

SOLICITATION, OFFER AND AWARD

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)

RATING

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1 74

2. CONTRACT NUMBER		3. SOLICITATION NUMBER DTRT57-06-R-20021		4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED 05/01/2006		6. REQUISITION/PURCHASE NUMBER 75-3445	
7. ISSUED BY U. S. DOT/RITA/Volpe Center 55 Broadway Cambridge MA 02142				8. ADDRESS OFFER TO (If other than Item 7)					

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. Sealed offers in original and _____ copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if hand carried, in the depository located in _____ until 1500 ET local time 05/31/2006
(Hour) (Date)

CAUTION: LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME Elizabeth A Segal		B. TELEPHONE (NO COLLECT CALLS)			C. E-MAIL ADDRESS segal@volpe.dot.gov	
	AREA CODE 617	NUMBER 494-2401	EXT.				

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OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232.8)	10 CALENDAR DAYS (%)	20 CALENDAR DAYS (%)	30 CALENDAR DAYS (%)	CALENDAR DAYS (%)
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14. ACKNOWLEDGEMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	
----------------------------------	------	----------	--	--

15B. TELEPHONE NUMBER		15C. CHECK IF REMITTANCE ADDRESS <input type="checkbox"/> IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.	17. SIGNATURE	18. OFFER DATE
AREA CODE	NUMBER			

AWARD (To be completed by government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304 (c) () <input type="checkbox"/> 41 U.S.C. 253 (c) ()		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM
24. ADMINISTERED BY (If other than Item 7)	CODE	25. PAYMENT WILL BE MADE BY	CODE
26. NAME OF CONTRACTING OFFICER (Type or print) Orin D. Cook		27. UNITED STATES OF AMERICA (Signature of Contracting Officer)	28. AWARD DATE

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

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SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 SERVICES AND PRICES

The contractor shall furnish all personnel, facilities, support, and management necessary to provide the services required under this contract. Contractor shall provide a turnkey Digital Microwave Radio Communications Network (DMRCN) for the Iraqi Republic Railway (IRR) in accordance with the Statement of Work (SOW) in Section C.

CLIN NO.	<u>UNIT PRICE</u>	<u>UNIT QUANTITY</u>	<u>TOTAL PRICE</u>
0001	<u>1</u>	<u>JOB</u>	_____
Conduct a preliminary network engineering study to develop path calculations for all thirty-three (33) sites in Iraq. This includes submission of a path engineering report, radio frequency (RF) propagation and interference analysis report, system integration plan, complete design packages for each tower and shelter, and engineering requirements analysis, in accordance with the SOW in Section C.			
0002	<u>1</u>	<u>JOB</u>	_____
Procure, install, factory integrate and test equipment required for twenty-one (21) turnkey Digital Microwave Radio Communications Network (DMRCN) prior to Shipment to Iraq, in accordance with the SOW in Section C. See Appendix A for locations marked as Base.			
0003	<u>1</u>	<u>JOB</u>	_____
Shipment and delivery (including insurance) of all necessary equipment to Iraq for twenty-one (21) DMRCN sites identified in CLIN 0002, in accordance with the SOW in Section C.			
0004	<u>Not Separately Priced (NSP)</u>		
The contractor shall install, field integrate and test for twenty-one (21) DMRCN in Iraq with the Communication Based Train Control (CBTC) system to provide a seamless transition with the existing IRR communications systems.			
0004A	<u>1</u>	<u>JOB</u>	_____
The contractor shall provide tower foundations and tower installation in accordance with the SOW in Section C.			

CLIN NO.	UNIT PRICE	UNIT QUANTITY	TOTAL PRICE
0004B The contractor shall install, integrate and test the DMRCN, Local Area Network (LAN) and Network Management System (NMS) with the CBTC system in accordance with the SOW in Section C. The contractor shall integrate the Very High Frequency (VHF) voice and data radio communication systems with the DMRCN in accordance with the SOW in Section C.	<u>1</u>	<u>JOB</u>	_____
0005 The contractor shall provide DMRCN, NMS and LAN operation and maintenance training in accordance with the SOW in Section C. The travel costs are not to exceed the Federal Travel Regulation rates.	<u>1</u>	<u>JOB</u>	_____
OPTIONS: Any of the below options may be exercised individually, or in any combination thereof, at any time during the performance period of the contract. Pricing for CLINs 0007, 0008, 0009, and 0010 shall be based upon ONE item. Optional CLINs 0007, 0008, 0009 and 0010 may be exercised more than once.			
0006 OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 for CLIN 0006A through 0006L in accordance with the SOW in Section C. (See sites 22 through 33 in Attachment 2) The period of performance for each subCLIN is 6 months from time of Option exercise.			<u>NSP</u>
0006A OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #22: Samarra.	<u>1</u>	<u>JOB</u>	_____
0006B OPTION - The contractor shall complete the work required In CLINs 0002, 0003, and 0004 at site #23: Tikrit.	<u>1</u>	<u>JOB</u>	_____
0006C OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #24: Bayji.	<u>1</u>	<u>JOB</u>	_____
0006D OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #25: Ein-Al-Debbiss.	<u>1</u>	<u>JOB</u>	_____
0006E OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #26: Talul-Al-Baqq.	<u>1</u>	<u>JOB</u>	_____

CLIN NO.		<u>UNIT PRICE</u>	<u>UNIT QUANTITY</u>	<u>TOTAL PRICE</u>
0006F	OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #27: Qayyara.	<u>1</u>	<u>JOB</u>	_____
0006G	OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #28: Shura.	<u>1</u>	<u>JOB</u>	_____
0006H	OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #29: Hammam Al Alil.	<u>1</u>	<u>JOB</u>	_____
0006I	OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #30: Mosul.	<u>1</u>	<u>JOB</u>	_____
0006J	OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #31: Wailiya.	<u>1</u>	<u>JOB</u>	_____
0006K	OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #32: Tall Al Owaynat.	<u>1</u>	<u>JOB</u>	_____
0006L	OPTION - The contractor shall complete the work required in CLINs 0002, 0003, and 0004 at site #33: Rabiya.	<u>1</u>	<u>JOB</u>	_____
0007	OPTION - Construction of security wall around the microwave tower and shelter at up to 33 DMRCN sites in accordance with the SOW in Section C. See Appendix A for list of sites. The period of performance of this CLIN is 1 month from time of Option exercise.	<u>1</u>	<u>EA</u>	_____
0008	OPTION - The contractor shall provide, install, and integrate with the communications and electrical equipment, a backup diesel generator at up to thirty-three (33) equipment shelter sites in accordance with the SOW in Section C. See Appendix A for list of sites. The period of performance of this CLIN is 2 months from time of Option exercise.	<u>1</u>	<u>EA</u>	_____

CLIN NO.		<u>UNIT</u> <u>PRICE</u>	<u>UNIT</u> <u>QUANTITY</u>	<u>TOTAL</u> <u>PRICE</u>
0009	OPTION - The contractor shall provide the following spare parts in accordance with the list in Attachment J.2 "System Spares and Test Equipment". Every line item must be priced. Failure to do so may result in your proposal being ineligible for further consideration. The period of performance of this CLIN is 2 months from time of Option exercise.			<u>Not to Exceed \$600,000</u>
0010	OPTION – The contractor shall provide, install, and integrate a Private Branch Exchange (PBX) system with the DMRCN equipment at each of the up to 33 sites in accordance with SOW in Section C. See Appendix A for list of sites. The period of performance of this CLIN is 2 months from time of Option exercise.	<u>1</u>	<u>EA</u>	_____

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1.0 BACKGROUND

A viable, efficient and safe railway system is an integral part of the United States (U.S.) efforts to rebuild Iraq's transportation infrastructure to move goods, people, and raw materials supporting international commerce and exchange in Iraq. To support this effort, communications are essential to maintain the safety and efficiency of train operations, as well as the safety of all employees, equipment, and the public on the railway.

The John A. Volpe National Transportation Systems Center (Volpe Center) is an Operating Administration within the Research and Innovative Technology Administration (RITA) of the United States Department of Transportation (USDOT). The Volpe Center, in partnership with sponsoring agencies, has a mission to improve transportation systems by providing technical research, analysis, and development services to the USDOT and other Federal agencies in support of their transportation and logistics-related missions.

The Volpe Center has provided extensive expertise in all aspects of railroad engineering to other Federal agencies, state agencies and private enterprises. In the past few years, the Volpe Center provided technical support to the Department of State's Iraq Reconstruction Management Office (IRMO), the program manager for the \$18 billion Iraq Reconstruction and Relief Fund, and the Project and Contracting Office-Iraq (PCO-Iraq), the project manager for reconstruction, in support of the U.S. efforts to rebuild the Iraqi Republic Railway (IRR). This contract will consist of the procurement, development, installation, integration, and testing of a turnkey digital microwave radio communications network (DMRCN) for the IRR. The network will function as the railway's backbone communications link for both voice and data transmission and will be an essential component of an overall communications-based train control (CBTC) system currently being installed.

C.1.1 General

A communications network infrastructure is required to provide voice and data transfer connectivity throughout the IRR system territory. The communications network shall be a digital microwave radio system that supports the International Telecommunications Union Radiocommunication Sector (ITU-R) fixed point-to-point microwave frequency bands for Region E (formerly Region 1). The DMRCN shall be developed for the 7 GHz to 8 GHz frequency band. The DMRCN shall be installed at Baghdad Central Station and multiple IRR train stations.

The contractor shall provide microwave radio base stations, transmission towers, telecommunication equipment shelters and auxiliary power systems, which shall include a backup battery uninterruptible power supply (UPS) and, if the option is exercised, a diesel-fueled backup generator. The contractor shall also install a communications network management system (NMS) and CBTC-supporting local area network (LAN) at Baghdad Central Station. The contractor shall connect the NMS and LAN with the DMRCN. If the option is exercised, the contractor shall also be required to provide, install, and integrate with the DMRCN a private branch exchange (PBX) communications system at up to thirty-three (33) train station locations on the DMRCN network.

The primary function of the DMRCN is to provide a high availability backhaul digital data network that supports the safety and performance requirements of the CBTC system. A CBTC system for the IRR is currently in the installation and testing phases.

C.1.2 Scope

The DMRCN infrastructure shall be installed at twenty-one (21) rail stations with options for up to twelve (12) additional rail stations for a total of up to thirty-three (33) rail stations, from Umm Qasr to Rabiya. Appendix A lists the locations of these railroad stations.

This turnkey effort encompasses the procurement, development, installation, integration, deployment, testing and documentation of the DMRCN. The contractor shall perform the following:

- a. Attend, as required, program review meetings with the Government. Most of the meetings will be held at the contractor's designated facilities;
- b. Conduct the microwave network engineering study to develop path calculations and path profiles to determine microwave base station and antenna system requirements for each site;
- c. Develop a system integration plan that will ensure a cohesive integration and interoperability approach with the existing IRR systems shown in Table 1.1;
- d. Develop operational specifications for the communications network infrastructure including towers, site power systems, equipment shelters and auxiliary power and communications equipment to support integration and interoperability with the existing VHF data and VHF voice networks;
- e. Supply the necessary equipment including, but not limited to the microwave towers, site power backup systems, equipment enclosures, microwave base station equipment, repeaters, antennas and other ancillary communications equipment, LAN equipment, NMS system equipment and PBX equipment (if option is exercised);
- f. Conduct site civil engineering preparation, tower construction, site grounding, power system testing, shelter installation, base station and antenna system installation;
- g. Implement the integration plan for the DMRCN with the existing IRR communications systems listed in Table 1.1, to ensure full interoperability and functionality;
- h. Procure, install, and integrate a LAN for the CBTC system at Baghdad Central Station;
- i. Install a NMS at Baghdad Central Station and remote sites to monitor critical aspects of the DMRCN;
- j. Perform functional and performance testing of the DMRCN;
- k. Perform system acceptance testing of the DMRCN;
- l. Provide training on the completed, installed, and integrated system(s); and
- m. Provide a Quality Assurance Plan that describes the procedure the contractor will use to ensure the quality assurance of the end product as well as the testing procedures and quality of equipment and supplies.

Table 1.1 IRR existing communications systems

Communications System	Frequency
The Motorola very high frequency (VHF) voice radio network	160 MHz
The MeteorComm VHF data network	50 – 60 MHz
The remote site IEEE 802.11 wireless Ethernet networks	2.4 GHz or 5.15 – 5.35 GHz
The Avtec integrated voice and communications consoles at the central office in Baghdad	N/A
The train management and dispatch system/communications-based train control (TMDS/CBTC) system at Baghdad Central Station	N/A

C.2.0 SYSTEM REQUIREMENTS

C.2.1 Microwave Network System Requirements

The throughput of the network shall be 50 megabits per second (Mbps) with the ability to utilize up to four DS1 circuits under time division multiplexing (TDM). The base stations shall be configured as 1+1 hot-standby. The base stations shall be capable of upgrade to 150 Mbps capacity without affecting the operation of the in-service system. All base station equipment, excluding antennas, shall be for indoor operation and installed in the equipment shelters.

The contractor shall provide a voice based dial-up orderwire system, which interconnects the DMRCN. Each base station shall be able to dial-up any other base station location.

The contractor shall be responsible for delivering a complete DMRCN system that meets and performs the integration requirements of the IRR communications systems listed in Table 1.1, in accordance with the system integration plan.

C.2.2 Antenna System Requirements

The contractor shall specify and provide the microwave antennas, radomes, and waveguide systems. The antennas shall provide the performance and availability defined in the final path analysis.

The antenna tower system shall be capable of upgrade to accommodate integration with additional radio networks.

C.2.3 Microwave Radio Tower Requirements

The contractor shall provide and install up to thirty-three (33) microwave towers. The towers shall be erected at the rail station locations listed in Appendix A and verified by the network engineering study. The towers are required to meet the loading requirements that support the microwave and VHF antennas. The microwave towers shall be self-supporting and capable of withstanding all structural and wind loads found in ANSI/TIA/EIA-222-F-1996, but in no case less than 100 mph (160 km/h). The tower structures shall also satisfy the requirements of ASTM A123/A123M-02 and A153/A153M-05 standards for materials and galvanizing.

