SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS

OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, AND 30

1. REQUISITION NUMBER: ANTV0022730001

2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NUMBER	6. SOLICITATION ISSUE DATE
GS00Q12NSD0013	29-Sep-2012	W911RQ-12-F-0114		

7. FOR SOLICITATION INFORMATION CALL:	a. NAME	b. TELEPHONE NUMBER *(No Collect Calls)*	8. OFFER DUE DATE/LOCAL TIME

9. ISSUED BY CODE W911RQ

RED RIVER ARMY DEPOT
100 JAMES CARLOW DRIVE
TEXARKANA TX 75507-5000

TEL:
FAX:

10. THIS ACQUISITION IS

- [X] UNRESTRICTED
- [ ] SET ASIDE: % FOR
  - [ ] SB
  - [ ] HUBZONE SB
  - [ ] 8(A)
  - [ ] SVC-DISABLED VET-OWNED SB
  - [ ] EMERGING SB

SIZE STD: 500 NAICS: 334417

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED

- [ ] SEE SCHEDULE

12. DISCOUNT TERMS

Net 30 Days

- [ ] 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)

13b. RATING

14. METHOD OF SOLICITATION

- [ ] RFQ
- [ ] IFB
- [ ] RFP

15. DELIVER TO CODE W911RQ

RED RIVER ARMY DEPOT
MICHAEL SHERIDAN
M/F BLDG 184
100 JAMES CARLOW DRIVE
TEXARKANA TX 75507-5000

16. ADMINISTERED BY CODE W911RQ

LEOLA LIGGINS
PHONE: 903-334-2330
FAX: 903-334-4141
LEOLA.LIGGINS.CIV@MAIL.MIL
TEXARKANA TX 75507-5000

17a. CONTRACTOR/ OFFEROR CODE 0HD54

HARRIS IT SERVICES CORPORATION
BRAD STEVENS
21000 ATLANTIC BLVD STE 300
DULLES VA 20166-2496

TEL. 703-483-8816

FACILITY CODE

18a. PAYMENT WILL BE MADE BY CODE HQ0303

DFAS COLUMBUS
DFAS - ROCK ISLAND / JAIQBAC
ATTN: ROCK ISLAND
PO BOX 182316
COLUMBUS OH 43218-2316

- [ ] 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK BELOW IS CHECKED [ ] SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/ SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	SEE SCHEDULE				

25. ACCOUNTING AND APPROPRIATION DATA

See Schedule

26. TOTAL AWARD AMOUNT (For Govt. Use Only)

$581,923.45

- [ ] 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1. 52.212-4. FAR 52.212-3. 52.212-5 ARE ATTACHED. ADDENDA [ ] ARE [ ] ARE NOT ATTACHED
- [ ] 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA [ ] ARE [ ] ARE NOT ATTACHED

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 0 COPIES

- [ ] TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.

29. AWARD OF CONTRACT: REFERENCE

- [X] OFFER DATED . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: SEE SCHEDULE

30a. SIGNATURE OF OFFEROR/CONTRACTOR

31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)

Paula G. Tidwell

31c. DATE SIGNED: 29-Sep-2012

30b. NAME AND TITLE OF SIGNER *(TYPE OR PRINT)*	30c. DATE SIGNED	31b. NAME OF CONTRACTING OFFICER *(TYPE OR PRINT)*
		PAULA G. TIDWELL / CONTRACTING OFFICER TEL: 903-334-3480 EMAIL: paula.g.tidwell.civ@mail.mil

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS (CONTINUED)

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/ SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	SEE SCHEDULE				

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED ☐ INSPECTED ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE
	32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER ☐ PARTIAL ☐ FINAL	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT ☐ COMPLETE ☐ PARTIAL ☐ FINAL	37. CHECK NUMBER

38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY *(Print)*	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT *(Location)*	
		42c. DATE REC'D *(YY/MM/DD)*	42d. TOTAL CONTAINERS

Section SF 1449 - CONTINUATION SHEET

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Lot	$480,459.96	$480,459.96

INSTALL BOXES AND SWITCHES
FFP
Install Boxes and Switches in accordance with Technical Data Package (TDP).

Only actual work performed will be paid.

CONTRACTOR MANPOWER REPORTING:
Harris IT Services Corporation Doing Business As Multimax, acknowledges by signing this order that they are aware of the requirements of Clause 52.000-4002, Contractor Manpower Reporting and agree to comply with the requirements in their entirety at no additional cost to the Government.

Period of Performance: 10/01/2012 through 09/30/2014 (730 Days)

FUNDING LINE 0001 (CLIN BROKEN OUT TO CITE TWO (2) DIFFERENT LINES OF FUNDING)
FOB: Destination
PURCHASE REQUEST NUMBER: ANTV0022730001

NET AMT	$480,459.96
ACRN AA	$480,459.96

CIN: ANTV00227300010001

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		1	Lot	$101,463.49	$101,463.49

INSTALL BOXES AND SWITCHES
FFP
Install Boxes and Switches in accordance with Technical Data Package (TDP).

FUNDING LINE 0002 (CLIN BROKEN OUT TO CITE TWO (2) DIFFERENT LINES OF FUNDING)
FOB: Destination
MILSTRIP: ANTV0022730001
PURCHASE REQUEST NUMBER: ANTV0022730001

NET AMT	$101,463.49
ACRN AB	$101,463.49

CIN: ANTV00227300010002

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government
0002	Destination	Government	Destination	Government

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	POP 01-OCT-2012 TO 30-SEP-2014	N/A	RED RIVER ARMY DEPOT MICHAEL SHERIDAN M/F BLDG 184 100 JAMES CARLOW DRIVE TEXARKANA TX 75507-5000 903-334-4622 FOB: Destination	W911RQ
0002	POP 01-OCT-2012 TO 30-SEP-2014	N/A	(SAME AS PREVIOUS LOCATION) FOB: Destination	W911RQ

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930AAPP6D 25FAE30000ANTV0022730001044XCJ041117
AMOUNT: $480,459.96
CIN ANTV00227300010001: $480,459.96

AB: 210203500006D 25FANTV000MIPR2LDAT0II980ZZII1020113
AMOUNT: $101,463.49
CIN ANTV00227300010002: $101,463.49

CLAUSES INCORPORATED BY FULL TEXT

52.000-4003 ISO 9001-2008 REGISTERED (Jan 2010)
Red River Army Depot, an ISO 9001-2008 registered industrial complex, is committed to quality.

52.000-4957 WIDE AREA WORKFLOW INFORMATION/INSTRUCTIONS - SERVICES (Jan 2012) (TACOM)

To implement DFARS 252.232-7003, "ELECTRONIC SUBMISSION OF PAYMENT REQUESTS", Red River Army Depot uses Wide Area WorkFlow — Receipt and Acceptance (WAWF-RA) to electronically process vendor requests for payment. This application allows DoD vendors to submit and track invoices and receipt/acceptance documents electronically.

The contractor is required to use WAWF-RA when processing invoices and receiving reports under this order. Submission of hard copy DD250/invoices will no longer be accepted for payment.

The contractor shall register to use WAWF-RA at https://wawf.eb.mil. There is no charge to use WAWF. All questions relating to system setup and vendor training can be directed to the help desk at Ogden, UT. They can be reached at 1-866-618-5988 or 1-801-605-7095. Web-based training for WAWF is also available at http://www.wawftraining.com/ . If you are new to WAWF, please visit our website at https://redriver.army.mil. Click on "Link to RRAD's Procurement" on the lower right. At the New Information for Vendors line, click on Access Information about Wide Area Workflow (WAWF). This will take you to the WAWF Getting Started Guide for Vendors. Print this guide for step by step instructions.

THE FOLLOWING CODES WILL BE REQUIRED TO ROUTE YOUR INVOICES THROUGH WAWF.

All codes are required for proper processing.

