Commonwealth of Virginia
Virginia Information Technologies Agency

RADIO & TELECOMMUNICATIONS EQUIPMENT, ACCESSORIES, BATTERIES & ANTENNAS

Mandatory Use* Contract for State Agencies & Institutions (over $100)

Date:	July 21, 2006
Contract #:	VA-060221-PMCA
Authorized User:	State Agencies, Institutions and Political Subdivisions as defined in the Code of Virginia.
Contractors:	PMC Associates P.O. Box 1575 Gloucester, VA 23061
FIN#	22-2873821
Contact:	Chris Doyel Phone: 800-351-1351 Fax: 804-694-8012 Email: ChrisD@pmcreps.com
Term:	February 21, 2006 – February 20, 2008
Delivery:	60 Days ARO
Payment:	Net 30 days

For Technical Information, Please Contact:

Virginia Information Technologies Agency
Telecommunications

David Warner
Phone: 804-371-5212
E-Mail: david.warner@vita.virginia.gov
Fax: 804-786-4177

For Contract Information, Please Contact:

Virginia Information Technologies Agency
Supply Chain Management

Doug Leslie
Phone: 804-371-5213
E-Mail: doug.leslie@vita.virginia.gov
Fax: 804-371-5659

NOTES: Individual Commonwealth of Virginia employees are not authorized to purchase equipment or services for their personal use from this Contract.

For updates, please visit our Website at http://www.vita.virginia.gov/procurement/contracts.cfm

VIRGINIA INFORMATION TECHNOLOGIES AGENCY (VITA): Prior review and approval by VITA for purchases in excess of $100,000.00 is required for State Agencies and Institutions only.

* This contract is **not** a mandatory source for replacement batteries.

VA-060221-PMCA
CONTRACT CHANGE LOG

Change No.	Description of Change	Effective Date
1	Updates supplier's and VITA's contact information	3/7/06
2	Updates supplier's contact information and notates that contract is **not** mandatory for purchase of replacement batteries	7/18/06
3	Mod 1 changes model and price for item 10.B and adds specification sheet	7/18/06

MODIFICATION #1
TO
CONTRACT NUMBER VA-060221-PMCA
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
PMC ASSOCIATES, INC.

This MODIFICATION #1 is an Agreement between the Commonwealth of Virginia, hereinafter referred to as "State" or "Commonwealth" or "VITA" (Virginia Information Technologies Agency), and PMC Associates, Inc., hereinafter referred to as "Contractor," relating to the modification of Contract VA-060221-PMCA, as amended. This Modification #1 is hereby incorporated into and made an integral part of Contract VA-060221-PMCA.

The purpose of this Modification #1 is to document both parties' agreement concerning a price change.

Reference: "IFB 2005-36 – SPECIFICATION AND BID SHEETS," Lot 6, Item 10.B., on page 14 of 172:

> Both above-referenced parties agree to change the Model and price for Item 10. B. "Carrier Squelch" to read as follows:
>
> "Model VX-5500LB $ 598.29 /each"

The foregoing is the complete and final expression of the parties' agreement to modify Contract VA-060221-PMCA and cannot be modified, except by a writing signed by duly authorized representatives of both parties.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THE CONTRACT.

PMC ASSOCIATES, INC.	COMMONWEALTH OF VIRGINIA
BY:	BY:
NAME: CHRIS DOYEL	NAME: Doug Leslie
TITLE: SALES REPRESENTATIVE	TITLE: Strategic Sourcing Specialist
DATE: JULY 11, 2006	DATE: JULY 18, 2006

Virginia Information Technologies Agency

VITA expect the best

COMMONWEALTH of VIRGINIA

SUPPLY CHAIN MANAGEMENT (SCM)

SOLICITATION - OFFER -and- AWARD

COVA Wireless Communications - Two-way Radio Statewide Contract
Invitation for Bid (IFB)

Contract #:	IFB #:	Date Issued:	Date Due:	APR #:	Approval #:
VA-060221-PMCA	2005-36	Oct. 31, 2005	Dec. 1, 2005	225	

Single Point of Contact: Doug Leslie: doug.leslie@vita.virginia.gov

ISSUING OFFICE:
Virginia Information Technologies Agency
Supply Chain Management Directorate
110 S. 7th Street, Suite 135
Richmond, VA 23219-9300

SHIP TO:
"Authorized Users" including any public body as defined by §2.2-4301 (5) of the Code of Virginia and all other public bodies as referenced in §2.2-4304 of the Code of Virginia

SOLICITATION

Sealed Bids for furnishing the Products and Services set forth in the schedule, will be returned to the Issuing Office. Please provide an original and two (2) copies. If hand carried, deliver to the SCM receptionist located at the address indicated. Bids must be received prior to 2:00 PM ET on the Date Due indicated above.
Please read and understand the attached Solicitation Instructions.

This is an advertised solicitation consisting of (1) the Instructions and General Requirements, pages 1 through 6; (2) the Solicitation Instructions, pages S-1 Through S-3; (3) the Contractual Terms and Conditions, pages C-1 through C 14; (4) the Specification and Bid Sheets, pages 1 through 172; and other provisions, representations, certifications or specifications as are attached or incorporated herein by reference. Bids will be publicly opened at: 2:10 PM ET, December 1, 2005, in the SCM offices, 110 South 7th Street, Suite 135, Richmond, VA 23219.

Issued by:
Doug Leslie
Senior Sourcing Consultant
SCM Strategic Sourcing

OFFER

In compliance with the Terms and Conditions set forth in this solicitation, the undersigned agrees, if this offer is accepted within 90 days from the date due above, to furnish any or all Bid Items awarded at the prices offered in the Specification and Bid Sheets, delivered to the Ship To address above within the time specified in the Bid.

CONTRACTOR's FIN: 22-2873821

Co. Name: PMC Associates
Address: 8 Crown Plaza #106
City/State/ZIP: Hazlet, N.J. 07730
Signature: [signature]
Print Name: Phil. P M Casciano
Title: Pres.
E-mail: PhilC@PMCTEPS.Com
VOICE# / FAX#: 732 888 9300 732 888 9388

BILL TO:
"Authorized Users" including any public body as defined by §2.2-4301 (5) of the Code of Virginia and all other public bodies as referenced in §2.2-4304 of the Code of Virginia

AWARD

Accepted as to Bid Lot numbers:	AMOUNT:	AWARD DATE:
SEE ATTACHED "AWARDED LOTS" PAGE.	Per Order.	2/21/2006
Commonwealth's Representative:	*COMMONWEALTH of VIRGINIA*	PAGE:
Susan Woolley Director, Supply Chain Management	By: Susan Woolley APP	1 -of- 1

Form 62 Rev. 2/10/2004

Lemuel C. Stewart, Jr.
Chief Information Officer

COMMONWEALTH of VIRGINIA

Virginia Information Technologies Agency
Supply Chain Management
110 S. 7th Street
Richmond, VA 23219-3900

Phone: (804) 371-5213
Fax: (804) 371-5969
Email:
doug.leslie@vita.virginia.gov

CONTRACT NUMBER VA-060221-PMCA
PMC Associates, Inc. Awarded Lots

DATE: February 21, 2006

I.F.B. NO: 2005-36

ITEM: Two-way Radio Equipment

SUPPLIER: PMC Associates, Inc.

The above-named Supplier has been awarded the following Lots as a result of IFB 2005-36:

Lot #	Supplier
2	PMC Associates
3	PMC Associates
4	PMC Associates
5	PMC Associates
6	PMC Associates
7	PMC Associates
9	PMC Associates
9A	PMC Associates
10	PMC Associates
11	PMC Associates
11	PMC Associates (Alt. Bid 1)
11	PMC Associates (Alt. Bid 2)
11	PMC Associates (Alt. Bid 3)
13	PMC Associates
14	PMC Associates
15	PMC Associates
16	PMC Associates
16A	PMC Associates
16B	PMC Associates
16B	PMC Associates (Alt. Bid)
17	PMC Associates
19	PMC Associates

Lot #	Supplier
19A	PMC Associates
20	PMC Associates
20A	PMC Associates
21	PMC Associates
21	PMC Associates (Alt. Bid 1)
21	PMC Associates (Alt. Bid 2)
21	PMC Associates (Alt. Bid 3)
22	PMC Associates (Alt. Bid)
23	PMC Associates
24	PMC Associates
24B	PMC Associates
25	PMC Associates
25A	PMC Associates
25B	PMC Associates
25B	PMC Associates (Alt. Bid)
26	PMC Associates
36	PMC Associates
37	PMC Associates
38	PMC Associates
39	PMC Associates
40	PMC Associates
41	PMC Associates

PMC Associates, Inc
Wireless Communications

8 Crown Plaza, Unit 106 Hazlet, NJ 07730
Phone: 732-888-9300 Fax: 732-739-3933
Website: www.pmcreps.com

CONTACTS

Virginia Representative:

Chris Doyel
PMC Associates, Inc.
P. O. Box 1575
Gloucester, VA 23061
(800) 351-1351
Fax (804) 694-8012
ChrisD@pmcreps.com

Authorized Vertex Dealers:

Clear Communications, Inc.
Steve Duncan
610 Cami Ln.
Charlottesville, VA 22902
(434) 971-8139
(434) 971-8919
sduncan@clearcomva.com

Clear Communications, Inc.
Steve Duncan
403 Commerce Rd.
Staunton, VA 24401
(540) 885-1990
(540) 885-7701
sduncan@clearcomva.com

Clear Communications, Inc.
Les Wilmer
11 Warehouse Rd.
Harrisonburg, VA 22801
(540) 432-0096
(540) 574-6095
lwilmer@clearcomva.com

Dominion Communications Systems, Inc.
Ian Wright
135 Pickwick Ave.
Colonial Heights, VA 23834
(804) 526-6373
(804) 520-2558
iwright45@aol.com

Authorized Vertex Dealers:

MACE, Inc.
Jim Hedgspeth
5821 Arrowhead Dr., Ste. 101
Virginia Beach, VA 23462
(757) 460-6247
Fax (757) 460-6249
sales@maceinconline.com

Kidd Communications, Inc.
Mark Kidd
1199 No. Mecklenberg Ave.
South Hill, VA 23970
(434) 447-3552
Fax (434) 447-3552
mkidd@meckcom.net

ProComm Service Corporation
Henry Henderson
3805 So. Main St.
Blacksburg, VA 24060
(800) 277-1777
(540) 951-0074
henryh@vawireless.com

Select Communications, Inc.
Tim Millican
7653-C Fullerton Rd.
Springfield, VA 22153
(703) 569-4400
Fax (703) 569-4490
vertex@selcom.org

LOT 2
MOBILE RADIOS - LOW BAND - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 **Radio, two-way, VHF-Low band with a least one band split, at least 4 MHz wide, capable of operation within the frequency range of 30 MHz to 50 MHz.**

The unit shall be a mobile trunk mountable with a minimum transmitter output power 100 watts appearing at the radio antenna connector. The radio shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination CTCSS frequencies or carrier only (no CTCSS). Minimum spread between frequencies without degradation to the transmitter and receiver shall be the equipment specified operational band-split as specified by each manufactures equipment specification. Frequency stability on transmit and receive shall be within ±.0005%, or 5PPM. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible and/or a visual indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit shall be equipped with a modulator that will allow the transmission of data. Unit to have control and power cables that are at least 17 feet (5.2 Meters) in length. Unit should have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. **Unit to be similar to a MA/COM ORION, Vertex VXR-6000L, Kenwood 690 H, Motorola MaraTrac, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model VX-6000 LRM $ 1,187.90 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, 1/4-wave whip.

Model MLB-3001 $ 82.11 /each

Item 4 Antenna, low band, base loaded, ASP/SPL 552-66-27 or approved equal.

Model: NM034CK $ 31.68 /each

Item 5 Installation and checkout per FCC requirements, in standard trunk mounting.

Model RM INSTALL $ 135.00 /each

Item 6 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /yr.
2. Service Shop $ 48.00 /yr.

Award based on Items 1-6 $ 1,604.59

OPTIONAL FEATURES:

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: INCLUDED $ 0 /each

LOT 3
MOBILE RADIOS LOW BAND FRONT MOUNT
SPECIFICATION AND BID SHEET

Item 1 **Radio, two-way, VHF-Low band with a least one band split, at least 4 MHz wide, capable of operation within the frequency range of 30 MHz to 50 MHz.**

The unit shall be a mobile front mountable unit with a minimum transmitter output power 60 watts appearing at the radio antenna connection. Unit shall have a minimum of sixteen (16) operator-selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Minimum spread between frequencies without degradation shall be 1.00 megahertz transmit and receive. Frequency stability on transmit and receive shall be within ±.0005%, or 5 PPM. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequencies, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 3 watts at 5% distortion or less. Unit should have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. **Unit to be similar to a Kenwood TK6110K, Kenwood TK690, Motorola Maratrac, MACOM Orion, Vertex 4000 L, Vertex 6000L, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model: VX-5500LFM $ 478.33 /each

Required Additional Features:

Item 2: Scan, multi-channel, (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely, and (3) channels to be scanned shall be individually selected by operator.

Model: INCLUDED $ 0 /each

Item 3 Antenna, low band, base loaded, ASP/SPL 552-66-27 or approved equal.

Model: NMO 34CK $ 31.68 /each

Item 4 Antenna, 1/4-wave whip. ASP-632 or approved equal.

Model: MLB-3001 $ 82.11 /each

Item 5 Installation and checkout per FCC requirements, in standard mounting.

Model: FM INSTALL $ 95.00 /each

Item 6 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /yr.
2. Service Shop $ 48.00 /yr.

Award based on Items 1-6 $ 855.12

OPTIONAL FEATURES:

Item 7 A.C. power supply to be used with above unit.

Model: FP-1023 $ 151.82 /each

Item 8 Desk microphone.

Model: MD11A25/4000 $ 79.80 /each

Item 9 Microphone, mobile type, noise canceling. This is to be a substitution item. It will replace the existing microphone.

Model: MH-53A7A $ 32.90 /each

Item 10 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 11 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 12 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

LOT 4
RADIOS, TWO-WAY
LOW BAND, BASE STATION, LOCAL CONTROL
50 WATTS
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way, VHF (30-50 MHz). Base station, local control, minimum R.F. power output 45 watts at the antenna jack. The radio shall have a four-channel capability with channel 1 active. Purchase order to specify frequency. Channels 2 through 4 blank or as specified on purchase order. Radio shall have continuous tone control squelch at a frequency to be specified on purchase order and continuous tone control squelch monitor switch and A.C. line surge protection. Shall have desk microphone, and be mounted in a desk top cabinet with power supply built into the cabinet. Frequency stability on transmit and receive shall be within ±.0005%, or 5PPM. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). **Unit to be similar to a MA/COM Orion Desktop / Wall mount Station, Vertex BSC5000, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model BSC-5000/5500L $ 1,832.80 /each

Required Additional Features:

Item 2. Transmitter frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 3 Receiver frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 4. - Antenna groundplane, unity gain, omnidirectional with mounting clamps. Decibel Products DB-201 or approved equal.

Model SG101-SFXSNM $ 367.20 /each

Item 5. - Antenna, coaxial, omnidirectional with mounting clamps. Decibel Product DB-205 or approved equal.

Model SG101-SFXDASNM $ 426.40 /each

Item 6.- Antenna, 2.5dB gain, sidemount with mounting clamps. Decibel Product DB-212-2 or approved equal.

Model SD-100-SFXDASNM $ 415.20 /each

Item 7. - Cable, 1/2" jacketed heliax type, 5O Ohms impedance, copper inner and outer conductors.

Model LD-4-50A $ 2.28 /each

Item 8. - Connector kit, for use with above heliax cable.
I

Model L4PNF-RC / L4PNM-RC $ 73.28 /each

Item 9. -Deletion of continuous tone control squelch (Credit)

Model TONE DELETE $ <96.00> /each

Item 10. - Ground strap kit.

Model 241098-1 $ 24.88 /each

Item 11.- Addition of noise blanker.

Model INCLUDED $ 0 /each

Item 12. - Post-warranty Maintenance one year parts and labor.

Model ONE YEAR-AGENCY $ 360.00 /each

Award based on Items 1-12 $ 3,406.40

OPTIONAL FEATURES:
Item 13. - Addition of VU Meter.

Model NA $ _____ /each

Item 14. - Clock, 12/24 hour

Model INCLUDED $ 0 /each

Item 15. - DTMF encoder with keypad

Model MH-53B7A $ 114.10 /each

Item 16. - Digital CTCSS

Model INCLUDED $ 0 /each

LOT 5
RADIOS, TWO-WAY LOW BAND, BASE STATION, LOCAL CONTROL
100 WATTS
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, VHF (30-50 MHz). Base station, local control, minimum R.F. power output 100 watts at the transmitter antenna jack. The radio shall have a four-channel capability with channel 1 active. Purchase order to specify frequency. Channels 2 through 4 blank or as specified on purchase order. The radio shall have continuous tone control squelch at a frequency to be specified on purchase order and tone control squelch monitor switch, and A.C. line surge protection. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. The radio shall have desk microphone and be mounted in a desk top or desk side cabinet with power supply built into the cabinet. Frequency stability on transmit and receive shall be within ±.0005%, or 5PPM. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). **Unit to be similar to a MA/COM Orion Base Station, Vertex BSC5000, or an approved equal.**

State Manufacturer: VERTEX STANDARD

Model BSC-5000/6000L $ 2,316.97 /each

Required Additional Features:

Item 2. - Transmitter frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 3. - Receiver frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 4. - Antenna groundplane, unity gain, omni directional with mounting clamps. Decibel Product DB-201 or approved equal.

Model SG101-5FXSNM $ 367.20 /each

Item 5. - Antenna, coaxial, omnidirectional with mounting clamps. Decibel Product DB-205 or approved equal.

Model SG101-5FXPASNM $ 426.40 /each

Item 6. - Antenna, 2.5dB gain, side mount with mounting clamps. Decibel Product DB-212-2 or approved equal.

Model 50/100-5FXPA5NM $ 415.20 /each

Item 7. - Cable, 1/2" jacketed heliax type, 5O Ohms impedance, copper inner and outer conductors.

Model LDF-4-50A $ 2.28 /each

Item 8. - Connector kit, for above heliax cable.

Model L4PNF-RC/L4PNM-RC $ 73.28 /each

Item 9. - Deletion of continuous tone control squelch (Credit).

Model TONE DELETE $ <96.00> /each

Item 10. - Post-warranty Maintenance one year parts and labor.

Radio at locality/agency $ 360.00 /yr.

Item 11. - Ground strap kit.

Model 241048-1 $ 24.88 /each

Item 12. - Addition of noise blanker.

Model INCLUDED $ 0 /each

Award based on Items 1-12 $ 3,890.21

OPTIONAL FEATURES:

Item 13. - Addition of VU Meter.

Model NA $ _____ /each

Item 14. - Clock, 12/24 hour

Model INCLUDED $ 0 /each

Item 15. - DTMF encoder with keypad

Model MH-53B7A $ 114.10 /each

Item 16. - Digital CTCSS

Model INCLUDED $ 0

LOT 6
RADIOS, TWO-WAY LOW BAND,
BASE STATION, TONE CONTROLLED,
70 WATTS, CONTINUOUS DUTY CYCLE
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way, VHF (30-50 MHz), remote. Base station, tone controlled, minimum R.F. power output 100 watts at the antenna jack. The unit shall be rated for continuous duty at 100 watts. The radio shall have a two-channel capability with channel 1 active. Purchase order to specify frequency. Channel 2 blank or as specified on purchase order. Shall have continuous tone control squelch at a frequency to be specified on purchase order and continuous tone control squelch monitor function. Shall have intercom, AC line surge protection, phone line surge protection and shall be mounted in an indoor cabinet. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Frequency stability on transmit and receive shall be within ±.0005%, or 5PPM. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). **Unit to be similar to a MA/COM Orion Base Station, Kenwood 6901S, 6902S, 6903S, or an approved equal.**

State Manufacturer: VERTEX STANDARD

Model BSC-5000/5500LTC $ 2,893.93 /each

Required Additional Features:

Item 2. - Transmitter frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 3. - Receiver frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 4. - Antenna groundplane, unity gain, omnidirectional with mounting clamps. Decibel Product DB-201 or approved equal.

Model SG-101-5FX5NM $ 367.20 /each

Item 5. - Antenna, coaxial, omnidirectional with mounting clamps. Decibel Products DB-205 or approved equal.

Model SG101-5FXPASNM $ 426.40 /each

Item 6. - Antenna, 2.5dB gain, side mount with mounting clamps. Decibel Product DB-212-2 or approved equal.

Model SD100-5FXPASNM 415.20 /each

Item 7. - Cable, 1/2", jacketed heliax type, copper inner and outer conductors.

Model LDF-4-50A $ 2.28 /each

Item 8. - Connector, kit for use with above heliax cable.

Model L4PNF-RC / L4PNM-RC 73.28 /each

Item 9. - Ground, strap kit for use with above heliax cable.

Model 241088-1 $ 24.88 /each

Item 10.- Receiver, addition of second unit, to be single frequency and have volume and squelch control and be identical in all performance specifications to the above station receiver, unit to have antenna matching device. Receiver includes notch filter, line response compensator and squelch operated relay.

A. Tone Squelch

Model VX-5500LB $ 598.29 /each

B. Carrier Squelch

Model INCLUDED $ 0 /each

Item 11.- Console, remote, tone controlled, 1TX-1RX, for use with above base station and with volume control, continuous tone control squelch monitor switch, desk microphone, and line and power line surge protection.

Model C-2002HS $ 948.00 /each

A. Handset Operation (Exchange) $ 0 /each
B. Intercom INCLUDED $ 0 /each

C. 2Tx - 2Rx Control INCLUDED $ 0 /each
D. 12/24 Hour Clock " $ 0 /each
E. Parallel Transmit Indicator "
with Notch Filter " $ 0 /each
F. Supervisory Control " $ 0 /each
G. Wall mount Bracket C-2002WMK $ 34.40 /each
H. DTMF encoder INCLUDED $ 0 /each

Item 13. - Post-warranty Maintenance, one year parts and labor, at locality/agency.
Base Station $ 360.00 /yr.
Console, remote, tone controlled $ 96.00 /yr.
Deskset, remote, tone controlled $ 48.00 /yr.