At a minimum, each tower shall include, but not be limited to, the following:

- Tower steel structure, anchor bolts, templates and other hardware
- Climbing ladder with fall protection
- One (1) vertical waveguide support ladder running from the waveguide bridge to top of tower
- Antenna mounts to support all required antennas
- An obstruction lighting system in accordance with Federal Aviation Administration (FAA) Advisory Circular (AC) 70/7460-1H
- A grounding network connected to the communications center grounding system and lightning protection system that comply with ANSI/TIA/EIA-222-F-1996.
- A hazard painting scheme in accordance with AC 70/7460-1H

The contractor shall construct the tower foundations and anchors in accordance with ANSI/TIA/EIA-222-F-1996, the manufacturer's recommendations, and according to the seismic zone and environmental regulations at each location. A complete engineering analysis for footings and anchors shall be submitted for approval. This, at a minimum, shall include the plans, assembly tolerances, and markings in accordance with ANSI/TIA/EIA-222-F-1996 Standard. High strength anchor bolts shall be used on all calculated load-carrying connections in accordance with ASTM A-325 or A-449. Bolts other than high strength shall have tensile properties at least equal to those specified in ASTM A-307-04. Tower foundation concrete shall have a minimum 28-day compressive strength of 3000 pounds per square inch (psi) in accordance with standards equivalent to American Concrete Institute (ACI) 318-05.

In lieu of specific soil analysis data from the proposed antenna tower sites, the contractor shall employ a generic site assessment to calculate foundation requirements. The following information from the 2000 International Building Code shall be used:

- Class of materials: Sandy gravel and/or gravel
- Allowable foundation pressure: 3,000 pounds per square foot
- Lateral bearing: 200 pounds per square foot/foot below natural grade
- Lateral sliding: 0.35 coefficient of friction

The Government may supply actual site conditions and soil surveys for each site after contract award. If provided, the contractor shall construct the tower foundations based upon this information.

C.2.4 Communications Equipment Shelter Requirements

The contractor shall provide up to thirty-three (33) telecommunications equipment shelters to be located adjacent to each antenna tower. Each shelter shall be placed on a concrete foundation and, at a minimum, shall include the following items:

- Microwave base station equipment and their ancillary components
- Existing communications systems listed in Table 1.1
- Separate room for battery backup UPS system
- Electrical system
- Optional stationary backup diesel generator, if exercised
- Automatic Transfer Switch (ATS)
- Heating ventilation and air conditioning (HVAC) system
- Exhaust fan and intake damper
- Wall mounted fire extinguisher
- Steel door with grounding strap, minimum door size is 3ft x 7ft (0.91m x 2.1m)

The shelters shall provide ample space for two persons working on the equipment and shall not be smaller than 8ft x 18ft x 8ft in height (2.43m x 5.48m x 2.43m). The contractor shall install dead bolt locks on each shelter.

All shelters shall meet the following specifications and standards:

- Uniform Building Code
- Building Officials & Code Administrators (BOCA) National Building Code
- Standard Building Code
- Local Basic Building Codes, if applicable
- American Society of Civil Engineers (ASCE) 7-88
- National Fire Protection Association (NFPA) National Electric Code (NEC) current edition

The shelters shall meet the following conditions:

- Wind speeds of at least 145 mph
- The seismic zone at each shelter location
- Ambient humidity (from 0-100%)

In lieu of specific soil analysis data, the contractor shall employ a generic site assessment to calculate foundation requirements. The following information from the 2000 International Building Code shall be used:

- Class of materials: Sandy gravel and/or gravel
- Allowable foundation pressure: 3,000 pounds per square foot
- Lateral bearing: 200 pounds per square foot/foot below natural grade
- Lateral sliding: 0.35 coefficient of friction

The Government may supply actual site conditions and soil surveys for each site after contract award. If provided, the contractor shall provide the shelter pads based upon this information.

The internal temperature of the shelters shall not rise above 85°F (29.4°C) with an external ambient temperature of 130°F (54.4°C) and shall not fall below 65°F (18.3°C) with an external ambient temperature of 20°F (-6.7°C). In addition, the temperatures shall be maintained while the equipment is operating at its normal duty cycle.

Each shelter shall be supplied with a waveguide entry point that accommodates the requirements of the communications equipment. All unused waveguide ports shall be capped with waveguide boots to prevent entry of rain, dust, and grit. The waveguide entry point shall have a waveguide grounding bus bar on the outside of the shelter. The waveguide grounding bus bar shall be grounded to the site grounding system.

Each shelter shall be supplied with an automatic transfer switch (ATS), which detects either loss of incoming commercial power or degradation of commercial power. The ATS shall be capable of distributing power from the backup diesel generator during failure or degradation of the commercial power. Upon restoration of commercial power, the ATS shall then switch distribution back to the commercial power from the optional backup diesel generator. During the transition from commercial power loss/degradation to generator start and spin-up, critical power shall be provided by the batteries. The ATS shall not back-feed to the commercial side of the service.

Each shelter shall be highly resistant to dust infiltration and shall be thermally insulated and equipped with a HVAC system to satisfy the temperature requirements specified above. In addition, each shelter shall be equipped with a separately controlled exhaust fan that provides a minimum of 350 cubic feet per minute (CFM) of air. Each shelter shall contain a main power electrical distribution system with a provision for electric service entrance. The electrical distribution system shall provide power to all communications equipment inside the shelter and microwave towers. The distribution panel shall supply 220/380 Volt, 3-phase power, at 50 Hz, 100-ampere capacity minimum. Individual overload-protected branch circuits shall supply electricity to the following:

- Radio and auxiliary equipment
- The tower navigation light
- Each duplex outlet (quantity of eight minimum, small appliance, ground-fault circuit interrupted)
- The HVAC system
- Inside and outside shelter lighting
- Transformer to provide 110 Volts Alternating Current (VAC)

The power distribution panel shall be equipped with a transient voltage surge suppressor (TVSS). Each shelter shall have a halo ground system that is connected to the external site ground network. The equipment rack shall be connected to a common ground bus (installed inside the shelter), which in turn shall be connected to the site external ground network.

Each shelter shall have switchable lights appropriately located to provide direct illumination of the equipment, both front and back. In case of commercial power and general failure, a separate and switchable battery powered emergency light shall be provided. A single outside light shall be provided that operates by photocell with an override switch located near the entrance door.

C.2.5 Site Power System Requirements

The contractor shall provide a fully integrated alternating current/direct current (AC/DC) power system for each communications equipment shelter that can draw AC power from the existing railway station sources. Stations are equipped variously with national grid power and/or existing generators.

For each shelter, the contractor shall provide a backup battery UPS system to provide continuous uninterrupted power for eight (8) hours to the communications equipment, HVAC equipment, antenna lighting systems, and equipment shelter lights. The batteries will be low/no maintenance type.

For each shelter, the contractor shall provide, as an option, a stationary backup diesel generator, dedicated to the DMRCN, to provide continuous uninterrupted power for ten (10) days to the communications equipment, HVAC equipment, shelter lights, and antenna tower lights. The contractor shall integrate the generator with the ATS.

C.2.6 Network Management System

The contractor shall provide a NMS that is capable of monitoring and managing all of the integrated communications. The system shall also be capable of monitoring the following station alarms, but not be limited to:

- Radio alarms
- Ethernet switch and channel bank system alarms
- Intrusion entry
- Backup Diesel Generator low fuel
- Backup Diesel Generator on/off
- Backup Diesel Generator failure
- Auto switch status
- Commercial power failure
- HVAC unit failure
- Exhaust fan failure
- Shelter over temperature
- Smoke detection
- Pressurization system failure
- Tower navigation lights failure
- Low batteries

The NMS shall be capable to incorporate the future expansion of the IRR and the potential addition of other network elements.

C.2.7 CBTC LAN Network

The contractor shall provide and install a LAN system for the CBTC dispatching system at Baghdad Central Station. The LAN shall provide a virtual private network to link the four CBTC TMDS dispatching consoles and shall be expandable to link seven TMDS consoles. The LAN shall include firewalls and antivirus protection, and provide a 1.544 Mbps T1 interface to the Internet.

C.2.8 PBX System Requirements

If the option is exercised, the contractor shall provide, install, and integrate a PBX system with the DMRCN equipment at up to thirty-three (33) DMRCN sites listed in Appendix A. The PBX system shall interconnect each of the sites with each other and Baghdad Central Station.

The PBX system station requirements are as follows:

- Baghdad - 200 lines
- Hilla - 20 lines
- Diwaniya - 20 lines
- Samawa - 50 lines
- Nasariya - 20 lines
- Basra - 60 lines
- Umm Qasr - 10 lines
- Bayji - 50 lines
- Mosul - 50 lines
- Rabiya - 10 lines

The PBX equipment at these stations shall interconnect with up to the thirty-three (33) stations listed in Appendix A and connect to the national network.

The PBX equipment at the remaining twenty-three (23) stations shall have one (1) line and be interconnected with up to the thirty-three (33) stations listed in Appendix A.

The PBX telephone terminals shall have voice-mail, conferencing, call-forwarding, and loudspeaker capability. The contractor is not responsible for wiring within stations from the terminal board to telephone terminals.

C.3.0 PRELIMINARY ENGINEERING ANALYSIS

C.3.1 Frequency Selection and Microwave Network Engineering

The contractor shall perform the following:

- Select the 7/8 GHz frequency band of operation consistent with ITU-R standards for fixed link microwave systems in Iraq. The analysis shall include, but not be limited to the following: interference, multipath, channel capacity, data throughput, atmospheric attenuation, and tower separation.
- Perform Preliminary path profiling to:
 - Verify whether the path links specified are feasible; and
 - Identify critical points along each path that require on-site inspection to accurately determine the existence and height of potential obstructions over which the path must pass.
- Conduct path surveys to collect “real world” data on potential obstruction heights, so that final antenna heights can be set to provide appropriate path clearance.
- Perform final path profiling to determine final antenna heights, including analyses for reflection, diffraction, wave interference, and refraction.

C.3.2 Path Propagation Analysis and Interference Study

The contractor shall conduct a path propagation performance analysis to ensure that each microwave path achieves a 99.995% availability objective calculated two-way at a 10^{-6} Bit Error Rate (BER) threshold. The overall two-way system availability shall be 99.7%. The contractor shall employ techniques such as frequency or space diversity protection to ensure that network availability is achieved in all types of fading conditions. The analysis shall include, but not be limited to the following: interference, multipath, channel capacity, data throughput, atmospheric attenuation, and tower separation. The propagation analysis shall also include seasonal variations in atmospheric and multipath conditions appropriate for Iraq.

The contractor shall conduct a frequency interference study to ensure no cases of intra-system or inter-system interference exist. This analysis shall include an RF interference analysis and channel selection that will:

- Ensure that all civilian, coalition and Iraqi military frequencies are protected from interference due to fundamental frequencies or harmonics transmitted by the microwave tower network, to the extent possible
- Ensure that there is no interference between the microwave communications equipment and other communications elements of the CBTC system, including MeteorComm: 50 - 60 MHz, Motorola: 160 MHz and Iridium (uplink 1616.0 - 1626.5 MHz, downlink 1621.35-1626.5 MHz)

- GPS frequencies:
 - L1 (1575.42 MHz)
 - L2 (1227.60 MHz)
 - L3 (1381.05 MHz)
- 802.11 frequencies:
 - 802.11a: 5.15 - 5.35 GHz
 - 802.11b: 2.4 GHz

C.3.3 License Application

The contractor shall prepare and submit the Application for Fixed Service License to the Iraqi National Communications and Media Commission (NCCMC) in Baghdad, Iraq.

C.3.4 System Engineering Planning and Network Layout

At a minimum, the contractor shall perform the following systems engineering tasks:

- a. Engineer and finalize required DMRCN equipment locations, interfaces with the other IRR communications systems and auxiliary communications equipment, and material for the microwave radio communications system at each site;
- b. Engineer and finalize antenna types, sizes and centerlines at each site;
- c. Finalize the installation material required to securely install the antenna systems;
- d. Engineer and finalize the tower heights and foundations for each site;
- e. Engineer and finalize the communications equipment shelter layout and configuration;
- f. Engineer and finalize the shelter and tower primary power and backup systems;
- g. Engineer and finalize the system shielding, grounding and bonding requirements at each site for grounding and lightning protection;
- h. Finalize the configuration of the CBTC LAN system and the NMS; and
- i. Engineer and finalize system antenna tower and shelter alarms.

C.3.5 Deliverables

1. The contractor shall prepare and submit for Government approval, a path engineering report that includes, but is not limited to the following areas:

- **System Type to be Deployed**
 - Frequency band and System technical characteristics, including:
 - Channel bandwidth
 - Maximum transmitter power
 - Noise and interference thresholds
 - Typical range of antenna size and effective gain
 - Antenna line loss characteristics
- **Preliminary Path Profiling**
 - Preliminary antenna heights
 - Possible “no-go” decision if heights are excessive
 - Identification of critical locations along the path where path clearance needs to be defined
- **Field Path Surveys**
 - Accurate information on obstructions and their heights to be used for finalizing path profiles and antenna heights
- **Final Path Profiling**
 - Final path profiling and antenna centerline heights.
 - Photographs of key obstructions

2. The contractor shall prepare and submit for Government approval, a RF propagation and interference analysis report that includes, but is not limited to the following areas:

- **RF Propagation Analysis**
 - Calculate the link budget for each path and determine whether performance will meet the availability requirements, or recommend how the path should be modified.
- **RF Interference Analysis**

The interference analysis shall include, but not be limited to, the following areas:

 - Inter-system interference, to the extent possible
 - Intra-system interference
 - Intermodulation interference
 - Multi-path fading

3. The contractor shall prepare and submit for Government approval, a system integration plan that will ensure a cohesive integration and interoperability approach with the existing IRR communications systems listed in Table 1.1.