[X] Invoice as 2-in-1 (Services only)

[X] Contractor CAGE Code

[X] Pay D0DAAC: HQ0303

[X] Issue DoDAAC: W911RQ

[X] Admin D0DAAC: W911RQ

[X] Inspect by D0DAAC: W911RQ

[X] Service Acceptor D0DAAC: W911RQ

[X] Contracting Officer: W911RQ

******Leave the LPO field blank. Entries in this field may delay processing.******

Contractor: WAWF will prompt asking for "additional e-mail submission" after clicking "SIGNATURE". The following E-Mail address MUST be input in order to prevent delays in processing:

Contracting Officer: Paula Tidwell, paula.g.tidwell.civ.@mail.mil, 903-334-3480
Contracting Officer Representative: Michael Sheridan, michael.a.sheridan.civ@mail.mil, 903-334-4622
Contract Administrator: Leola Liggins, leola.liggins.civ@mail.mil, 903-334-2330

The paying office DoDAAC and mailing address will be located on the front of your award. You can track your payment information on the DFAS website at http://www.dod.mil/dfas/contractorpay/myinvoice.html. Your purchase order/contract number or invoice will be required to inquire status of your payment.

Questions concerning payment should be directed to the Defense Finance Accounting Services (DFAS) Centralized Customer Service Contact Center at 1-800-756-4571. Please have your order number and invoice ready when calling about payment status.

CLAUSES INCORPORATED BY FULL TEXT

52.212-4037 PERFORMANCE (Apr 1994)

[X] Services to be performed at Red River Army Depot, Texarkana, TX.

[ ] Other:_____

CLAUSES INCORPORATED BY FULL TEXT

52.222-42 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

THIS STATEMENT IS FOR INFORMATION ONLY: IT IS NOT A WAGE DETERMINATION
Employee Class Monetary Wage-Fringe Benefits

(End of Clause)

CLAUSES INCORPORATED BY FULL TEXT

52.222-4029 WAGE RATES (Jul 2005)

The attached schedule of Wage Rates No. **2005-2235, Latest Revision Apply** was authorized by the Secretary of Labor to be the prevailing wage rates for construction and maintenance contracts at Red River Army Depot, Bowie County, Texarkana, Texas. Any change of wage rates will be issued by addendum prior to opening of bids.

A copy of the Service Contract Act wage determination may be downloaded at website http://www.wdol.gov.

CLAUSES INCORPORATED BY FULL TEXT

52.222-4089 HOURS OF WORK (Apr 1994)

The hours of work on this contract will be from **0700** AM (Central Time) until **1700** PM, **Monday through Friday** (except holidays), unless other hours are specifically approved by the Contracting Officer.

CLAUSES INCORPORATED BY FULL TEXT

52.232-3 PAYMENTS UNDER PERSONAL SERVICES CONTRACTS (APR 1984)

The Government shall pay the Contractor for the services performed by the Contractor, as set forth in the Schedule of this contract, at the rates prescribed, upon the submission by the Contractor of proper invoices or time statements to the office or officer designated and at the time provided for in this contract. The Government shall also pay the Contractor:

(a) a per diem rate in lieu of subsistence for each day the Contractor is in a travel status away from home or regular place of employment in accordance with Federal Travel Regulations (41 CFR 101-7) as authorized in appropriate Travel Orders; and

(b) any other transportation expenses if provided for in the Schedule.

52.232-99 PROVIDING ACCELERATED PAYMENT TO SMALL BUSINESS SUBCONTRACTORS (DEVIATION)(AUG 2012)
This clause implements the temporary policy provided by OMB Policy Memorandum M-12-16, Providing Prompt Payment to Small Business Subcontractors, dated July 11, 2012.
(a) Upon receipt of accelerated payments from the Government, the contractor is required to make accelerated payments to small business subcontractors to the maximum extent practicable after receipt of a proper invoice and all proper documentation from the small business subcontractor.
(b) Include the substance of this clause, including this paragraph (b), in all subcontracts with small business concerns.
(c) The acceleration of payments under this clause does not provide any new rights under the Prompt Payment Act.

52.236-4028 AMMUNITION AREA PROJECTS (Apr 1994)

Access to the Ammunition Limited Area by contractor employees in privately owned vehicles (POV) is not authorized and shall not be permitted. The contractor shall provide transportation to and from the work site in an authorized contractor's vehicle. Employees of contractors doing work in the Ammunition Limited Area will be required to park their POV in Parking Lots 5 and 13 outside the limited area.

52.236-4031 SECURITY REGULATIONS (Apr 1994)

(a) All contractors, subcontractors, and their employees are responsible for complying with the following regulations:

(1) Items forbidden on the depot include "strike anywhere" matches, alcoholic beverages, narcotics, photographic equipment, unauthorized tools, firearms, explosives and illegal knives (stilettoes, switchblades, hook blades, and blades over three inches in length).

(2) Personnel will not retain passes and badges upon job completion or termination, enter depot in an intoxicated condition, fight, gamble, picket, or create a disturbance. Failure to return badges will cost your firm $50.00 per badge.

(3) Contractor will ensure that all contractor employees comply with all applicable fire, safety, and security requirements and adhere to all applicable state and federal labor laws and regulations.

(b) General Instructions:

(1) All depot traffic regulations will be observed.

(2) Predetermined work routes will be followed with no deviation.

(3) All personal vehicles and containers are subject to search and confiscation of unauthorized items while on the depot (with or without presence of owner).

(4) Notorious misconduct off the depot may be sufficient grounds for denying entrance to the depot.

(5) POV'S must have a minimum insurance coverage and state inspection sticker, in accordance with Texas State Laws.

(6) All personnel will adhere to all depot fire, safety, security, and other applicable regulations.

52.236-4032 SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS (Jan 2010)

(a) The contractor shall furnish all personnel and material necessary for the prevention of accidents, injury or damage to employees or equipment while operating on a Federal reservation. Also includes personnel and equipment necessary for the prevention of accidental damage to Government property, Federal employees or other U.S. Government contractor personnel.

(b) The contractor and his employees to include subcontractors and their employees, will comply with all Federal, state and local laws pertaining to traffic safety and safety of public rights of way. In addition, the contractor or his authorized agent will comply with the Occupational Safety and Health Act Parts 1910 and 1926, the U.S. Army Engineer Manual 385-1-1, Army Regulations, Red River Regulations 385-1, and the Uniform Code of Traffic Control Devices.

(c) Each contractor shall have a written contractors safety program and policy. In cases where the subcontractor has a written regulation for its employees, a copy of that regulation will be forwarded to the contractor for forwarding to the Contracting Officer, prior to commencement of work.

(d) Subcontractors and Employees. Each subcontractor shall be considered a contractor employee for purposes of this section.

(e) Warning signs, barricades, and detours. The contractor shall furnish and erect adequate warning signs, flashing lights, and barricades to properly control traffic movements around or through the construction site. The contractor shall provide and maintain any detours or crossovers necessary for the safety and convenience of traffic.

(f) Contractor and Employee Vehicles. Contractor vehicles must meet with current state safety regulations and an appropriate sticker affixed in the lower left corner of the windshield. Vehicles not meeting the state safety codes will not be allowed on RRAD. Those which have a safety inspection expire while on RRAD will be removed and properly recertified NLT 15 days prior to the expiration date. Vehicles found to be out of

inspection date will be ordered off of the depot and the contractor decal removed. Vehicles found by RRAD Safety personnel to be unsafe for RRAD operations will be brought to the attention of the contractor who will either repair the vehicle or remove it.

(g) Contractors are responsible for their employees' conduct and their vehicles. Employees with unsafe vehicles will be required to remove them from RRAD until they can be repaired.

(h) Accidents, other than minor first aid injuries, should be reported to the COR and/or Contract Administrator who will inform Safety as appropriate. These are reportable on a Department of Army Form 285 when they occur on U.S. Federal property. .