Item 14. - I.D., automatic, CW.

Model INCLUDED $ 0 /each

Item 15. - Test speaker and microphone.

Model MD-11B8J $ 136.50 /each

Item 16. - Deskset, tone controlled, for use with above station. Unit to have volume control, handset, power line and phone line surge protection.

Model C-2000HS $ 484.00 /each

1. Notch filter INCLUDED $ _____ /each
2. Parallel Transmit Light " $ _____ /each

Item 17. - DTMF decoder

Model INCLUDED $ 0 /each

Item 18. - Digital CTCSS

Model INCLUDED $ 0 /each

Award based on Items 1-18 $ 6,908.36

OPTIONAL FEATURES:
Item 19.- Metering panel or kit with meter(s).

Model NA $ _____ /each

LOT 7
PORTABLE RADIOS, TWO-WAY
LOW BAND
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way, VHF (30-50 MHz), portable, minimum R.F. power output 5 watts appearing at the antenna jack or connector. The unit will have a minimum 6-channel capability. Purchase order to specify frequencies to be used. Shall have continuous tone control squelch at a frequency to be specified on purchase order. Shall have all controls mounted on the top of the radio, except for the transmit button. Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with *and* without an external speaker/microphone. Unit shall have automatic connection to vehicular charger for power, speaker/microphone, and antenna. Frequency stability on transmit and receive shall be within ±.001%, or 10 PPM. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. **Unit to be similar to a Motorola HT-750, Motorola HT-1250, Kenwood TK190, Vertex VX-510, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model VX-510LBC $ 406.40 /each

Required Additional Features:

Item 2. - Charger, AC single unit.

Model VAC-520B $ 53.20 /each

Item 3.- Charger, AC multi., for minimum of 6 units.

Model VAC-6520B $ 402.50 /each

Item 4. - Battery, spare, rechargeable for above portable unit, duty cycle same as specified above

Model FNB- $ 70.00 /each

Award based on Items 1-4 $ 932.10

OPTIONAL FEATURES:

Item 5. - Charger, D.C., vehicular, with mobile microphone, base loaded ASP/SPL-552-66-27 antenna and speaker.

Model NA $_____/each

Item 6. - Speaker/Microphone.

Model MH-30A2B $ 51.80 /each

Item 7 - Belt clip back on radio.

Model CLIP-4 $ 7.70 /each

Item 8 - Post-warranty Maintenance, one-year parts and labor.

Radio	$ 48.00	/yr.
Charger, A.C., single	$ 12.00	/yr.
Charger, A.C., rapid	$ 13.00	/yr.
Charger, A.C., multi unit	$ 26.00	/yr.
Charger, D.C., Vehicular/mobile	$ NA	/yr.

Item 9 - Charger, A.C. rapid

Model VAC-520B $ 53.20 /each

Item 10 - Battery pack, to be used with alkaline batteries, for above portable.

Model PBA-19 $ 27.30 /each

LOT 9
MOBILE RADIOS - HIGH BAND - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (150-174MHz) mobile trunk mount, minimum transmitter output power 100 watts at the antenna jack. Band-split of radio shall be at least 24 MHz wide. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Radio shall have a minimum of sixteen (16) operator-selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Units shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. Minimum spread between frequencies without degradation shall be 24.0 megahertz transmit and 24.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.00025% Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit shall be equipped with a modulator that will allow the transmission of data. Unit to have control and power cables that are at least 17 feet (5.2 Meters) in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. **Unit must meet or exceed the MIL-STD-810E standard as described below:**

MIL-STD-810E

Description	Method	Procedures
High Temperature	501.3	I and II
Low Temperature	502.3	I or II
Temperature	503.3	I
Solar Radiation	505.3	I or II
Rain	506.3	I
Humidity	507.3	II
Salt Fog	509.3	I
Dust	510.3	I
Vibration	514.4	I Category 10
Shock	516.4	I

Unit to be similar to a Motorola MaraTrac, Vertex VX-6000V, MACOM M7100ip VHF, Kenwood TK-790(H), or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-6000VCRM $ 1,152.90 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, 3dB gain antenna, similar to an ASP-800 or approved equal.

Model NMO 150CK $ 29.73 /each

Item 4 Installation and checkout per FCC requirements, in standard trunk mounting.

Model RM INSTALL $ 135.00 /each

Item 5 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /yr.
2. Service Shop $ 48.00 /yr.

Award based on Items 1-5 $ 1,485.63

OPTIONAL FEATURES:

Item 6 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 7 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 8 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 9. Antenna, 1/4-wave whip. ASP-1497 or approved equal.

Model: NMOQW152K $ 11.56 /each

Item 10 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

LOT 9A
MOBILE RADIOS - HIGH BAND - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (150-174 MHz) mobile trunk mount, minimum transmitter output power 100 watts. Band-split of radio shall be at least 24 MHz wide. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Unit should have at least three groups (modes) with 25 channels in each. These modes shall consist of any high band RF frequency and any combination of CTCSS frequencies or carrier only (no CTCSS). Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Units shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. Minimum spread between frequencies without degradation shall be 24.0 megahertz transmit and 24.0 megahertz receive. Frequency stability on transmit and receive shall be within ±0.00025%. The normal operating range of the radio shall be (-30 to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit shall be equipped with a modulator that will allow the transmission of data. Unit to have control and power cables that are at least 17 feet (5.2 Meters) in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. **Unit must meet or exceed the MIL-STD-810E standard as defined below.**

MIL-STD-810E

Description	Method	Procedures
High Temperature	501.3	I and II
Low Temperature	502.3	I or II
Temperature	503.3	I
Solar Radiation	505.3	I or II
Rain	506.3	I
Humidity	507.3	II
Salt Fog	509.3	I
Dust	510.3	I
Vibration	514.4	I Category 10
Shock	516.4	I

Unit to be similar to a Motorola MaraTrac, Vertex VX-6000V, Kenwood TK-790(H), or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-6000VCRM $ 1,152.90 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, 3dB gain antenna, similar to an ASP-800 or approved equal.

Model NMO150CK $ 29.73 /each

Item 4 Installation and checkout per FCC requirements, in standard trunk mounting.

Model RM INSTALL $ 135.00 /each

Item 5 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /yr.
2. Service Shop $ 48.00 /yr.

Award based on Items 1-5 $ 1,485.63

OPTIONAL FEATURES:

Item 6 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 7 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 8 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 9. Antenna, 1/4-wave whip. ASP-1497 or approved equal.

Model: NMOQW152K $ 11.56 /each

Item 10 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

LOT 10
MOBILE RADIOS - HIGH BAND - WIDE SPACED - FRONT MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (150-174MHz) mobile front mount, minimum transmitter output power 40 watts. Radio shall be able to communicate in conventional analog mode. Unit shall be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Shall have a minimum of sixteen (16) operator-selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. Minimum spread between frequencies without degradation shall be 24.0 megahertz transmit and 24.0 megahertz receive. Frequency stability on transmit and receive shall be ± 0.00025%. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 3 watts at 10% distortion or less. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery operation. **Unit to be similar to a Motorola XTL5000, MACOM M7100ip, Vertex VX-4000V, Vertex VX-6000V, Kenwood TK-7150, TK-790 or approved equal.**

State Manufacturer: VERTEX STANDARD

Model VX-4204-0-50 $ 304.85 /each

Required Additional Features:

Item 2 Scan, multi-channel, (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, 3dB gain antenna, similar to an ASP-800 or approved equal.

Model NMO150CK $ 29.73 /each.

Item 4 Installation and checkout per FCC requirements, in standard trunk mounting.

Model FM INSTALL $ 95.00 /each

Item 5 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /yr.
2. Service Shop $ 48.00 /yr.

Award based on Items 1-5 $ 597.58

OPTIONAL FEATURES:

Item 6 A.C. power supply to be used with above unit.

Model FP-1023 $ 151.82 /each

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-NC4204 $ 25.20 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-700D $ 102.20 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10 Antenna, 1/4-wave whip. ASP-1497 or approved equal

Model NMOQW $ 11.56 /each

Item 11 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

LOT 11
VEHICULAR REPEATER - HIGH BAND
SPECIFICATION AND BID SHEET

Item 1: Radio, vehicular repeater, maximum transmitter power output 250 milliwatts, to allow operation of vehicle-mounted two-way radio by a portable radio. Unit to operate with the following mobile radio units, exact type to be specified on purchase order:

Motorola	MICOR	$ 983.30
	MITREK	$ "
	SYNTOR	$ "
	SYNTOR X	$ "
	SPECTRA	$ "
	MCS2000	$ "
	XTL5000	$ "
MA/COM	MASTR II	$ 983.30
	RANGR	$ "
	DELTA S	$ "
	DELTA SX	$ "
	ORION	$ "
	M7100ip	$ "

Unit shall operate in frequency range 150.7-174 MHz for use with mobile radios operating within the 30-50 and 450-512 MHz ranges. Unit shall employ a single frequency, transmit and receive, to be specified on purchase order. Transmitter to have a frequency stability over the temperature range -30 to +60 Celsius of ±0.002% (150-174MHz). Unit to be capable of both 30 and 15 KHz (11KOF3E) operation. Unit shall include a hand held portable radio similar to MACOM Panther 405P, 605P, MACOM P5100ip, P7100i, Motorola HT 750, Motorola XTS2500, XTS5000, or approved equal

Portable shall transmit and receive on same frequency as vehicular repeater. Portable shall have a transmitter power output of 250 milliwatt minimum and 2.0 watt maximum. The vehicular repeater system shall include a control/charger unit which may be mounted in the vehicle in a location convenient to the operator. The control/charger shall include a repeater enable/disable switch. When this switch is in the "enable" position, removing the portable radio from the charger shall automatically activate the repeater function; replacing the portable in the charger shall automatically deactivate the repeater function. The vehicular repeater system shall provide the following functions as a minimum:

1. Transmissions from the portable shall be repeated by the mobile unit;
2. Signals received by the mobile receiver shall be repeated to the portable;
3. Both the portable and the vehicular repeater shall be equipped with adjustable timer circuitry to limit the duration of any one transmission to one and one-half minutes maximum;
4. The portables shall be capable of overriding the repeater transmitter so as to cause the mobile radio to transmit despite the presence of a signal in its receiver;
5. Only one repeater transmitter and one mobile transmitter shall operate when several mobiles equipped with activated vehicular repeaters are within range of each other and one or more portable radios;
6. The portables shall be equipped with a control which will enable them to communicate with each other without causing any mobile radio within range to repeat the portable transmission.

Model: VX414/VRX-1000VC $ 983.30 /each

Item 2 Installation and checkout per FCC requirements, in standard trunk mounting.

Model: VR INSTALL $ 360.00 /each

Item 3 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /each
2. Service Shop $ 84.00 /each

Award based on Items 1-3 $ 1,607.30

OPTIONAL FEATURES:

These items will not be considered in the evaluation.

A. Mobile Detector Receiver - Used when mobile radio transmit frequency is different than mobile receive frequency.

Model Low Band NA $_____ /each

Model UHF NA $_____ /each

B. Mobile Monitor Transmit - Permits communications between portable and vehicular repeater, includes necessary microphone and speaker.

Model: MMTX $ 71.40 /each

C. Installation and checkout per FCC requirements.

Model: MMTX INSTALL $ 60.00 /each

D. Post-warranty Maintenance, one year parts and labor at service shop.

Model: MMTX ONE YEAR $ 36.00 /each

LOT 11 -(ALTERNATE 1)
VEHICULAR REPEATER - HIGH BAND
SPECIFICATION AND BID SHEET

Item 1: Radio, vehicular repeater, maximum transmitter power output 250 milliwatts, to allow operation of vehicle-mounted two-way radio by a portable radio. Unit to operate with the following mobile radio units, exact type to be specified on purchase order:

Motorola	MICOR	$ 1,131.70
	MITREK	$ "
	SYNTOR	$ "
	SYNTOR X	$ "
	SPECTRA	$ "
	MCS2000	$ "
	XTL5000	$ "
MA/COM	MASTR II	$ 1,131.70
	RANGR	$ "
	DELTA S	$ "
	DELTA SX	$ "
	ORION	$ "
	M7100ip	$ "

Unit shall operate in frequency range 150.7-174 MHz for use with mobile radios operating within the 30-50 and 450-512 MHz ranges. Unit shall employ a single frequency, transmit and receive, to be specified on purchase order. Transmitter to have a frequency stability over the temperature range -30 to +60 Celsius of ±0.002% (150-174MHz). Unit to be capable of both 30 and 15 KHz (11KOF3E) operation. Unit shall include a hand held portable radio similar to MACOM Panther 405P, 605P, MACOM P5100ip, P7100i, Motorola HT 750, Motorola XTS2500, XTS5000, or approved equal

Portable shall transmit and receive on same frequency as vehicular repeater. Portable shall have a transmitter power output of 250 milliwatt minimum and 2.0 watt maximum. The vehicular repeater system shall include a control/charger unit which may be mounted in the vehicle in a location convenient to the operator. The control/charger shall include a repeater enable/disable switch. When this switch is in the "enable" position, removing the portable radio from the charger shall automatically activate the repeater function; replacing the portable in the charger shall automatically deactivate the repeater function. The vehicular repeater system shall provide the following functions as a minimum:

1. Transmissions from the portable shall be repeated by the mobile unit;
2. Signals received by the mobile receiver shall be repeated to the portable;
3. Both the portable and the vehicular repeater shall be equipped with adjustable timer circuitry to limit the duration of any one transmission to one and one-half minutes maximum;
4. The portables shall be capable of overriding the repeater transmitter so as to cause the mobile radio to transmit despite the presence of a signal in its receiver;
5. Only one repeater transmitter and one mobile transmitter shall operate when several mobiles equipped with activated vehicular repeaters are within range of each other and one or more portable radios;
6. The portables shall be equipped with a control which will enable them to communicate with each other without causing any mobile radio within range to repeat the portable transmission.

Model: VX-821/VXR-1000VC $ 1,131.70 /each

Item 2 Installation and checkout per FCC requirements, in standard trunk mounting.

Model: VR INSTALL $ 360.00 /each

Item 3 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /each
2. Service Shop $ 84.00 /each

Award based on Items 1-3 $ 1,755.70

OPTIONAL FEATURES:

These items will not be considered in the evaluation.

A. Mobile Detector Receiver - Used when mobile radio transmit frequency is different than mobile receive frequency.

Model Low Band NA $_____ /each

Model UHF NA $_____ /each

B. Mobile Monitor Transmit - Permits communications between portable and vehicular repeater, includes necessary microphone and speaker.

Model: MMTX $ 71.40 /each

C. Installation and checkout per FCC requirements.

Model: MMTX INSTALL $ 60.00 /each

D. Post-warranty Maintenance, one year parts and labor at service shop.

Model: MMTX-ONE YEAR $ 36.00 /each

LOT 11 (ALTERNATE 2)
VEHICULAR REPEATER - HIGH BAND
SPECIFICATION AND BID SHEET

Item 1: Radio, vehicular repeater, maximum transmitter power output 250 milliwatts, to allow operation of vehicle-mounted two-way radio by a portable radio. Unit to operate with the following mobile radio units, exact type to be specified on purchase order:

Motorola	MICOR	$ 1,340.30
	MITREK	$ "
	SYNTOR	$ "
	SYNTOR X	$ "
	SPECTRA	$ "
	MCS2000	$ "
	XTL5000	$ "
MA/COM	MASTR II	$ 1,340.30
	RANGR	$ "
	DELTA S	$ "
	DELTA SX	$ "
	ORION	$ "
	M7100ip	$ "

Unit shall operate in frequency range 150.7-174 MHz for use with mobile radios operating within the 30-50 and 450-512 MHz ranges. Unit shall employ a single frequency, transmit and receive, to be specified on purchase order. Transmitter to have a frequency stability over the temperature range -30 to +60 Celsius of ±0.002% (150-174MHz). Unit to be capable of both 30 and 15 KHz (11KOF3E) operation. Unit shall include a hand held portable radio similar to MACOM Panther 405P, 605P, MACOM P5100ip, P7100i, Motorola HT 750, Motorola XTS2500, XTS5000, or approved equal

Portable shall transmit and receive on same frequency as vehicular repeater. Portable shall have a transmitter power output of 250 milliwatt minimum and 2.0 watt maximum. The vehicular repeater system shall include a control/charger unit which may be mounted in the vehicle in a location convenient to the operator. The control/charger shall include a repeater enable/disable switch. When this switch is in the "enable" position, removing the portable radio from the charger shall automatically activate the repeater function; replacing the portable in the charger shall automatically deactivate the repeater function. The vehicular repeater system shall provide the following functions as a minimum:

1. Transmissions from the portable shall be repeated by the mobile unit;
2. Signals received by the mobile receiver shall be repeated to the portable;
3. Both the portable and the vehicular repeater shall be equipped with adjustable timer circuitry to limit the duration of any one transmission to one and one-half minutes maximum;
4. The portables shall be capable of overriding the repeater transmitter so as to cause the mobile radio to transmit despite the presence of a signal in its receiver;
5. Only one repeater transmitter and one mobile transmitter shall operate when several mobiles equipped with activated vehicular repeaters are within range of each other and one or more portable radios;
6. The portables shall be equipped with a control which will enable them to communicate with each other without causing any mobile radio within range to repeat the portable transmission.

Model: VX-414/SVR-200V $ 1,340.30/each

Item 2 Installation and checkout per FCC requirements, in standard trunk mounting.

Model: VR INSTALL $ 360.00 /each

Item 3 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 190.00 /each
2. Service Shop $ 84.00 /each

Award based on Items 1-3 $ 1,964.30

OPTIONAL FEATURES:

These items will not be considered in the evaluation.

A. Mobile Detector Receiver - Used when mobile radio transmit frequency is different than mobile receive frequency.

Model Low Band _____ $_____/each

Model UHF _____ $_____/each

B. Mobile Monitor Transmit - Permits communications between portable and vehicular repeater, includes necessary microphone and speaker.

Model: NA $_____/each

C. Installation and checkout per FCC requirements.

Model: NA $_____/each

D. Post-warranty Maintenance, one year parts and labor at service shop.

Model: NA $_____/each

LOT 11 (ALTERNATE 3)
VEHICULAR REPEATER - HIGH BAND
SPECIFICATION AND BID SHEET

Item 1: Radio, vehicular repeater, maximum transmitter power output 250 milliwatts, to allow operation of vehicle-mounted two-way radio by a portable radio. Unit to operate with the following mobile radio units, exact type to be specified on purchase order:

Motorola	MICOR	$ 1,488.70
	MITREK	$ "
	SYNTOR	$ "
	SYNTOR X	$ "
	SPECTRA	$ "
	MCS2000	$ "
	XTL5000	$ "
MA/COM	MASTR II	$ 1,488.70
	RANGR	$ "
	DELTA S	$ "
	DELTA SX	$ "
	ORION	$ "
	M7100ip	$ "

Unit shall operate in frequency range 150.7-174 MHz for use with mobile radios operating within the 30-50 and 450-512 MHz ranges. Unit shall employ a single frequency, transmit and receive, to be specified on purchase order. Transmitter to have a frequency stability over the temperature range -30 to +60 Celsius of ±0.002% (150-174MHz). Unit to be capable of both 30 and 15 KHz (11KOF3E) operation. Unit shall include a hand held portable radio similar to MACOM Panther 405P, 605P, MACOM P5100ip, P7100i, Motorola HT 750, Motorola XTS2500, XTS5000, or approved equal

Portable shall transmit and receive on same frequency as vehicular repeater. Portable shall have a transmitter power output of 250 milliwatt minimum and 2.0 watt maximum. The vehicular repeater system shall include a control/charger unit which may be mounted in the vehicle in a location convenient to the operator. The control/charger shall include a repeater enable/disable switch. When this switch is in the "enable" position, removing the portable radio from the charger shall automatically activate the repeater function; replacing the portable in the charger shall automatically deactivate the repeater function. The vehicular repeater system shall provide the following functions as a minimum:

1. Transmissions from the portable shall be repeated by the mobile unit;
2. Signals received by the mobile receiver shall be repeated to the portable;
3. Both the portable and the vehicular repeater shall be equipped with

   adjustable timer circuitry to limit the duration of any one transmission to

   one and one-half minutes maximum;

4. The portables shall be capable of overriding the repeater transmitter so as to cause the mobile radio to transmit despite the presence of a signal in its receiver;
5. Only one repeater transmitter and one mobile transmitter shall operate when several mobiles equipped with activated vehicular repeaters are within range of each other and one or more portable radios;
6. The portables shall be equipped with a control which will enable them to communicate with each other without causing any mobile radio within range to repeat the portable transmission.

Model: VX-821/5VR-200V $ 1,488.70 /each

Item 2 Installation and checkout per FCC requirements, in standard trunk mounting.

Model: VR INSTALL $ 360.00 /each

Item 3 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /each
2. Service Shop $ 84.00 /each

Award based on Items 1-3 $ 2,112.70

OPTIONAL FEATURES:

These items will not be considered in the evaluation.

A. Mobile Detector Receiver - Used when mobile radio transmit frequency is different than mobile receive frequency.

Model Low Band _____ $ _____ /each

Model UHF _____ $ _____ /each

B. Mobile Monitor Transmit - Permits communications between portable and vehicular repeater, includes necessary microphone and speaker.