4. The contractor shall prepare and submit for Government approval, five (5) complete engineering packages, bearing a Professional Engineer's stamp, for each tower built. These packages shall include complete shop drawings, list of components and subsystems, and structural analysis.

a. The shop drawings shall include, but not be limited to, the following: catalog data from the tower manufacturer including tower lights and controls, ladder, safety equipment, and the complete structural analysis of the tower and foundation. The structural analysis shall include, but not be limited to, base loading, wind loading, deflection, rotation, antenna loading, and any other parameters critical to the installation of the tower and its performance.

5. The contractor shall prepare and submit for Government approval, five (5) complete engineering packages for each telecommunications shelter. These packages shall include, but not be limited to, general description and shelter layout, equipment blueprints, floor and elevation plans, electrical wiring diagrams, and HVAC schematics.

The electrical wiring diagrams shall include, but not be limited to, the following:

- AC power system wiring diagrams that identify the AC power wiring system in the shelter. These diagrams shall include outlets, AC lights, transformers, and breaker panels
- A wiring diagram that identifies the wiring between the components of the power system that includes the ATS, batteries, and optional backup diesel generator
- DC power wiring diagrams that identify the DC power wiring in the shelter. These diagrams shall include the DC equipment, breaker panels and batteries
- A wiring diagram that identifies all base station and base repeater system wiring. The diagram shall include all base stations and repeaters, patch panels, copper cabling, Ethernet cabling, order-wires, computer terminal interfaces, wayside T1s and waveguide

6. The contractor shall prepare and submit for Government approval, an engineering requirements analysis for deployment of the microwave radio network in the ITU-R microwave band, including, but not be limited to:

- The number and location of tower sites and telecommunications shelters
- The height of each tower
- The microwave network reliability and availability

7. The contractor shall prepare and submit for Government approval, the final Path Profile and Analysis for each microwave link. This analysis shall validate the final path links to include tower elevations, antenna sizing, and diversity spacing.

C.4.0 PROCUREMENT AND INTEGRATION

The contractor shall submit the final DMRCN system configuration to the CO for formal approval. After approval by the CO, the contractor shall commence the procurement of equipment.

The contractor shall coordinate with the CBTC system contractor, Mafeks LLC, and/or any other IRR communications contractor as well as the IRR, to develop and ensure a cohesive integration approach with the systems listed in Table 1.1.

C.4.1 Testing, Certification, and Documentation of Operability

The contractor shall perform a series of tests to demonstrate the performance and proper operation of the DMRCN both at the factory and in the field. The testing shall satisfy all of the elements defined in the system integration plan.

The contractor shall examine and certify in writing that it meets the requirements in this contract. The Government reserves the right to perform inspections anytime during the period of performance.

To allow the Government time to arrange an inspection, the contractor shall maintain and provide to the CO a current work schedule as well as provide the CO with ten (10) business days notice prior to performing the testing defined herein.

The Contracting Officer's Technical Representative (COTR) shall verify compliance during acceptance at the factory. The following checklist shall, at a minimum, be employed:

- DMRCN equipment in compliance with product specifications
- Equipment matching the system configuration plan
- Safe and neat wire routing and logical component placements
- Properly sized conductors, appropriate wire splices and terminations
- No damaged parts or components
- Properly labeled components

C.4.1.1 Factory Level Integration Testing

The contractor shall prepare a Factory Level Integration Test Plan and submit it to the CO for approval prior to the start of testing. The contractor shall perform Factory Level System Integration Testing. The contractor shall notify the CO ten (10) business days prior to any testing so that the Government may attend the testing.

This testing shall include, but not be limited to, the following: all DMRCN equipment, site power supply systems, shelters, generators, and NMS equipment. Testing shall take place after the equipment has been installed and integrated into the equipment shelters. Testing shall demonstrate the following:

- Interoperation of microwave communications equipment with the existing Motorola VHF voice and MeteorComm VHF data systems, in accordance with the system integration plan. The contractor shall be required to provide Motorola and MeteorComm radios for the integration testing
- Power system operation
- Battery backup system discharge and recharge durations
- Interoperation of the NMS with the following systems, in accordance with the system integration plan:
 - The VHF and DMRCN equipment
 - Shelter and power system alarms
 - Battery backup UPS system
 - The ATS

C.4.1.2 Field Level Test Plan

The contractor shall prepare a Field Level Test Plan and submit it to the CO for approval prior to the shipment.

The test plan shall, at a minimum, include the following:

- DMRCN Installation and System Verification
- The voltage standing wave ratio (VSWR) testing of the waveguide
- Integration and interoperation of DMRCN with the IRR communications systems listed in Table 1.1, in accordance with the system integration plan
- All links satisfy the 10^{-6} BER threshold requirement
- Antenna System Installation and Alignment
- Integration and interoperation of the NMS with the following systems, in accordance with the system integration plan:
 - The DMRCN
 - The IRR communications systems listed in Table 1.1.
 - Shelter, tower and backup diesel generator alarms
 - Backup diesel generator system, if exercised
- Backup diesel generator operation, if exercised
- Battery backup UPS system
- The ATS
- Tower navigation lighting

C.4.2 Site and System Integrated Grounding

The contractor shall develop a site grounding system that is capable of protecting all equipment and facilities provided under this contract from lightning strikes and equipment malfunctions. The grounding system shall be developed in accordance with ANSI/TIA/EIA-222-F-1996. The grounding system shall be documented and submitted to the Government for approval.

C.4.3 Integration and Logistics

The contractor shall integrate and test the DMRCN equipment to demonstrate full system functionality as well as integration and interoperation with the MeteorComm and Motorola equipment. The towers and antenna systems will be delivered directly to the Government designated delivery points, in Iraq, as required. Thereafter, the towers and antenna systems will be integrated at each IRR site.

The contractor shall complete the testing per the Factory Level Test Plan approved by the CO. Upon successful completion of the tests and acceptance for shipment, the integrated DMRCN and the shelters will be prepared for shipment to Iraq.

The contractor is responsible for shipping, including but not limited to, cost of the shipment, export licenses and other permits required to deliver the equipment to final installation locations in Iraq.

C.4.5 Deliverables

1. The contractor shall provide twelve (12) complete documentation and hardware installation drawing packages for the DMRCN equipment and the existing equipment listed in Table 1.1. Drawings and documentation will be provided in English.
2. The contractor shall provide twelve (12) complete sets of the commercially available equipment manuals for all major items including, but not be limited to:
 - DMRCN equipment
 - Telecommunications Shelters
 - ATS
 - Transformers/inverters
 - Antenna system components
 - NMS
 - CBTC LAN System
 - Battery backup UPS system
 - Backup diesel generator, if exercised
3. The contractor shall prepare and submit for Government approval, five (5) copies of the Factory Level Integration and Field Level Test Plans, and five (5) copies of the Factory Level Integration Testing results.
4. The contractor shall provide a complete set of operation and maintenance manuals for each shelter.

C.5.0 EQUIPMENT DELIVERY TO IRAQ

Upon successful completion of the factory level integration testing, the contractor shall prepare all equipment and material, including, but not limited to DMRCN equipment, communications equipment shelters, and antenna towers, for shipment to Iraq. The contractor shall be responsible for the shipment (i.e., arrangements, cost, insurance, permits, tariffs) and delivery of all equipment to the 21 DMRCN sites and the additional 12 DMRCN sites, if options are exercised, for a total of up to 33 DMRCN sites listed in Appendix A. The contractor may establish a consolidation or central receiving site in Iraq, or anywhere else, but is responsible for the final delivery of all equipment to the DMRCN sites listed in Appendix A.

C.5.1 Equipment Acceptance in Iraq

The contractor shall verify that the DMRCN equipment is in compliance with product specifications at the DMRCN sites in Iraq. The following checklist shall, at a minimum, be employed:

- DMRCN equipment in compliance with product specifications
- Equipment matching the system configuration plan
- Safe and neat wire routing and logical component placements
- Properly sized conductors, appropriate wire splices and terminations
- No damaged parts or components
- Properly labeled components

C.6.0 CONSTRUCTION, NETWORK DEPLOYMENT, AND FIELD VERIFICATION

The contractor shall coordinate with the CBTC system contractor, Mafeks LLC, and/or any other IRR communications contractor as well as the IRR, to integrate and test the DMRCN with the existing IRR communications systems listed in Table 1.1.

C.6.1 Site Preparation

The contractor shall provide a final site plan, for each site, for approval by the CO. The plan shall include, but not be limited to, location and installation of the antenna towers, antenna tower foundations including piers, communications equipment shelters and concrete pads, as well as generators, fuel tanks, and associated concrete pads.

The contractor shall grade and strip the site of any vegetation. Any soft areas (such as tree stump holes, etc.) shall be filled and compacted. The contractor shall grade the site so that it has positive drainage run off with no low or drainage collection points.

At each site, the contractor shall build a concrete pad for placement of the communications equipment shelter, the backup diesel generator and the fuel tank. The pads shall be capable of supporting the weight of the equipment that will be mounted on it. The communications equipment shelter pad shall be installed such that a waveguide bridge directly aligns with the waveguide ports of the shelter.

At each site, the contractor shall prepare conduit lined trenches for the power system and telecom system interconnection between the rail station, communications equipment shelter and the optional backup diesel generator.

The contractor shall install a site grounding system prior to pouring of the foundations and pads.

C.6.2 Tower Installation and Tower Foundation Construction

At each site, the contractor shall construct the tower foundations and install the towers per the instructions and tower construction documents supplied by the tower manufacturer and Iraqi local building codes.

C.6.3 Shelter Installation

At each site, the contractor shall install and secure the equipment shelter to the pad in accordance with the manufacturer(s)'s instructions and Iraqi local building codes, where applicable. The contractor shall interconnect each equipment shelter system with the power and telecommunications systems at each rail station.

C.6.4 Antenna System Installation and Alignment

At each site, the contractor shall install the antennas and waveguides in accordance with the manufacturer(s)'s instructions. At each shelter, the contractor shall install a waveguide bridge made of galvanized steel with cover plates for environmental protection.

The contractor shall install and align the antennas for the DMRCN. The contractor shall document specific tests and procedures in the Field Level Test Report as well as document the results of the local tests and provide copies of such documentation for retention at the site and in a central repository at Baghdad Central Station.

C.6.5 MeteorComm and Motorola Radio and Antenna Installation

The contractor shall integrate and test the MeteorComm VHF data communications and Motorola VHF voice radios, antennas and coax cable systems per instructions provided by the manufacturers and in accordance with the system integration plan. The contractor shall integrate these systems with the DMRCN in accordance with the system integration plan.

C.6.6 DMRCN Installation and System Testing and Verification

The contractor shall install and perform system tests and verification of the DMRCN equipment and all associated antennas once the antenna system is aligned and operational. The contractor shall conduct tests on the base station and repeater equipment per the manufacturer(s)'s recommendations and document the specific tests and procedures in the Field Level Test Plan. The contractor shall also document results of the local tests and provide copies of such documentation for retention at the site and in a central repository at Baghdad Central Station.

C.6.7 CBTC Local Area Network and Network Management System Installation

The contractor shall install and integrate the LAN and NMS with the CBTC system prior to Field Level Testing.

C.6.8 Field Level Testing

To allow the Government time to arrange an inspection, the contractor shall maintain and provide to the Government a current work schedule and shall provide the CO with ten (10) business days notice prior to performing the field level testing.

The contractor shall perform Field Level Testing of the DMRCN. The testing shall include, but not be limited to the DMRCN equipment and communications hardware in Table 1.1, the telecommunication equipment shelters and antenna tower systems. The testing shall occur after the equipment has been installed on site and integrated into the network.

Testing shall demonstrate the following:

- DMRCN Installation and System verification
- The voltage standing wave ratio (VSWR) testing of the waveguide
- Integration and interoperation of DMRCN with the IRR communications systems listed in Table 1.1, in accordance with the system integration plan
- All links satisfy the 10^{-6} BER threshold requirement
- Antenna System Installation and Alignment
- Integration and interoperation of the NMS with the following systems, in accordance with the system integration plan:
 - The DMRCN
 - The IRR communications systems listed in Table 1.1.
 - Shelter, tower and backup diesel generator alarms
 - Backup diesel generator system, if exercised
- Backup diesel generator operation, for generators provided under this contract
- Battery backup UPS system
- ATS
- Tower navigation lighting.

The contractor shall conduct communications path testing to support the CBTC system. Further, the contractor shall document in the Field Level Test Plan and test report, system tests to demonstrate the full functionality of the communications systems.

C.6.9 Site Clean up

The contractor, upon completion of the construction work, shall clean the surrounding area and site of all construction debris and excess building material.

C.6.10 Deliverables

The contractor shall prepare and submit for CO approval:

1. One original and four (4) copies of Field Level Testing results
2. System final layout and engineering drawings for each site showing the locations and routing of all equipment.
3. A Final “as built” drawing package, stamped by a Professional Engineer, for each site.
4. A Final Site Plan for each site.

C.7.0 TRAINING

The contractor shall provide training for twelve (12) students from the IRR. The training will be held in a location identified and provided by the contractor that has the necessary demonstration prototype systems and facilities. The contractor shall be responsible for all costs associated with the training. The training costs shall not exceed the Federal Travel Regulations rates.

The contractor shall provide DMRCN, NMS, and LAN operation and maintenance training. The training shall include, but not be limited to, instruction on operation, maintenance procedures, trouble-shooting procedures, and configuration procedures.

The training material presented will be available both electronically and in printed hardcopy in sufficient quantities, both in English and Arabic. The contractor shall prepare and submit one original and four (4) copies to the CO of the training materials presented to the IRR.

C.8.0 PROGRAM MANAGEMENT

The contractor shall assign a Program Manager to this contract that shall be the contractor's point of contact responsible for the technical management and monitoring of the contract.

Within twenty (20) days calendar days after the contract award, the contractor and the Government shall attend a project startup meeting. The contractor shall host this meeting at its designated facility. At the project startup meeting, the contractor and the Government will establish the program review meeting schedule.