(i) The Contracting Officer will notify the contractor in writing of any observed non-compliance with the foregoing provisions. The contractor shall, after receipt of such notice, immediately take corrective action. The Safety Manager may make direct contact with a contractor or his authorized representative for conditions of imminent danger to life or U.S. Government property. In such cases, the Contracting Officer will be immediately notified. In cases which have the potential for embarrassment to the U.S. Government, or Red River Army Depot, the Contracting Officer will notify the contractor verbally to be followed up by a written report of the situation and the action to be taken to correct it. If the contractor fails or refuses to promptly take corrective action, the Contracting Officer will issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of a claim for extension of time or for excess costs or damages by the contractor unless it was later determined that the contractor was in compliance.

52.236-4033 FIRE PREVENTION AND PROTECTION (Apr 1994)

The contractor shall comply with all fire prevention measures prescribed in the installation fire regulations, a copy of which is on file in the office of the Contracting Officer. A written fire permit shall be obtained from the installation fire marshall for use of open flame devices, such as: blowtorches, portable furnaces, tar kettles, or gas and electric welding and cutting equipment in, or within 15 feet of buildings. The contractor shall be liable for any fire loss to Government property attributable to negligence on the part of the contractor, including failure to comply with fire prevention measures prescribed by terms of this contract.

52.237-2 PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION (APR 1984)

The Contractor shall use reasonable care to avoid damaging existing buildings, equipment, and vegetation on the Government installation. If the Contractor's failure to use reasonable care causes damage to any of this property, the Contractor shall replace or repair the damage at no expense to the Government as the Contracting Officer directs. If the Contractor fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost, which may be deducted from the contract price.

(End of clause)

52.242-4004 ADMINISTERING CONTRACTING OFFICER (May 2011)

NAME: Paula G. Tidwell

ADDRESS: Red River Army Depot
100 James Carlow Drive
ATTN: CCTA-HDR
Texarkana, Texas 75507-5000

TELEPHONE: 903-334-3480
FAX: 903-334-4141

E-MAIL: paula.g.tidwell.civ@mail.mil

52.246-4001 INSPECTION AND ACCEPTANCE (Apr 1994)

Red River Army Depot
Texarkana, Texas

52.246-4002 PARTIAL SHIPMENTS (Apr 1994)
Partial shipments are authorized.

52.247-4049 PACKAGING & MARKING (Apr 1994)
Material is to be packaged and packed in a manner to afford adequate protection against damage during shipment from supply source to destination. Package and pack shall conform to the applicable carrier rules, regulations and tariffs and may be the industry standard commercial practice. All unit, intermediate and exterior packs shall, as a minimum, be marked as follows by any means which provides legibility and durability: Federal Stock Number and/or Manufacturer's Part Number; Noun; Quantity; Purchase Order Number; Requisition Number; Mark for Bldg; and Ship To. Exterior shipping containers shall contain a packing list or other documentation setting forth contents.

252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

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

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

(End of clause)

252.212-7001 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS (JUN 2012)

(a) The Contractor agrees to comply with the following Federal Acquisition Regulation (FAR) clause which, if checked, is included in this contract by reference to implement a provision of law applicable to acquisitions of commercial items or components.

_X_ 52.203-3, Gratuities (APR 1984) (10 U.S.C. 2207).

(b) The Contractor agrees to comply with any clause that is checked on the following list of Defense FAR Supplement clauses which, if checked, is included in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components.

(1) ____ 252.203-7000, Requirements Relating to Compensation of Former DoD Officials (SEP 2011) (Section 847 of Pub. L. 110-181).

(2) ____ 252.203-7003, Agency Office of the Inspector General (APR 2012)(section 6101 of Pub. L. 110-252, 41 U.S.C. 3509).

(3) ____ 252.205-7000, Provision of Information to Cooperative Agreement Holders (DEC 1991) (10 U.S.C. 2416).

(4) ____ 252.219-7003, Small Business Subcontracting Plan (DoD Contracts) (JUN 2012) (15 U.S.C. 637).

(5) ____ 252.219-7004, Small Business Subcontracting Plan (Test Program) (JAN 2011) (15 U.S.C. 637 note).

(6)(i) ____ 252.225-7001, Buy American and Balance of Payments Program (JUN 2012) (41 U.S.C. chapter 83, E.O. 10582).

(ii) ____ Alternate I (OCT 2011) of 252.225-7001.

(7) ____ 252.225-7008, Restriction on Acquisition of Specialty Metals (JUL 2009) (10 U.S.C. 2533b).

(8) ____ 252.225-7009, Restriction on Acquisition of Certain Articles Containing Specialty Metals (JUN 2012) (10 U.S.C. 2533b).

(9) ____ 252.225-7012, Preference for Certain Domestic Commodities (JUN 2012) (10 U.S.C. 2533a).

(10) ____ 252.225-7015, Restriction on Acquisition of Hand or Measuring Tools (JUN 2005) (10 U.S.C. 2533a).

(11) ____ 252.225-7016, Restriction on Acquisition of Ball and Roller Bearings (JUN 2011) (Section 8065 of Pub. L. 107-117 and the same restriction in subsequent DoD appropriations acts).

12) ____ 252.225-7017, Photovoltaic Devices (JUN 2012) (Section 846 of Pub. L. 111-383).

13)(i) ____ 252.225-7021, Trade Agreements (JUN 2012) (19 U.S.C. 2501-2518 and 19 U.S.C. 3301 note).

(ii) ____ Alternate I (OCT 2011) of 252.225-7021.

(iii) ____ Alternate II (OCT 2011) of 252.225-7021.

(14) ____ 252.225-7027, Restriction on Contingent Fees for Foreign Military Sales (APR 2003) (22 U.S.C. 2779).

(15) ____ 252.225-7028, Exclusionary Policies and Practices of Foreign Governments (APR 2003) (22 U.S.C. 2755).

(16)(i) ____ 252.225-7036, Buy American Act—Free Trade Agreements—Balance of Payments Program (JUN 2012) (41 U.S.C. chapter 83 and 19 U.S.C. 3301 note).

(ii) ____ Alternate I (JUN 2012) of 252.225-7036.

(iii) ____ Alternate II (JUN 2012) of 252.225-7036.

(iv) ____ Alternate III (JUN 2012) of 252.225-7036.

(v) ____ Alternate IV (JUN 2012) of 252.225-7036.

(vi) ____Alternate V (JUN 2012) of 252.225-7036.

(17) ____ 252.225-7038, Restriction on Acquisition of Air Circuit Breakers (JUN 2005) (10 U.S.C. 2534(a)(3)).

(18) ____ 252.225-7039, Contractors Performing Private Security Functions (JUN 2012) (Section 862 of Pub. L. 110-181, as amended by section 853 of Pub. L. 110-417 and sections 831 and 832 of Pub. L. 111-383).

(19) ____ 252.226-7001, Utilization of Indian Organizations, Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns (SEP 2004) (Section 8021 of Pub. L. 107-248 and similar sections in subsequent DoD appropriations acts).

(20) ____ 252.227-7013, Rights in Technical Data--Noncommercial Items (FEB 2012), if applicable (see 227.7103-6(a)).

(21) ____ 252.227-7015, Technical Data—Commercial Items (DEC 2011) (10 U.S.C. 2320).

(22) ____ 252.227-7037, Validation of Restrictive Markings on Technical Data (JUN 2012), if applicable (see 227.7102-4(c)))(10 U.S.C. 2321).

(23) _X_ 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports (MAR 2008) (10 U.S.C. 2227).

(24) ____ 252.237-7010, Prohibition on Interrogation of Detainees by Contractor Personnel (NOV 2010) (Section 1038 of Pub. L. 111-84)

(25) ____ 252.237-7019, Training for Contractor Personnel Interacting with Detainees (SEP 2006) (Section 1092 of Pub. L. 108-375).

(26) ____ 252.243-7002, Requests for Equitable Adjustment (MAR 1998) (10 U.S.C. 2410).