Model: NA $_____/each

C. Installation and checkout per FCC requirements.

Model: NA $_____/each

D. Post-warranty Maintenance, one year parts and labor at service shop.

Model: NA $_____/each

LOT 13
RADIOS, TWO-WAY HIGH BAND, BASE STATION, LOCAL CONTROL 100 WATTS
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, VHF (150-174 MHz). Base station, local control, minimum R.F. power output 100 watts at the transmitter antenna jack. The radio shall have a four-channel capability with channel 1 active. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Purchase order shall specify frequency. Channels 2 through 4 blank or as specified on purchase order. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels *assigned to public safety.* Radio shall have continuous tone control squelch at a frequency to be specified on purchase order and continuous tone control squelch monitor switch, and A.C. line surge protection. Shall have desk microphone and be mounted in a desk top or desk side cabinet with power supply built into the cabinet. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Frequency stability on transmit and receive shall be ±0.0003%. The normal operating range shall range from (-30 C to +60 C). **Unit to be similar to a MACOM M7100ip Base Station, Vertex BSC5000, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model BSC-5000/6000VC $ 2,316.97 /each

Required Additional Features:

Item 2. - Transmitter frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 3. - Receiver frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 4. - Antenna groundplane, unity gain, omnidirectional with mounting clamps. Decibel Product DB-201 or approved equal.

Model SG201-3F35NF $ 212.80 /each

Item 5. - Antenna, coaxial, omnidirectional with mounting clamps. Decibel Product DB-205 or approved equal.

Model SG225M-5F35NF $ 317.60 /each

Item 6. - Antenna, 6dB gain, omnidirectional with mounting clamps. Decibel Product DB-224 or approved equal.

Model SD222-5F4PA5NM $ 247.20 /each

Item 7. - Antenna, 5dB gain with mounting clamps. Celwave PD200 or approved equal.

Model SD212-5F32P25NM 414.40 /each

Item 8. - Cable, 1/2" jacketed heliax type, 5O Ohms impedance, copper inner and outer conductors.

Model LDF-4-50A $ 2.28 /each

Item 9. - Connector kit, for use with above heliax cable.

Model L4PNF-RC / L4PNM-RC 73.28 /each

Item 10.- Deletion of continuous tone control squelch (Credit).

Model TONE DELETE $ <96.00> /each

Item 11.- Post-warranty Maintenance one year parts and labor.

Radio at locality/agency $ 360.00 /each

Item 12.- Ground strap kit.

Model 241086-1 $ 24.88 /each

Item 13 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-700D $ <6.30> /each

Item 14. - Digital CTCSS

Model INCLUDED $ 0 /each

Award based on Items 1-14 $ 3,867.11

OPTIONAL FEATURES:
Item 15. - Clock, 12/24 hour.

Model INCLUDED $ 0 /each
Item 16. - Addition of VU Meter.

Model NA $ /each
Item 17. - DTMF encoder with keypad

Model MH-700D $ 102.20 /each

LOT 14
RADIOS, TWO WAY
HIGH BAND, BASE STATION, REMOTE
100 WATTS, TONE CONTROLLED
CONTINUOUS DUTY CYCLE
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, VHF (150-174 MHz), remote base station, tone controlled, minimum R.F. power output 100 watts at the transmitter antenna jack. The Base station shall have a two-channel capability with channel one active. The unit shall have a continuous duty cycle. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Purchase order to specify frequency. Channel 2 shall be blank or as specified on purchase order. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Unit shall have continuous tone control squelch at a frequency to be specified on purchase order; unit shall have a continuous tone control squelch monitor function, shall have intercom, AC line surge protection, and phone line surge protection. The unit shall be housed in an indoor floor type of cabinet. Unit shall have a frequency stability on both transmit and receive of ±.0003%. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). **Unit to be similar to a MACOM Mastr III VHF Base station, Motorola Quantar base station, Kenwood TKR7400, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model VXR-9000/C100TC $ 3,538.30 /each

Required Additional Features:

Item 2. - Transmitter frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 3. - Receiver frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 4. - Antenna groundplane, unity gain, omnidirectional with mounting clamps. Decibel Product DB-201 or approved equal.

Model 56201-5F33NF $ 212.80 /each

Item 5. - Antenna, coaxial, omnidirectional with mounting clamps. Decibel Product DB-205 or approved equal.

Model 56225M-5F33NF 317.60 /each

Item 6. - Antenna, omnidirectional, 6dB gain. Decibel Product DB-224 or approved equal.

Model 5D222-5F4DA3NM 247.20 /each

Item 7. - Antenna, 5dB gain with mounting clamps. Celwave PD200 or approved equal.

Model 5D212-5F3P23NM 414.40 /each

Item 8. - Cable, 1/2", jacketed heliax type copper inner and outer conductors

Model LDF-4-50A $ 2.28 /each

Item 9. - Connector kit for use with above heliax cable.

Model L4DNF-RC / L4DNM-RC 73.28 /each

Item 10.- Ground strap kit.

Model 241088-1 $ 24.88 /each

Item 11.- Receiver, second unit, to be single frequency, have volume control, squelch and be identical in all performance specifications to the above station receiver, unit to have antenna matching device. Receiver includes notch filter, line response compensator and squelch operated relay.

A. Tone Squelch

Model VXR-9000VC $ 1,096.46 /each

B. Carrier Squelch

Model INCLUDED $ 0 /each

Item 12. - Console, remote, tone controlled, 1TX-1RX, for use with above base station and with volume control, continuous tone control line and power line surge protection.

Model C-2002HS $ 948.00 /each

A. Handset Operation (Exchange)	$ INCLUDED	/each
B. Intercom	$ "	/each
C. 2Tx - 2Rx Control	$ "	/each
D. 12/24 Hour Clock	$ "	/each
E. Parallel Transmit Indicator with Notch Filter	$ "	/each
F. Supervisor Control	$ "	/each
G. Wall mount Bracket C-2002WMK	$ 34.40	/each
H. DTMF encoder with Keypad	$ INCLUDED	/each

Item 13. - Post-warranty Maintenance, one year parts and labor, at locality/agency.

Base Station	$ 360.00	/yr.
Console, remote, tone controlled	$ 96.00	/yr.
Deskset, remote, tone controlled	$ 60.00	/yr.

Item 14. - I.D., automatic, CW

Model INCLUDED $ 0 /each

Item 15. - Test speaker and microphone.

Model MD-11ABJ $ 71.40 /each

Item 16. - Deskset, tone controlled, for use with above station. Unit to have volume control, handset, power line and phone line surge protection.

Model CH-2000HS $ 484.00 /each

1. Notch filter	$ INCLUDED	/each
2. Parallel Transmit Light	$ INCLUDED	/each

Item 17. - DTMF decoder

Model INCLUDED $ 0 /each

Item 18. - Digital CTCSS

Model INCLUDED $ 0 /each

Award based on Items 1-18 $ 7,981.00

OPTIONAL FEATURES:

Item 19. - Metering panel or kit with meter(s).

Model NA $ 0 /each

LOT 15
RADIOS, TWO-WAY REPEATERS,
CONTINUOUS DUTY CYCLE
HIGH BAND 100 WATTS,
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, repeater, VHF (150-174 MHz), minimum R.F. power output 100 Watts at the transmitter output jack. The unit shall be a single duplex channel; frequency to be specified on purchase order. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding encrypted mode communications. Unit shall have continuous duty cycle.

Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. *Unit* shall have continuous tone control squelch frequency to be specified on purchase order. Shall be mounted in an indoor floor mounted cabinet. The height shall be within +/- 3.5 inches of 40 inches high. The unit shall also house the Duplexer, space permitting. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Unit shall have a frequency stability on both transmit and receive of ±.00025%. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). **Unit to be similar to a MACOM Mastr III Repeater Station, Motorola Quantar Repeater Station, Kenwood TKR7400S Repeater Station, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model VXR-9000VC100 $ 3,160.40 /each

Required Additional Features:

Item 2. - Antenna, omnidirectional, unity gain, with mounting clamps. Decibel Product DB-201 or approved equal.

Model SG201-SF35NF $ 212.80 /each

Item 3. - Antenna, coaxial, omnidirectional with mounting clamps. Decibel Product DB-205 or approved equal.

Model 5G225M-5F35NF $ 317.60 /each

Item 4. - Antenna, omnidirectional, 6.OdB gain, with mounting clamps. Decibel Product DB-224 or approved equal.

Model 5D222-5F4PA5NM $ 247.20 /each

Item 5. - Antenna, 5dB gain with mounting clamps. Celwave PD200 or approved equal.

Model 5D212-5F32P25NM $ 414.40 /each

Item 6. - Duplexer for use with above repeater, 150-174 MHz bandpass, suitable for transmit-receive frequency separation of three (3) MHz or greater.

Model Q2220E $ 944.00 /each

Item 7. - Cable, 1/2" jacketed heliax type, 5O Ohms impedance, copper inner and outer conductors.

Model LDF-4-50A $ 2.28 /each

Item 8. - Connector, kit for use with above heliax cable.
Model LAPNF-RC / LAPNM-RC $ 73.28 /each

Item 9. - Ground, strap kit.

Model 241088-1 $ 24.88 /each

Item 10. - Timer deletion.

Model NA $ 0 /each

Item 11.- Console, remote, tone, controlled, for use with above station if equipped with remote panel, console to have volume control, continuous tone control squelch monitor switch, desk microphone, and control line and power line surge protection.

Model C-2002HS $ 948.00 /each

A. Handset Operation (Exchange) $ 0 /each
B. Intercom $ INCLUDED /each
C. Repeater On-Off Control $ INCLUDED /each

D. 12/24 Hour Clock $ INCLUDED /each
E. Parallel Transmit Indicator $ " /each
F. Supervisor Control $ " /each
G. Wall mount Bracket C-2002WMK $ 34.40 /each
H. DTMF encoder with keypad $ INCLUDED /each

Item 12. - Deskset, tone controlled, for use with above station. Unit to have volume control, handset, power line and phone line surge protection.

Model C-2000HS $ 484.00 /each

1. Notch filter $ INCLUDED /each
2. Parallel Transmit Light $ " /each

Item 13. - Panel, remote, tone controlled for above repeater with continuous tone control squelch monitor function, repeater disable function, intercom, and phone line surge protection.

Model TRA-223 $ 308.00 /each

Item 14. - Deletion of continuous tone control squelch (Credit).

Model TONE DELETE $ <96.00> /each

Item 15. - Post-warranty Maintenance, one-year parts and labor at locality/agency:
Repeater with duplexer $ 490.00 /yr.
Console, remote, tone controlled $ 96.00 /yr.
Deskset, remote, tone controlled $ 60.00 /yr.

Item 16. - I.D., automatic, CW

Model INCLUDED $ 0 /each

Item 17. - Test speaker and microphone.

Model MD-11A8J $ 71.40 /each

Item 18. - DTMF decoder.

Model INCLUDED $ 0 /each

Item 19. - Digital CTCSS

Model INCLUDED $ 0 /each

Item 20. - Duplexer, 150-174 MHz bandpass-reject, suitable for transmit-receive frequency separation of three hundred (300) KHz or greater.

Model R216CR $ 1,360.80 /each

Award based on Items 1-20 $ 9,241.30

OPTIONAL FEATURES:

Item 21. - Metering panel or kit with meter(s).

Model NA $_____/each

Item 22. – Shared Repeater Panel

Model NA $_____/each

LOT 16
RADIOS TWO-WAY
PORTABLES, HIGH BAND,
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, VHF (150-174 MHz), portable, minimum R.F. Power output 4 watts appearing at the transmitter antenna or external antenna jack. The unit shall have a 6-channel minimum capability. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Purchase order to specify the frequencies to be used. Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety The unit shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with and without an external speaker/microphone. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Frequency stability on both receive and transmit to be ±.0005%. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. **Unit to be similar to a Vertex VX-160, Kenwood TK-272G, Motorola HT 750, MACOM 300P Panther, MACOM Panther 405P, ICOM IC-F3S, ICOM F3GS, or approved equal.**

State Manufacturer VERTEX STANDARD

Model VX-160VB/57C $ 170.00 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model NC-77B $ 25.90 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6800B $ 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V57 $ 34.30 /each

Award based on Items 1-4 $ 632.70

OPTIONAL FEATURES:

Item 5. - Speaker/microphone.

Model MH-360S $ 14.70 /each

Item 6. - DTMF, pad

Model Sub VX-429 $ 139.30 /each

Item 7. - Post-warranty Maintenance, one year parts and labor.

Radio	$ 36.00	/each
Charger, AC, single	$ 12.00	/each
Charger, AC, multi unit	$ 26.00	/each
Charger, DC, Vehicular	$ NA	/each

Item 8 - Programmer or programming software and cable to be used with above radio. (should operate on IBM Compatible PC)

Model CT-42A $ 55.30 /each

Item 9.- Battery pack, to be use with alkaline batteries, for above portable.

Model FBA-25A $ 14.00 /each

Item 10.- Belt Clip

Model CLIP-800 $ 4.20 /each

Item 11.- Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, 3db gain antenna similar to an ASP-800 and speaker. All connections for speaker and antenna must be automatic.

Model NA $ _____ /each

LOT 16A
RADIOS TWO-WAY
PORTABLES, HIGH BAND,
PROJECT/APCO 25 CAPABLE
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, VHF (150-174 MHz), portable, minimum R.F. Power output 4 watts at the antenna, 6-channel minimum capability. Radio s hall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications. Unit shall be APCO/Project 25 capable.

Purchase order to specify the frequencies to be used. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with and without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.00025%. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. **Unit must meet the following standard: MIL-STD-810F as described below.**

MIL-STD-810F

Description	Method	Procedures
Low Pressure	500.4	I or II
High Temperature	501.4	I and II
Low Temperature	502.4	I or II
Temperature Shock	503.4	I
Solar Radiation	505.4	I or II
Blowing Rain	506.4	I
Humidity	507.4	I
Salt Fog	509.4	I
Blowing Dust	510.4	I
Vibration	514.5	I Category 24
Shock	516.5	I

Unit to be similar to a MACOM P7100ip VHF, Kenwood TK-5210K2, Motorola XTS2500 Type II VHF, Motorola XTS 5000 Type II VHF portable, or approved equal.

State Manufacturer VERTEX STANDARD

Model VX-P924-DO-5C $ 1,409.15 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model VAC-920B $ 53.20 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6920B $ 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V96Li $ 44.80 /each

Award based on Items 1-4 $ 1,909.65

OPTIONAL FEATURES:

Item 5. - Speaker/microphone.

Model MH-50D7A $ 65.80 /each

Item 6. - DTMF, pad

Model Sub VX-P929-D0-5 $ 97.30 /each

Item 7. - Post-warranty Maintenance, one year parts and labor.

Radio	$ 144.00	/each
Charger, AC, single	$ 12.00	/each
Charger, AC, multi unit	$ 26.00	/each
Charger, DC, Vehicular	$ NA	/each

Item 8 - Programmer or programming software and cable to be used with above radio. (should operate on IBM Compatible PC)

Model CT-109 $ 78.40 /each

Item 9.- Battery pack, to be use with alkaline batteries, for above portable.

Model FBA-26A $ 14.00 /each

Item 10.- Belt Clip

Model CLIP-920 $ 7.00 /each

Item 11.- Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, 3db gain antenna similar to an ASP-800 and speaker. All connections for speaker and antenna must be automatic.

Model NA $ • /

LOT 16B
RADIOS TWO-WAY
PORTABLES, HIGH BAND,
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, VHF (150-174 MHz), portable, minimum R.F. Power output 4 watts at the antenna or an external antenna connector. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Unit shall have multiple modes/groups with the capability of at least 16 channels in each mode/group. Purchase order to specify the frequencies to be used. Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. Unit shall be capable of being used as a hand held portable with and without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.0005%. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Unit must meet the following MIL-STD-810E specifications. **Unit must meet or exceed the MIL-STD-810E standard as described below.**

MIL-STD-810E

Description	Method	Procedures
High Temperature	501.3	I and II
Low Temperature	502.3	I or II
Temperature	503.3	I
Solar Radiation	505.3	I or II
Rain	506.3	I
Humidity	507.3	II
Salt Fog	509.3	I
Dust	510.3	I
Vibration	514.4	I Category 10
Shock	516.4	I

Unit to be similar to an ICOM F3GS, Kenwood TK-280K, Vertex VX-800V, or approved equal.

State Manufacturer VERTEX STANDARD

Model VX-800VC/62C 342.40 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model VAC-800B 53.20 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6800B 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V62Li $ 44.80 /each

Award based on Items 1-4 $ 842.90

OPTIONAL FEATURES:

Item 5. - Speaker/microphone

Model MH-50A7A $ 65.80 /each

Item 6. - DTMF, pad

Model add-16 $ 37.41 /each

Item 7. - Post-warranty Maintenance, one year parts and labor.

Radio	$ 36.00	/each
Charger, AC, single	$ 12.00	/each
Charger, AC, multi unit	$ 26.00	/each
Charger, DC, Vehicular	$ NA	/each

Item 8 - Programmer or programming software and cable to be used with above radio. (should operate on IBM Compatible PC)

Model VX-VPL-1/CT-70 $ 105.00 /each

Item 9.- Battery pack, to be use with alkaline batteries, for above portable.

Model FBA-25A $ 14.00 /each

Item 10.- Belt Clip

Model CLIP-800 $ 4.20 /each

Item 11.- Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, 3db gain antenna similar to an ASP-800 and speaker. All connections for speaker and antenna must be automatic.

Model NA $ 0 /each

LOT 16B (ALTERNATE)
RADIOS TWO-WAY
PORTABLES, HIGH BAND,
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

WATERPROOF

Item 1. Radio, two-way, VHF (150-174 MHz), portable, minimum R.F. Power output 4 watts at the antenna or an external antenna connector. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Unit shall have multiple modes/groups with the capability of at least 16 channels in each mode/group. Purchase order to specify the frequencies to be used. Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. Unit shall be capable of being used as a hand held portable with and without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.0005%. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Unit must meet the following MIL-STD-810E specifications. **Unit must meet or exceed the MIL-STD-810E standard as described below.**

MIL-STD-810E

Description	Method	Procedures
High Temperature	501.3	I and II
Low Temperature	502.3	I or II
Temperature	503.3	I
Solar Radiation	505.3	I or II
Rain	506.3	I
Humidity	507.3	II
Salt Fog	509.3	I
Dust	510.3	I
Vibration	514.4	I Category 10
Shock	516.4	I

Unit to be similar to an ICOM F3GS, Kenwood TK-280K, Vertex VX-800V, or approved equal.

State Manufacturer VERTEX STANDARD

Model VX-824-DO-5C 371.60 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model VAC-920B 53.20 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6920B 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V86Li $ 44.80 /each

Award based on Items 1-4 $ 872.10

OPTIONAL FEATURES:

Item 5. - Speaker/microphone

Model MH-60D7A $ 65.80 /each

Item 6. - DTMF, pad

Model Sub VX-829-DO-5 $ 21.00 /each

Item 7. - Post-warranty Maintenance, one year parts and labor.

Radio	$ 36.00	/each
Charger, AC, single	$ 12.00	/each
Charger, AC, multi unit	$ 24.00	/each
Charger, DC, Vehicular	$ NC	/each

Item 8 - Programmer or programming software and cable to be used with above radio. (should operate on IBM Compatible PC)

Model CT-109 $ 78.40 /each

Item 9.- Battery pack, to be use with alkaline batteries, for above portable.

Model FBA-26A $ 14.00 /each

Item 10.- Belt Clip

Model CLIP-920 $ 7.00 /each

Item 11.- Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, 3db gain antenna similar to an ASP-800 and speaker. All connections for speaker and antenna must be automatic.

Model NA $ _____ /each

LOT 17
RADIOS TWO-WAY
PORTABLES, HIGH BAND,
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, VHF (150 - 174 MHz), portable, minimum R.F. Power output 4 watts at the antenna. The unit shall have a 16-channel minimum capability. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Purchase order to specify the frequencies to be used. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—15 KHz and 7.5 KHz frequency assignments within 150-174 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 15 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 7.5 KHz or 15 KHz channel). Unit shall be capable of transmitting and receiving on all NTIA (National Telecommunications and Information Administration) interoperability channels assigned to public safety. Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with and without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.0005%. Normal operations of radio equipment and factory specifications shall be consistent over the temperature range of (-30 to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Maximum size to be 2.31"W X 4.32"H X 1.81". **Unit must meet or exceed the following MIL-STD-810E standard as described below.**

MIL-STD-810E

Description	Method		Procedures
	High Temperature	501.3	I and II
	Low Temperature	502.3	I or II
	Temperature	503.3	I
	Solar Radiation	505.3	I or II
	Rain	506.3	I
	Humidity	507.3	II
	Salt Fog	509.3	I
	Dust	510.3	I
	Vibration	514.4	I Category 10
	Shock	516.4	I

Unit to be similar to a Vertex VX-414, VX-424, Kenwood 2140, Kenwood 2160, or an approved equal.

State Manufacturer VERTEX STANDARD

Model VX-414-2-5C $ 219.20 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model NC-77B $ 53.20 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6400B $ 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V57 $ 34.30 /each

Award based on Items 1-4 $ 674.90

OPTIONAL FEATURES:

Item 5. - Speaker/microphone.

Model MH-3605 $ 34.30 /each

Item 6. - DTMF, pad

Model Sub VX-424-2-5 $ 79.10 /each

Item 7. - Post-warranty Maintenance, one year parts and labor.

Radio	$ 29.00	/each
Charger, AC, single	$ 12.00	/each
Charger, AC, multi unit	$ 26.00	/each
Charger, DC, Vehicular	$ NA	/each

Item 8 - Programmer or programming software and cable to be used with above radio. (shall operate on IBM Compatible PC)

Model CT-42A $ 55.30 /each

Item 9.- Battery pack, to be use with alkaline batteries, for above portable.

Model FBA-25A $ 14.00 /each

Item 10.- Belt Clip

Model CLIP-800 $ 4.20 /each

Item 11.- Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, and speaker. All connections for speaker and antenna must be automatic.

Model NA $ _____ /each

Item 13 - Leather Carrying Case for above portable.