The contractor shall prepare and submit reports and data for program review meetings to the COTR a minimum of five (5) days before each program review meeting.

C.9.0 OPTIONS

C.9.1 Additional Sites North of Baghdad (Options)

The contractor shall provide a DMRCN including antennas, towers and equipment shelters and all necessary components for the development and integration with the DMRCN as described in the scope of work at up to twelve (12) additional site locations (see Appendix A). If any option for additional sites is exercised, the work shall be performed in accordance with Section C, SOW (see paragraphs 1-9) herein.

C.9.2 Security Wall Construction (Option)

The contractor shall build a 300 linear ft (91m), 10ft (3m) high security wall surrounding the microwave tower and the shelter at up to thirty-three (33) DMRCN sites, subject to final measurement verification by the contractor. If option is exercised, the work shall be performed in accordance with Section C, statement of work. The wall will consist of brick, mortar and cement plaster with barbed arms mounted on top. The contractor shall provide an 18ft (5.5m) wide double entrance solid steel gate for vehicle access and a single 3ft (0.915m) wide solid steel gate for personnel access, both subject to final measurement verification by the contractor. The contractor shall construct the wall to match as closely as possible local styles and building materials. The contractor shall construct the wall to allow free movement of large trucks and construction equipment.

C.9.3 Backup Diesel Generators (Option)

The contractor shall provide, install, and integrate with the communications and electrical equipment, a stationary backup diesel-fueled generator at up to thirty-three (33) equipment shelter sites. If option is exercised, the work shall be performed in accordance with Section C, SOW. The generator shall provide uninterrupted power for ten (10) days to the communications equipment, HVAC equipment, shelter lights, and antenna tower lights at 100% load (see SOW Section 2.5).

C.9.4 System Spares and Test Equipment (Option)

The contractor shall provide the system spares and test equipment listed in Attachment J.2, if option is exercised.

C.9.5 PBX System Equipment and Installation (Option)

The contractor shall provide, install, and integrate a PBX system with the DMRCN equipment at up to thirty-three (33) DMRCN sites listed in Appendix A, if option is exercised. The work shall be performed in accordance with Section C, SOW. The contractor shall provide and install the PBX telephone equipment and all necessary switchgear to bring the telephone system to a terminal board at each rail station. The PBX system shall interconnect each of the sites with each other and Baghdad Central Station (see Section 2.8, SOW).

APPENDIX A

Proposed Antenna Tower Site Locations and Estimated Tower Heights

	RR Station	Latitude	Longitude	Tower Height feet (meters)	
1	Baghdad	33 19 25.50N	44 22 50.16E	240 (73.1)	Base
2	Mushahide	33 38 35.20N	44 13 57.89 E	240 (73.1)	Base
3	Balad	33 57 6.98N	44 9 11.33E	200 (61)	Base
4	Mahmoudiya	33 3 4.64N	44 22 6.93E	300 (91.4)	Base
5	Musayyib	32 46 39.31N	44 17 44.83E	200 (61)	Base
6	Hilla	32 29 48.78N	44 26 37.72E	200 (61)	Base
7	Hashemiya	32 22 33.02N	44 38 55.17E	340 (103.6)	Base
8	Diwaniya	31 58 55.35N	44 53 44.66E	300 (91.4)	Base
9	Hamza	31 43 26.59N	44 58 11.70E	190 (58)	Base
10	Rumaitha	31 31 5.47N	45 12 6.10E	190 (58)	Base
11	Samawa	31 16 27.76N	45 18 11.06E	150 (45.7)	Base
12	Khudher	31 11 9.66N	45 33 16.83E	180 (54.9)	Base
13	Bat-haa	31 6 43.25N	45 52 53.16E	200 (61)	Base
14	Nasiriya	31 1 24.39N	46 13 49.93E	200 (61)	Base
15	Souq al Shuyoukh	30 52 45.87N	46 27 35.52E	360 (109.7)	Base
16	Ghbishiya	30 41 6.98N	46 57 09.96E	300 (91.4)	Base
17	Rumaila	30 34 38.44N	47 22 3.45E	300 (91.4)	Base
18	Shouaiba Jct.	30 28 33.87N	47 39 39.29E	220 (67)	Base
19	Basra	30 33 36.29N	47 47 2.74E	150 (45.7)	Base
20	Marbad	30 12 15.68N	47 48 7.41E	190 (58)	Base
21	Umm Qasr	30 02 34.34N	47 55 41.21E	150 (45.7)	Base
22	Samarra	34 11 18.50N	43 51 4.59E	300 (91.4)	Option
23	Tikrit	34 36 21.08N	43 39 40.50E	300 (91.4)	Option
24	Bayji	34 55 15.58N	43 28 12.19E	240 (73.1)	Option
25	Ein Al- Debbiss	35 12 03.75N	43 16 25.32E	260 (79.2)	Option
26	Talul Al-Baqq	35 25 05.03N	43 06 29.82E	200 (61)	Option
27	Qayyara	35 42 27.94N	43 17 38.93E	260 (79.2)	Option
28	Shura	36 00 04.25N	43 13 55.35E	250 (76.2)	Option
29	Hammam Al Alil			260 (79.2)	Option
30	Mosul	36 19 53.19N	43 7 15.50E	380 (115.8)	Option
31	Wailiya	36 27 31.11N	42 40 5.66E	380 (115.8)	Option
32	Tall Al Owaynat			380 (115.8)	Option
33	Rabiya	36 48 29.58N	42 5 6.63E	160 (48.8)	Option

NOTE: The contractor is responsible for verifying the tower heights prior to installation.

SECTION D - PACKAGING AND MARKING

D.1 PRESERVATION AND PACKAGING (MAY 1999)

All equipment and material, including tools, parts, and publications shall be preserved and packed in accordance with the contractors standard commercial practice and shall provide product protection against deterioration, loss, and damage during multiple shipments, handling, and storage, unless otherwise specified by the Government.

D.2 MARKING (APR 2006)

All items submitted to the Government shall be clearly marked as follows:

- a. Name of contractor;
- b. Contract number;
- c. Description of items contained therein;
- d. Consignee's name and address; and
- e. If applicable, packages containing software or other magnetic media shall be marked on external containers with a notice reading substantially as follows: "CAUTION: SOFTWARE/MAGNETIC MEDIA ENCLOSED. DO NOT EXPOSE TO HEAT OR MAGNETIC FIELDS."

D.3 CARGO MARKING AND PLACARD INFORMATION (APR 2006)

Mandatory guidelines for Cargo Marking and Placard Information for work being performed in Iraq can be found at the following website:

http://www.rebuildingiraq.net/portal/page?_pageid=95,77347&_dad=portal&_schema=PORTAL

SECTION E - INSPECTION AND ACCEPTANCE

E.1 FAR 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(es):

<http://www.arnet.gov/far> (FAR)

<http://www.dot.gov/ost/m60/tamtar/tar.htm> (TAR)

<http://www.dot.gov/ost/m60/earl/tamcomplete.htm> (TAM)

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	TITLE	DATE
52.246-2	INSPECTION OF SUPPLIES – FIXED PRICE	AUG 1996
52.246-4	INSPECTION OF SERVICES – FIXED PRICE	AUG 1996
52.246-12	INSPECTION OF CONSTRUCTION	AUG 1996
52.246-16	RESPONSIBILITY FOR SUPPLIES	APR 1984

E.2 QUALITY ASSURANCE PLAN (APR 2006)

The contractor shall provide a description of the procedure they will use to guarantee the quality assurance of the end product, testing procedures, and quality of their vendor's equipment and supplies.

E.3 GOVERNMENT INSPECTION AND ACCEPTANCE (APR 2006)

In accordance with the above FAR clauses the Government will require two separate inspections and acceptances.

1. The first inspection and acceptance will be required prior to shipment to Iraq of all work and other deliverables under this contract. The inspection and acceptance shall be performed at the contractor's designated facility.
2. The second inspection and acceptance will be the final inspection and acceptance of all work and other deliverables under this contract and shall be performed in Iraq at the individual Iraqi Republic Railway (IRR) sites.
3. The Government has the right to inspect and test all supplies and services called for by the contract, to the extent practicable, at any and all places and times and in any event before acceptance.

SECTION F - DELIVERIES OR PERFORMANCE

F.1 FAR 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(es):

<http://www.arnet.gov/far> (FAR)

<http://www.dot.gov/ost/m60/tamtar/tar.htm> (TAR)

<http://www.dot.gov/ost/m60/earl/tamcomplete.htm> (TAM)

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	TITLE	DATE
52.242-14	SUSPENSION OF WORK	APR 1984
52.242-15	STOP WORK ORDER	AUG 1989
52.242-17	GOVERNMENT DELAY OF WORK	APR 1984

F.2 FAR 52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within ten (10) calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than eighteen (18) months. The time stated for completion shall include final cleanup of the premises.

F.3 DELIVERIES/SCHEDULE (APR 2006)

The contractor shall be required to submit a submittal schedule to the Government **within twenty (20) days after contract award** that is subject to approval by the CO. The table below outlines the deliverables. All deliverables must be submitted to the CO for formal approval. Unless otherwise noted below, one original and four (4) copies of all deliverables will be required.

DELIVERABLE	DUE DATE
Path Engineering Report	60 calendar days after contract award
Radio Frequency Propagation and Interference Analysis	
System Integration Plan	
Engineering Packages for Each Tower	The first ten (10) sites due within 30 calendar days after System Integration Plan submittal. After that, the remaining sites will be submitted at a minimum of one (1) site per week.
Engineering Packages for Each Telecommunications Shelter	
Engineering Requirements Analysis for DMRCN	90 calendar days after contract award
Final Path Profile and Analysis for Each Link	
Twelve Drawing Packages for DMRCN Equipment	
Twelve Sets of Commercially Available Equipment Manuals	
Factory Level Integration Test Plan	30 calendar days after Engineering Requirements Analysis submittal
Field Level Test Plan	14 calendar days after Factory Level Integration Test Plan submittal
Factory Level Test Results	14 calendar days after Factory Level Integration Test Plan submittal
Field Level Test Results	21 calendar days following site completion
Final Layout and Engineering Drawings for Each Site	21 calendar days following site completion
Operation and Maintenance Manuals for Each Shelter	21 calendar days following site completion
Final Drawing Packages for Each Site	
Final Site Plan for Each Site	
Training Materials Presented to the IRR	

F.4 PLACE OF DELIVERY/PERFORMANCE (APR 2006)

The following delivery requirements shall apply to this contract:

- A. The contractor shall provide inspection dates to the Contracting Officer for confirmation of inspection at contractor's plant and approval before shipment;
- B. The contractor is responsible for delivery to Iraq and eventually to each site;
- C. The contractor shall address the physical characteristics of the equipment and transportability parameters to ensure that the system design is mobile, resistant to transportation and handling damage, and compatible with commercial and common carrier transport;
- D. The contractor shall ensure that the end-item deliverables meet any unique, security, protection and handling requirements; and
- E. The Contractor shall ensure that shipments, whether software, hardware, or documentation, from any site is in accordance with applicable customs and security regulations.

F.5 CONTRACTOR'S WORK SCHEDULE (APR 2006)

The contractor shall provide a schedule showing the order in which the contractor proposes to perform work, and the dates on which the contractor contemplates starting and completing the salient features of the contract. The schedule shall be in the form of a progress chart (Gantt chart) of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the reporting period. The schedule shall be submitted in Microsoft® Project or similar format.

F.6 CONTRACT PROGRESS REPORT (APR 2006)

The contractor is required to prepare a monthly progress report for each month. The report shall be provided by the 15th of the following month. At a minimum, the report will cover the following items:

- A. The work performed during the previous month.
- B. Significant findings, problems, delays, inclusions, events, trends, etc. of the reporting period which result from or affect the performance of the contract.
- C. Detailed description of the work planned for the next reporting period.
- D. Specific action required by the Government to assist in the resolution of a problem or to effect the timely progression of the contract.

F.7 REPORTS (APR 2006)

The contractor may be required to prepare additional reports during performance of the contract. These reports could include, but not be limited to, program review meeting agenda, meeting minutes, meeting content, and progress schedule. The contractor shall prepare and submit reports and data for program review meetings to the CO a minimum of five (5) days before each meeting. These program review meetings will be held subject to Government discretion.

F.8 WORK SCHEDULE (APR 2006)

In accordance with FAR Clause 52.236-15, "Schedules for Construction Contracts" referenced in Section I, work schedules shall be in the form of a progress chart (Gantt chart) of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the reporting period. The schedule shall be submitted in Microsoft® Project or similar format.

F.9 REPORTS OF WORK - REPORT DISTRIBUTION (APR 2006)

Nothing set forth herein regarding number of copies shall be construed as authority to disregard the provisions of the clause of this contract.

A. Contract Progress Report:

1 copy to the CO or ACO
1 copy to the COTR

B. Program Review Meeting Reports:

1 copy to the CO or ACO
1 copy to the COTR

C. Other Deliverables and Reports: (See F.3 above)

1 copy to the CO or ACO
Remaining copies to the COTR

Reports may be submitted in electronic format via email if available.

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 TAR 1252.242-73 CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (OCT 1994)

A. The Contracting Officer may designate Government personnel to act as the Contracting Officer's Technical Representative (COTR) to perform functions under the contract such as review and/or inspection and acceptance of supplies and services, including construction and other functions of a technical nature. The Contracting Officer will provide a written notice of such designation to the Contractor within five working days after contract award or for construction, not less than five (5) working days prior to giving the Contractor the notice to proceed. The designation letter will set forth the authorities and limitations of the COTR under the contract.

B. The Contracting Officer cannot authorize the COTR or any other representative to sign documents (i.e., contracts, contract modifications, etc.) that require the signature of the Contracting Officer.