(27) ____ 252.246-7004, Safety of Facilities, Infrastructure, and Equipment For Military Operations (OCT 2010) (Section 807 of Pub. L. 111-84).

(28) ____ 252.247-7003, Pass-Through of Motor Carrier Fuel Surcharge Adjustment to the Cost Bearer (SEP 2010) (Section 884 of Pub. L. 110-417).

(29)(i) ____ 252.247-7023, Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631).

(ii) ____ Alternate I (MAR 2000) of 252.247-7023.

(iii) ____ Alternate II (MAR 2000) of 252.247-7023.

(iv) ____ Alternate III (MAY 2002) of 252.247-7023.

(30) ____ 252.247-7024, Notification of Transportation of Supplies by Sea (MAR (2000) (10 U.S.C. 2631).

(31) ____ 252.247-7027, Riding Gang Member Requirements (OCT 2011) (Section 3504 of Pub. L. 110-417).

c) In addition to the clauses listed in paragraph (e) of the Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items clause of this contract (FAR 52.212-5), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

(1) 252.225-7039, Contractors Performing Private Security Functions (JUN 2012) (Section 862 of Pub. L. 110-181, as amended by section 853 of Pub. L. 110-417 and sections 831 and 832 of Pub. L. 111-383).

2) 252.227-7013, Rights in Technical Data--Noncommercial Items (FEB 2012), if applicable (see 227.7103-6(a)).

(3) 252.227-7015, Technical Data--Commercial Items (DEC 2011), if applicable (see 227.7102-4(a)).

(4) 252.227-7037, Validation of Restrictive Markings on Technical Data (JUN 2012), if applicable (see 227.7102-4(c)).

(5) 252.237-7010, Prohibition on Interrogation of Detainees by Contractor Personnel (NOV 2010) (Section 1038 of Pub. L. 111-84).

(6) 252.237-7019, Training for Contractor Personnel Interacting with Detainees (SEP 2006) (Section 1092 of Pub. L. 108-375).

(7) 252.247-7003, Pass-Through of Motor Carrier Fuel Surcharge Adjustment to the Cost Bearer (SEP 2010) (Section 884 of Pub. L. 110-417).

(8) 252.247-7023, Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631).

(9) 252.247-7024, Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631).

(End of Clause)

H2. INSURANCE (Fixed Price Contract)

Pursuant to the requirements of the contract clause titled "Insurance-Work on a Government Installation", the contractor shall obtain and maintain at least the following kinds of insurance and minimum liability coverage during any period of contract performance:

a. Workmen's Compensation and occupational disease coverage as required by law except that, if this contract is to be performed in a state which does not require or permit private insurance, then compliance with the statutory or administrative requirements in any such state will be satisfactory. The required Workmen's Compensation Insurance shall extend to cover employers' liability for accidental bodily injury or death and for occupational disease with a minimum liability limit of $100,000.

b. Comprehensive General Liability Insurance in the minimum limit of $500,000 per occurrence for bodily injury liability.

c. Comprehensive Automotive Liability Insurance with minimum limits of $200,000 per person and $500,000 per occurrence for bodily injury, and a minimum limit of $20,000 per occurrence for property damage.

L2. AMC-Level Protest Program

If you have complaints about this procurement, it is preferable that you first attempt to resolve those concerns with the responsible contracting officer. However, you can also protest to Headquarters, AMC. The HQAMC-Level Protest Program is intended to encourage interested parties to seek resolution of their concerns within AMC as an Alternative Dispute Resolution forum, rather than filing a protest with the Government Accountability Office or other external forum. Contract award or performance is suspended during the protest to the same extent, and within the same time periods, as if filed at the GAO. The AMC protest decision goal is to resolve protests within 20 working days from filing. To be timely, protests must be filed within the periods specified in FAR 33.103. If you want to file a protest under the HQAMC-Level Protest Program, the protest must request resolution under that program and be sent to the address below. All other agency-level protests should be sent to the contracting officer for resolution.

Headquarters U.S. Army Materiel Command
Office of Command Counsel-Deputy Command Counsel

4400 Martin Road
Rm: A6SE040.001
Redstone Arsenal, AL 35898-5000
Fax: (256) 450-8840 or
e-mail: amcprotests@conus.army.mil

The HQAMC-Level Protest Procedures are located at http://www.amc.army.mil/pa/COMMANDCOUNSEL.asp.

If Internet access is not available, contact the contracting officer or HQ, AMC to obtain the HQAMC-Level Protest Procedures.

Exhibit/Attachment Table of Contents

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Attachment 1	1. BBL	1	

TECHNICAL DATA PACKAGE-INSIDE

TECHNICAL DATA PACKAGE
FOR THE
INSTALLATION INFORMATION
INFRASTRUCTURE MODERNIZATION PROGRAM INSIDE PLANT
AT
RED RIVER, TEXARKANA, TX

08/06/2012

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Appendices

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TECHNICAL DATA PACKAGE FOR THE INSTALLATION INFORMATION INFRASTRUCTURE MODERNIZATION PROGRAM AT RED RIVER, TEXARKANA, TX

The network requirements for this Technical Data Package (TDP) were developed within the guidance set forth in the references contained in Appendix J of this TDP. This TDP and associated references may refer to small, medium, and large Ethernet switches or other specific technologies. The intent for these references is to serve as a guide for assisting the contractor in understanding the footprint and switch sizing available. Any reference, implied or otherwise, to any specific technologies, commercial products, processes, or services by trade name, trademark, manufacturer, or otherwise, does not constitute or imply its endorsement, recommendation, or favoring by the U.S. Government. The contractor-proposed solution can use any Unified Capabilities Requirements (UCR)-compliant technologies as long as the proposed solution meets the *Department of Defense (DoD) Unified Capabilities Requirements (UCR) 2008, Change 3,* requirements; is on the Unified Capabilities Approved Products List (UC APL); and meets the capabilities defined in this TDP.

1.0 INTRODUCTION

This TDP provides technical requirements and engineering details for implementation of the Installation Information Infrastructure Modernization Program (I3MP) at Red River, Texarkana, TX. This TDP is based on requirements to modernize current telecommunications network to meet I3MP Standards.

1.1 System Diagrams

Not Applicable.

1.2 Existing Network Systems Descriptions

1.2.1 Existing Outside Plant

Red River Army Depot's current OSP infrastructure consists of copper, single-mode (SM) fiber optic cable (FOC) and multimode (MM) FOC, most of which is installed in maintenance hole/duct systems, with some FOC and copper direct buried and aerial installed into some areas. Red River AD has one main communications node (MCNs) and three (3) area distribution nodes (ADNs) (one of which are co-located with the MCN and buildings with SM FOC installed). The MCN are located in Building 184. The ADNs are located in Buildings 184, 345, 595. The existing FOC connectivity between data nodes consists of a minimum of 24 strands of SM FOC. Most of the end-user buildings (EUBs) have existing 12-strand (ST), SM FOC already connected to core ADN sites.

1.2.2 Existing Network Transport

Not Applicable.

1.2.3 Existing Data Network

Not Applicable.

1.2.3.1 Existing Gateway Router/Top Level Architecture Gateway Router
Not Applicable.

1.2.3.2 Existing Data Core Layer/Main Communications Nodes
Not Applicable.

1.2.3.3 Existing Distribution Layer/Area Distribution Nodes
Not Applicable.

1.2.3.4 Existing Access Layer/End-User Buildings

Not Applicable.

1.2.3.5 Existing Network Management System

Not Applicable.

1.2.4 Existing Voice and/or UC Infrastructure

Not Applicable.

1.2.5 Existing Facilities Supporting infrastructure

Not Applicable.

1.2.6 Existing Wireless Infrastructure

Not Applicable.

1.3 Engineering Design Assumptions
Not Applicable.

1.3.1 Design Assumptions for the GW Router/TLA GW Router

Not Applicable.