Model LCC-410 $ 22.40 /each

LOT 19
MOBILE RADIOS - UHF - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way UHF (450-470 MHz) mobile trunk mount, minimum transmitter output power 100 watts appearing at the antenna jack of the radio equipment. Band-split of radio shall be at least 20 MHz wide. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS).

Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Minimum spread between frequencies without degradation shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0003%. The normal operating range shall range from (-30 C to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit to have control and power cables that are at least 17 feet (5.2 Meters) in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. **Unit to be similar to a Motorola XTL5000 UHF, Vertex VX-6000U, MACOM –UHF M7100ip mobile, Kenwood TK-890(H), or an approved equal.**

State Manufacturer: VERTEX STANDARD

Model VX-6000UDRM $ 1,187.90 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, 5 dB gain, ASP-1750 or approved equal.

Model NM0450CK $ 30.82 /each

Item 4 Installation and checkout per FCC requirements, in standard trunk mounting.

Model RM INSTALL $ 135.00 /each

Item 5 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /yr.
2. Service Shop $ 48.00 /yr.

Award based on Items 1-5 $ 1,521.72

OPTIONAL FEATURES:

Item 6 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 7 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 8 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 9 Antenna, 1/4 wave, unity gain, similar ASPD-1610 or approved equal.

Model NMOQW450CX $ 10.87 /each

Item 10 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

LOT 19A
MOBILE RADIOS - UHF --WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way UHF (450-470 MHz) mobile trunk mount, minimum transmitter output power 100 watts at the antenna jack. Band-split of radio shall be at least 20 MHz wide. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Unit should have at least three modes/groups with 25 channels in each. These modes/groups shall consist of any UHF RF frequency and any combination of CTCSS frequencies or carrier only (no CTCSS). Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Minimum spread between frequencies without degradation shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0003%. The normal operating range shall range from (-30 C to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit shall be equipped with a modulator that will allow the transmission of data. Unit to have control and power cables that are at least 17 feet (5.2 Meters) in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. **Unit must meet or exceed the following MIL-STD-810E standard as described below.**

MIL-STD-810E

Description	Method	Procedures
High Temperature	501.3	I and II
Low Temperature	502.3	I or II
Temperature	503.3	I
Solar Radiation	505.3	I or II
Rain	506.3	I
Humidity	507.3	II
Salt Fog	509.3	I
Dust	510.3	I
Vibration	514.4	I Category 10
Shock	516.4	I

Unit to be similar to a Motorola XTL5000, Vertex VX-6000U, or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-6000UDRM $ 1,187.90 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, 5 dB gain, ASP-1750 or approved equal.

Model NM0450CK $ 30.82 /each

Item 4 Installation and checkout per FCC requirements, in standard trunk mounting.

Model RM INSTALL $ 135.00 /each

Item 5 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /yr.
2. Service Shop $ 48.00 /yr.

Award based on Items 1-5 $ 1,521.72

Item 6 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 7 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 8 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 9 Antenna, 1/4-wave whip, Similar to ASPD-1610 or approved equal.

Model NMOQW450CX $ 10.87 /each

Item 10 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

LOT 20
MOBILE RADIOS - UHF - WIDE SPACED - FRONT MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way UHF (450-470 MHz) mobile front mount, minimum transmitter output power 25 watts appearing at the antenna jack. Band-split of radio shall be at least 20 MHz wide. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Radio shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Minimum spread between frequencies without degradation shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0003%. The normal operating temperature range shall range from (-30 C to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Receiver shall have a minimum audio output of 4 watts at 10% distortion or less. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. **Unit to be similar to a Vertex 4000U, Vertex 6000U, Kenwood 8150, Kenwood TK-890, MACOM 7100ip, MACOM Panther 605M, Motorola XTL5000, or an approved equal.**

State Manufacturer: VERTEX STANDARD

Model VX-4207-7-45 $ 335.30 /each

Required Additional Features:

Item 2 Scan, multi-channel, (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, 5 dB gain, Similar to ASP-1750 or approved equal.

Model NM0450CK $ 30.82 /each

Item 4 Installation and checkout per FCC requirements, in standard trunk mounting.

Model FM INSTALL $ 95.00 /each

Item 5 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /yr.
2. Service Shop $ 36.00 /yr.

Award based on Items 1-5 $ 617.12

Item 6 A.C. power supply to be used with above unit.

Model FP-1023 $ 151.82 /each

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-NC4204 $ 25.20 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-7000 $ 102.20 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10 Antenna, 1/4-wave whip, Similar to ASPD-1610 or approved equal.

Model NMOQW450CK $ 10.47 /each

Item 11 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

LOT 20A
MOBILE RADIOS - UHF - WIDE SPACED - FRONT MOUNT
PROJECT/APCO 25 CAPABLE
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way UHF (450-470 MHz) mobile trunk mount, minimum transmitter output power 40 watts appearing at the equipment antenna jack. Band-split of radio shall be at least 20 MHz wide. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications. Unit shall be Project/APCO 25 capable.

Unit should have at least 25 channels. Channels shall consist of any UHF RF frequency and any combination of CTCSS frequencies or carrier only (no CTCSS). Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Minimum spread between frequencies without degradation shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0003%. The normal operating temperature range shall range from (-30 C to +60 C). Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. Unit must meet or exceed the following MIL-STD-810E specification as described below:

MIL-STD-810E

Description	Method	Procedures
High Temperature	501.3	I and II
Low Temperature	502.3	I or II
Temperature	503.3	I
Solar Radiation	505.3	I or II
Rain	506.3	I
Humidity	507.3	II
Salt Fog	509.3	I
Dust	510.3	I
Vibration	514.4	I Category 10
Shock	516.4	I

Unit to be similar to a, MACOM M7100ip, Motorola XTL5000 or an approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-7200UD $ 1,381.80 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, 5 dB gain, ASP-1750 or approved equal.

Model NM0450CK $ 30.82 /each

Item 4 Installation and checkout per FCC requirements

Model FM INSTALL $ 95.00 /each

Item 5 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 144.00 /yr.
2. Service Shop $ 60.00 /yr.

Award based on Items 1-5 $ 1,711.62

Item 6 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-NC4204 $ 25.20 /each

Item 7 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-700D $ 102.20 /each

Item 8 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 9 Antenna, 1/4-wave whip, Similar to ASPD-1610 or approved equal.

Model NMOQW450CR $ 10.87 /each

Item 10 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

LOT 21

VEHICULAR REPEATER, UHF
SPECIFICATION AND BID SHEET

Item 1 Radio, vehicular repeater, maximum transmitter power output 250 milliwatts, to allow operation of vehicle-mounted two-way radio by portable radio. Unit to operate with the following mobile radio units, exact type to be specified on purchase order:

Motorola	MICOR	$ 1,016.90
	MITREK	$ "
	SYNTOR	$ "
	SYNTOR X	$ "
	SPECTRA	$ "
	MCS 2000	$ "
	XTL5000	$ "
MA/COM	MASTR II	$ 1,016.90
	RANGR	$ "
	DELTA S	$ "
	DELTA SX	$ "
	ORION	$ "
	M7100ip	$ "

Unit shall operate in frequency range 450-470MHz for use with mobile radios operating within the 30-50 and 150-170MHz ranges. Unit shall employ a single frequency, transmit and receive, to be specified on purchase order. Transmitter to have a frequency stability over the temperature range (-30 to +60) Celsius of ±0.0005% (450-470MHz). Unit to be capable of both 25 and 12.5 KHz operation. Unit shall include a hand held portable radio similar to a MA/COM P5100ip, P7100ip, MA/COM Panther 605P, MA/COM Panther 405P, Motorola XTS2500, XTS5000, Motorola HT-750, or approved equal.

Portable shall transmit and receive on same frequency as vehicular repeater. Portable shall have a transmitter power output of 250 milliwatt minimum and 2.0 watt maximum. The vehicular repeater system shall include a control/charger unit which may be mounted in the vehicle in a location convenient to the operator. The control/charger shall include a repeater enable/disable switch. When this switch is in the "enable" position, removing the portable radio from the charger shall automatically activate the repeater function; replacing the portable in the charger shall automatically deactivate the repeater function. The vehicular repeater system shall provide the following functions as a minimum:

1. Transmissions from the portable shall be repeated by the mobile unit;
2. Signals received by the mobile receiver shall be repeated to the portable;
3. Both the portable and the vehicular repeater shall be equipped with adjustable timer circuitry to limit the duration of any one transmission to one and one-half minutes maximum;
4. The portable shall be capable of overriding the repeater transmitter so as to cause the mobile radio to transmit despite the presence of a signal in its receiver;
5. Only one repeater transmitter and one mobile transmitter shall operate when several mobiles equipped with activated vehicular repeaters are within range of each other and one or more portable radios;
6. The portables shall be equipped with a control which will enable them to communicate with each other without causing any mobile radio within range to repeat the portable transmission.

Model VX-417/VXR-100UD $ 1,016.90 /each

Item 2 Installation and checkout per FCC requirements, in standard trunk mounting.

Model VR INSTALL $ 360.00 /each

Item 3 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /each
2. Service Shop $ 48.00 /each

Award based on Items 1-3 $ 1,544.90

OPTIONAL FEATURES: These items will not be considered in the evaluation.

A. Mobile Detector Receiver - Used when mobile radio transmit frequency is different than mobile receive frequency.

Model Low Band $ NA /each
Model High Band $ NA /each

B. Mobile Monitor Transmit - Permits communications between portable and vehicular repeater, includes necessary microphone and speaker.

Model MMTX $ 71.40 /each

C. Installation and checkout per FCC requirements.

Model MMTX INSTALL $ 60.00 /each

D. Post-warranty Maintenance, one year parts and labor at service shop.

Model MMTX ONE YEARS $ 36.00 /each

LOT 21 (ALTERNATE 1)

VEHICULAR REPEATER, UHF
SPECIFICATION AND BID SHEET

Item 1 Radio, vehicular repeater, maximum transmitter power output 250 milliwatts, to allow operation of vehicle-mounted two-way radio by portable radio. Unit to operate with the following mobile radio units, exact type to be specified on purchase order:

Motorola	MICOR	$ 1,373.90
	MITREK	$ "
	SYNTOR	$ "
	SYNTOR X	$ "
	SPECTRA	$ "
	MCS 2000	$ "
	XTL5000	$ "
MA/COM	MASTR II	$ 1,373.90
	RANGR	$ "
	DELTA S	$ "
	DELTA SX	$ "
	ORION	$ "
	M7100ip	$ "

Unit shall operate in frequency range 450-470MHz for use with mobile radios operating within the 30-50 and 150-170MHz ranges. Unit shall employ a single frequency, transmit and receive, to be specified on purchase order. Transmitter to have a frequency stability over the temperature range (-30 to +60) Celsius of ±0.0005% (450-470MHz). Unit to be capable of both 25 and 12.5 KHz operation. Unit shall include a hand held portable radio similar to a MA/COM P5100ip, P7100ip, MA/COM Panther 605P, MA/COM Panther 405P, Motorola XTS2500, XTS5000, Motorola HT-750, or approved equal.

Portable shall transmit and receive on same frequency as vehicular repeater. Portable shall have a transmitter power output of 250 milliwatt minimum and 2.0 watt maximum. The vehicular repeater system shall include a control/charger unit which may be mounted in the vehicle in a location convenient to the operator. The control/charger shall include a repeater enable/disable switch. When this switch is in the "enable" position, removing the portable radio from the charger shall automatically activate the repeater function; replacing the portable in the charger shall automatically deactivate the repeater function. The vehicular repeater system shall provide the following functions as a minimum:

1. Transmissions from the portable shall be repeated by the mobile unit;
2. Signals received by the mobile receiver shall be repeated to the portable;
3. Both the portable and the vehicular repeater shall be equipped with adjustable timer circuitry to limit the duration of any one transmission to one and one-half minutes maximum;
4. The portable shall be capable of overriding the repeater transmitter so as to cause the mobile radio to transmit despite the presence of a signal in its receiver;
5. Only one repeater transmitter and one mobile transmitter shall operate when several mobiles equipped with activated vehicular repeaters are within range of each other and one or more portable radios;
6. The portables shall be equipped with a control which will enable them to communicate with each other without causing any mobile radio within range to repeat the portable transmission.

Model VX-417/SVR-2004D $ 1,373.90 each

Item 2 Installation and checkout per FCC requirements, in standard trunk mounting.

Model VR INSTALL $ 360.00 /each

Item 3 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /each
2. Service Shop $ 46.00 /each

Award based on Items 1-3 $ 1,901.90

OPTIONAL FEATURES: These items will not be considered in the evaluation.

A. Mobile Detector Receiver - Used when mobile radio transmit frequency is different than mobile receive frequency.

Model Low Band $ NA /each
Model High Band $ NA /each

B. Mobile Monitor Transmit - Permits communications between portable and vehicular repeater, includes necessary microphone and speaker.

Model NA $ _____ /each

C. Installation and checkout per FCC requirements.

Model NA $ _____ /each

D. Post-warranty Maintenance, one year parts and labor at service shop.

Model NA $_____/each

LOT 21 (ALTERNATE 2) WATERPROOF PORTABLE

VEHICULAR REPEATER, UHF
SPECIFICATION AND BID SHEET

Item 1 Radio, vehicular repeater, maximum transmitter power output 250 milliwatts, to allow operation of vehicle-mounted two-way radio by portable radio. Unit to operate with the following mobile radio units, exact type to be specified on purchase order:

Motorola	MICOR	$ 1,176.50
	MITREK	$ "
	SYNTOR	$ "
	SYNTOR X	$ "
	SPECTRA	$ "
	MCS 2000	$ "
	XTL5000	$ "
MA/COM	MASTR II	$ 1,176.50
	RANGR	$ "
	DELTA S	$ "
	DELTA SX	$ "
	ORION	$ "
	M7100ip	$ "

Unit shall operate in frequency range 450-470MHz for use with mobile radios operating within the 30-50 and 150-170MHz ranges. Unit shall employ a single frequency, transmit and receive, to be specified on purchase order. Transmitter to have a frequency stability over the temperature range (-30 to +60) Celsius of ±0.0005% (450-470MHz). Unit to be capable of both 25 and 12.5 KHz operation. Unit shall include a hand held portable radio similar to a MA/COM P5100ip, P7100ip, MA/COM Panther 605P, MA/COM Panther 405P, Motorola XTS2500, XTS5000, Motorola HT-750, or approved equal.

Portable shall transmit and receive on same frequency as vehicular repeater. Portable shall have a transmitter power output of 250 milliwatt minimum and 2.0 watt maximum. The vehicular repeater system shall include a control/charger unit which may be mounted in the vehicle in a location convenient to the operator. The control/charger shall include a repeater enable/disable switch. When this switch is in the "enable" position, removing the portable radio from the charger shall automatically activate the repeater function; replacing the portable in the charger shall automatically deactivate the repeater function. The vehicular repeater system shall provide the following functions as a minimum:

1. Transmissions from the portable shall be repeated by the mobile unit;
2. Signals received by the mobile receiver shall be repeated to the portable;
3. Both the portable and the vehicular repeater shall be equipped with adjustable timer circuitry to limit the duration of any one transmission to one and one-half minutes maximum;
4. The portable shall be capable of overriding the repeater transmitter so as to cause the mobile radio to transmit despite the presence of a signal in its receiver;
5. Only one repeater transmitter and one mobile transmitter shall operate when several mobiles equipped with activated vehicular repeaters are within range of each other and one or more portable radios;
6. The portables shall be equipped with a control which will enable them to communicate with each other without causing any mobile radio within range to repeat the portable transmission.

Model VX821/VXR-1000UD $ 1,176.50 /each

Item 2 Installation and checkout per FCC requirements, in standard trunk mounting.

Model VR INSTALL $ 360.00 /each

Item 3 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /each
2. Service Shop $ 48.00 /each

Award based on Items 1-3 $ 1,704.50

OPTIONAL FEATURES: These items will not be considered in the evaluation.

A. Mobile Detector Receiver - Used when mobile radio transmit frequency is different than mobile receive frequency.

Model Low Band $ NA /each
Model High Band $ NA /each

B. Mobile Monitor Transmit - Permits communications between portable and vehicular repeater, includes necessary microphone and speaker.

Model MMTX $ 71.40 /each

C. Installation and checkout per FCC requirements.

Model MMTX INSTALL $ 60.00 /each

D. Post-warranty Maintenance, one year parts and labor at service shop.

Model MMTX ONE YEAR $ 36.00 /each

LOT 21 (ALTERNATE 3) WATERPROOF PORTABLE

VEHICULAR REPEATER, UHF
SPECIFICATION AND BID SHEET

Item 1 Radio, vehicular repeater, maximum transmitter power output 250 milliwatts, to allow operation of vehicle-mounted two-way radio by portable radio. Unit to operate with the following mobile radio units, exact type to be specified on purchase order:

Motorola	MICOR	$ 1,533.50
	MITREK	$ "
	SYNTOR	$ "
	SYNTOR X	$ "
	SPECTRA	$ "
	MCS 2000	$ "
	XTL5000	$ "
MA/COM	MASTR II	$ 1,533.50
	RANGR	$
	DELTA S	$
	DELTA SX	$
	ORION	$
	M7100ip	$

Unit shall operate in frequency range 450-470MHz for use with mobile radios operating within the 30-50 and 150-170MHz ranges. Unit shall employ a single frequency, transmit and receive, to be specified on purchase order. Transmitter to have a frequency stability over the temperature range (-30 to +60) Celsius of ±0.0005% (450-470MHz). Unit to be capable of both 25 and 12.5 KHz operation. Unit shall include a hand held portable radio similar to a MA/COM P5100ip, P7100ip, MA/COM Panther 605P, MA/COM Panther 405P, Motorola XTS2500, XTS5000, Motorola HT-750, or approved equal.

Portable shall transmit and receive on same frequency as vehicular repeater. Portable shall have a transmitter power output of 250 milliwatt minimum and 2.0 watt maximum. The vehicular repeater system shall include a control/charger unit which may be mounted in the vehicle in a location convenient to the operator. The control/charger shall include a repeater enable/disable switch. When this switch is in the "enable" position, removing the portable radio from the charger shall automatically activate the repeater function; replacing the portable in the charger shall automatically deactivate the repeater function. The vehicular repeater system shall provide the following functions as a minimum:

1. Transmissions from the portable shall be repeated by the mobile unit;
2. Signals received by the mobile receiver shall be repeated to the portable;
3. Both the portable and the vehicular repeater shall be equipped with adjustable timer circuitry to limit the duration of any one transmission to one and one-half minutes maximum;
4. The portable shall be capable of overriding the repeater transmitter so as to cause the mobile radio to transmit despite the presence of a signal in its receiver;
5. Only one repeater transmitter and one mobile transmitter shall operate when several mobiles equipped with activated vehicular repeaters are within range of each other and one or more portable radios;
6. The portables shall be equipped with a control which will enable them to communicate with each other without causing any mobile radio within range to repeat the portable transmission.

Model VX-821/SVR-200UD $1,533.50 /each

Item 2 Installation and checkout per FCC requirements, in standard trunk mounting.

Model VR INSTALL $ 360.00 /each

Item 3 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 120.00 /each
2. Service Shop $ 48.00 /each

Award based on Items 1-3 $ 2,061.50

OPTIONAL FEATURES: These items will not be considered in the evaluation.

A. Mobile Detector Receiver - Used when mobile radio transmit frequency is different than mobile receive frequency.

Model Low Band $ NA /each
Model High Band $ NA /each

B. Mobile Monitor Transmit - Permits communications between portable and vehicular repeater, includes necessary microphone and speaker.

Model NA $ _____ /each

C. Installation and checkout per FCC requirements.

Model NA $ _____ /each

D. Post-warranty Maintenance, one year parts and labor at service shop.

Model NA $_____/each

LOT 22 (ALTERNATE)
RADIOS, TWO-WAY, UHF, BASE STATION,
LOCAL CONTROLLED 40 WATTS
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, UHF (450-470 MHz). Base station, local control, minimum R.F. power output 40 watts at the antenna jack of the transmitter. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding encrypted mode communications.

16-channel capability with channel 1 active. Purchase order to specify frequency. Channels 2 through 16 blank or as specified on purchase order. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Shall have continuous tone control squelch at a frequency to be specified on purchase order, continuous tone control squelch monitor switch and A.C. line surge protection. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Radio shall have desk microphone and be mounted in a desk top cabinet with power supply built into the cabinet. Unit shall have a frequency stability on both transmit and receive of ±.00025%. The normal operating temperature range shall range from (-30 C to +60 C). **Base Station to be similar to a MACOM M7100ip Base station, Vertex BSC5000, or approved equivalent.**

State Manufacturer: VERTEX STANDARD

Model BSC-5000/5500UD $ 1,844.47 /each

Required Additional Features:

Item 2. - Transmitter frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 3. - Receiver frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 4. - Antenna, unity gain, omnidirectional with mounting clamps. Decibel Product DB-201 or approved equal.

Model MFB-4500 $ 92.44 /each

Item 5.- Antenna, 10dB gain, omnidirectional with mounting clamps. Celwave PD-455 or approved equal.

Model ASP-705K $ 700.00 /each

Item 6. - Antenna, 10dB gain, yagi with mounting clamps. Decibel Product DB-436 or approved equal.

Model YA 3450 WN $ 82.80 /each

Item 7. - Cable, 7/8" jacketed heliax type, 50 Ohms impedance, copper inner and outer conductors.

Model LDF-5-50A $ 5.24 /each

Item 8. - Connector kit, for use with above heliax cable.

Model L5TNF-PS/L5TNM-PS $ 72.00 /each

Item 9. - Deletion of continuous tone control squelch (Credit).

Model TONE DELETE $ <96.00> /each

Item 11. - Post-warranty Maintenance one year parts and labor.
Radio at locality/agency $ 360.00 /yr.

Item 12. - Ground strap kit

Model 241088-7 $ 32.16 /each

Item 13. - I.D., automatic, CW.