G.2 RESPONSIBILITY FOR CONTRACT ADMINISTRATION (APR 2006)

Contracting Officer: The Contracting Officer (CO) has the overall responsibility for this contract. The CO alone, without delegation, is authorized to take actions on behalf of the Government to amend, modify, or deviate from the contract terms, conditions, requirements, specifications, details and/or delivery schedules. However, the CO may delegate certain other responsibilities to his/her authorized representatives.

Administrative Contracting Officer: An Administrative Contracting Officer (ACO) may be designated by the Contracting Officer. The duties of an ACO include but are not limited to: analyzing and making recommendations on the Contractor's proposals, offers, or quotations upon request of the Contracting Officer and approving Contractor's invoices in accordance with the terms of the contract.

Contracting Officer's Technical Representative: A Contracting Officer's Technical Representative (COTR) will be designated by the Contracting Officer. The responsibilities of the COTR include but are not limited to: inspecting and monitoring the Contractor's work; determining the adequacy of performance by the Contractor in accordance with the terms and conditions of this contract; acting as the Government's representative in charge of work at the site to ensure compliance with contract requirements in so far as the work is concerned; and advising the Contracting Officer of any factors which may cause delay in performance of the work. The COTR does not have the authority to make new assignments of work or to issue directions that cause an increase or decrease in the price of this contract or otherwise affect any other contract terms.

The Contracting Officer, Administrative Contracting Officer, and Contracting Officer's Technical Representatives are located at:

U. S. Department of Transportation/RITA
John A. Volpe National Transportation System Center
55 Broadway
Cambridge, MA 02142-1093

The Contracting Officer reserves the right to appoint an inspector to oversee work in Iraq.

G.3 VOUCHER REVIEW (MAY 1999)

The Government may at its sole discretion arrange for a Contractor to review vouchers and supporting data submitted for payment under the provisions of this contract. The Contractor reviewing vouchers and supporting data will perform this function in accordance with contract provisions which prohibit disclosure of proprietary financial data or use of such data for any purpose other than to perform accounts payable services.

G.4 PERFORMANCE EVALUATIONS (APR 2006)

Performance evaluations shall be completed for each contract over \$100,000. Performance evaluations shall also be completed at least annually for contracts that have a performance period in excess of one year. A final performance evaluation shall be completed at the end of contract performance. (The performance evaluation form at <http://cps.od.nih.gov/files/standardreport.doc>, or equivalent form, shall be used.)

The CO or designee will submit the completed evaluation to the contractor for comment. The contractor shall have thirty (30) calendar days in which to respond to the CO regarding the proposed evaluation. The Government will consider any comments provided by the contractor before finalizing a Performance Evaluation Report. Additionally, the contractor's comments will be attached to the Report.

G.5 PAYMENT SCHEDULE

The contractor shall be required to submit a payment schedule to the Government **within twenty (20) days after contract award** that is subject to approval by the CO, in accordance with FAR clauses 52.232-5, and 52.232-32, incorporated by reference in Section I.

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 TYPE OF CONTRACT (DEC 1998)

This is a Firm-Fixed Price contract in accordance with Federal Acquisition Regulation (FAR) 16.202.

H.2 NON-PERSONAL SERVICES (MAY 1998)

The Contractor agrees that this is a nonpersonal services contract; that for all the purposes of the contract the Contractor is not, nor shall it hold itself out to be, an agent or partner of, or joint venturer with, the Government; and that the contractor shall neither supervise, nor accept supervision from, Government employees.

H.3 SALES TAX EXEMPTION (SEP 1999)

A. The Volpe National Transportation Systems Center, as part of the Department of Transportation, an agency of the United States, is an exempt purchaser. Accordingly, all purchases of personal property by this organization are exempt from state and local taxation.

B. The Contractor may be provided with Tax Exemption certificates for the purpose of obtaining an exemption under this procurement for materials and equipment purchased under this procurement. Notwithstanding the terms of the Federal, State, and Local Taxes clause, the Contractor shall state separately on its vouchers the amount of state sales tax, and the Government agrees to either to pay the amount of the tax to the Contractor or, where the amount of the tax exceeds \$250.00 to provide evidence necessary to sustain the exemption.

H.4 SAFETY AND ACCIDENT PREVENTION (APR 2006)

In performing any work under this contract on premises which are under the direct control of the Government, the contractor shall (a) conform to all safety rules and requirements as in effect during the term of the contract; and (b) take such additional precautions as the Contracting Officer may reasonably require for safety and accident prevention proposes. The Contractor agrees to take all reasonable steps and precautions to prevent accidents and preserve the life and health of contractor and Government personnel performing or in any way coming in contact with the performance of the contract on such premises. Any violation of such rules and requirements, unless promptly corrected as directed by the Contracting Officer, may be grounds for termination of this contract.

H.5 SAFETY AND HEALTH (APR 2006)

(a) In accordance with FAR 52.236-13, "Accident Prevention", referenced in Section I, reports on accidents shall be provided as follows:

The Contractor shall immediately notify and promptly report to the Contracting Officer or his representative, an accident or incident or exposure resulting in fatality, disabling occupational injury or occupational disease or contamination of property arising out of work performed under this contract. Provided, however, the Contractor will not be required to include in any report an expression of opinion as to the fault or negligence of any employee. In addition, the Contractor shall comply with any illness, incident and industry experience reporting requirements set forth in the Schedule of the contract. The Contractor will investigate all such work related incidents or accidents to persons and property to the extent necessary to positively conclude what cause or causes resulted in said accident or incident, and furnish the Contracting Officer with a report, in such form as the Contracting Officer may require, of the investigative findings, together with proposed and/or completed corrective actions.

(b) Information on the Code of Federal Regulations (CFR) requirements ' pertaining to safety and health standards, 29 CFR 1910 and 29 CFR 1926 for OSHA General Industry Safety and Health Standards and OSHA Construction Industry Standards, respectively, is available as follows:

OSHA Publication 2207, which includes a combination of the CFR requirements as they relate to construction safety and health, for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

H.6 INSURANCE (APR 2006)

The contractor shall secure, pay the premiums for and keep in force until the expiration of this contract, and any renewal thereof, adequate insurance as provided below, such insurance to specifically include liability assumed by the contractor under this contract.

- (1) Workman's compensation insurance as required by law of the State.
- (2) Comprehensive bodily injury liability insurance with limits of not less than \$500,000 for each accident.
- (3) Property damage liability with a limit of not less than \$100,000 for each accident.
- (4) Automotive bodily injury liability insurance with limits of not less than \$200,000 for each person and \$500,000 for each accident, and property damage liability insurance, with a limit of not less than \$40,000 for each accident.

Each policy of insurance shall contain an endorsement that any cancellation or material change in the coverage adversely affecting the Government's interest shall not be effective unless the insurer or the contractor gives written notice of cancellation or change to the CO at least thirty (30) calendar days prior to the aforementioned actions. When the coverage is provided by self-insurance, the contractor shall not change or decrease the coverage without the CO's prior approval.

A certificate of each policy of insurance shall be furnished to the CO within ten (10) days after notice of award certifying, among other things, that the policy contains the aforesaid endorsement. The insurance companies providing the above insurance shall be satisfactory to the Government. Notices of policy changes shall be furnished to the CO.

H.7 WARRANTY (APR 2006)

The contractor shall provide the standard manufacturers warranty for all OEM equipment and software integrated with the DMRCN. During the warranty period, the contractor shall repair or replace any contractor product that does not substantially conform to product specifications. The warranty period begins from the date of system completion at each site and final acceptance by the Government.

H.8 SECURITY (APR 2006)

Contractors are responsible for obtaining their own security within Iraq. The costs incurred for security are outside the bounds of this contract. In order to obtain security and transportation services, the contractor should make arrangements with the Department of State and PCO-Iraq located at the U.S. Embassy, Baghdad, Iraq.

Security and transportation services are available from a list of sources published in the Contractor User Guide issued by the United States Department of State/Project & Contract Office (PCO). This guide is available at the following website:

http://ashw3ptpd03.rebuildingiraq.net/portal/page?_pageid=95,77308&_dad=portal&_schema=PORTAL.

Contractors should contact potential firms directly to request references and learn more about the services they offer. The listing of these firms does not constitute an endorsement by the PCO or the Volpe Center, but is for informational purposes only. The Government assumes no responsibility for the capability or the integrity of the firms listed in the guide.

H.9 SUBCONTRACT APPROVAL (APR 2006)

The contractor's Subcontracting Plan dated [**to be completed at time of award for other than small business concerns**] in support of this contract, is hereby approved and incorporated herein. The contractor is granted consent to enter into subcontracting agreements with those companies identified in the Subcontracting Plan, or, for small business firms, the companies originally proposed as subcontractors.

Only first-tier subcontractors are allowed unless the contractor can provide a strong technical rationale for inclusion of a second-tier subcontract and demonstrate what steps have been taken to prevent layering of costs and profit.

The contractor shall follow the procedures specified in Part 44 of the FAR and FAR Clauses 52-244-2 and 52.244-5 when providing advance notification or requesting consent to new subcontracts.

SECTION I - CONTRACT CLAUSES

I.1 FAR 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 CO will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far> (FAR)

<http://www.dot.gov/ost/m60/tamtar/tar.htm> (TAR)

<http://www.dot.gov/ost/m60/earl/tamcomplete.htm> (TAM)

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	TITLE	DATE
52.202-1	DEFINITIONS	JUL 2004
52.203-3	GRATUITIES	APR 1984
52.203-5	COVENANT AGAINST CONTINGENT FEES	APR 1984
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	JUL 1995
52.203-7	ANTI-KICKBACK PROCEDURES	JUL 1995
52.203-8	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	JAN 1997
52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	JAN 1997
52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	SEP 2005
52.204-2	SECURITY REQUIREMENTS	AUG 1996
52.204-4	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER	AUG 2000
52.204-7	CENTRAL CONTRACTOR REGISTRATION	OCT 2003
52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARRMENT	JAN 2005
52.211-5	MATERIAL REQUIREMENTS	AUG 2000
52.211-13	TIME EXTENSIONS	SEP 2000
52.215-2	AUDIT AND RECORDS – NEGOTIATION	JUN 1999
52.215-8	ORDER OF PRECEDENCE - UNIFORM CONTRACT FORMAT	OCT 1997
52.215-10	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA	OCT 1997
52.215-12	SUBCONTRACTOR COST OR PRICING DATA	OCT 1997
52.215-14	INTEGRITY OF UNIT PRICES	OCT 1997

52.217-7	OPTION FOR INCREASED QUANTITY – SEPARATELY PRICED LINE ITEM For the purpose of this clause, the blank is completed as follows: at any time during the performance of the contract	MAR 1989
52.217-9	OPTION TO EXTEND THE TERM OF THE CONTRACT For the purpose of this clause, the blank is completed as follows: (a) at anytime during the performance of the contract; 30 calendar days (c) 66 months	MAR 2000
52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS	MAY 2004
52.219-9	SMALL BUSINESS SUBCONTRACTING PLAN	JUL 2005
52.219-14	LIMITATIONS ON SUBCONTRACTING	DEC 1996
52.219-16	LIQUIDATED DAMAGES - SUBCONTRACTING PLAN	JAN 1999
52.219-25	SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM	OCT 1999
52.219-26	DISADVANTAGED STATUS AND REPORTING	OCT 2000
52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES	FEB 1997
52.222-3	CONVICT LABOR	JUN 2003
52.222-4	CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION	JUL 2005
52.222-21	PROHIBITION OF SEGREGATED FACILITIES	FEB 1999
52.222-26	EQUAL OPPORTUNITY	APR 2002
52.222-27	AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION	FEB 1999
52.222-35	EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS	DEC 2001
52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES	JUN 1998
52.222-37	EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA	DEC 2001
52.223-5	POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION	AUG 2003
52.223-6	DRUG-FREE WORKPLACE	MAY 2001
52.223-13	CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING	AUG 2003
52.223-14	TOXIC CHEMICAL RELEASE REPORTING	AUG 2003
52.225-1	BUY AMERICAN ACT - SUPPLIES	JUN 2003
52.225-8	DUTY-FREE ENTRY	FEB 2000
52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	FEB 2006
52.227-1	AUTHORIZATION AND CONSENT	JUL 1995
52.228-11	PLEDGES OF ASSETS	FEB 1992
52.229-3	FEDERAL, STATE, AND LOCAL TAXES	APR 2003
52.232-1	PAYMENTS	APR 1984
52.232-5	PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS	SEP 2002
52.232-9	LIMITATION ON WITHHOLDING OF PAYMENTS	APR 1984
52.232-17	INTEREST	JUN 1996
52.232-18	AVAILABILITY OF FUNDS	APR 1984