1.3.2 Design Assumptions for the Core Layer\MCN
Not Applicable.

1.3.3 Design Assumptions for the Distribution Layer/ADN

Not Applicable.

1.3.4 Design Assumptions for the Distribution Legacy Devices

Not Applicable.

1.3.5 Design Assumptions for the Access Layer EUB

Not Applicable.

2.0 OSP Requirements

Separate Proposal Package

3.0 Inside Plant and ACCESS LAYER REQUIREMENTS

The contractor shall engineer, furnish, install, secure, and test (EFIS&T) the modernization and expansion of the existing ISP infrastructure IAW the *Technical Criteria for the Installation Information Infrastructure Architecture* and the *UCR, 2008, Change 3* (refer to Appendix J). Sections of the infrastructure installed under one task may serve in other tasks or parts of other tasks.

3.1 Modernization and Expansion of Access Layer Devices and Supporting Infrastructure

The contractor shall EFIS&T the modernization and expansion of the existing Core, Data, and Access Layers of the ISP infrastructure IAW the latest *Technical Criteria for the Installation Information Infrastructure Architecture*, the *UCR 2008, Change 3,* and as defined in the Baseline Building List (BBL), inside plant (IN) drawings, and Appendix B of this TDP.

3.2 Modernization and Expansion of Premises/Horizontal Cabling

This section is N/A.

4.0 Network TRANSPORT REQUIREMENTS

Not Applicable.

4.1 Modernization and Expansion of the Transport Network

Not applicable.

5.0 CORE Network SYSTEMS

Not Applicable.

5.1 Modernization and Expansion of the Network's Core and Distribution Layers

Not Applicable.

6.0 Voice/Unified Capabilities REQUIREMENTS

Not Applicable.

6.1 Modernization and Expansion of the Voice/UC Network

Not Applicable.

6.2 Modernization of Voice Mail

Not Applicable.

6.3 Modernization of Automated Directory Attendant System

Not Applicable.

6.4 Modernization of Telecommunications Management System

Not Applicable.

7.0 secret Internet Protocol Router network

Not Applicable.

7.1 Modernization and Expansion of SIPRNet

Not Applicable.

8.0 Site Preparation

See Section 8.1.

8.1 New Communications Shelter.

The contractor shall EFI&T a new 10'X12'X10' communications shelter.

8.2 Modernization of the Heating, Ventilation, and Cooling in Building XX, Room XX

Not Applicable.

9.0 STAND-ALONE TASKS

The following tasks may be executed at multiple times at various locations as required during the fielding process.

9.1 OSP Stand-Alone Tasks

Separate Proposal Package

9.2 ISP Stand-Alone Tasks

9.2.1 36-Inch Wall-Mounted Cabinet

The contractor shall furnish and install (F&I) one minimum 22-inch-wide by 36-inch-high by 24-inch-deep (exterior dimensions) equipment cabinet and the associated hardware. If the depth of the cabinet cannot support the contractor's proposed solution, the cabinet shall be sized IAW the Appendix B cabinet requirements. The contractor shall EF&I a 48- by 48-inch backboard, cut to fit if necessary, for use to install the cabinet on a concrete block wall.

9.2.2 50-Inch Floor-Mounted Cabinet

The contractor shall F&I one 24-inch-wide by 50-inch-high by 37-inch-deep (exterior dimensions) freestanding equipment cabinet and associated hardware, mounted to a concrete floor. The interior dimensions (equipment mounting space) of the cabinet shall be 19 inches wide by 48 inches high by 34 inches deep.

9.2.3 84-Inch Floor-Mounted Cabinet

The contractor shall F&I one 22-inch-wide by 84-inch-high by 37-inch-deep (exterior dimensions) freestanding equipment cabinet and associated hardware, mounted to a concrete floor. The interior dimensions (equipment mounting space) of the cabinet shall be 19 inches wide by 77 inches high by 34 inches deep.

9.2.4 48-Inch Floor Mounted Rack

The contractor shall F&I one standard, 48-inch-high, four-post, freestanding, aluminum equipment rack with a 19-inch-wide mounting space and the associated hardware, mounted

to a concrete floor. This equipment rack shall meet or exceed American National Standards Institute/Electronic Industries Alliance (ANSI/EIA) 310-D.

9.2.5 84-Inch Floor-Mounted Rack

The contractor shall F&I one standard, 84-inch-high, freestanding, aluminum equipment rack with a 19-inch-wide mounting space and the associated hardware. The contractor shall mount the rack to a concrete floor. This equipment rack shall meet or exceed ANSI/EIA 310-D.

9.2.6 EFI&T 12-Strand, SM FOC Riser

The contractor shall EFI&T 500 feet of 12-strand, riser-rated, SM FOC in 2-inch, flex raceway; two FOPPs; four SM, duplex, fiber optic patch cords each 5 feet in length and four brick and block (B&B) core drills at an 8-inch depth. As part of this task, the contractor shall terminate, test, and label all strands on both ends of the run.

9.2.7 EFI&T Category 6 Unshielded Twisted Pair Cable Bundle

The contractor shall EFI&T twenty-four (24) each Category (CAT) 6, unshielded twisted pair (UTP) cable runs, along with two CAT 6-rated, 24-port, registered jack (RJ)-45 patch panels. Each cable shall be 200 feet in length and shall terminate on a patch panel at each end. Each patch panel shall mount to a 24- by 24-inch backboard. The backboard shall mount to a B&B wall.

Installation shall include all actions and materials required to place the cable properly from patch panel to patch panel. The contractor shall perform all actions and provide all materials required to core drill up to a 5.5-inch-diameter hole in each of two B&B walls that are 12 inches thick. Actions include, but are not limited to, drilling the hole, installing a sleeve, waterproofing the hole and sleeve, and sealing or fire stopping the sleeve. The contractor shall EF&I 50 feet of 4-inch EMT and 20 feet of plastic raceway large enough to contain the cabling and meet the requirements of this TDP. The contractor shall EFI&T and label 48 CAT 6, UTP patch cords. Each patch cord shall be a minimum of 5 feet in length. The contractor shall coordinate the color scheme with the Network Enterprise Center (NEC). Cable management is required.

9.2.8 Remove TR Items

The contractor shall remove a 36-inch, wall-mounted cabinet; a 48- by 48- by ¾-inch, plywood backboard secured to a B&B wall; a rack-mounted and fully terminated, 12-port, SM FOPP; a rack-mounted and fully terminated, 96-port, CAT 6 copper patch panel (COPP); and a medium chassis switch. Turn over the items to the NEC upon removal. The contractor shall reterminate and test the 12-strand, SM FOC into a new wall-mounted, 12-port FOPP. The contractor shall reterminate and test all 96 CAT 6 cables onto a new wall-mounted, 96-port COPP and provide cable management. All patch panels shall mount on small backboards large enough to accommodate the patch panels and cable management.

9.3 Data Network Stand-Alone Tasks

9.3.1 24-Port Ethernet Switch

The contractor shall EFIS&T a medium-availability, ASLAN, 24-port 10/100/1000-Megabit-per-second (Mbps), stackable, 1-Gigabit (Gb), modular, Layer 2 (L2), Power over

Ethernet (PoE) edge device equipped with two 1-Gb ports populated with two Gigabit Interface Converter-Long Transport (GBIC-LX) ports (optics), adequate power supplies, and anything else required to prepare the device for use or an Optical Line Termination/Optical Network Terminal (OLT/ONT) equivalent.

9.3.2 48-Port Ethernet Switch

The contractor shall EFIS&T a medium-availability, ASLAN, 48-port, 10/100/1000-Mbps, stackable, 1-Gb, modular, L2, PoE edge device equipped with two 1-Gb ports populated with two GBIC-LX ports (optics), adequate power supplies, and anything else required to prepare the device for use or an OLT/ONT equivalent.