Model INCLUDED $ 0 /each

Item 14 - Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model MH-700D $ 102.20 /each

Item 15. - Digital CTCSS

Model INCLUDED $ 0 /each

Award based on Items 1-15 $ 3,195.31

OPTIONAL FEATURES:
Item 16. - Addition of VU Meter.

Model NA $_____/each
Item 17. - Clock, 12/24 hour

Model INCLUDED $ 0 /each
Item 19. - DTMF encoder with keypad

Model MH-700D $ 102.20 /each

LOT 23
RADIOS, TWO-WAY
BASE STATION, REMOTE
UHF, TONE CONTROLLED, 100 WATTS
CONTINUOUS DUTY CYCLE
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, VHF (450-470 MHz), remote. Base station, tone controlled, minimum R.F. power output 100 watts at the transmitter antenna jack. The unit shall have a continuous duty cycle. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding encrypted mode communications.

Unit shall have a two-channel capability with channel 1 active. Channel 2 blank or as specified on purchase order. Purchase order to specify frequency. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Shall have continuous tone control squelch at a frequency to be specified on purchase order and continuous tone control squelch monitor function. Shall have intercom, AC line surge protection and phone line surge protection. Shall be mounted in a floor mount indoor type or cabinet. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Unit shall have a frequency stability on both transmit and receive of ±.0003%. The normal temperature operating range shall range from (-30 C to +60 C). **Base Station to be similar to a MACOM Mastr III UHF Base station, Motorola Quantar, Kenwood TKR-8400S, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model VXR-9000UD/100TC $ 3,694.02 /each

Required Additional Features:

Item 2. - Transmitter frequency determining device for each additional channel.

Model INCLUDED $_____ /each

Item 3. - Receiver frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 4. - Antenna, unity gain, omnidirectional, with mounting clamps. Decibel Product DB-201 or approved equal.

Model MFB-4500 $ 92.44 /each

Item 5. - Antenna, omnidirectional, 10dB gain with mounting clamps. Celwave PD-455 or approved equal.

Model ASP-705K $ 700.00 /each

Item 6. - Antenna, Yagi, 10dB gain with mounting clamps. Decibel Product DB-436 or approved equal.

Model YA3450NN $ 82.80 /each

Item 7. - Cable, 7/8", jacketed heliax type, copper inner and outer conductors, 50 Ohms impedance.

Model LDF-5-50A $ 5.24 /each

Item 8. - Connection kit for use with above heliax cable.

Model L5TNF-PS/L5-TNM-PS $ 72.00 /each

Item 9. - Ground strap kit.

Model 241088-7 $ 32.16 /each

Item 10.- Receiver, second unit, to be single frequency and have volume and squelch control and be identical in all performance specifications to the above station receiver, antenna matching device. Receiver includes notch filter, line response compensator, and squelch operated relay.

A. Tone Squelch
Model VXR-9000UD $ 1,096.46 /each

B. Carrier Squelch
Model INCLUDED $ 0 /each

Item 11.- Console, remote, tone controlled, 1TX-1RX, for use with above base station and with volume control, continuous tone control squelch monitor switch, desk microphone, and control line and power line surge protection.

Model C-2002HS $ 948.00 /each

A. Handset Operation (Exchange)
$ 0 /each

B. Intercom	$ "	/each
C. 2Tx - 2Rx Control	$ "	/each
D. 12/24 Hour Clock	$ "	/each
E. Parallel Transmit Indicator with Notch Filter	$	/each
F. Supervisor Control	$ "	/each
G. Wall mount Bracket C-2002WMK	$ 34.40	/each
H. DTMF encoder with keypad	$ "	/each

Item 12. - Deskset, tone controlled, for use with above station. Unit to have volume control, handset, power line and phone line surge protection.

Model C-2000HS $ 484.00 /each

1. Notch filter	$ INCLUDED	/each
2. Parallel Transmit Light	$ "	/each

Item 13. - Post-warranty Maintenance, one year parts and labor, at locality/agency.

Base Station	$ 360.00	/yr.
Console, remote, tone controlled	$ 96.00	/yr.
Deskset, remote, tone controlled	$ 60.00	/yr.

Item 14. - I.D., automatic, CW.

Model INCLUDED $ 0 /each

Item 16 - Test speaker and microphone.

Model MD-11A8J $ 71.40 /each

Item 15 - DTMF decoder

Model INCLUDED $ 0 /each

Item 16. - Digital CTCSS

Model INCLUDED $ 0 /each

Award based on Items 1-18 $ 8,312.92

OPTIONAL FEATURES:

Item 17. - Metering panel or kit with meter(s).

Model NA $_____/each

LOT 24
RADIOS, TWO-WAY REPEATERS,
CONTINUOUS DUTY CYCLE
UHF BAND 100 WATTS
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, repeater, UHF (450-470 MHz), minimum R.F. power output 100 Watts at the transmitter antenna jack, single duplex channel. Frequency to be specified on purchase order. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications. Unit shall have a continuous duty cycle

Shall have continuous tone control squelch at a frequency to be specified on purchase order. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Shall be mounted in an indoor floor mounted cabinet. The height shall be within +/- 3.5 inches of 40 inches high. The unit shall also house the Duplexer, space permitting. Shall have AC line surge protection, test speaker and microphone. Unit shall have a frequency stability on both transmit and receive of ±.0003% The normal temperature operating range shall range from (-30 C to +60 C) minimum; unit to have time out timer. **Unit to be similar to a MACOM Mastr III Repeater Station, Motorola Quantar Repeater Station, Kenwood TKR8400S Repeater Station, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model VXR-9000UD100TCR $ 3,258.26 each

Required Additional Features:

Item 2. - Antenna, omnidirectional, unity gain with mounting clamps. Decibel Product DB-201 or approved equal.

Model MFB-4500 $ 92.44 /each

Item 3. - Antenna, omnidirectional, 10dB gain, Collinear with mounting clamps. Celwave PD-455 or approved equal.

Model ASP-705K $ 700.00 /each

Item 4. - Duplexer for use with above repeater. (5 MHz frequency separation)

Model Q3220E-3 $ 748.00 /each

Item 5. - Cable, 7/8" jacketed heliax type, 50 Ohms impedance, copper inner and outer conductors.

Model LDF-5-50A $ 5.24 /each

Item 6. - Connector, kit for use with above heliax cable.

Model L5TNF-PS/L5TNM-PS $ 72.00 /each

Item 7. - Ground, strap kit.

Model 241088-7 $ 32.16 /each

Item 8. - Console, remote, tone controlled, for use with above station if equipped with remote panel. Console to have volume control, continuous tone control squelch monitor switch, desk microphone, and control line and power line surge protection.

Model C-2002-HS $ 948.00 /each

A. Handset Operation (Exchange) $ INCLUDED /each

B. Intercom $ " /each

C. Repeater, On-Off Control $ " /each

D. 12/24 Hour Clock $ " /each

E. Parallel Transmit Indicator with Notch Filter $ " /each

F. Supervisor Control $ " /each

G. Wall mount Bracket C-2002WMK 34.40 /each

H. DTMF encoder with keypad $ INCLUDED /each

Item 9. - Panel, remote, tone controlled, for above repeater with continuous tone control squelch monitor function, repeater disable function, intercom, and phone line surge protection.

Model TRA-223 $ 308.00 /each

Item 10. - Deletion of tone squelch

Model TONE DELETE $ <96.00> /each

Item 11.- Post-warranty Maintenance, one-year parts and labor at locality/agency:

A. Repeater with duplexer $ 480.00 /yr

B. Console, remote, tone controlled $ 96.00 /yr.

C. Deskset, remote, tone controlled $ 60.00 /yr.

Item 12.- Deletion of time out timer.

Model NA $ _____ /each

Item 13.- I.D., automatic, CW.

Model INCLUDED $ 0 /each

Item 14.- Test speaker and microphone.

Model MD-11A8J $ 71.40 /each

Item 15. Deskset, tone controlled, for use with above station. Unit to have volume control, handset, power line and phone line surge protection.

Model C-2000HS $ 484.00 /each

1. Notch filter $ INCLUDED /each

2. Parallel Transmit Light $ " /each

Item 16. DTMF decoder

Model INCLUDED $ 0 /each

Item 17. - Digital CTCSS

Model INCLUDED $ 0 /each

Award based on Items 1-17 $ 7,293.90

OPTIONAL FEATURES:

Item 18. - Metering panel or kit with meter(s).

Model NA $_____/each

Item 19. – Shared Repeater Panel

Model NA $_____/each

LOT 24B
RADIOS, TWO-WAY
UHF BAND, LOW POWER REPEATER STATION,
LOCAL CONTROL 25 WATTS
CONTINUOUS DUTY CYCLE
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way, UHF (450-470 MHz). Desktop Base and Repeater station, local control, minimum R.F. power output 25 watts at the antenna jack, four-channel capability with channel 1 active. Unit shall be capable of base and repeater operations as determined by user. Desktop Base-Repeater switch / control shall be easily accessible by the user. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding encrypted mode communications. Unit shall have a continuous duty cycle.

Purchase order to specify frequency. Channels 2 through 4 blank or as specified on purchase order. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band operations (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband operations (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Minimum spread between frequencies without degradation shall be 20.0 megahertz transmit and 20.0 megahertz receive. Shall have continuous tone control squelch at a frequency to be specified on purchase order and a continuous tone control squelch monitor switch, and A.C. line surge protection. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Unit shall have desk microphone and be mounted in a desk top cabinet with power supply built into the cabinet. Unit shall have a frequency stability on both transmit and receive of +.00025%. The normal operating temperature range shall range from (-30 C to +60 C). **Unit to be similar to a Kenwood TKR850, Vertex 9000 UHF, or approved equal.**

State Manufacturer: VERTEX STANDARD

Model VXR-7000 UD $ 1,247.37 /each

Required Additional Features:

Item 2. - Transmitter frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 3. - Receiver frequency determining device for each additional channel.

Model INCLUDED $ 0 /each

Item 4. - Antenna groundplane, with mounting clamps, omnidirectional, unity gain. Decibel Product DB-201 or approved equal.

Model MFB-4500 $ 92.44 /each

Item 5. - Antenna, omnidirectional, coaxial with mounting clamps. Decibel Product DB-205 or approved equal.

Model FB245D $ 92.00 /each

Item 6. - Antenna, 6dB gain with mounting clamps. Decibel Product DB-224 or approved equal.

Model CRX-450B $ 98.82 /each

Item 7. - Antenna, 5dB gain with mounting clamps. Celwave PD200 or approved equal.

Model CRX-450 $ 71.51 /each

Item 8. - Cable, 1/2" Jacketed heliax type, 5O Ohms impedance, copper inner and outer conductors.

Model LDF4-50A $ 2.28 /each

Item 10. - Connector kit, for above heliax cable.

Model L4PNF-RC/L4PNM-RC $ 73.28 /each

Item 11. - Ground strap kit.

Model 241088-1 $ 24.88 /each

Item 12. - Post-warranty Maintenance one year parts and labor.

Radio at locality/agency $ 240.00 /each

Award based on Items 1-12 $ 1,942.57

OPTIONAL FEATURES:

Item 16. - Clock, 12/24 hour.

Model NA $ _____ /each

Item 17. - Addition of VU Meter.

Model NA $ _____ /each

Item 18. - DTMF encoder with keypad

Model MH-700D $ 102.20 /each

LOT 25
RADIOS TWO-WAY
PORTABLES, UHF BAND,
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, UHF (450-470 MHz), portable; minimum R.F. Power output 4 watts at the antenna connector/jack, 6-channel minimum capability. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Purchase order to specify the frequencies to be used. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with and without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.0003%. The normal temperature operating range shall range from (-30 C to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. **Unit to be similar to a Vertex VX-160U, Kenwood TK-372G, Motorola HT 750, MACOM 300P Panther, MACOM Panther 405P, ICOM IC-F4S, ICOM F4GS, or approved equal.**

State Manufacturer VERTEX STANDARD

Model VX-160UD/57 $ 170.00 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model NC-77B $ 25.90 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6800B $ 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V57 $ 34.30 /each

Award based on Items 1-4 $ 632.70

OPTIONAL FEATURES:

Item 5. - Speaker/microphone.

Model MH-360S $ 14.70 /each

Item 6. - DTMF, pad

Model Sub-VX-429 $ 139.30 /each

Item 7. - Post-warranty Maintenance, one year parts and labor.

A. Radio $ 36.00 /each
B. Charger, AC, single $ 12.00 /each
C. Charger, AC, Multi unit $ 26.00 /each
D. Charger, DC, Vehicular $ N.A /each

Item 8. - Programmer or programming software and cable to be used with above radio. (should be used on an IBM Compatible PC)

Model CT-42A $ 55.30 /each

Item 9. - Battery pack, to be use with alkaline batteries, for above portable.

Model FBA-25A $ 14.00 /each

Item 10 - Belt Clip

Model CHP-800 $ 4,20 /each

Item 11 - Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, 5 db gain antenna similar to ASP-1750 and speaker. All connections for speaker and antenna must be automatic.

Model NA $ _____ /each

LOT 25A
RADIOS TWO-WAY
PORTABLES, UHF BAND,
4 WATTS, SYNTHESIZED
PROJECT 25/APCO 25 CAPABLE
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, UHF (450-470 MHz), portable; minimum R.F. Power output 4 watts at the antenna connector/jack, 6-channel minimum capability. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications. Unit shall be Project 25/APCO 25 capable

Purchase order to specify the frequencies to be used. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with *and* without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.0003%. The normal temperature operating range shall range from (-30 C to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. **Unit to be similar to a Motorola XTS-2500 Type II UHF portable, Motorola XTS-5000 Type II UHF portable, MACOM 5100ip UHF portable, MACOM 7100ip UHF portable, or approved equal.**

State Manufacturer VERTEX STANDARD

Model VX-P924-G7-C5 $ 1,409.15 each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model VAC-920B $ 53.20 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6920B $ 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V86Li $ 44.80 /each

Award based on Items 1-4 $ 1,909.65

OPTIONAL FEATURES:

Item 5. - Speaker/microphone.

Model MH-50D7A $ 65.80 /each

Item 6. - DTMF, pad

Model Sub VX-P929-G7-5 97.30 /each

Item 7. - Warranty, one year parts and labor.

A. Radio	$ 144.00	/each
B. Charger, AC, single	$ 12.00	/each
C. Charger, AC, Multi unit	$ 26.00	/each
D. Charger, DC, Vehicular	$ NA	/each

Item 8. - Programmer or programming software and cable to be used with above radio. (should be used on an IBM Compatible PC)

Model CT-109 $ 78.40 /each

Item 9. - Battery pack, to be use with alkaline batteries, for above portable.

Model FNB-26A $ 14.00 /each

Item 10 - Belt Clip

Model CLIP-920 $ 7.00 /each

Item 11 - Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, 5 db gain antenna similar to ASP-1750 and speaker. All connections for speaker and antenna must be automatic.

Model NA $_____/each

LOT 25B
RADIOS TWO-WAY
PORTABLES, UHF BAND,
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, UHF (450-470 MHz), portable; minimum R.F. Power output 4 watts at the antenna connector/jack. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Unit shall be multi mode/group capable with at least 16 channels in each mode/group. Purchase order to specify the frequencies to be used. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with and without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.0003%. The normal temperature operating range shall range from (-30 C to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. **Unit must meet or exceed the following MIL-STD-810E standard as described below:**

MIL-STD-810E

Description	Method	Procedures
High Temperature	501.3	I and II
Low Temperature	502.3	I or II
Temperature	503.3	I
Solar Radiation	505.3	I or II
Rain	506.3	I
Humidity	507.3	II
Salt Fog	509.3	I
Dust	510.3	I
Vibration	514.4	I Category 10
Shock	516.4	I

Unit to be similar to a Kenwood TK-380K, MACOM Panther 605P, Vertex 800U, or approved equal.

State Manufacturer VERTEX STANDARD

Model VX-800UD/62 $ 342.40 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model VAC-800B $ 53.20 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6800B $ 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V62Li $ 44.80 /each

Award based on Items 1-4 $ 842.90

OPTIONAL FEATURES:

Item 5. - Speaker/microphone.

Model MH-50A7A $ 65.80 /each

Item 6. - DTMF, pad

Model add-16 $ 37.41 /each

Item 7. - Post-warranty Maintenance, one year parts and labor.

A. Radio $ 36.00 /each
B. Charger, AC, single $ 12.00 /each
C. Charger, AC, Multi unit $ 26.00 /each
D. Charger, DC, Vehicular $ NA /each

Item 8. - Programmer or programming software and cable to be used with above radio. (should be used on an IBM Compatible PC)

Model VX-VPL-1/CT-70 $ 105.00 /each

Item 9. - Battery pack, to be use with alkaline batteries, for above portable.

Model FBA-25 $ 14.00 /each

Item 10 - Belt Clip

Model CLIP-800 $ 4.20 /each

Item 11 - Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, 5 db gain antenna similar to ASP-1750 and speaker. All connections for speaker and antenna must be automatic.

Model NA $ _____ /each

LOT 25B (ALTERNATE) WATERPROOF PORTABLE
RADIOS TWO-WAY
PORTABLES, UHF BAND,
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, UHF (450-470 MHz), portable; minimum R.F. Power output 4 watts at the antenna connector/jack. Unit shall be able to receive and transmit in the analog mode and shall be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Unit shall be multi mode/group capable with at least 16 channels in each mode/group. Purchase order to specify the frequencies to be used. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with and without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.0003%. The normal temperature operating range shall range from (-30 C to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. **Unit must meet or exceed the following MIL-STD-810E standard as described below:**

MIL-STD-810E

Description	Method	Procedures
High Temperature	501.3	I and II
Low Temperature	502.3	I or II
Temperature	503.3	I
Solar Radiation	505.3	I or II
Rain	506.3	I
Humidity	507.3	II
Salt Fog	509.3	I
Dust	510.3	I
Vibration	514.4	I Category 10
Shock	516.4	I

Unit to be similar to a Kenwood TK-380K, MACOM Panther 605P, Vertex 800U, or approved equal.

State Manufacturer VERTEX STANDARD

Model VX-824-G7-5C $ 381.20 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model VAC-920B $ 53.20 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6920B $ 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V86Li $ 44.80 /each

Award based on Items 1-4 $ 881.70

OPTIONAL FEATURES:

Item 5. - Speaker/microphone.

Model MH-50D7A $ 65.80 /each

Item 6. - DTMF, pad

Model Sub VX-829-G7-5 $_____/each

Item 7. - Post-warranty Maintenance, one year parts and labor.

A. Radio	$ 36.00	/each
B. Charger, AC, single	$ 12.00	/each
C. Charger, AC, Multi unit	$ 24.00	/each
D. Charger, DC, Vehicular	$ NA	/each

Item 8. - Programmer or programming software and cable to be used with above radio. (should be used on an IBM Compatible PC)

Model CT-109 $ 78.40 /each

Item 9. - Battery pack, to be use with alkaline batteries, for above portable.

Model FBA-26A $ 14.00 /each

Item 10 - Belt Clip

Model CLIP-920 $ 7.00 /each

Item 11 - Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, 5 db gain antenna similar to ASP-1750 and speaker. All connections for speaker and antenna must be automatic.

Model NA $_____/each

LOT 26
RADIOS TWO-WAY
PORTABLES, UHF BAND,
4 WATTS, SYNTHESIZED
SPECIFICATION AND BID SHEET

Item 1. Radio, two-way, UHF (450-470 MHz), portable, minimum R.F. Power output 4 watts at the antenna jack/connector. Radio shall have a 16-channel minimum capability. Radio shall be able to communicate in conventional analog mode. Unit must be 100 % compatible with convention analog mode communications, excluding secure encrypted mode communications.

Purchase order to specify the frequencies to be used. Unit to be capable of Transmitting and Receiving all FCC Part 90.20 and Part 90.35—25 KHz and 12.5 KHz frequency assignments within 450-470 MHz inclusive. Unit shall be capable of both Wide Band emissions (similar to 20K0F3E or 16K0F3E emissions on a 25 KHz Channel) and Narrowband emissions (Emissions similar to 11K0F3E on a 12.5 KHz or 25 KHz channel). Unit shall have a flexible antenna, a minimum 1150 mAh rechargeable battery and the battery shall be capable of operating at the rated output for a minimum of 8 hours at a 5%-5%-90% duty cycle (EIA). The radio shall have a leather carrying case or approved equal. Unit shall be capable of being used as a hand held portable with *and* without an external speaker/microphone. Frequency stability on both receive and transmit to be ±.0003%. The normal temperature operating range shall range from (-30 C to +60 C). Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Receiver frequency spread to be full band with no degradation. Transmitter frequency spread to be full band with no degradation. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with a visual and/or an audible indication that disabling has occurred. Maximum size to be 2.31"W X 4.32"H X 1.81". **Unit must meet or exceed the following MIL-STD-810E standard as described below:**

MIL-STD-810E

Description	Method		Procedures
	High Temperature	501.3	I and II
	Low Temperature	502.3	I or II
	Temperature	503.3	I
	Solar Radiation	505.3	I or II
	Rain	506.3	I
	Humidity	507.3	II
	Salt Fog	509.3	I
	Dust	510.3	I
	Vibration	514.4	I Category 10
	Shock	516.4	I

Unit to be similar to a Vertex VX-417, VX-427, Kenwood 3140, Kenwood 3160, or an approved equal.

State Manufacturer VERTEX STANDARD

Model VX-417-2-5C $ 219.20 /each

Required Additional Features:

Item 2. - Charger, AC, Single unit.

Model NC-77B $ 25.90 /each

Item 3. - Charger, AC, Multiunit, minimum of six units.

Model VAC-6800B $ 402.50 /each

Item 4. - Battery, spare, same duty cycle as above.

Model FNB-V57 $ 34.30 /each

Award based on Items 1-4 $ 681.90

OPTIONAL FEATURES:

Item 5. - Speaker/microphone.

Model MH-360S $ 14.70 /each

Item 6. - DTMF, pad

Model Sub VX-427-2-5 $ 79.10 /each

Item 7. - Post-warranty Maintenance, one year parts and labor.