52.232-32	PERFORMANCE-BASED PAYMENTS For the purpose of this clause, the blank is completed as follows: 30th	FEB 2002
52.232-23	ASSIGNMENT OF CLAIMS	JAN 1986
52.232-25	PROMPT PAYMENT	OCT 2003
52.232-27	PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS This clause is applicable only to the construction portion of the contract in Iraq.	SEP 2005
52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER – CENTRAL CONTRACTOR REGISTRATION	OCT 2003
52.233-1	DISPUTES	JUL 2002
52.233-3	PROTEST AFTER AWARD	AUG 1996
52.233-4	APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM	OCT 2004
52.236-1	PERFORMANCE OF WORK BY THE CONTRACTOR For the purpose of this clause, the blank is completed as follows: twelve percent (12%)	APR 1984
52.236-2	DIFFERING SITE CONDITIONS	APR 1984
52.236-3	SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK	APR 1984
52.236-5	MATERIAL AND WORKMANSHIP	APR 1984
52.236-6	SUPERINTENDANCE BY THE CONTRACTOR	APR 1984
52.236-7	PERMITS AND RESPONSIBILITIES	NOV 1991
52.236-8	OTHER CONTRACTS	APR 1984
52.236-9	PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS	APR 1984
52.236-10	OPERATIONS AND STORAGE AREAS	APR 1984
52.236-11	USE AND POSSESSION PRIOR TO COMPLETION	APR 1984
52.236-12	CLEANING UP	APR 1984
52.236-13	ACCIDENT PREVENTION	NOV 1991
52.236-15	SCHEDULES FOR CONSTRUCTION CONTRACTS	APR 1984
52.236-17	LAYOUT OF WORK	APR 1984
52.236-21	SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION	FEB 1997
52.236-26	PRECONSTRUCTION CONFERENCE	FEB 1995
52.239-1	PRIVACY OR SECURITY SAFEGUARDS	AUG 1996
52.242-1	NOTICE OF INTENT TO DISALLOW COSTS	APR 1984
52.242-13	BANKRUPTCY	JUL 1995
52.243-1	CHANGES – FIXED PRICE ALTERNATE II	AUG 1987 APR 1984
52.243-4	CHANGES	AUG 1987
52.244-2	SUBCONTRACTS	AUG 1998
52.244-5	COMPETITION IN SUBCONTRACTING	DEC 1996
52.244-6	SUBCONTRACTS FOR COMMERCIAL ITEMS	FEB 2006
52.246-25	LIMITATION OF LIABILITY - SERVICES	FEB 1997
52.247-63	PREFERENCE FOR U.S.-FLAG AIR CARRIERS	JUN 2003
52.247-64	PREFERENCE FOR PRIVATELY OWNED U.S.-FLAG COMMERCIAL VESSELS	FEB 2006
52.248-3	VALUE ENGINEERING – CONSTRUCTION	FEB 2000
52.249-2	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE), ALTERNATE 1	MAY 2004 SEP 1996

52.249-4	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (SERVICES) (SHORT FORM)	APR 1984
52.249-8	DEFAULT (FIXED-PRICE SUPPLY AND SERVICE)	APR 1984
52.249-10	DEFAULT (FIXED-PRICE CONSTRUCTION)	APR 1984
52.249-14	EXCUSABLE DELAYS	APR 1984
52.251-1	GOVERNMENT SUPPLY SOURCES	APR 1984
52.253-1	COMPUTER GENERATED FORMS	JAN 1991

II. TRANSPORTATION ACQUISITION REGULATION (48 CFR CHAPTER 12)

NUMBER	TITLE	DATE
1252.223-71	ACCIDENT AND FIRE REPORTING	APR 2005
1252.223-73	SEAT BELT USE POLICIES AND PROGRAMS	APR 2005
1252.242-72	DISSEMINATION OF CONTRACT INFORMATION	OCT 1994
1252.245-70	GOVERNMENT PROPERTY REPORTS	OCT 1994

I.2 FAR 52.204-1 APPROVAL OF CONTRACT (DEC 1989)

This contract is subject to the written approval of the Chief of the Contracting Office and shall not be binding until so approved.

I.3 FAR 52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)

(a) The Contractor shall make the following notifications in writing:

- (1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.
- (2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall -

- (1) Maintain current, accurate, and complete inventory records of assets and their costs;
- (2) Provide the ACO or designated representative ready access to the records upon request;
- (3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and
- (4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

(c) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

I.4 FAR 52.225-9 BUY AMERICAN ACT-CONSTRUCTION MATERIALS (JAN 2005)

(a) *Definitions.* As used in this clause-

"Component" means an article, material, or supply incorporated directly into a construction material.

"Construction material" means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

"Cost of components" means-

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

"Domestic construction material" means-

(1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

"Foreign construction material" means a construction material other than a domestic construction material.

"United States" means the 50 States, the District of Columbia, and outlying areas.

(b) *Domestic preference.*

(1) This clause implements the Buy American Act (41 U.S.C. 10a - 10d) by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows:

none

[Contracting Officer to list applicable excepted materials or indicate "none"]

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that-

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) *Request for determination of inapplicability of the Buy American Act.*

(1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including-

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) *Data.* To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison			
<u>Construction Material Description</u>	<u>Unit of Measure</u>	<u>Quantity</u>	<u>Price (Dollars)*</u>
<i>Item 1:</i>			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____
<i>Item 2:</i>			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____
<p>[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]</p> <p>[Include other applicable supporting information.]</p> <p>[* Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]</p>			

I.5 FAR 52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT-CONSTRUCTION MATERIALS (MAY 2002)

(a) *Definitions.* "Construction material," "domestic construction material," and "foreign construction material," as used in this provision, are defined in the clause of this solicitation entitled "Buy American Act-Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) *Requests for determinations of inapplicability.* An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) *Evaluation of offers.*

(1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) *Alternate offers.*

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested-

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

I.6 FAR 52.225-11 BUY AMERICAN ACT—CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JAN 2006)

(a) *Definitions.* As used in this clause—

“Caribbean Basin construction material” means a construction material that—

(1) Is wholly the growth, product, or manufacture of a Caribbean Basin country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a Caribbean Basin country into a new and different construction material distinct from the materials from which it was transformed.

“Component” means an article, material, or supply incorporated directly into a construction material.

“Construction material” means an article, material, or supply brought to the construction site by the Contractor or subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

“Cost of components” means—

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

“Designated country” means any of the following countries:

(1) A World Trade Organization Government Procurement Agreement country (Aruba, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, or United Kingdom);

(2) A Free Trade Agreement country (Australia, Canada, Chile, Mexico, or Singapore);

(3) A least developed country (Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, East Timor, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Laos, Lesotho, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Tanzania, Togo, Tuvalu, Uganda, Vanuatu, Yemen, or Zambia); or

(4) A Caribbean Basin country (Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin Islands, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Montserrat, Netherlands Antilles, Nicaragua, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, or Trinidad and Tobago).

“Designated country construction material” means a construction material that is a WTO GPA country construction material, an FTA country construction material, a least developed country construction material, or a Caribbean Basin country construction material.

“Domestic construction material” means—

(1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

“Foreign construction material” means a construction material other than a domestic construction material.

“Free Trade Agreement country construction material” means a construction material that—

(1) Is wholly the growth, product, or manufacture of a Free Trade Agreement (FTA) country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a FTA country into a new and different construction material distinct from the materials from which it was transformed.

“Least developed country construction material” means a construction material that—

(1) Is wholly the growth, product, or manufacture of a least developed country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a least developed country into a new and different construction material distinct from the materials from which it was transformed.

“United States” means the 50 States, the District of Columbia, and outlying areas.

“WTO GPA country construction material” means a construction material that—

(1) Is wholly the growth, product, or manufacture of a WTO GPA country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a WTO GPA country into a new and different construction material distinct from the materials from which it was transformed.

(b) Construction materials.

(1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the WTO GPA and Free Trade Agreements (FTAs) apply to this acquisition. Therefore, the Buy American Act restrictions are waived for designated country construction materials.

(2) The Contractor shall use only domestic, designated country construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

(3) The requirement in paragraph (b)(2) of this clause does not apply to the construction materials or components listed by the Government as follows:

none

[Contracting Officer to list applicable excepted materials or indicate "none"]

(4) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(3) of this clause if the Government determines that—

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the restrictions of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act.

(1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(4) of this clause shall include adequate information for Government evaluation of the request, including—

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(4)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) *Data*. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction Material Description	Unit of Measure	Quantity	Price (Dollars)*
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Item 1:

Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____

Item 2:

Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____

[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]

[Include other applicable supporting information.]

[* Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]

II. TRANSPORTATION ACQUISITION REGULATION (48 CFR CHAPTER 12) CLAUSES

I.7 TAR 1252.237-73 KEY PERSONNEL (APR 2005)

(a) The personnel as specified below are considered essential to the work being performed under this contract and may, with the consent of the contracting parties, be changed from time to time during the course of the contract by adding or deleting personnel, as appropriate.

(b) Before removing, replacing, or diverting any of the specified individuals, the Contractor shall notify the contracting officer, in writing, before the change becomes effective. The Contractor shall submit information to support the proposed action to enable the contracting officer to evaluate the potential impact of the change on the contract. The Contractor shall not remove or replace personnel under this contract until the Contracting Officer approves the change.

The Key Personnel under this Contract are:

- (1) Program Manager - (To be specified at time of award of contract)
- (2) Network Engineer - (To be specified at time of award of contract)
- (3) Contractor Implementation Project Manager - (To be specified at time of award of contract)

SECTION J - LIST OF ATTACHMENTS

ATTACHMENT NO.	TITLE	PAGES
J.1	Contractor Performance Report	6
J.2	System Spares and Test Equipment	2

SECTION K – REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

K.1 FAR 52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2005)

(a)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (b) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (b) instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

(i) Paragraph (b) applies.

(ii) Paragraph (b) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(b) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [*offeror to insert changes, identifying change by clause number, title, date*]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause #	Title	Date	Change

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

K.2 FAR 52.236-28 PREPARATION OF PROPOSALS--CONSTRUCTION (OCT 1997)

(a) Proposals must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a proposal must initial each erasure or change appearing on any proposal form.

(b) The proposal form may require offerors to submit proposed prices for one or more items on various bases, including--

(1) Lump sum price;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of paragraphs (b)(1) through (b)(3) of this provision.

(c) If the solicitation requires submission of a proposal on all items, failure to do so may result in the proposal being rejected without further consideration. If a proposal on all items is not required, offerors should insert the words "no proposal" in the space provided for any item on which no price is submitted.

(d) Alternate proposals will not be considered unless this solicitation authorizes their submission.

SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS OR QUOTERS

L.1 SOLICITATION PROVISIONS

FAR 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions 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. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far> (FAR)

<http://www.dot.gov/ost/m60/tamtar/tar.htm> (TAR)

<http://www.dot.gov/ost/m60/earl/tamcomplete.htm> (TAM)

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) - SOLICITATION PROVISIONS

NUMBER	TITLE	DATE
52.204-6	DATA UNIVERSAL NUMBERING SYSTEM DUNS NUMBER	OCT 2003
52.211-6	BRAND NAME OR EQUAL	AUG 1999
52.214-34	SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE	APR 1991
52.214-35	SUBMISSION OF OFFERS IN U.S. CURRENCY	APR 1991
52.215-1	INSTRUCTIONS TO OFFERORS – COMPETITIVE ACQUISITION	JAN 2004
52.222-21	PROHIBITION OF SEGREGATED FACILITIES	FEB 1999
52.222-23	NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION	FEB 1999
52.232-38	SUBMISSION OF ELECTRONIC FUNDS TRANSFER INFORMATION WITH OFFER	MAY 1999

II. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) - FULL TEXT PROVISIONS

FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997) ALTERNATE IV (OCT 1997)

Submission of cost or pricing data is not required.

Provide information described below:

See Price Proposal Instructions below.

FAR 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a Firm Fixed Price contract resulting from this solicitation.

FAR 52.225-12 NOTICE OF BUY AMERICA ACT REQUIREMENT – CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JAN 2005)

(a) Definitions. “Construction material,” “designated country construction material,” “domestic construction material,” and “foreign construction material,” as used in this provision, are defined in the clause of this solicitation entitled “Buy American Act—Construction Materials Under Trade Agreements” (Federal Acquisition Regulation (FAR) clause 52.225-11).

(b) Requests for determination of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of FAR clause 52.225-11 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers.

(1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction materials, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(4)(i) of FAR clause 52.225-11.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material, other than designated country construction material, that is not listed by the Government in this solicitation in paragraph (b)(3) of FAR clause 52.225-11, the offeror also may submit an alternate offer based on use of equivalent domestic or designated country construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of FAR clause 52.225-11 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of FAR clause 52.225-11 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic or designated country construction material, and the offeror shall be required to furnish such domestic or designated country construction material. An offer based on use of the foreign construction material for which an exception was requested—

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

FAR 52.233-2 SERVICE OF PROTEST (AUG 1996)

- (a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

U. S. Department of Transportation/RITA
John A. Volpe National Transportation System Center
Attention: Orin D. Cook, DTS-852
55 Broadway
Cambridge, MA 02142-1093

- (b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

L.2 GENERAL INFORMATION

A. PROPOSAL IDENTIFICATION

For ease of reference, that part of an Offeror's submission covering factors other than Price; i.e., Past Performance, Staffing, Technical Understanding, and Approach to Management, will be referred to in this Request for Proposal (RFP) as the "Technical Proposal."

B. AWARD WITHOUT DISCUSSIONS

The Government intends to evaluate proposals and award the contract based on the initial offer, in accordance with FAR 52.215-1(f)(4). It is particularly important that each Offeror be fully responsive in providing its best offer initially, since there may be no opportunity to revise proposals at a later date.

Offerors' initial proposals shall be reviewed to determine whether they satisfy the formal requirements of the solicitation. Those proposals determined by the Government to be so grossly and obviously deficient as to be totally unacceptable on their face may be eliminated from further consideration before the initial evaluation.

Failure of Offerors to respond to or follow the instructions regarding the organization and content of the proposal volumes may result in the entire offer being eliminated before initial evaluation.

An incomplete or deficient price proposal will impede the CO from performing a price analysis to determine probable cost to the Government and reasonableness of proposed price.

C. INQUIRIES

Any inquiries or correspondence pertaining to the Request for Proposal (RFP) must be received not later than seven (7) calendar days after issuance of this RFP. Address all written inquiries to:

U.S. Department of Transportation/RITA
John A. Volpe National Transportation Systems Center
Attention: Elizabeth A. Segal, DTS-852
55 Broadway
Cambridge, MA 02142-1093

Questions must be submitted in writing by e-mail to Elizabeth A. Segal at the following e-mail address: segal@volpe.dot.gov. Any questions received after this date will be answered only if determined by the CO to be in the best interest of the Government. NO ORAL INQUIRIES WILL BE ANSWERED. No question of any nature or form is to be directed to technical personnel. Any additions, deletions, or changes to this procurement will be made by amendment to the RFP.

Each amendment will be identified by number and receipt thereof will be acknowledged by each Offeror. Consistent with the dissemination of the RFP, any amendment will be posted on the Volpe Center Acquisition Division Internet Home Page (<http://www.volpe.dot.gov/procure/index.html>) and no paper copies will be mailed to prospective Offerors.