9.3.3 96-Port Ethernet Switch

The contractor shall EFIS&T a medium-availability, ASLAN, 96-port, 10/100/1000-Mbps, small chassis, 1-Gb, modular, Layer 3 (L3), PoE edge device equipped with two 1-Gb ports populated with two GBIC-LX ports (optics), adequate power supplies, and anything else required to prepare the device for use or an OLT/ONT equivalent.

9.3.4 Chassis Module(s) to Support 48 10/100/1000-Mbps PoE Ports

The contractor shall EFIS&T the medium-availability, ASLAN, module(s) to provide a minimum of 48 10/100/1000-Mbps PoE ports and anything else required to prepare the device for use in the proposed Ethernet switch chassis solution or an OLT/ONT equivalent.

9.3.5 4-Port 10-Gigabit Ethernet Module

The contractor shall EFIS&T a medium-availability, ASLAN, 10-Gigabit Ethernet (GbE), L3, chassis-based, 4-port (four 10-Gigabit, small form-factor pluggable ports) module with optics, compatible with the chassis it will be used with and anything else required to prepare the device for use or an OLT/ONT equivalent.

9.4 Voice/UC Network Stand-Alone Tasks

Not Applicable.

9.5 Facility Stand-Alone Tasks

9.5.1 Alternating Current Subpanel (100-Ampere, Single-Phase)

The contractor shall EFI&T a 100-ampere (amp), 120/240-volt-alternating-current (VAC), single-phase, alternating current (AC) electrical subpanel, to include a 100-foot feeder length, required breakers in the servicing panel, main breaker in the subpanel, and breakers to support the new load. The work shall be performed IAW the National Fire Protection Association (NFPA) 70, *National Electrical Code® (NEC®)*.

9.5.2 AC Subpanel (100-Amp, Three-Phase)

The contractor shall EFI&T a 100-amp, 120/208-VAC, three-phase, AC electrical subpanel, to include a 100-foot feeder length, required breakers in the servicing panel, main breaker in the subpanel, and breakers to support the new load. The work shall be performed IAW the NFPA 70, *NEC*®.

9.5.3 AC Subpanel (200-Amp, Three Phase)

The contractor shall EFI&T a 200-amp, 120/208-VAC, three-phase, AC electrical subpanel, to include a 100-foot feeder length, required breakers in the servicing panel, main breaker in the subpanel, and breakers to support the new load. The work shall be performed IAW the NFPA 70, *NEC*®.

9.5.4 AC Circuit (30-Amp, Single-Phase)

The contractor shall EFI&T a 30-amp, 120/240-VAC, single-phase, AC electrical circuit, to include 50 feet of cable, required breakers in the servicing panel, conduit, outlets, and anything else required to prepare the device for use.

9.5.5 AC Circuit (30-Amp, Three-Phase)

The contractor shall EFI&T a 30-amp, 120/208-VAC, three-phase, AC electrical circuit, to include 50 feet of cable, required breakers in the servicing panel, conduit, outlets, and anything else required to prepare the device for use.

9.5.6 **UPS** (5-**kilovoltampere**)

The contractor shall EFIS&T a 5-kilovoltampere (kVA) uninterruptible power supply (UPS) with 30 minutes of battery at a 50-percent load, including all mounting hardware, configuration, and anything else required to make the device operational. The UPS shall be remotely monitored and managed by Simple Network Management Protocol Version 3 (SNMPv3) at the Element Management System (EMS).

9.5.7 **UPS** (2.2-kVA)

The contractor shall EFIS&T a 2.2-kVA UPS with 30 minutes of battery at a 50-percent load, including all mounting hardware, configuration, and anything else required to make the device operational. The UPS shall be remotely monitored and managed by SNMPv3 at the EMS.

9.5.8 Power Distribution

The contractor shall EF&I a 20-amp, 120-volt receptacle strip with a minimum of six (6) each receptacles, including overvoltage protection. The receptacle switch shall not include an on/off switch.

9.5.9 Telecommunications Grounding Busbar

The contractor shall EFI&T a copper, predrilled telecommunications grounding busbar (TGB) at least 0.25 of an inch thick, 2 inches wide, and 20 inches in length. The TGB shall be sized, installed, bonded, and grounded IAW the *Technical Criteria for the Installation Information Infrastructure Architecture*, Sections 2.6 and 3.18. Work shall include 100 feet of 1/0-American Wire Gauge (AWG) copper conductor to bond the TGB to the telecommunications main grounding busbar (TMGB).

9.5.10 Telecommunications Main Grounding Busbar

The contractor shall EFI&T a copper, predrilled TMGB at least 0.25 of an inch thick, 4 inches wide, and 20 inches in length. The TMGB shall be sized, installed, bonded, and grounded IAW the *Technical Criteria for the Installation Information Infrastructure*

Architecture, Sections 2.6 and 3.18. Work shall include 100 feet of 3/0-AWG copper conductor to bond the TMGB to the main facility ground.

9.5.11 Telecommunication Ground Conductor (3/0-AWG)

The contractor shall EFI&T 50 feet of 3/0-AWG copper conductor to be used to ground equipment and racks to a TGB, or to be used as a grounding conductor for a TGB or TMGB, IAW the *Technical Criteria for the Installation Information Infrastructure Architecture*, Sections 2.6 and 3.18.

9.5.12 Telecommunication Ground Conductor (4/0-AWG)

The contractor shall EFI&T 25 feet of 4/0-AWG copper conductor to be used to ground equipment and racks to a TGB, or as a grounding conductor between a TGB and a TMGB, IAW the *Technical Criteria for the Installation Information Infrastructure Architecture*, Sections 2.6 and 3.18.

9.5.13 Telecommunication Ground Conductor (1/0-AWG)

The contractor shall EFI&T 25 feet of 1/0-AWG copper conductor to be used to ground equipment and racks to a TGB, or as a grounding conductor between a TGB and a TMGB, IAW the *Technical Criteria for the Installation Information Infrastructure Architecture*, Sections 2.6 and 3.18.

9.5.14 **Telecommunications Room** Passive Ventilation

The contractor shall EFI&T the installation of additional ventilation for one TR to improve airflow and reduce temperature buildup in the TR. The installation of passive ventilation consisting of a high-output air grill/louver and a low-input air grill/louver will accomplish the ventilation of the TR. Grills/louvers in TR perimeter walls or doors shall have tamper-proof mounting, be capable of securing against forced entry, and include man bars.

9.5.15 TR Fan-Assisted Ventilation

The contractor shall EFI&T the installation of additional ventilation for one TR to improve airflow and reduce temperature buildup in the TR. The installation of passive ventilation consisting of a high-output air grill/louver and a low-input air grill/louver shall accomplish the ventilation of the TR. The fan(s) shall have multiple fan speeds to give the ability to lower acoustic noise when the maximum airflow is not required. The fan(s) shall provide a maximum air flow of 450 cubic feet per minute and produce no more than 65 decibels of audible noise. Operation of the fan shall be by a manual on/off switch and a temperature sensor. Fans(s) and grills/louvers shall have tamper-proof mounting. Grills/louvers in the TR perimeter walls or doors shall secure against forced entry and include man bars.

9.5.16 TR Cooling

The contractor shall EFI&T the replacement of a ceiling-mounted, dedicated air conditioning unit for one TR to provide cooling in the TR. The work shall include new the air conditioning, exterior condenser on a concrete pad, mechanical piping, and electrical circuits. The new air conditioner may be either ceiling- or wall-mounted. The new air conditioner shall be sized at a nominal 1-ton of cooling capacity. Control of the air conditioning unit shall be by manual on/off switch and a temperature sensor. Additionally, the contractor shall install fan-assisted ventilation as a secondary backup to the dedicated

air conditioner, including the fan(s), a high-output air grille/louver, and a low-input air grille/louver. The fan(s) shall have multiple fan speeds to give the ability to lower acoustic noise when the maximum airflow is not required. Grilles/louvers shall be manually operable. Grilles/louvers shall secure against forced entry and include man bars. The contractor shall assume the TR is located on the inside of the building, 300 feet from the exterior wall of the building. The contractor shall assume six core drills up to a 5.5-inch-diameter into 12-inch B&B walls.