Radio	$ 36.00	/each
Charger, AC, single	$ 12.00	/each
Charger, AC, multi unit	$ 26.00	/each
Charger, DC, Vehicular	$ NA	/each

Item 8 - Programmer or programming software and cable to be used with above radio. (shall operate on IBM Compatible PC)

Model CT-42A $ 55.30 /each

Item 9.- Battery pack, to be use with alkaline batteries, for above portable.

Model PBA-25A $ 14.00 /each

Item 10.- Belt Clip

Model CLIP-800 $ 4.20 /each

Item 11.- Digital CTCSS

Model INCLUDED $ 0 /each

Item 12 - Charger, D.C., vehicular, with mobile microphone, and speaker. All connections for speaker and antenna must be automatic.

Model NA $ _____ /each

Item 13 - Leather Carrying Case for above portable.

Model LCC-410 $ 22.40 /each

LOT 36
MOBILE RADIOS - DUAL BAND – VHF-LO/VHF-HI
LOW POWER - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (30 MHz - 50 MHz)/VHF (150 - 170MHz) mobile trunk mount, minimum transmitter output power 100 watts (VHF)/45 watts (VHF). Shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Minimum spread between frequencies shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0005% (-30 to +60 C) minimum. Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit to be capable of both 30 and 15 KHz operation on VHF High Band. Unit to have control and power cables that are at least 17 feet in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. This dual band unit is two separate mobiles with a common control head. Unit shall meet or exceed the following specification (MIL-STD-810E) as described below:

MIL-STD-810E

Description	Method		Procedures
	High Temperature	501.3	I and II
	Low Temperature	502.3	I or II
	Temperature	503.3	I
	Solar Radiation	505.3	I or II
	Rain	506.3	I
	Humidity	507.3	II
	Salt Fog	509.3	I
	Dust	510.3	I
	Vibration	514.4	I Category 10
	Shock	516.4	I

Unit to be a Kenwood TK690-HBK (VHF)/TK-790-BK (VHF) or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX 6000L/5500VC $ 1,692.40 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3: Antenna, VHF High Band, 3dB gain antenna, similar to an ASP-446 or approved equal.

Model NMO150CK $ 29.73 /each

Item 4. Antenna, low band, base loaded, ASP448/ASPA448/ASPB448 or approved equal.

Model NMO34CK $ 31.68 /each

Item 5 Installation and checkout per FCC requirements, in standard trunk mounting.

Model RM INSTALL $ 195.00 /each

Item 6 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /yr.
2. Service Shop $ 72.00 /yr.

Award based on Items 1-6 $ 2,200.81

OPTIONAL FEATURES:

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10: Antenna, VHF High Band, 1/4-wave whip. Similar to ASP-7490 or approved equal.

Model NMOQW152K $ 11.56 /each

Item 11. Antenna, VHF Low Band, 1/4-wave whip. Similar to an ASPR632 or approved equal.

Model: MLB-3001 $ 82.11 /each

Item 12 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

Item 13 Unit to be equipped with a modulator that will allow the transmission of data.

Model: INCLUDED $ 0 /each

LOT 37
MOBILE RADIOS - DUAL BAND – VHF-LO/VHF-HI
HIGH POWER - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (30 - 50 MHz)/VHF (150 - 170MHz)trunk mount, minimum transmitter output power 100 watts (VHF)/100 watts (VHF). Shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Minimum spread between frequencies shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0005% (-30 to +60 C) minimum. Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit to be capable of both 30 and 15 KHz operation on VHF High Band. Unit to have control and power cables that are at least 17 feet in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. Unit shall meet or exceed the following specification (MIL-STD-810E) as described below. This dual band unit is two separate mobiles with a common control head.

MIL-STD-810E

Description	Method		Procedures
	High Temperature	501.3	I and II
	Low Temperature	502.3	I or II
	Temperature	503.3	I
	Solar Radiation	505.3	I or II
	Rain	506.3	I
	Humidity	507.3	II
	Salt Fog	509.3	I
	Dust	510.3	I
	Vibration	514.4	I Category 10
	Shock	516.4	I

Unit to be a Kenwood TK690HBK (VHF)/TK-790HBK (VHF) or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-6000L/6000VC $ 2,077.40 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, VHF High Band, 3dB gain antenna, similar to an ASP-446 or approved equal.

Model NM0150CK $ 29.73 /each

Item 4. Antenna, low band, base loaded, ASP448/ASPA448/ASPB448 or approved equal.

Model NM034CK $ 31.68 /each

Item 5 Installation and checkout per FCC requirements, in standard trunk mounting.

Model DRM INSTALL $ 195.00 /each

Item 6 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /yr.
2. Service Shop $ 72.00 /yr.

Award based on Items 1-6 $ 2,585.81

OPTIONAL FEATURES:

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10: Antenna, VHF Low Band, 1/4-wave whip. Similar to an ASPR632 or approved equal.

Model MLB-3001 $ 82.11 /each

Item 11. Antenna, VHF High Band, 1/4-wave whip. Similar to ASP-7490 or approved equal.

Model: NMOQW152K $ 11.56 /each

Item 12 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

Item 13 Unit to be equipped with a modulator that will allow the transmission of data.

Model: INCLUDED $ 0 /each

LOT 38
MOBILE RADIOS - DUAL BAND – VHF-LO/UHF
LOW POWER - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (30 MHz - 50 MHz)/UHF (450 - 470 MHz) mobile trunk mount, minimum transmitter output power 100 watts (VHF)/35 watts (UHF). Shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Minimum spread between frequencies shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0005% (-30 to +60 C) minimum. Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit to be capable of both 25 and 12.5 KHz operation on UHF. Unit to have control and power cables that are at least 17 feet in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. Unit shall meet or exceed the following specification (MIL-STD-810E) as described below. This dual band unit is two separate mobiles with a common control head.

MIL-STD-810E

Description	Method		Procedures
	High Temperature	501.3	I and II
	Low Temperature	502.3	I or II
	Temperature	503.3	I
	Solar Radiation	505.3	I or II
	Rain	506.3	I
	Humidity	507.3	II
	Salt Fog	509.3	I
	Dust	510.3	I
	Vibration	514.4	I Category 10
	Shock	516.4	I

Unit to be a Kenwood TK690HBK (VHF)/TK-890BK (UHF) or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-6000L/5500UD $ 1,702.40 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, UHF, 5 dB gain, ASP-7657 or approved equal.

Model NM0450CK $ 30.82 /each

Item 4 Antenna, low band, base loaded, ASP448/ASPA448/ASPB448 or approved equal.

Model: NM034CK $ 31.68 /each

Item 5 Installation and checkout per FCC requirements, in standard trunk mounting.

Model DRM INSTALL $ 195.00 /each

Item 6 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /yr.
2. Service Shop $ 72.00 /yr.

Award based on Items 1-6 $ 1,657.45

OPTIONAL FEATURES:

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10 Antenna, UHF, 1/4 wave, unity gain, similar ASP-7490 or approved equal.

Model NMOQN450K $ 10.87 /each

Item 11. Antenna, VHF Low Band, 1/4-wave whip. Similar to an ASPR632 or approved equal.

Model: MLB-3001 $ 82.11 /each

Item 12 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

Item 13 Unit to be equipped with a modulator that will allow the transmission of data.

Model: INCLUDED $ 0 /each

LOT 39
MOBILE RADIOS - DUAL BAND – VHF-LO/UHF
HIGH POWER - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (30 - 50 MHz)/UHF (450 - 470 MHz)trunk mount, minimum transmitter output power 100 watts (VHF)/75 watts (UHF). Shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Minimum spread between frequencies shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0005% (-30 to +60 C) minimum. Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit to be capable of both 25 and 12.5 KHz operation on UHF. Unit to have control and power cables that are at least 17 feet in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. Unit shall meet or exceed the following specification (MIL-STD-810E) as described below. This dual band unit is two separate mobiles with a common control head.

MIL-STD-810E

Description	Method		Procedures
	High Temperature	501.3	I and II
	Low Temperature	502.3	I or II
	Temperature	503.3	I
	Solar Radiation	505.3	I or II
	Rain	506.3	I
	Humidity	507.3	II
	Salt Fog	509.3	I
	Dust	510.3	I
	Vibration	514.4	I Category 10
	Shock	516.4	I

Unit to be a Kenwood TK690HBK (VHF)/TK-890HBK (UHF) or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-6000L/6000UD $ 2,107.40 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, UHF, 5 dB gain, ASP-7657 or approved equal.

Model NM0450CK $ 30.82 /each

Item 4. Antenna, low band, base loaded, ASP448/ASPA448/ASPB448 or approved equal.

Model: NM034CK $ 31.68 /each

Item 5 Installation and checkout per FCC requirements, in standard trunk mounting.

Model DRM INSTALL $ 195.00 /each

Item 6 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /yr.
2. Service Shop $ 72.00 /yr.

Award based on Items 1-6 $ 2,616.90

OPTIONAL FEATURES:

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10 Antenna, UHF, 1/4 wave, unity gain, similar ASP7490 or approved equal.

Model NMOQW450CK $ 10.87 /each

Item 11. Antenna, VHF Low Band, 1/4-wave whip. Similar to an ASPR632 or approved equal.

Model: MLB-3001 $ 82.11 /each

Item 12 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

Item 13 Unit to be equipped with a modulator that will allow the transmission of data.

Model: INCLUDED $ 0 /each

LOT 40
MOBILE RADIOS - DUAL BAND – VHF-HI/UHF
LOW POWER - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (150 - 170MHz)/UHF (450-470 MHz) mobile trunk mount, minimum transmitter output power 45 watts (VHF)/35 watts for (UHF). Shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Minimum spread between frequencies shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0005% (-30 to +60 C) minimum. Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit to be capable of both 25 and 12.5 KHz operation on UHF and 30 and 15 KHz operation on VHF. Unit to have control and power cables that are at least 17 feet in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. Unit shall meet the following specification (MIL-STD-810E). This dual band unit is two separate mobiles with a common control head.

MIL-STD-810E

Description	Method		Procedures
	High Temperature	501.3	I and II
	Low Temperature	502.3	I or II
	Temperature	503.3	I
	Solar Radiation	505.3	I or II
	Rain	506.3	I
	Humidity	507.3	II
	Salt Fog	509.3	I
	Dust	510.3	I
	Vibration	514.4	I Category 10
	Shock	516.4	I

Unit to be a Kenwood TK790BK (VHF)/TK-890BK (UHF) or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-5500VC/5500UD $ 1,218.23 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, UHF, 5 dB gain, ASP-7657 or approved equal.

Model NM0450CK $ 30.82 /each

Item 4. Antenna, VHF High Band, 3dB gain antenna, similar to an ASP-446 or approved equal.

Model NM0150CK $ 29.73 /each

Item 5 Installation and checkout per FCC requirements, in standard trunk mounting.

Model DRM INSTALL $ 195.00 /each

Item 6 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /yr.
2. Service Shop $ 72.00 /yr.

Award based on Items 1-6 $ 1,725.78

OPTIONAL FEATURES:

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10 Antenna, UHF, 1/4 wave, unity gain, similar ASP7490 or approved equal.

Model NMOQW450CK $ 10.87 /each

Item 11. Antenna, VHF High Band, 1/4-wave whip. Similar to ASP7490 or approved equal.

Model: NMOQW152K $ 11.56 /each

Item 12 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

Item 13 Unit to be equipped with a modulator that will allow the transmission of data.

Model: INCLUDED $ 0 /each

LOT 41
MOBILE RADIOS - DUAL BAND – VHF-HI/UHF
HIGH POWER - WIDE SPACED - TRUNK MOUNT
SPECIFICATION AND BID SHEET

Item 1 Radio, two-way VHF (150 - 170MHz)/UHF (450-470 MHz) mobile trunk mount, minimum transmitter output power 100 watts (VHF)/75 watts (UHF). Shall have a minimum of sixteen (16) operator selected "channels," each of which shall consist of a combination of one of sixteen radio frequencies and any combination of CTCSS frequencies or carrier only (no CTCSS). Minimum spread between frequencies shall be 20.0 megahertz transmit and 20.0 megahertz receive. Frequency stability on transmit and receive shall be ±0.0005% (-30 to +60 C) minimum. Purchase order to specify radio and CTCSS frequencies. Unit shall be capable of having the channel configuration programmed or reprogrammed as to radio and CTCSS tone frequency, in the field using an external programming device available from the successful bidder. There shall be no capability of such programming available to the operator or other unauthorized parties, either by external controls or other means. Radio shall be equipped with a device which disables the transmitter after a period of between 60 to 90 seconds and provides the operator with audible indication that disabling has occurred. Receiver shall have a minimum audio output of 10 watts at 5% distortion or less. Unit to be capable of both 25 and 12.5 KHz operation on UHF and 30 and 15 KHz operation on VHF. Unit to have control and power cables that are at least 17 feet in length. Unit shall have built into the circuitry some method of holding the programmed memory when the unit is disconnected from the vehicle battery. Unit shall meet or exceed the following specification (MIL-STD-810E) as described below. This dual band unit is two separate mobiles with a common control head.

MIL-STD-810E

Description	Method		Procedures
	High Temperature	501.3	I and II
	Low Temperature	502.3	I or II
	Temperature	503.3	I
	Solar Radiation	505.3	I or II
	Rain	506.3	I
	Humidity	507.3	II
	Salt Fog	509.3	I
	Dust	510.3	I
	Vibration	514.4	I Category 10
	Shock	516.4	I

Unit to be a Kenwood TK790HBK (VHF)/TK-890HBK (UHF) or approved equal.

State Manufacturer: VERTEX STANDARD

Model VX-6000VC/6000UD $ 1,939.90 /each

Required Additional Features:

Item 2 Scan, multi-channel (1) priority shall follow the channel selection, (2) a separate switch shall be provided to disable this scan function entirely and (3) channels to be scanned shall be individually selected by the operator.

Model INCLUDED $ 0 /each

Item 3 Antenna, UHF, 5 dB gain, ASP-7657 or approved equal.

Model NM0450CK $ 30.82 /each

Item 4. Antenna, VHF High Band, 3dB gain antenna, similar to an ASP-446 or approved equal.

Model NM0150CK $ 29.73 /each

Item 5 Installation and checkout per FCC requirements, in standard trunk mounting.

Model DRM INSTALL $ 195.00 /each

Item 6 Post-warranty Maintenance for one year parts and labor at:

1. Locality/Agency $ 180.00 /yr.
2. Service Shop $ 72.00 /yr.

Award based on Items 1-6 $ _____

OPTIONAL FEATURES:

Item 7 Microphone, mobile type, noise canceling. This is a substitution item. It will replace the existing microphone.

Model MH-53A7A $ 32.90 /each

Item 8 Microphone, mobile type, DTMF. This is a substitution item. It will replace the existing microphone.

Model: MH-53B7A $ 74.90 /each

Item 9 Digital CTCSS

Model: INCLUDED $ 0 /each

Item 10 Antenna, UHF, 1/4 wave, unity gain, similar ASPD7490 or approved equal.

Model NMOQW450CK $ 10.87 /each

Item 11. Antenna, VHF High Band, 1/4-wave whip. Similar to ASP7490 or approved equal.

Model: NMOQW150K $ 11.56 /each

Item 12 Microphone, Hang Up Bracket, to be used with the above mobile, this bracket will disable continuous tone control squelch (CTCSS) so the operator can monitor the frequency to be used.

Model: MICHUB $ 0 /each

Item 13 Unit to be equipped with a modulator that will allow the transmission of data.

Model: INCLUDED $ 0 /each

COMMONWEALTH OF VIRGINIA
VIRGINIA INFORMATION TECHNOLOGIES AGENCY (VITA)
SUPPLY CHAIN MANAGEMENT DIVISION
110 SOUTH 7TH STREET, SUITE 135
RICHMOND, VIRGINIA 23219-3931

November 23, 2005

IFB 2005-36
COVA WIRELESS COMMUNICATIONS – TWO-WAY RADIO
STATEWIDE CONTRACT IFB

Amendment #1

The Due Date for receipt of Bids has been revised as a result of this Amendment. The Due Date/Time is December 6, 2005, 2:00 PM ET. Bids will be publicly opened at 2:10 PM ET on the same day.

Reference: IFB Section "Instructions and General Requirements", *Instructions to Bidders,* Page 1 of 6, Item 1:

Delete Item 1 in its entirety and replace it with the following:

1. In order for a Bid to be considered, Bidder must either be the manufacturer of the equipment bid; or Bidder must be otherwise fully-qualified in all respects to fulfill the requirements of this IFB and meet all requirements herein, and submit with its Bid a letter from the manufacturer of the equipment bid, on the manufacturer's letterhead and signed by the manufacturer, certifying that Bidder is their representative with authority to designate service providers in the Commonwealth of Virginia.

Reference: IFB Section "Instructions and General Requirements", *General Requirements,* Subsection 1 "Specifications", Page 4 of 6, Item 1.2, first sentence:

Insert the following phrase between the words "Manufacturers" and "for":

> "or their representative pursuant to *Instructions to Bidders,* Item #1 on Page 1 of 6,"

Reference: IFB Section "Instructions and General Requirements", *General Requirements,* Subsection 1 "Specifications":

Add the following Item to this Subsection on Page 5 of 6:

1.17. Where floor type, floor mount or outdoor pole-mounted cabinets are specified in the "SPECIFICATION AND BID SHEETS", cabinets shall include a secure locking mechanism to facilitate the prevention of unauthorized access.

Reference: IFB Section "Contractual Terms and Conditions", Page C-3 of C-14, Item "Acceptance, Testing and Compliance with Specifications", first paragraph:

Insert the following sentence after the second sentence, which ends, "… (provided that the Authorized User, in its sole discretion, may Accept the same prior to expiration of the thirty (30) day period.)":

> "Upon request, the Authorized User shall provide written confirmation of Acceptance."

Reference: IFB Section "Contractual Terms and Conditions", Page C-5 of C-14, Item "Warranty", last paragraph, first sentence:

Replace the first sentence of the last paragraph with the following sentence:

> "All parts used under this agreement shall be new parts or refurbished parts certifiable as new."

Reference: IFB Section "Contractual Terms and Conditions", Page C-6 of C-14, Item "Contract Term", last sentence:

Replace the last sentence of this item, which begins "All open calls…", with the following sentence:

> "All outstanding orders, unexpired warranties and maintenance agreements, unresolved service/repair calls, and related documents shall survive the period of performance stated in this section until such time as all of same (executed prior to the expiration of this contract) have been completely closed."

Reference: IFB Section "SPECIFICATION AND BID SHEETS", Page 13 of 172, Lot 6 "RADIOS, TWO WAY LOW BAND, BASE STATION, TONE CONTROLLED, 70 WATTS, CONTINUOUS DUTY CYCLE":

Replace all instances of the phrase "100 watts" in this Lot with the phrase "70 watts".

Reference: IFB Section "SPECIFICATION AND BID SHEETS", Page 29 of 172, Lot 10 "MOBILE RADIOS - HIGH BAND - WIDE SPACED - FRONT MOUNT", Item 4:

Delete the word "trunk" from this item.

Reference: IFB Section "SPECIFICATION AND BID SHEETS", Page 33 of 172, Lot 11 "VEHICULAR REPEATER - HIGH BAND", Item C:

Delete Item C in its entirety.

Reference: IFB Section "SPECIFICATION AND BID SHEETS", Page 81 of 172, Lot 20 "MOBILE RADIOS - UHF - WIDE SPACED - FRONT MOUNT", Item 4:

Delete the word "trunk" from this item.

Reference: IFB Section "SPECIFICATION AND BID SHEETS", Page 134 of 172, Lot 29 "MOBILE RADIOS – 800 MHz - FRONT MOUNT – PROJECT 25/APCO 25 CAPABLE", Item 5:

Delete the word "trunk" from this item.

Reference: IFB Section "SPECIFICATION AND BID SHEETS", Page 136 of 172, Lot 30 "MOBILE RADIOS – 700/800 MHz - FRONT MOUNT – PROJECT 25/APCO 25 CAPABLE", Item 5:

Delete the word "trunk" from this item.

Reference: IFB Section "SPECIFICATION AND BID SHEETS", Lots 1, 8 and 18:

Replace the information in each of these three Lots in its entirety with the information on the following three pages, respectively:

LOT 1
RECEIVER, MONITOR, LOW BAND
SPECIFICATION AND BID SHEET

Radio, monitor, tone and voice, low band (30-50 MHz). Shall respond to standard EIA tone (1+1) sequential signaling. Purchase order to specify frequency. Purchase order to specify tone frequencies. Shall have a rechargeable battery/battery pack with an approximate 17-hour life; based on 2% receive duty cycle (EIA standard). Unit shall have a manual reset, alert/monitor switch, volume control, and holster and/or locking belt clip, or equivalent means to secure unit on users' person in a comfortable/appropriate and safe manner. Unit shall have the ability to be readily connected to an external antenna. This may be accomplished via a direct connection from the unit to the antenna, and/or via an AC battery Charger/external antenna accessory, and/or by an equivalent alternate means.

Monitor size shall be approximately 4.5 x 2.5 x 1.3", weight approximately 9 oz. Unit shall be a Motorola Minitor V, or approved equal.

State Manufacturer:_____

Model:_____ $_____ /each

Award based on Total for Lot 1 $_____

Optional Additional Features:

Item 2: AC battery Charger with an external antenna connection; or an approved similar accessory.

Model _____ $_____/each

Item 3: Direct connection interface/cable antenna accessory kit.

Model_____ $_____/each

LOT 8
RECEIVER, MONITOR, HIGH BAND
SPECIFICATION AND BID SHEET

Radio, monitor, tone and voice, High band (150-174 MHz). Shall respond to standard EIA tone (1+1) sequential signaling. Purchase order to specify frequency. Purchase order to specify tone frequencies. Shall have a rechargeable battery/battery pack with an approximate 17-hour life; based on 2% receive duty cycle (EIA standard). Unit shall have a manual reset, alert/monitor switch, volume control, and holster and/or locking belt clip, or equivalent means to secure unit on users' person in a comfortable/appropriate and safe manner. Unit shall have the ability to be readily connected to an external antenna. This may be accomplished via a direct connection from the unit to the antenna, and/or via an AC battery Charger/external antenna accessory, and/or by an equivalent alternate means.