L.3 GENERAL INSTRUCTIONS FOR TECHNICAL PROPOSAL AND PRICE PROPOSAL PREPARATION

L.3.A. SOLICITATION MAILING INSTRUCTIONS

To facilitate proper handling of the offer or amendment thereof, it is imperative that the outermost envelope/packaging that contains the offer/amendment be addressed in the format presented in the "Issued by" Block on page 1 of Standard Form 33. Packages must be clearly labeled with the solicitation number and a statement that the contents are "Proposal Data - To Be Opened By Addressee Only."

L.3.B. PROPOSAL PRESENTATION

Offerors are required to submit their proposals in two separate volumes as follows:

Volume I - Price Proposal

The Price Proposal must consist of the attached Standard Form 33, solicitation documents (including Section B and Attachment J.2), detailed pricing information, and a Small Business Subcontracting plan (for other than small business concerns).

Volume II – Technical Proposal

This volume must include all the required information as described in Section L.5 below.

Each volume should be complete in itself so that evaluation of each part may be accomplished concurrently and evaluation of the non-price factors may be made strictly on the basis of technical merit.

L.3.C. COPIES

You must submit one (1) original and two (2) copies of the Price Proposal (Volume I) and one (1) original and five (5) copies of the Technical Proposal (Volume II). The Technical Proposal shall also be submitted on a CD-ROM in a virus-free format compatible with Microsoft Office Word Version 2003.

L.3.D. PROPOSAL FORMAT

1. Introduction and Purpose

This section specifies the format which Offerors shall use in their proposals. The intent is to ensure a certain degree of uniformity in the format of the responses to facilitate evaluation.

2. Text

The Offeror's written Technical Proposal shall be prepared on standard 8.5 x 11-inch pages in portrait orientation. The proposal pages shall be numbered and printed double-sided. The double-sided page counts as two (2) pages. Each page must have a one-inch margin at the top, the bottom, and on each side. Page numbers, notations of proprietary information, and any other identifying information printed on each page are excluded from the margin requirement. Print must be spaced at six (6) lines per inch. Text font must be no smaller than twelve (12) point; however, text included on figures, charts, and/or matrices may be reduced to eight (8) point. Offerors may use proportional fonts provided the Government's requirement for the proposal to be readable is met and smaller type is not used to circumvent the proposal page limitations. Should the Offerors require fold-out pages, one fold-out page shall not exceed either 8.5 inches by 22 inches or 17 inches by 11 inches, which when folded in half will be no larger than 8.5 inches x 11 inches. The fold-out will count as two pages.

The text restrictions do not apply to the price proposal.

3. Page Limits

The maximum number of pages that may be submitted for the Technical and Price Proposals are as follows:

Volume I - Price Proposal - No Limit

Volume II – Technical Proposal - See Instructions for Technical Proposal in L.5 below for specific limitations and format restrictions

4. Binding

The volumes must be loose leaf and in binders which can be easily opened and closed.

5. Cover

The cover, which shall not count against the page limitation of the proposal of each volume, shall indicate the following:

- a. Title of proposal
- b. Volume number and title
- c. RFP number
- d. Name and address of the Offeror
- e. Copy number

6. Title Page

The title page, which shall not count against the page limitation of the proposal of each volume shall include the following:

- a. Title of proposal
- b. Volume number and title
- c. RFP number
- d. Name, address, and telephone number of the Offeror
- e. Authorized signatures (The title page for each volume shall be signed by an official authorized to bind the Offeror.)
- f. Index

L.4 INSTRUCTIONS FOR THE PRICE PROPOSAL

L.4.A. INTRODUCTION

As stated in Paragraph L.2.B., the Government anticipates making award based on initial offers as provided in FAR 52.215-1(f)(4). A proposal that is incomplete may be eliminated from further consideration because discussions are not planned. During its evaluation, the Government may request clarifications; i.e., the correction of minor omissions or errors that do not alter the proposal or open discussions.

It is the Offeror's responsibility to ensure that its Price Proposal is sufficiently complete and comprehensive so that the review may be accomplished without further dialogue.

All information relating to price must be included in Volume I of the proposal; under no circumstances shall cost or pricing data be included elsewhere in the proposal. However, the Government anticipates making award on initial offers and does not expect to hold discussions. Consequently, the Offeror is advised that failure to provide sufficient information and supporting documentation may result in the rejection of its proposal.

L.4.B. FORMAT

In addition to the requirements set forth in Section L.3, the Price Proposal shall be submitted in two sections as follows:

- Section I - Solicitation Documents
- Section II - Pricing Information

L.4.C. SECTION I - SOLICITATION DOCUMENTS

In this section, offerors shall submit a completed and signed SF 33 (page 1 of the solicitation), including acknowledgment of any amendments, and annual Representations and Certifications, as amended. (Section K of the solicitation).

L.4.D. SECTION II – PRICING INFORMATION

In this section, offerors shall submit sufficient pricing information detailing how it developed the proposed final price figures for each CLIN in Section B. While there are no required schedules, this information should be submitted in sufficient detail in order for the Government to do a comprehensive review of its price proposal. Offerors shall also complete Attachment J.2. “System Spares and Test Equipment” in its entirety. Offerors are reminded that failure to submit required information may make it ineligible from further consideration for award.

L.4.E. SUBCONTRACTING PLAN (IF APPLICABLE)

In accordance with FAR 52.219-9, Offerors who are not small business concerns shall submit a Small Business Subcontracting Plan. The plan must be submitted in accordance with FAR Part 19 and must comply with FAR 19.704. The Offeror shall show the subcontractor’s business size, and the percentage and type of workload estimated to be subcontracted out. All cost and technical information must be included in the appropriate sections of the Offeror’s proposal in addition to the submission of the subcontracting plan. The socio-economic Volpe Center goals with the Small Business Administration are currently as follows:

	<u>Percent of Dollars Awarded</u>
Awards to Small Businesses	36%
Awards to Small Disadvantaged Businesses	20%
Awards to Women-Owned Businesses	11%
Awards to HUBZone Businesses	12%
Awards to Service Disabled Veteran-Owned Small Business	3%

These goals are not intended to be mandatory but the Offeror is to keep these goals in mind when developing its subcontracting plan. Please note that these goals must be proposed as a percentage of total dollars being subcontracted. A business may count toward more than one of the goals shown above. For example, a small disadvantaged business owned by a woman would count toward three of the four goals.

Offerors are advised that subcontracting plans will be posted on the OSDDBU website and that performance will be evaluated under the new DOT partnership with SBA on subcontracting program reviews. Small business offerors are exempt from the subcontracting plan submission and will automatically receive a successful evaluation credit towards subcontracting goals.

L.5 INSTRUCTIONS FOR THE TECHNICAL PROPOSAL

INTRODUCTION

Proposals shall be structured in accordance with the instructions contained herein.

L.5.A. CONTENT

The Technical Proposal should be comprehensive and explicit. Elaboration of general corporate or company experience in non-related activities will detract from the quality of the proposal. All qualifications, experience, and capabilities should relate to the services required by the SOW. Legibility, conciseness, completeness, clarity of content, coherence, and brevity are important since they will facilitate the Government’s evaluation procedure.

L.5.B. PAGE LIMITS

The maximum number of pages that may be submitted is as follows:

1. Technical Approach and Technical Understanding: Twenty five (25) pages.
2. Management Approach: Ten (10) pages
3. Past Performance: The total overall page limit for the summaries of the Offeror's five (5) most relevant contracts is thirty (30). There is no limit for the required list of other current contracts, for past performance reports, or for any information submitted by the Offeror to demonstrate that it has made its best efforts to ensure that customers provide past performance reports to the Volpe Center.
4. Staffing: Resumes submitted may not exceed an average of two (2) pages per resume.

L.5.C. PROCESS

The technical evaluation process has been designed to minimize the proposal and evaluation costs of both the Offeror and the Government. It reduces the Offeror's written submission to essential information upon which to evaluate the Offerors.

L.5.D. PARTS OF THE TECHNICAL PROPOSAL (VOLUME II)

SECTION I - TECHNICAL APPROACH AND TECHNICAL UNDERSTANDING

The Offeror shall describe how it plans to meet the requirements of the contract and to demonstrate that it has the necessary understanding, expertise, and experience to successfully accomplish the SOW. The Offeror shall provide a technical approach that will demonstrate an understanding of the solicitation and technical approach to the solicitation, with emphasis on systems integration.

SECTION II- MANAGEMENT APPROACH

The Offeror shall provide an overview of its management approach for the overall contract. The Offeror shall describe its capability to effectively and efficiently manage the work described by this contract, including forming teams. Additionally, the Offeror shall describe its approach to managing changes that impact price, schedule, and configuration management.

SECTION III- PAST PERFORMANCE

Offerors shall submit their past performance (reference) information as a separate part of their proposal for both the Offeror and major proposed subcontractors and it shall be clearly marked and identifiable.

References other than that provided by the Offeror may be contacted by the Government and the information received may be used in the evaluation of the Offeror's past performance. Among the minimum factors that must be addressed is past performance in the following areas:

- Development, procurement, installation, and testing of long haul point-to-point digital microwave radio communications networks
- Systems integration and testing of digital microwave radios communications equipment with other types of communications equipment
- Installation and deployment of large scale communications systems in a hostile environment

The Offeror must provide a list of contracts that it is currently performing or has completed within the past five (5) years. The offeror must make a good faith effort to ensure that the list includes all Prime contracts with a value over \$1,000,000 with the Federal Government. If the Offeror can demonstrate that including information on all Prime contracts with the Federal Government over \$1,000,000 would create an undue burden on the offeror because of the large number of applicable contracts, then the list may be reduced to reflect contracts that are most relevant and for which data is readily available. The offeror must describe in its proposal what types of contracts were excluded and what process was utilized to ensure that all Prime contracts with the Federal Government over \$1,000,000 relevant to the SOW were included. In addition, the list must include those applicable contracts reflecting the involvement of the proposed Program Manager (PM), Lead Network Engineer (LNE) and Contractor Implementation Project Manager (CIPM). The list may also include other contracts considered relevant by the Offeror, including those with customers other than the Federal Government. The offeror must include the following information for each contract:

1. Name and address of customer
2. Contract number
3. Contract type
4. Total contract value
5. Description of contract work
6. Contracting Officer's address, telephone number and e-mail address
7. Contracting Officer's Technical Representative's address, telephone number and e-mail address
8. Administrative Contracting Officer's address, telephone number and e-mail address (if different from item 6)
9. List of major subcontractors
10. Assessment of relevance to requirements identified in this solicitation.
11. Any final or interim contract past performance report issued by the contracting agency for the five (5) most relevant contracts. Copies of reports on other than the five (5) contracts considered most relevant by the Offeror should not be submitted as part of the proposal, but may be obtained by the Government if the Government considers the contracts relevant.

From the above list, the offeror must select no more than five contracts that it considers the most relevant in demonstrating its ability to perform the contract. This list of most relevant contracts must be separated from the above list. Offerors may also include information regarding problems encountered on the five (5) identified contracts and the offeror's corrective actions.

The offeror is responsible for making all reasonable efforts to ensure that a completed evaluation report is submitted for each of the five identified contracts by no later than the due date for receipt of proposals. If the contracting activity has completed a contractor evaluation report, particularly those completed in accordance with Subpart 42.15 of the FAR, and provided a copy to the offeror, a copy of this report is sufficient. Otherwise, the offeror is responsible for making all reasonable efforts to ensure that a copy of the performance evaluation report is submitted directly to the Volpe Center CO or designee by the appropriate contracting activity's responding official by no later than the due date for receipt of proposals. If the contracting activity has not developed its own past performance evaluation report form, please refer that contracting activity to the Contractor Performance Report format found at National Institutes of Health Contractor Performance System website at: <http://cps.od.nih.gov/files/standardreport.doc>.

Information contained in the evaluation reports shall be considered sensitive and shall not be released to other offerors. Failure of the Offeror to demonstrate that it has made all reasonable efforts to provide the required past performance reports will result in an unacceptable rating for this factor. The Government reserves the right to obtain additional information from any of the contracts identified in the two lists. If the Government receives negative past performance information (indicating that performance was less than satisfactory) that is not accompanied by a response from the Offeror, a copy of the adverse information will be provided to the offeror and the offeror will be given a specific timeframe in which to provide a response. If no response is received within the specified timeframe, the negative past performance information will be evaluated as submitted.

Offerors may use the Client Authorization Letter, as Exhibit A to the Technical Proposal Instructions, to all non-Federal Government references listed in their proposal to assist in the timely processing of past performance evaluations. The offeror shall include a copy of all completed Client Authorization Letters, or other correspondence, as part of the Past Performance submission.

If the Offeror has no relevant past performance history, it must affirmatively so state. Offerors that state they have no relevant past performance history and Offerors that are unable to provide past performance reports after making all reasonable efforts will be evaluated as neutral (neither favorably nor unfavorably) under this criteria, in accordance with FAR 15.305.

In the case of a relatively new firm (i.e., established within the last 18 months), the Offeror may submit any past performance information for the firm itself; this shall be specifically noted in the proposal submission.

If the offeror does not include past performance history or does not affirmatively state that no past performance history exists or can be obtained, the Offeror's proposal will be ineligible for award.

SECTION IV- STAFFING

The purpose of this section is to evaluate the qualifications of the Offeror's personnel proposed for this contract in terms of technical expertise, experience, education, and qualifications relevant to the requirements of this solicitation. Resumes shall be submitted in accordance with the requirements herein.

The evaluation will consider the level of technical expertise, education, and training of the Program Manager, Network Engineer, Contractor Implementation Project Manager, and proposed technical staff.

Program Manager (PM)

The Offeror must identify the individual who will serve as the overall PM for this contract and who will be identified under the Key Personnel clause in Section I.7. - KEY PERSONNEL. The PM is the contractor individual responsible for the management of all work activities required to ensure successful deployment and completion of the contract. The PM is the Government's primary technical point of contact during the performance of the work. The individual's resume shall be submitted in accordance with the requirements herein.