APPENDIX A. OUTSIDE PLANT

Separate Proposal Package

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APPENDIX B. INSIDE PLANT

B-1.0 ISP REQUIREMENTS

The ISP requirements, regardless of Core or EUB location, shall be implemented IAW the most recent versions of the *U.S. Army Installation and Campus Area Network Design Guide*, the *Technical Criteria for the Installation Information Infrastructure Architecture*, industry standards, and the current *UCR 2008, Change 3,* unless otherwise specified by the Government in this TDP. The IN detail drawings show the location and details of the TRs on a floor plan and the details of the cable routes, grounding, power circuit runs, associated work, and rack elevations, if applicable.

The Government has provided drawings and pictures (where available) with recommended equipment placement. The contractor shall determine exact locations of new equipment in coordination with the site point of contact (POC) and building tenant. The environment, existing equipment, cabling, power sources, grounding, tenant needs, noise produced by the equipment, safety, security, maintainability, equipment access, industry standards, Government standards, etc., must be taken into consideration. The Government will approve new equipment locations before work begins. To remain vendor- and technology-neutral, the Government has labeled "OPEN SPACE" (shown within racks and cabinets on the IN drawings) available for the contractor to place its electronics. Since the Government provides flexibility for designs in the drawings, the contractor shall EFIS&T any additional items, such as larger or additional racks, cabinets, shelf space, power, grounding, cabling, hardware, software, or any other items beyond those shown on the IN drawings to meet all the requirements of this TDP.

B-1.1 Power Outlets, Circuits, and Grounding

The contractor shall install all equipment IAW the *Technical Guide for I3A* and *I3MP Grounding and Bonding, Version 2.2*, the applicable ANSI/TIA/EIA standards, the *OSPDPR*, all local and national codes, and ARs.

The contractor shall ensure all power circuits and power outlets/receptacles are of the proper rating, amperage, quantity, and National Electrical Manufacturers' Association (NEMA) receptacle configuration to support the proposed solution during and after the burn-in period. All existing, dedicated AC circuits identified by the Government in the drawings are in use and are 120/240-volt-root-mean-square single-phase, 20-amp power circuits in a duplex, NEMA 5-15 or 5-20, receptacle configuration, unless otherwise specified. If the contractor's solution requires more circuits, different rating, amperage, quantity, and/or NEMA receptacle configuration, the contractor shall EFI&T all necessary power components to provide dedicated circuits to power the electronics and/or UPS and its required features properly. Components include, but are not limited to, wire, conduit, outlets, breakers, fuse panels, core drills, grounding, labeling, subpanels, and anything else required to provide dedicated circuits to the electronics and/or UPS. Properly label all new or reused circuits/breakers at the power distribution panel and at the receptacle. Ground the contractor-provided receptacles to the servicing power distribution panel through a dedicated, insulated, green-wire grounding conductor. The contractor shall notify the site POC if the contractor observes the power panel feeding the new circuit is non-compliant with any electrical requirements. The contractor shall be responsible for ensuring all power cords for electronics can reach their power source.

In many cases, the IN drawings show large grounding wires to the nearest power panel. The Government cannot open the power panels to survey the conductor wire sizes; therefore, large grounding wires are called out on the IN drawings. The contractor shall bid the size of the wires called out on the IN drawings but may reduce the size of the wire to meet NEC requirements after an electrician has verified the size of conductors in the power panel.

B-1.2 Task Dependencies

1.2.1 Equipment Hot-Swapping

If sufficient space for the new and old switch is not available, a hot-swap (new equipment for old) may occur with Government approval. Hot-swaps are not ideal, because they do not allow for a 30-day testing period; however, they may be necessary. The Government must approve any hot-swap, and coordinate it with the site POC and tenants. There are also instances in which rack space may be limited and the contractor may need to provide small tables or other equipment temporarily on which to place electronics during the burn-in period. The TRs in which this may be a requirement are dependent upon the contractor's solution and shall be determined using the Government-provided pictures and drawings.

1.2.2 Repositioning Existing Equipment

Whether placing new equipment in a new or existing rack, cabinet, or backboard, the contractor may reposition existing components as necessary to meet the design requirements. Prior coordination with and approval of the site POC is required.

1.2.3 Fiber Optic Riser Cabling

Select only new riser cabling and conduit, properly rated for their intended use, as required by this TDP. Install all new FOC on a cable ladder or protect it using metallic conduit or raceway. Flexible innerduct is an acceptable solution, but only on a limited basis, in locations where metallic enclosures are not practical. Do not use large patch cables/rip cords (longer than 20 feet) in place of risers, unless the Government approves such use.

1.2.4 Fiber Optic Cable Termination

The contractor shall terminate all FOC in the identified node and EUB. The site-preferred termination connectors for FOC on FOPPs are subscriber terminal (ST)-type connectors. The contractor shall fully populate all new FOPPs with ST-type connectors. The contractor shall use Ultra- or Angle-polished connectors with pre-manufactured pigtails fusion spliced onto the OSP cable. The contractor shall terminate all FOC strands required in this TDP on rack-mounted FOPPs at the EUB and the node, unless otherwise specified on an IN drawing. The contractor shall terminate the FOC strands from the same cable sheath on a single FOPP, and the contractor shall not split strands from the same cable across FOPPs, unless the cable has a strand count higher than 144. If splitting FOC strands across FOPPs is necessary, the FOPPs shall be in the same rack. The contractor shall terminate core and distribution FOCs on separate FOPPs. The contractor shall protect all FOPP connectors and unused optical connectors (e.g., GBICs) from environmental particulates, such as dust and dirt.

1.2.5 Riser Maintenance Loops

All new riser fiber installed shall include a minimum, 10-foot maintenance/service loop at each end of the fiber run. The contractor shall secure, in close proximity to the FOPP, all

maintenance/service loops in which the contractor terminates the fiber. The contractor shall maintain the minimum cable bend radius.

1.2.6 Patch Cords

The contractor shall provide all necessary patch cords/jumpers (fiber and UTP) to ensure end-to-end connectivity. All provided cables shall meet the TIA/EIA standard. The contractor shall ensure all patch cords are of the proper length, media, and connector type. The cords shall be of sufficient length to accommodate moves within the same rack/cabinet, but shall not be of such length as to create a disorganized appearance. The contractor shall coordinate patch cord color schemes with the NEC prior to ordering the cords.

1.2.7 Racks and Cabinets

The contractor shall make reasonable efforts to install racks or cabinets that match the color and height of the existing cabinets or racks. All new equipment cabinets shall be lockable and keyed alike. The contractor shall account for and turn over all keys to the site POC. The contractor shall lock all cabinets after completing the work. The contractor shall submit cabinet and rack specifications to the Government prior to ordering. The contractor shall not order cabinets or associated equipment until the Government has approved its type, size, and location. All racks and cabinets shall have the correct number of posts and shall be sized to properly house, support, secure, and cool the proposed and existing equipment to be installed in the unit. The contractor shall ensure each new rack or cabinet secures to the floor or wall and has the proper rating to support the load that it will support.

The use of low-profile wall-mounted enclosures, ceiling-mounted enclosures, lock boxes, weather-resistant enclosures, and noise-dampening/acoustic rack enclosures is required in some locations, and such locations are identified on the IN drawings.

With the exception of low-profile wall-mounted enclosures, all new racks/cabinets shall maintain a minimum of 4-rack-unit sparing after the contractor installs all equipment in the rack/cabinet. All racks and cabinets shall have sufficient cable management systems, both vertical and horizontal, to maintain an organized appearance and shall include cable dressing.