Monitor size shall be approximately 4.5 x 2.5 x 1.3", weight approximately 9 oz. Unit shall be a Motorola Minitor V, or approved equal.

State Manufacturer:_____

Model:_____ $_____ /each

Award based on Total for Lot 8 $_____

Optional Additional Features:

Item 2: AC battery Charger with an external antenna connection; or an approved similar accessory.

Model _____ $_____/each

Item 3: Direct connection interface/cable antenna accessory kit.

Model_____ $_____/each

LOT 18
RECEIVER, MONITOR, UHF
SPECIFICATION AND BID SHEET

Radio, monitor, tone and voice, UHF band (450-470 MHz). Shall respond to standard EIA tone (1+1) sequential signaling. Purchase order to specify frequency. Purchase order to specify tone frequencies. Shall have a rechargeable battery/battery pack with an approximate 17-hour life; based on 2% receive duty cycle (EIA standard). Unit shall have a manual reset, alert/monitor switch, volume control, and holster and/or locking belt clip, or equivalent means to secure unit on users' person in a comfortable/appropriate and safe manner. Unit shall have the ability to be readily connected to an external antenna. This may be accomplished via a direct connection from the unit to the antenna, and/or via an AC battery Charger/external antenna accessory, and/or by an equivalent alternate means.

Monitor size shall be approximately 4.5 x 2.5 x 1.3", weight approximately 9 oz. Unit shall be a Motorola Minitor V, or approved equal.

State Manufacturer:_____

Model:_____ $_____ /each

Award based on Total for Lot 18 $_____

Optional Additional Features:

Item 2: AC battery Charger with an external antenna connection; or an approved similar accessory.

Model _____ $_____/each

Item 3: Direct connection interface/cable antenna accessory kit.

Model_____ $_____/each

By signing and returning this Amendment #1 with its Bid, Bidder acknowledges the changes incorporated herein. *Failure of Bidder to sign and return this Amendment to the VITA SPOC at the Issuing Office listed on the IFB cover page (Form 62) by the date and time specified as the Due Date/Time for Bids may result in its Bid being found non-responsive.*

Name of Company: PMC Associates Date: 12-1-05

Signature: [signature] Print: Philip M Casciano

Title: Pres Telephone: 732 888 9300

E-Mail Address: PhilC@Pmcreps.com Fax: 732 888 9388

INSTRUCTIONS TO BIDDERS

VITA encourages the participation of small, minority and women-owned businesses, and encourages prospective Contractors to establish strategic industry relationships with such firms to facilitate the goods or services required by this solicitation.

1. Only Bids from the manufacturer of the equipment bid shall be considered for award.
2. In order to be considered for selection, Bidders must submit a complete response to this IFB. All sealed bids shall be clearly marked on the outside cover or package with the name of Bidder, and the IFB number (2005-36). Bids must be received by the due date and time, at the address listed on the cover sheet, in order to be considered. Any Bids received in this office after this time will be rejected.
3. Bidders must include with their bids an electronic copy of the "IFB 2005-36 - COVA Wireless Communications - Two-way Radio Statewide Specs Form" Excel spreadsheet, which can be found at the web site where the solicitation is posted (www.eva.virginia.gov). *Failure to submit a completed Specs Form spreadsheet in the provided format, populated for each lot bid, may render your bid non-responsive and eliminate it from consideration.*
4. Please submit your original Bid plus two (2) complete copies, including the Specs Form spreadsheet (CD-ROM preferred) and any supporting documentation requested.
5. Bids shall be signed by an authorized representative of the bidding company. Failure to submit all information required may result in rejection by the Virginia Information Technologies Agency (VITA). VITA reserves the right to request any information it deems necessary for evaluation.
6. It is the Bidder's responsibility to inquire about and clarify any requirement of this IFB that is not clearly understood. All questions must be in writing by e-mail with subject line "Questions on IFB 2005-36" and must be received no later than 4:00 p.m. local time on 11/14/2005. No questions or inquiries will be accepted after this time. All questions must be addressed to the Single Point of Contact (SPOC) listed below:

   SPOC: Doug Leslie

   Email: doug.leslie@vita.virginia.gov
7. Bidder's attention is directed to the cover page, in reference to the providing of company information, including their Federal Identification Number (FIN).
8. The Commonwealth of Virginia operates an e-procurement web site at http://www.eva.virginia.gov. Bidders are encouraged to check this site regularly for any amendments that may be published subsequent to issuance of the bid.
9. Bidders are required to register with eVA (www.eva.virginia.gov). Bidder will not receive an award if not registered with eVA prior to award date.
10. Results of this IFB will not be given out by telephone. Any resulting Notice of Award will be made available on the eVA web site.
11. Bidders are advised to read and understand the attached Contractual Terms and Conditions.

12. Award(s), if made, will be made per lot to the responsive and responsible Bidder or Bidders with the lowest total cost for all required items in each individual lot on the associated Specification and Bid Sheets. VITA reserves the right to make up to five (5) awards for each lot. VITA reserves the right to reject any and all bids in whole or in part and to waive any informality in the bids.
13. All pricing shall include shipping FOB Destination to any point within the Commonwealth of Virginia, and shall include delivery of all manuals and other incidentals necessary for proper operation.
14. VITA, at its sole discretion, *may not accept or consider any proposal from any Bidder who is not current with its Industrial Funding Adjustment (IFA) payments* as of the date of the award.

ADDITIONAL BIDDER INSTRUCTIONS

1. In order to be considered for contract award, Bidders shall bid on one or more Lots, and must submit current product literature for each product offered.
2. Bidders must fill in all required blanks on the "SPECIFICATION AND BID SHEET" for each Lot for which Bidders are submitting Bids. All blanks, except those classified as "Optional Features," are required to be populated, including "Required Additional Features." If you are offering an item at no charge, enter a zero (0) or $0.
3. Bidders shall clearly and specifically identify the product(s) being offered for each Lot and enclose with the bid the complete and detailed descriptive literature, catalog cuts and specifications in hard copy (three [3] copies) and electronic format to enable the Commonwealth to determine if the product(s) offered meet(s) the specifications and requirements of this solicitation. FAILURE TO DO SO MAY CAUSE THE BID TO BE CONSIDERED NON-RESPONSIVE. All information should be organized in the order in which it is addressed in the IFB and clearly labeled, with the hard copies preferably being in binders with tabs identifying the IFB sections or Lot Numbers addressed.
4. The Commonwealth reserves the right to request any bidder to submit information missing from its bid, to clarify the bid and to submit any additional information which the Commonwealth deems necessary in order to evaluate the bidder's offer.
5. Bidder and service facilities shall grant permission for a representative of the Commonwealth to inspect their facilities at any time during normal business hours both prior to and after award.
6. Any bid in response to this solicitation shall be valid for 90 days. At the end of the 90 days the bid may be withdrawn at the written request of the Bidder. If the bid is not withdrawn at that time it remains in effect until an award is made or the solicitation is canceled.

VITA reserves the right to conduct any test it may deem advisable and to make all evaluations necessary. VITA also reserves the right to reject any or all bids, in whole or in part, to waive informalities and to delete items prior to making an award or awards, whenever it is deemed in the sole opinion of VITA to be in its best interest.

MANDATORY PRE-BID CONFERENCE

1. A mandatory pre-bid conference will be held at 10:00 AM ET on November 10, 2005, in the VITA offices at 110 South 7th Street, Richmond, VA, 23219, unless VITA's offices in Richmond are officially opening late or officially closed for business. The purpose of this conference is to allow potential bidders an opportunity to present questions and obtain clarification relative to any facet of this solicitation.
2. If VITA's offices in Richmond are officially opening late or closed for business for the day on the date on which the pre-bid conference is scheduled because of inclement weather or other occurrence beyond VITA's control, the mandatory pre-bid conference will be held at 10:00 AM ET on November 15, 2005, in the same location.
3. All pre-bid questions must be in writing. The cut off date for submitting questions is November 7, 2005. No questions or inquiries will be accepted after this time.
4. In order to attend the pre-bid conference, VITA requests that all bidders submit their intent to attend via e-mail to doug.leslie@vita.virginia.gov with subject line "IFB 2005-36 Pre-bid Conference" by November 7, 2005. Please provide the name of your company and the names of all individuals planning to attend. Failure to do so may jeopardize your ability to pass through building security and to attend the conference.
5. Failure to attend the pre-bid conference will result in your bid being found non-responsive.

PURPOSE

The Virginia Information Technologies Agency (VITA) desires to establish a statewide term contract with one or more manufacturers to provide, on an as-needed basis, radio and telecommunications equipment, accessories, batteries and antennas (but not parts, kits or test equipment) for the Commonwealth of Virginia (COV) and all "Authorized Users". "Authorized Users" includes any public body as defined by §2.2-4301 (5) of the Code of Virginia, and all other public bodies as referenced in §2.2-4304 of the Code of Virginia, herein after referred to as "Authorized Users". Use of the contract will be mandatory for COV state agencies and institutions and optional for all other Authorized Users. The Commonwealth reserves the right to authorize exceptions to the use of the mandatory contract on a case by case basis and to conduct separate procurements whenever it is deemed to be in the best interest of the Commonwealth.

GENERAL REQUIREMENTS

1. SPECIFICATIONS

1.1. Equipment, antennas and accessories: This IFB includes Low Band, High Band, UHF and 800 MHz radio and telecommunications equipment, as described in the "SPECIFICATION AND BID SHEETS".

1.2. Bids will be considered from Radio Manufacturers for Bendix/King, E.F. Johnson, Kenwood, M/A-COM, Motorola, RELM, Tait, Vertex, or equals. VITA, in its sole discretion, shall determine whether a brand bid is the equal of that specified.

1.3. Purchases from this IFB will be for initial start up and complete replacement of existing equipment, and any additions to or replacements of same, during the contract period.

1.4. All products furnished shall be new, unused and in current production.

1.5. Contractor shall provide with each piece of equipment a user/operator manual in hard copy format at no charge.

1.6. Contractor shall furnish the Authorized User with a maintenance manual with wiring diagrams and parts and accessories list upon request at no charge for any piece of equipment ordered. For any item of which a given Authorized User has purchased ten (10) or more, Contractor shall provide a maintenance manual with wiring diagrams and parts and accessories list at no charge upon delivery of the order. CD-ROM format is preferred.

1.7. Contractor shall provide to VITA all current maintenance manuals for all products available on any contract(s) awarded as a result of this IFB, including addenda sheets and notices, in CD-ROM format throughout the term of the contract. These items shall be sent to the following individuals or their designee:

Mr. Paul Hoppes or Mr. David Warner
Virginia Information Technologies Agency
ATTN: Communications Engineer Manager
110 S. 7th St., 1st Floor
Richmond, VA 23219

The maintenance manuals shall be kept up-to-date with each addendum sent to the above address.

1.8. Contractor shall provide to VITA (at the address above) all service bulletins for all items available on the contract throughout the term of the contract.

1.9. Contractor shall provide to VITA one (1) copy or set of all programming software, cables, required interfaces, and all accessories required for radio programming, throughout the term of the contract at no charge. Contractor shall continue to provide to VITA all programming software, hardware and firmware updates while any related radio remains on contract. Contractor will not be held accountable for programming equipment misuse or repair, except as provided for in the applicable warranty.

1.10. If a contract item is discontinued or otherwise unavailable, Contractor shall offer a comparable model, approved by the designated VITA Contract Manager as being materially equivalent in capabilities, features, functions, and physical dimensions, at a price not to exceed that of the discontinued or unavailable model prior to discontinuation.

1.11. Contractor shall make available new replacement parts for repair of all equipment on this contract. All parts for the equipment furnished must be available for a period of at least five (5) years from the date of contract termination. All parts used in the repair

of radio equipment furnished under this contract must be the exact replacement part specified and supplied by the manufacturer. Any exception necessary because of part unavailability or other unusual situation must have prior approval of the VITA radio engineer (or designee) in the case of COV state agencies and institutions, or the purchaser in the case of other Authorized Users. It is preferred that new or approved replacement parts be available for all equipment for at least five (5) years from the date such equipment becomes outdated, obsolete, discontinued or superseded.

1.12. Delivery of all requested contract items shall be made within 60 calendar days after receipt of a valid purchase order referencing any contract awarded as a result of this solicitation. Contractor shall carry an adequate stock of equipment to ensure such delivery for the duration of the contract. State your earliest firm delivery date as follows: ___14__Days After Receipt of Order (ARO).

1.13. When requested by the Authorized User on a valid order, equipment purchased shall be installed by the Contractor at the installation price bid not later than 60 days after requested, as mutually agreed upon by Contractor and Authorized User. Contractor shall provide product demonstrations, when requested, at no additional charge.

1.14. At a minimum the Contractor shall provide a warranty/maintenance on all products for a period of one (1) year or the manufacturer's warranty length, whichever is greater. Warranty shall begin on date of acceptance by the Authorized User. The Contractor shall repair or replace all equipment returned for repair within seven (7) days of receipt. For on-site warranty, the Contractor guarantees that the user will not be out of service for more than 24 hours. The vendor may replace, repair or loan the end-user similar equipment to meet this requirement.

1.15. The Contractor shall provide necessary preventive maintenance, required testing and inspection, calibration and/or other work necessary to maintain the equipment in operational condition during the warranty period.

1.16. The bid price shall be for complete installation ready for the Authorized User's use, and shall include all applicable freight and installation charges and the Industrial Funding Adjustment payment. Extra charges will NOT be allowed unless otherwise noted in the associated "Specification and Bid Sheet."

2. TEST SAMPLES

2.1. Upon request from VITA, Bidder shall submit test samples for any lot bid within ten (10) calendar days. FAILURE ON THE PART OF THE BIDDER TO PROVIDE SUCH SAMPLES WITHIN THE SPECIFIED TIME FRAME MAY BE CAUSE FOR VITA TO CONSIDER THE BID AS NON-RESPONSIVE.

2.2. Bid samples shall be an exact and true representative sample of the actual material offered. Each bid sample shall be properly tagged or labeled with the name of the Bidder/manufacturer, the bid opening date, the Lot number for which it is submitted and the specific item number, if identified in the Lot. Bid samples shall be provided at no cost to the Commonwealth. FAILURE ON THE PART OF THE BIDDER TO COMPLY WITH THESE INSTRUCTIONS MAY BE CAUSE TO CONSIDER THE BID AS NON-RESPONSIVE.

2.3. VITA will return any bid samples submitted no more than 30 days after a contract is awarded for the corresponding lot(s).

3. LOCATIONS

3.1. Name of Manufacturer and Shipping Point: Each Bidder shall supply in the space below the name and address of the manufacturer of each item offered and the shipping point. If you need more space, you may include the information in an attachment and reference its exact location here:

Lot/Item Number(s): SEE ATTACHED.

Manufacturer: _____

Address: _____

Shipping point: _____

3.2. Each Bidder shall have an organized network of franchised service providers strategically located throughout the Commonwealth of Virginia. Two-way radio service must be the primary business of these providers with qualified technicians either licensed by FCC, APCO or equal as determined by VITA in its sole discretion. Each Bidder shall indicate the names, addresses and telephone numbers of the service providers and local Virginia representative(s) that would provide service under any contract resulting from this IFB. If bidding on an item that includes service and installation, Bidder shall indicate the names, addresses and telephone numbers of their service providers within the Commonwealth of Virginia.

3.3. These service providers must provide warranty backup and daily routine maintenance. Service providers must be capable of "system" maintenance as well as hardware maintenance.

3.4. Service providers must be backed by the manufacturer with a complete line of OEM parts.

3.5. Each Bidder must demonstrate, upon request, to the Commonwealth of Virginia that their service personnel are being consistently trained in the function and maintenance of all new products as well as standard products by providing updates of personnel certification on these products.

SOLICITATION INSTRUCTIONS

REV. 10/31/05

1. EXPLANATION TO BIDDERS:

Any explanation desired by a bidder regarding this solicitation/invitation for bid must be requested in writing and with sufficient time allowed for a reply to reach the bidder before the submission of their bids. PRIOR TO SUBMISSION OF A BID, BIDDERS ARE REQUIRED TO READ THESE INSTRUCTIONS, REVIEW THE SCHEDULE, READ ALL TERMS AND CONDITIONS AND CHECK THE DGS/DPS EVA WEB SITE WWW.EVA.VIRGINIA.GOV FOR ANY AMENDMENTS OR CHANGES. THIS SOLICITATION IS SUBJECT TO THE PROVISIONS OF THE VIRGINIA PUBLIC PROCUREMENT ACT (VPPA). Any interpretation required by the Commonwealth will be in the form of an amendment to the solicitation; SEE PARAGRAPH 9 BELOW. Oral explanations or instructions given before the award of the Contract will not be binding.

2. PREPARATION OF SOLICITATION

A. Bids shall be submitted on the forms furnished, and must bear an original signature by an individual authorized to bind the company submitting the bid. If erasures or other changes appear on the form, each erasure or change must be initialed by the person signing the bid. Telegraphic or facsimile bids will not be considered. Bidders may not submit multiple bids in a single envelope.

B. Bidders are required to enter their Federal Identification Number [FIN] in the space provided on Page 1, VITA Form 62. Failure to enter a number in the space provided or to provide a correct FIN number may delay award or result in VITA determining that the bidder is not registered to conduct business with VITA. It is the bidder's responsibility to provide the correct FIN number and to keep VITA updated as to any changes in bidder's status.

C. The bid form may provide for submission of a price or prices for one or more items. All prices shall be entered in the schedule, VITA Form 62, or in the attachment provided for pricing. Where the bid form explicitly requires that the bidder bid on all items (e.g., an all or none requirement), failure to do so will disqualify the bid. When submission of a price on all items is not required, bidder should insert the words "no bid" in the space provided for any item on which no price is submitted.

D. Additional bids may be submitted, when in the bidder's judgment they can provide more than one solution which meets the required specifications of the procurement. Additional bids shall be submitted on either a duplicate copy of the bid document or on plain paper and shall be clearly identified with the words "ADDITIONAL BID" written or printed on the face of each additional bid. Additional bids shall not be considered unless detailed specifications or descriptions sufficient to establish quality, utility and merit accompany the bid.

   BIDDERS SUBMITTING ADDITIONAL BIDS ARE REMINDED THAT THE TERMS AND CONDITIONS WHICH APPLY TO THE ORIGINAL BID SHALL ALSO APPLY TO ANY ADDITIONAL BID AND ANY MODIFICATION TO TERMS AND CONDITIONS OF A SOLICITATION OR THE ADDITION OF RESTRICTIVE PROVISIONS BY A BIDDER SHALL BE CAUSE FOR REJECTION OF THE BID.

E. Modification of bids already submitted will be considered if received at the office designated in the invitation for bids before the time set for opening of bids.

3. SUBMISSION OF BIDS

TO BE CONSIDERED, THE BID MUST BE RECEIVED AT THE ADDRESS GIVEN IN THE SOLICITATION ON OR BEFORE THE DATE AND HOUR DESIGNATED. Bidders must pay particular attention to ensure that the bid is properly addressed. The Commonwealth is not responsible if the bid is not properly addressed. The Commonwealth is not responsible if the bid does not reach the destination specified by the date and time identified

on page 1 of the Solicitation. Sealed bids received after the date and hour identified on page 1 of the solicitation are automatically disqualified, and will not be considered. All bids must be sealed, marked and addressed, to the address shown on page 1 of the Solicitation, and marked on the outside of the bidder's envelope as in the example below. Failure to do so may result in a premature opening of, or a failure to open, the bid.

From: Name of Bidder
Street or Box Number
City, State, Zip Code
Due Date Time
IFB No. 2005-36

4. LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWALS OF BIDS

A. Any bids received at the office designated as the Issuing Office on page 1 of the Solicitation after the exact time specified for receipt will not be considered for award.

B. A bid may be amended and/or withdrawn by a bidder if the office issuing the bid receives the request in writing before the date and hour set forth in the bid form. The request must be signed by a person authorized to represent the person or firm that submitted the bid. Submission of a subsequent bid shall normally constitute the withdrawal of any prior bid submitted by the same bidder on the same IFB.

5. PUBLIC OPENING OF BIDS

Bids will be publicly opened at the time and date specified on page 1 of the Solicitation document. Bids will not normally be evaluated at the bid opening meeting. All bids will be opened at the location shown on page 1 of the solicitation.

6. SOLICITATION TERMS AND CONDITIONS

The terms and conditions contained in this solicitation are considered mandatory and are the only terms and conditions governing transactions under any Contract awarded as a result of this solicitation.

If the bidder includes additional terms and conditions on pre-printed marketing sheets, pre-printed catalogues, or other pre-printed materials, then it is understood that those terms and conditions are of no consequence to and will not be included in any resulting Contract.

Any other modification, addition, clarification, or change to the mandatory terms and conditions by the bidder shall cause the bid to be rejected.

7. AWARD OF CONTRACT

Bids shall be evaluated and the responsive and responsible bidder(s) offering the lowest price(s) for each lot will be awarded Contract(s). The Commonwealth reserves the right to reject any and all bids in whole or in part and to waive any informality in the bids.

8. AWARD NOTICES

Upon the completion of evaluation, the Commonwealth will post a NOTICE OF AWARD (NOA). All award notices will be posted on the DGS/DPS eVA web site (www.eva.virginia.gov).

TELEPHONIC REQUESTS FOR BID RESULTS WILL NOT BE HONORED.

9. AMENDMENT OF SOLICITATION

Any amendment or change to this solicitation will be issued in writing and will identify the changes to be made in the bid. All amendments will be posted to the DGS/DPS eVA web site (www.eva.virginia.gov).

