: DD
- 8. APP CODE: A
- 9. DIST. STATEMENT REQUIRED: E

- 10. FREQUENCY: See block 16
- 11. AS OF DATE: See block 16
- 12. DATE OF FIRST SUB: See block 16
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E-MAIL: <mailto:anthony.j.combi.civ@mail.mil>

15. TOTAL: 1 1

16. REMARKS: The Contractor shall prepare and submit the Software Design Description (SDD) for electronic controller software written. The SDD tells a programmer/software designer how the software operates and executes functions. The Contractor shall prepare and submit a draft copy twenty-eight (28) months award contract award, which is thirty (60) days prior to the final submission date specified within the contract scope. The Government shall review and provide comments within thirty (30) days. The Contractor shall incorporate the governments comments and submit one (1) final SDD within thirty (30) days after receipt of the draft comments.

17. PRICE GROUP: N/A