1.2.8 User Connectivity

The contractor shall permanently label all new cables (to include patch cords), patch panels, terminals, etc., that are added, changed, or modified, including re-homed cables. The contractor shall label IAW the current ANSI/TIA/EIA 606-A-2002 standard and the NEC's existing labeling scheme. The contractor shall not use handwritten tags/labels. The contractor shall coordinate labeling of cables, outlets, and equipment with the NEC before any labeling takes place.

1.2.9 Labeling

Permanently label all new cables (to include patch cords) and patch panels, as well as any cables, patch panels, terminals, etc., that are added, changed, or modified, including re-homed cables. Perform labeling IAW the current ANSI/TIA/EIA 606-A-2002 standard and the NEC's existing labeling scheme. Do not use handwritten tags/labels. Coordinate the labeling of cables, outlets, and equipment with the NEC before any such labeling takes place.

1.2.10 Equipment Separation

All new electronic equipment and metallic cabling that carries Unclassified but Sensitive Internet Protocol Router Network traffic shall maintain a minimum of one meter of separation from any electronic equipment that transmits, processes, or stores classified information.

1.2.11 Cable Testing

The contractor shall ensure all cable (OSP cable, premise wiring, and patch cords), cable connections, splices, and terminations are installed IAW Government and industry standards. End-to-end testing shall be performed onsite on every strand/pair of all installed cable in this project IAW the *OSPDPR* and industry standards. The contractor shall perform open-ended testing on all cable pairs and strands installed by this effort in which the termination of only one end will occur. Test all cable "on the reel" prior to installation to verify cable functionality, and test again after final termination. Do not use factory test results to determine cable functionality before installation, as cable damage may occur during shipping/handling. The contractor may test all cable pairs/strands prior to re-homing/moving and shall test after work on that cable is completed. The contractor shall correct any problems with the cable. The contractor shall inform the Government of its intent to test, providing sufficient time for the Government to schedule to witness the testing. The contractor shall provide the Government with a hardcopy (in MS Word or .pdf) and softcopy of the test results and any software required to provide reading access to the test results. There shall also be a summary report included with the test results. Information on the summary sheet shall include, but is not limited to, the cable identification number, strand/pair, test result, and pass/fail. The contractor shall test all pairs/strands of existing cable to be re-terminated/re-homed prior to working on the cable, and then retest the cable once the work is completed. Document and report pairs/strands that fail initial testing (prior to working on the cable) to the NEC. All pair/strands that pass initial testing shall pass testing after the contractor has completed the work on the cable. The contractor is responsible for repairing any pairs/strands damaged during the re-homing/re-termination effort. If the contractor elects to reuse cables and or connections currently in-service, the contractor must include, in its cutover plan, how it plans to accomplish the testing required in this paragraph. During the testing, the Government may require the contractor to establish temporary connections to limit out-of-service time. The contractor shall test all cables that require re-termination before and after the re-termination.

1.2.12 EUB UPS

The contractor shall EFIS&T new UPSs to support the Access Layer electronics for momentary fluctuation and interruption events. These UPSs shall be of the kind in form and function as those currently used in many locations such as in buildings 416, 419, 426,427 and others. They are typically 1RU in vertical size and fit in standard cabinets.

The contractor shall EFIS&T all new UPSs to report alarms and provide status updates via SNMPv3 back to the EMS in the NEC. The contractor shall furnish, install, secure, and test (FIS&T) any software and licensing required to manage the new UPSs from the EMS workstation.

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APPENDIX C. TRANSPORT

Not Applicable.

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APPENDIX D. CORE NETWORK SYSTEMS

Not Applicable.

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APPENDIX E. VOICE/UNIFIED CAPABILITIES

Not Applicable.

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APPENDIX F. SECRET INTERNET PROTOCOL ROUTER NETWORK

Not Applicable.

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APPENDIX G. SITE PREPARATION

Not Applicable.

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APPENDIX H. THEATER/SITE-UNIQUE DESIGN CONSIDERATIONS

Not Applicable.

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APPENDIX I. DRAWINGS, PICTURES, AND SUPPORTING DOCUMENTS

I-1.0 SUPPORTING DOCUMENTS

I-1.1 etc.

All drawings, pictures, and the BBL associated with this TDP will be send to Red River AD Officials.

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APPENDIX J. REFERENCES

Note: The version in effect at the time of this report's publication shall apply. The following publications are applicable to this TDP and/or have been cited herein.

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GLOSSARY. ACRONYMS AND ABBREVIATIONS

Note: Do not copy/paste a glossary from another document. The tech editor will create the glossary based on the acronyms within the TDP. This glossary was built from this TDP as an example.>

AC	alternating current
ADAS	Automated Directory Attendant System
ADN	area distribution node
amp	ampere
ANSI	American National Standards Institute
APL	Approved Products List
AR	Army Regulation
ASD	Assistant Secretary of Defense
ASLAN	Assured Services Local Area Network
AWG	American Wire Gauge
B&B	brick and block
BBL	Baseline Building List
CAT	category
CIO	Chief Information Officer
CJCSI	Chairman, Joint Chiefs of Staff Instruction
COE	Corps of Engineers
COPP	copper patch panel
CSMA/CD	Carrier Sense Multiple Access with Collision Detection
DIACAP	Department of Defense Information Assurance Certification and Accreditation Program
DISA	Defense Information Systems Agency
DOD	Department of Defense
DODI	Department of Defense Instruction
DTE	Data Terminal Equipment
EF&I	engineer, furnish, and install
EFI&T	engineer, furnish, install, and test
EFIS&T	engineer, furnish, install, secure, and test
EIA	Electronic Industries Alliance
EMS	Element Management System
EMT	electrical metallic tubing
EUB	end-user building
F&I	furnish and install
FOC	fiber optic cable

FOPP	fiber optic patch panel

Gb	Gigabit
GbE	Gigabit Ethernet
GBIC-LX	Gigabit Interface Converter-Long Transport
GW	gateway
HQDA	Headquarters, Department of the Army
HVAC	heating, ventilation, and cooling
I3MP	Installation Information Infrastructure Modernization Program
IA	information assurance
IAW	in accordance with
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
ISDN	Integrated Services Digital Network
ISO/IEC	International Organization for Standardization/International Electrotechnical Commission
ISP	inside plant
ITU-T	International Telecommunication Union–Telecommunication Standardization Sector
JCS	Joint Chiefs of Staff
kVA	kilovoltampere
L2	Layer 2
L3	Layer 3
Mbps	Megabits per second
MCN	main communication node
MDI	Media Dependent Interface
MH	maintenance hole
MIB	Management Information Base
NEC	Network Enterprise Center
NEC®	National Electrical Code®
NFPA	National Fire Protection Association
NII	Networks and Information Integration
NMS	Network Management System
OLT	Optical Line Termination
ONT	Optical Network Terminal
OSP	outside plant
OSPDPR	Outside Plant Design and Performance Requirements

PAM	pamphlet
PoE	Power over Ethernet
PVC	polyvinyl chloride
RAR	Rapid Action Revision
RFC	Request for Comments
RJ	registered jack
RTS	Real Time Services
SAT	System Acceptance Test
SIPRNet	Secret Internet Protocol Router Network
SM	single-mode
SNMPv3	Simple Network Management Protocol Version 3
SONET	Synchronous Optical Network
sq. ft.	square foot
STD	Standard Drawing
STIG	Security Technical Implementation Guide
TDP	Technical Data Package
TGB	telecommunications grounding busbar
TIA	Telecommunications Industry Association
TLA	Top Level Architecture
TMGB	telecommunications main grounding busbar
TMS	Telecommunications Management System
TR	telecommunications room
UC	Unified Capabilities
UCR	Unified Capabilities Requirements
UFC	Unified Facilities Criteria
UPS	uninterruptible power supply
USAISEC	United States Army Information Systems Engineering Command
UTP	unshielded twisted pair
VAC	volts alternating current
VoIP	Voice over Internet Protocol

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