Lead Network Engineer (LNE)

The Offeror must identify the individual who will serve as the overall LNE for this contract and who will be identified under the Key Personnel clause in Section I.7. - KEY PERSONNEL. The LNE is the contractor individual responsible for the contract's adherence to good systems engineering and integration practices, responsiveness to the Government's technical requirements and requests, and compliance with the contractor's engineering standards.

Contractor Implementation Project Manager (CIPM)

The Offeror must identify the individual who will serve as the CIPM and who will be identified under the Key Personnel clause in Section I.7. - KEY PERSONNEL. The CIPM is the individual responsible for the day-to-day activities required to ensure successful development, installation, integration, testing and acceptance of the equipment.

Proposed Technical Staff

The purpose of this subfactor is to assess the capability of the Offeror's proposed staffing and skill mix to satisfy the requirements of this contract. The evaluation will consider the level of technical expertise, education, and training of the proposed staff.

Resume Content

Resumes for the proposed PM, LNE, CIPM and the technical staff must be representative of, and consistent with, the Offeror's proposed labor cost presented in the Price Proposal. Resumes shall show demonstrated experience in areas similar to the requirements of the SOW. Resumes must also be verifiable. Relevant dates and names and addresses of educational institutions and employers must be provided for all experience, education, and specialized training claimed.

Exhibit A

Client Authorization Letter

[Company Name]
[Street Address]
[City, State/Province Zip/Postal Code]
[Date]

[Recipient Name]
[Address]
[City, State/Province Zip/Postal Code]

Dear *[Client]*:

We are currently responding to the Volpe Center Request for Proposal No. DTRT57-06-R-20021 for the procurement of a Digital Microwave Radio Communications Network for the Iraqi Republic Railway. The Volpe Center is placing increased emphasis in its acquisitions on past performance as a source selection evaluation factor. The Volpe Center requires Offerors to inform references identified in proposals that the Volpe Center may contact them about contract performance information.

If you are contacted by the Volpe Center for information on work we have performed under contract for your company/agency/state/local Government, you are hereby authorized to respond to Volpe Center inquiries.

Your cooperation is appreciated. Please direct any questions to _____.
(Offeror's point of contact)

Sincerely,
[Your name]
[Your position]

[Typist's initials]
Enclosure: *[Number]*

cc: *[Name]*

SECTION M - EVALUATION FACTORS FOR AWARD

M.1 GENERAL

M.1.A. BASIS FOR AWARD

Award will be made to the responsive and responsible offeror whose proposal provides the best value to the Government based on the Technical Proposal, the Price Proposal, and other factors as listed elsewhere in Section M. It is the Government's intent to make award based upon initial proposals without entering into discussions or negotiations. While it is the Government's intent to make award based upon initial proposals, the Government may, nevertheless, determine during the evaluation period that it is necessary to conduct discussions. In that case, the CO will proceed to establish a competitive range and conduct negotiations with the firms in that range.

M.1.B. ORDER OF IMPORTANCE

The technical evaluation factors that are addressed in the Technical Proposal, when combined, are significantly more important than price in the selection of a contractor for award. Notwithstanding this fact, Offerors are cautioned not to minimize the importance of the Price Proposal. As the difference in ratings of submitted Technical Proposals decreases, the importance of evaluated price will increase. When the Technical Proposals are evaluated as essentially equal, price may become the determining factor in making an award.

M.2 TECHNICAL PROPOSAL EVALUATION

M.2.A. GENERAL

The Offeror's Technical Proposal will be evaluated in accordance with the factors described below.

The first factor (Technical Approach and Technical Understanding) is more important than the remaining three factors (Management Approach, Past Performance and Staffing). The second and third factors (Management Approach and Past Performance) are of equal importance, but more important than the fourth factor (Staffing). The fourth factor (Staffing) is of lesser importance than the previous three factors.

M.2.B. CRITERIA FOR EVALUATION

The criteria for evaluation are described below.

Technical Approach and Technical Understanding. The purpose of this factor is to assess the Offeror's technical understanding of the requirements of the Statement of Work (SOW), in particular its experience in addressing the critical technical issues, including systems integration.

Management Approach. The purpose of this factor is to evaluate the Offeror's approach to (1) plan and manage contracts, (2) schedule, integrate and perform work, and (3) configuration management. These three subfactors are of equal importance.

Past Performance. The purpose of this factor is to assess the ability of the Offeror to perform successfully based upon an evaluation of its relevant past performance history within the past five (5) years. The offeror's relevant past performance history will be evaluated on the basis of the following subfactors: (1) development, procurement, installation, and testing of long haul digital microwave radio communications networks; (2) Systems integration and testing of digital microwave radios communications equipment with other types of communications equipment; (3) installation and deployment of large scale communications systems in hostile environments; (4) quality of product/service; (5) timeliness of performance; and (6) cost control. These subfactors are of equal importance.

Only relevant past performance history will be considered. The Government will determine relevance of past performance information based on the similarity of the nature of the previous work to the current requirement, the dollar value of the previous efforts (greater than \$1,000,000), and the currency of the prior work (within the past five (5) years).

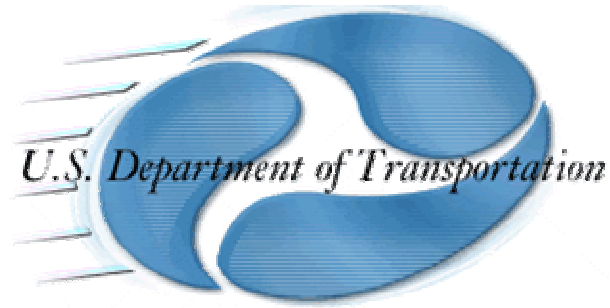
If an Offeror has affirmatively stated that it has no relevant past performance history, and there is no evidence to the contrary, the Offeror will be rated neutral (neither favorably nor unfavorably) on past performance.

Staffing. The purpose of this factor is to assess (1) the qualifications of the PM, LNE, CIPM and (2) the depth and breadth of technical staff available in terms of experience, qualifications, and education relevant to the SOW. Subfactor (1) is of greater importance than subfactor (2).

M.3 PRICE PROPOSAL EVALUATION

The Price Proposal will not be numerically scored. The proposed price will be evaluated to ensure that the final agreed to price is fair and reasonable and a fair market price. The small business subcontracting plan, if required, will be evaluated for acceptability.

ATTACHMENT J.1 - CONTRACTOR PERFORMANCE REPORT



CONTRACTOR PERFORMANCE REPORT

Host Agency:	Report Type:	Report Date: From:	To:
Evaluating Organization:	Contracting Office:	Contract Number:	Order Number:
Contractor Name and Address:		TIN: DUNS: SIC/NAICS: Commodity Code: Contract Type:	
Contract Award Date:	Contract Expiration Date:	Contract Value:	
Description of Requirement:			

RATINGS

Quality of Product or Service

0=Unsatisfactory 1=Poor 2=Fair 3=Good 4=Excellent 5=Outstanding

Rating:

Government Comments for Quality of Product or Service

Cost Control

0=Unsatisfactory 1=Poor 2=Fair 3=Good 4=Excellent 5=Outstanding

Rating:

Government Comments for Cost Control

Timeliness of Performance

0=Unsatisfactory 1=Poor 2=Fair 3=Good 4=Excellent 5=Outstanding

Rating:

Government Comments for Timeliness of Performance

Business Relations

0=Unsatisfactory 1=Poor 2=Fair 3=Good 4=Excellent 5=Outstanding

Rating:

Government Comments for Business Relations

Subcontracts

Are subcontracts involved?

Government Comments for Comment on subcontracts

Contractor Key Personnel

Contractor Manager/Principal Investigator

Government Comments for Contractor Manager/Principal Investigator

Contractor Key Person

Government Comments for Contractor Key Person

Contractor Key Person

Government Comments for Contractor Key Person

Small Business Subcontracting Plan

Did the contractor make a good faith effort to comply with its subcontracting plan consistent with the goals and objectives, reporting and other aspects of the plan?

If this is a bundled contract, did the contractor meet the goals and objectives for small business participation?

Government Comments for Comments on Small Business Subcontracting Plan

Small Disadvantaged Business Goals

Did the contractor make a good faith effort to comply with its subcontracting plan consistent with the goals and objectives, for small disadvantaged business (SDB) participation, monetary targets for SDB participation, and required notifications?

Government Comments for Meeting SDB Subcontracting Requirements

Customer Satisfaction

Is/was the contractor committed to customer satisfaction?

Small Business Subcontracting Plan

Did the contractor make a good faith effort to comply with its subcontracting plan consistent with the goals and objectives, reporting and other aspects of the plan?

If this is a bundled contract, did the contractor meet the goals and objectives for small business participation?

Government Comments for Comments on Small Business Subcontracting Plan

Small Disadvantaged Business Goals

Did the contractor make a good faith effort to comply with its subcontracting plan consistent with the goals and objectives, for small disadvantaged business (SDB) participation, monetary targets for SDB participation, and required notifications?

Government Comments for Meeting SDB Subcontracting Requirements

Customer Satisfaction

Is/was the contractor committed to customer satisfaction?

Government Comments for Customer Satisfaction

Project Officer/COTR

Phone: Ext: Fax:
Internet Address:

Government Comments for Overall Comment

Contracting Officer

Phone: Ext: Fax:
Internet Address:

Contractor Representative

Phone: Ext: Fax:
Internet Address:

Summary Ratings:

Quality of Product or Service Rating :
Cost Control Rating :
Timeliness of Performance Rating :
Business Relations Rating :

CONTRACTOR COMMENTS

Contractor's Comments for Quality of Product or Service

Contractor's Comments for Cost Control

Contractor's Comments for Timeliness of Performance

Contractor's Comments for Business Relations

Contractor's Comments for Comment on subcontracts

Contractor's Comments for Contractor Manager/Principal Investigator

Contractor's Comments for Contractor Key Person

Contractor's Comments for Contractor Key Person

Contractor's Comments for Comments on Small Business Subcontracting Plan

Contractor's Comments for Meeting SDB Subcontracting Requirements

Contractor's Comments for Customer Satisfaction

Contractor's Comments for Overall Comment

OMB CLEARANCE NO. 9000-0142
SOURCE SELECTION INFORMATION/CONFIDENTIAL

ATTACHMENT J.2 - SYSTEM SPARES AND TEST EQUIPMENT

DESCRIPTION	UNIT	PRICE
Microwave Radio Terminals, 7/8 GHz		
Waveguide Position kit	EA	
Flexible conduit 2 ft length	EA	
Waveguide Adapter	EA	
Ancillary Equipment		
Equipment Rack 7' x 19"	EA	
Ethernet Cable	EA	
Power Distribution Panel	EA	
Telecommunication Management Network Interface Card	EA	
Link Monitor with Remote Provisioning	EA	
Power Cable Kit (2 per shelf)	EA	
Heat Deflector	EA	
Fan Assembly	EA	
Audio Junction Cable.	EA	
Link Monitor Junction Cable	EA	
RS-232 Junction Cable	EA	
Wayside DS1 cable 50 ft length	EA	
Wirewrap Adapter, Eternal Alarms	EA	
Wirewrap Adapter, Audio	EA	
Orderwire handset	EA	
Rack packaging	EA	
Auxiliary Communications Equipment		
Fast Ethernet L2+ Ethernet Switch 24 x 10/100/1000 RJ-45 ports	EA	
Channel Bank - Subscriber Station	EA	
SNMP Alarm Encoder with routing/analog option	EA	
Ethernet Cable, SNMP Alarm Encoder	EA	
DSX-1 Cross Connect Panel	EA	
Motorola 4 wire interface	EA	
Rack mounted computer workstation for Craft Terminal Interface to radios. Microsoft Windows XP, 17" LCD monitor, CD-ROM	EA	
Antennas Equipment		
Antennas	EA	
Radomes	EA	

DESCRIPTION	UNIT	PRICE
Shelters		
Surge Arrestor: Parallel connected	EA	
Disconnect: 220/380 volt – 100 Amp – 3 phase – 50 Hz – NEMA 3R	EA	
Distribution Panel: 220/380 volt – 100 Amp – 3 phase – 50 Hz – 24 space – NEMA 1	EA	
Transformer for 110 volt tool receptacle	EA	
Duplex General Purpose Receptacles: 20 amp – wall mount	EA	
Duplex Tool Receptacle: 20 amp – wall mount	EA	
Interior Lights: 4', 2-bulb – 40 Watt Fluorescent	EA	
Halo Ground: #2 insulated stranded copper – mechanical connections – (4) 6' pigtails, one at each corner	EA	
Ground bars: 4" x 16" x 1/4"	EA	
Exhaust Fan: 350 CFM – 12" Fan – Thermostat – Screened and filtered hood	EA	
Intake Damper: 12" x 12" – Motorized louvers – Screened and filtered hood	EA	
HVAC: (2) 3-Ton Wall Mount Air Conditioners – 5kw heat – Lead/Lag Controller	EA	
Alarms: Open Door, Smoke, Temperature – Humidity – AC Power Fail – HVAC Fail	EA	
Door: 3.0' x 7.0' Galvanized and Painted Steel Door and Frame	EA	
Waveguide Entrance: 6-Port Microflex – 4" diameter ports plus caps	EA	
Fire Extinguisher: 10 lbs, CO ₂	EA	
First Aid Kit: 10-Man – QTY 1, Battery Safety Kit	EA	
Electrical Breaker	EA	
Two-pole Breaker	EA	
AC controller	EA	
Exterior light	EA	
Conduit	EA	
Automatic Transfer Switch: Open transition, 3 pole, 4 wire, NEMA 1, 400 Amp	EA	
Diesel Generator		
Must provide uninterrupted continuous power for 10 days Compact diesel generator set, single/three phase voltages, 50Hz	EA	
PBX System		
System Switchgear	EA	
PBX System End User Terminal and Handset	EA	
PBX System Headset	EA	

* If the offeror anticipates any other spare parts and/or test equipment not on the list, it should add and price the parts and/or equipment.