If the bid opening date is extended, the new date and time will be clearly shown on the face of the amendment.

Bidders will be required to sign and return a copy of the amendment with their bid to indicate that they have received the document and are aware of the changes made.

10. ANTI-COLLUSION CERTIFICATION

By Bidder's signature on the face of this bid, Bidder certifies that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same equipment, software, or services, and is in all respects fair and without collusion or fraud. Bidder understands collusive bidding is a violation of the Virginia Governmental Frauds Act and Federal Law and can result in fines, prison sentences, and civil damage awards. Bidder agrees to abide by all conditions of this bid and certifies that he or she is authorized to sign this bid for the bidder's firm.

11. DEMONSTRATIONS

The Commonwealth reserves the right to require the Bidder to demonstrate to the satisfaction of the Commonwealth, that the products offered will perform in a completely acceptable manner and to meet or exceed the specifications referenced in the solicitation. The demonstration site and time is subject to agreement between the Commonwealth and Bidder

12. PROTESTS OF AWARDS

All protests of awards shall be conducted in accordance with the provisions of the VPPA and VITA's Alternative Dispute Resolution procedure.

13. CONTRACT

Any Contract which is awarded as a result of this solicitation, offer and award shall be between VITA and the Contractor. No other agency, institution or public body may negotiate in any way with the vendor concerning the items identified in the schedule or any terms and conditions of the Contract. All problems associated with the resulting Contract shall be brought to the attention of the VITA authorized representative.

Specifications - Any comments or questions concerning the specifications, terms and conditions or any note contained in this solicitation shall be submitted, in writing, to the issuing office (See VITA Form #62).

14. TRADE SECRETS OR PROPRIETARY INFORMATION

Trade secrets or proprietary information submitted by a bidder in connection with a procurement transaction shall not be subject to public disclosure under the Virginia Freedom of Information Act; however, the bidder must invoke the protections of Code of Virginia, Section 2.2-4342, prior to or upon submission of the data or other materials, and must identify the data or other materials to be protected and state the reason why protection is necessary. The proprietary or trade secret material submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secret or proprietary information. The classification of an entire bid document, line item prices and/or total bid prices as proprietary or trade secrets is not acceptable and will result in rejection of the bid.

15. ALTERNATIVE DISPUTE RESOLUTION

By signing and submitting a bid under this solicitation, the bidder agrees that should it desire to appeal a protest decision of an award resulting from this solicitation, it agrees to submit such appeal to VITA's alternative dispute resolution procedures. Such use of VITA's alternative dispute resolution procedures shall be concurrent with and not in lieu of the bidder's other statutory protest appeals outlined in §§2.2-4364 and 4365 of the Code of Virginia.

CONTRACTUAL TERMS and CONDITIONS

SCOPE OF CONTRACT

The following paragraphs contain the contractual terms and conditions which shall govern the sale of *radio and telecommunications equipment and antennas and accessory items* (Hardware or Equipment or Product) and Services identified in this Contract, from the Contractor identified on the cover page of this contract. All Hardware includes any software or firmware inherent to its operation. This Contract or Agreement between the Commonwealth of Virginia, hereinafter referred to as "Commonwealth" or "State" or "VITA" (Virginia Information Technologies Agency) and the Contractor is established on the behalf of, and may be used by, Agencies, Institutions, and other public bodies as defined in §2.2-4301 of the Virginia Public Procurement Act ("VPPA"), hereinafter referred to as "Authorized Users".

The functional and technical requirements of the Equipment and Services to be acquired are described in detail in Invitation for Bids 2005-36.

INCORPORATED CONTRACTUAL PROVISIONS

The contractual provisions at the following URL are statutorily mandated provisions that are hereby incorporated by reference, including the contractual claims provision §2.2-4363 of the Code of Virginia: http://www.vita.virginia.gov/procurement/documents/terms_05-06sw.pdf.

ORDERS

Contractor is required to accept any order placed through the eVA electronic procurement website portal (http://www.eva.state.va.us). eVA is the Commonwealth of Virginia's total electronic procurement solution. State agencies, as defined in §2.2-2006 of the Code of Virginia, shall order through eVA. All other Authorized Users are encouraged to order through eVA, but may order through the following means:

i). Purchase Order (PO): An official PO form issued by an Authorized User.

ii). Any order/payment transaction processed through the Commonwealth of Virginia's contract with American Express (AMEX). Each order must not exceed $5,000, or the then-current charge card limit.

iii). Any other order/payment charge or credit card process, such as AMEX, MASTERCARD, or VISA under contract for use by an Authorized User.

This ordering authority is limited to issuing orders for the Equipment and Services available under this Contract. Under no circumstances shall any Authorized User have the authority to modify this Contract.

TRANSPORTATION AND PACKAGING

All contract prices are FOB Destination. All shipments to the Authorized User's site(s) shall be made at the Contractor's expense. The Contractor shall make all arrangements for transportation and shall notify the Authorized User upon shipment. Except as otherwise specified herein, standard commercial packaging, packing and shipping containers shall be used. All shipping containers shall be legibly marked or labeled on the outside with purchase order number, commodity description, and quantity.

INSTALLATION

a. The Contractor shall deliver/install the requested Equipment or Services ready for use by the installation date (day, month, year) identified as required in the General Requirements, not to exceed 60 days ARO.

b. Any amendment by VITA to this Contract or any part thereof, may require the establishment of a new mutually agreed to required delivery date. VITA or any Authorized User may delay the installation date by notifying the Contractor at least ten (10) days before the required installation date.

c. If the Equipment, software or services is not delivered/installed within the time specified in the Schedule, the Commonwealth reserves the right to cancel the award of this Contract and/or terminate this Contract for default without further obligation, and award the solicitation to the next responsive and responsible bidder.

d. Neither the Contractor nor the Authorized User shall be responsible for delays resulting from acts beyond the control of each party. These include, but are not limited to, acts of God, riots, acts of war, fire, earthquakes, epidemics, or disasters.

NEW EQUIPMENT AND SUBSTITUTE EQUIPMENT

Unless otherwise requested in the specifications, all equipment furnished under this Contract shall be new and in current production.

During the term of this Contract, the Contractor is not authorized to substitute any item for that Equipment identified in the Schedule without the written permission of the VITA contract manager. Violation of this condition shall be considered grounds for termination of the Contract.

SITE PREPARATION

a. Equipment environmental specifications, if required, for the equipment to be delivered under this Contract shall be furnished in writing by the Contractor upon award. These specifications shall be in such detail to ensure that the equipment to be installed shall operate efficiently from the point of view of environment.

b. The Authorized User shall prepare the site at its own expense and in accordance with the equipment environmental specifications provided by the Contractor.

FAILURE TO DELIVER

In the event the Contractor fails for any reason to deliver in a timely manner or according to Contract terms the items set forth in the Schedule, the Authorized User, at its own discretion, may give Contractor oral or written notice of such breach. Once notice by the Authorized User is sent or given, the Authorized User may immediately procure the items from another source. Once the Authorized User has effected a purchase from an alternate source (in accordance with the Virginia Public Procurement Act) the parties agree that the Authorized User may charge-back Contractor, in which case Contractor agrees to reimburse the Authorized User for any difference in cost between the original Contract price and the Authorized User's costs to cover from the alternate source. In no event shall the Authorized User be held to pay Contractor any costs incurred by Contractor, including but not limited to ordering, marketing, manufacturing, or delivering the item(s) which are subject of the Authorized User's notice of breach. This remedy is in addition to and not in lieu of any other remedy the Authorized User or VITA may have under this agreement and the laws of the Commonwealth of Virginia.

ACCEPTANCE, TESTING AND COMPLIANCE WITH SPECIFICATIONS

All materials, Equipment and Services are subject to inspection and testing by the Authorized User and any that does not meet or exceed the specifications or other requirements of the Contract may be rejected. The Authorized User shall be given thirty (30) days from the completion of installation by the Contractor (or thirty (30) days after delivery if customer installed) to test, evaluate and accept the materials, Equipment and Services delivered or furnished under this Contract (provided that the Authorized User, in its sole discretion, may Accept the same prior to expiration of the thirty (30) day period). If the Contractor's materials, Equipment or Services fail to meet the Contract specifications or other requirements, including the specifications of the brand name, or those required by the Contractor's own technical documentation, then the same may be rejected and returned to the Contractor. The Authorized User may require a replacement to be provided or may avail itself of the remedies for breach.

Acceptance shall be effective for the purpose of determining title to that which is delivered and for making payment, however, acceptance by the Authorized User following testing and evaluation during the thirty (30) day period shall not be conclusive that the materials, Equipment or Services conform in all respects to the Contract specifications and other requirements. In the event that nonconformance therewith is discovered by the Authorized User after acceptance, whether due to a latent defect or otherwise, the Contractor shall take whatever action is necessary to conform the materials, Equipment or Services to the Contract specifications and other requirements, including but not limited to modification or replacement of the same. The Contractor's failure to do so shall constitute breach of Contract for which the Commonwealth may exercise the remedies provided in the section herein entitled "Termination and Cancellation," in addition to and not in lieu of any other remedies available under Virginia law.

TITLE

Clear and unrestricted title to all Equipment purchased under this Contract shall pass to the Authorized User upon Acceptance.

RISK OF LOSS OR DAMAGE

The Authorized User is relieved from all risks of loss or damage until clear and unrestricted title is transferred to the Authorized User.

FIELD MODIFICATIONS AND/OR ENGINEERING CHANGES

Contractor sponsored modifications and/or engineering changes shall be made with the consent of the Authorized User at no additional charge for a period of one (1) year from the date of installation. The Authorized User reserves the right at all times to schedule these Contractor sponsored modifications and/or changes to minimize the impact on the daily operations of the Authorized User.

WARRANTY

The Contractor is required to provide two types of Warranty Service. For all Handheld and Mobile Equipment complete with sundries and accessories, the Contractor shall provide Depot (return to vendor) Warranty services. For all other types of Equipment, the Contractor shall provide On-Site Warranty services.

a. For Handheld and Mobile Equipment:
Contractor shall provide depot warranty services (labor and parts) for a period of not less than twelve (12) months or such greater period as may be provided by the manufacturer's warranty, beginning on the date of acceptance, at no cost to the State. Contractor shall act as sole point of contact for all units repaired under warranty. The Authorized User shall send the Equipment to the Contractor, postage paid, and the Contractor shall repair or replace the Equipment and return it to the Authorized User, postage paid, within seven (7) days of receipt.

b. For all other Equipment - not Handheld or Mobile:
Contractor shall provide On-Site warranty (labor, travel and parts) for a period of not less than twelve (12) months or such greater period as may be provided by the manufacturer's warranty, beginning on the date of acceptance, at no cost to the Authorized User. Contractor shall act as sole point of contact for all units repaired under warranty. All warranty services shall be provided during the Principal Period of Maintenance which is hereby defined as 8 a.m. to 5 p.m. Monday through Friday, State holidays excluded, unless otherwise mutually agreed upon between an Authorized User and the Contractor for a particular circumstance. The Contractor shall respond to all requests for warranty service and repair or replace the Equipment to a restored operation within twenty-four (24) hours after notification that a failure has occurred.

Prior to the expiration of the warranty period, whenever Equipment is shipped for mechanical repair or replacement purposes, the Contractor shall bear all costs associated with returning the Equipment to the Contractor's repair facility. When repair of the Equipment is completed the Contractor shall bear all costs associated with returning the Equipment to the Authorized User's original point of shipment. Cost of shipping includes but is not limited to, costs of packing, transportation, rigging, drayage and insurance for

damage or loss. Contractor shall repair the Equipment or provide an interim replacement product, within 24 hours of notification that a malfunction exists. Any interim product(s) will be provided at no additional cost to Authorized User, until the original product is returned, in good working condition.

All parts used under this agreement shall be new and unused. Parts which have been replaced shall become the property of the Contractor.

POST-WARRANTY MAINTENANCE

The Contractor is required to provide 12 months of Post-warranty Maintenance, upon receipt of a valid Order not less than 30 days prior to the expiration of the then-current Warranty or Maintenance period, at the prices identified in each of the applicable Lots, throughout the term of the Contract. Unless otherwise specified in the applicable Lot, Post-warranty Maintenance shall be provided under the same parameters as the initial Warranty.

MALFUNCTION REPORTS

The Contractor shall furnish a signed malfunction report to the user upon completion of each maintenance call. The report will list as a minimum all corrective action taken, parts used, and number of hours required to repair the equipment. The Contractor shall also maintain an electronic log of the following information for each maintenance call using a spreadsheet or database program: Serial number of malfunctioning equipment, FCC check, Parts used, Corrective action taken, Date of repair, and Number of hours required to repair the equipment. This electronic log shall be provided to VITA on a quarterly basis.

EQUIPMENT REPLACEMENT

In the event that the Equipment furnished under this Agreement experiences continual maintenance downtime while under maintenance and as a result the total system is inoperative in excess of 5% of total time available for daily service (e.g., 45 hours per week, 180 hours per month, 5% = 9 hours per month) for three consecutive calendar months, the Authorized User reserves the right to require the Contractor to replace the machine at no cost to the Authorized User. The replacement machine/device shall be installed no later than thirty (30) days after the Authorized User requests the Contractor to provide a replacement.

PRIME CONTRACTOR RESPONSIBILITY

If the Contractor's services offering include any goods or services to be supplied by another party, the Contractor agrees as follows:

a. The Contractor shall act as prime contractor and shall be the sole point of contact with regard to all obligations under this Agreement. The prime contractor shall be responsible for the acts and/or omissions of any subcontractor providing goods and services pursuant to this contract.

and

b. The Contractor hereby represents and warrants that the Contractor has made such other party aware of the proposed use and disposition of the other party's products or services, and that such other party has agreed in writing that it has no objection thereto.

SUPPLIES

Authorized charges do not include operational supplies (e.g. paper, tape, etc.) unless such supplies are specifically identified in the Schedule. All supplies used by the State shall conform to the Contractor's published specifications provided to State at time of equipment installation. The State reserves the right to acquire such supplies from any Contractor of its choice.

INVOICES

All invoices shall be rendered promptly after all Equipment covered by the invoice has been accepted. Invoices for Equipment maintenance or Extended Warranty shall be paid monthly in arrears. No invoice may include any costs other than those identified in the Schedule. Invoices shall provide at a minimum:

1. Type and description of the equipment or service;
2. Serial number, if any;
3. Charge for each item;
4. This Contract Number, and;
5. Contractor's Federal Identification Number (FIN)

CONTRACT TERM

The initial Term of this Contract shall be from the date of award and continue for two (2) years. The Commonwealth may renew the Contract for three (3) additional one (1) year periods under the terms and conditions of the original contract, at its sole discretion. Written notice of the Commonwealth's intention to renew will be given approximately 60 days prior to the expiration date of each contract period. All open calls and related documents shall survive the period of performance stated in this section until such time as all open calls (executed prior to the expiration of this contract) have been completely closed.

DEFAULT

In case of failure to deliver goods or services in accordance with the Contract terms and conditions, the Commonwealth, after due oral or written notice, may procure them from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies that the Commonwealth may have.

BREACH

The Contractor shall be deemed in breach of this Agreement if the Contractor (a) fails to make any Product or Service ready for acceptance testing by the specified delivery date; (b) repeatedly

fails to respond to requests for maintenance or other required service within the time limits set forth in this Agreement; (c) fails to comply with any other term of this Agreement and fails to cure such noncompliance within ten days (or such greater period as is acceptable to the Commonwealth) following Contractor's receipt of a Show Cause Notice identifying such noncompliance; or (d) fails to provide a written response to the Commonwealth's Show Cause Notice within ten days after receiving same.

The Contractor shall not be in breach of this Agreement if its default was due to causes beyond the reasonable control of, and occurred without any fault or negligence on the part of, both the Contractor and its subcontractors. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the Commonwealth in either its sovereign or Contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or unusually severe weather.

In the event of breach, in addition to any other remedies provided by law, the Commonwealth may cancel its obligations with respect to any or all unaccepted Products or Services. All costs for de-installation and return of Products shall be borne by the Contractor. In no event shall any failure by the Commonwealth to exercise any remedy available to it be construed as a waiver of or consent to any breach.

LIMITATION OF LIABILITY

To the maximum extent permitted by applicable law, the Contractor's liability under this contract for loss or damages to government property caused by the use of any defective or deficient product and/or services delivered under this Contract shall not exceed the greater of **$1,000,000** ***dollars or two times the total annual amount of this contract***. The Contractor will not be liable under this contract for any indirect, incidental, special or consequential damages, or damages from loss of profits, revenue, data or use of the supplies, equipment and/or services delivered under this contract. The above limitation of liability is per incident. The limitation and exclusion of damages in the foregoing sentences will not apply, however, to liability arising from: (a) personal injury or death; (b) defect or deficiency caused by willful misconduct or negligence on the part of the contractor; or (c) circumstances where the contract expressly provides a right to damages, indemnification or reimbursement.

QUALIFICATIONS OF BIDDERS

The Commonwealth may make such reasonable investigations as deemed proper and necessary to determine the ability of the bidder to perform the services/furnish the goods and the bidder shall furnish to the Commonwealth all such information and data for this purpose as may be requested. The Commonwealth reserves the right to inspect bidder's physical facilities prior to award to satisfy questions regarding the bidder's capabilities. The Commonwealth further reserves the right to reject any bid/proposal if the evidence submitted by, or investigations of, such bidder fails to satisfy the Commonwealth that such bidder is properly qualified to carry out the obligations of the Contract and to provide the services and/or furnish the goods contemplated therein.

PROPRIETARY INFORMATION, DUPLICATION AND DISCLOSURE

The Contractor acknowledges that in the course of performing services hereunder its personnel and subcontractors (if any) may have access to confidential information about the Commonwealth's business, operations, employees, customers. Contractor agrees that, except as directed by the Commonwealth , Contractor its employees and its subcontractors shall not at any time during or after the term of this Agreement (a) disclose any Confidential Information to any third party, (b) permit any third party to examine and/or make copies of any reports, documents or electronic data containing Confidential Information (whether they are prepared by Contractor or come into Contractor's possession or under Contractor's control by reason of Contractor's services) or (c) use any Confidential Information for any reason other than in the performance of services hereunder. Upon termination of this Agreement, Contractor shall return to the Commonwealth or at the Commonwealth's request destroy, all reports, documents, electronic data and other matter in Contractor's possession or under Contractor's control that contain or relate to Confidential Information. Contractor may disclose Confidential Information to such of its personnel as have a need therefore in the performance of their duties for the Commonwealth, provided, however, that Contractor shall inform all such personnel of their confidentiality obligations hereunder and shall use its absolute best efforts to ensure their compliance therewith. Contractor shall not be required to treat as confidential any information which:

(a) contractor can demonstrate was in its possession prior to execution of this Agreement

(b) has become generally available in the public domain without breach of this Agreement

(c) becomes lawfully available to Contractor from a source other than the Commonwealth

ANY RELEASE OF PROPRIETARY OR CONFIDENTIAL INFORMATION BY THE CONTRACTOR OR CONTRACTOR'S EMPLOYEES SHALL BE CONSIDERED A BREACH OF THIS AGREEMENT. THE CONTRACTOR SHALL NOT USE THE CONFIDENTIAL INFORMATION OF THE COMMONWEALTH FOR ITS OWN BENEFIT OR FOR THE BENEFIT OF ANY THIRD PARTY. THE PROVISIONS OF THIS SECTION SHALL SURVIVE ANY TERMINATION OF THIS AGREEMENT IN PERPETUITY.

CONTRACTOR ACCESS TO AUTHORIZED USER LOCATION/S

The Authorized User shall grant to Contractor personnel such access to the Authorized User's location as may be necessary or appropriate for Contractor to perform its obligations under this Agreement, subject to all security issues. For any individual location, the Contractor may be required to undergo additional security procedures that may include but not be limited to; records verification, submission of photos and or fingerprints, etc. The Contractor may at any time, for any Authorized User location, be required to undertake the execution and completion for each individual employee, the requirement of the submission of additional forms that the Authorized User would consider reasonable for security measures. These forms may include the individual employee's agreement that all Authorized User information that is garnered while at the User's site is confidential and proprietary. Any unauthorized release of proprietary information by the Contractor or Contractor's employees shall constitute a breach of this Agreement.

ASSIGNMENT

To the fullest extent permitted by law, the parties agree that Contractor's rights under this Contract shall not be assignable, in whole or in part, to any other party without the Virginia Information Technologies Agency's (VITA's) written consent, and that any purported assignment or transfer without such consent shall be null and void.

In the event VITA receives any notice from a third party claiming to be an assignee of any rights of the Contractor under this Contract, Contractor agrees that payment or other performance in respect of those rights shall not be due until at least thirty days after VITA's receipt of the notice required by the above paragraph or receipt of a similarly executed notice confirming the absence or revocation of the purported assignment. VITA' Supply Chain Management Division shall promptly notify the Contractor of any assignment notice it receives.

SOFTWARE/FIRMWARE

For any software/firmware that is included in any Equipment supplied by the Contractor, the Contractor represents and warrants that it is the sole owner of the software/firmware product or, if not the owner, has received all proper authorizations from the owner to license the software/firmware product, and has the full right and power to grant the rights contained in this Contract. Contractor further warrants and represents that the software/firmware product is of original development, and that the package and its use will not violate or infringe upon any patent, copyright, trade secret or other property right of any other person.

TERM OF LICENSE

For any software/firmware that is included in any Equipment supplied by the Contractor, the license(s) are supplied on a non-exclusive, irrevocable perpetual license basis and shall continue in perpetuity until canceled by the Authorized User or unless terminated in accordance with the provisions of this Contract. Notwithstanding the foregoing, the Authorized User may terminate the license at any time. All licenses granted to the Authorized User are for the use of the software/firmware product at the using agency's computing facilities (sites) and on the Equipment or for the purpose identified in the Schedule. This license is perpetual and in no event shall Contractor's remedies for any breach of this Agreement include the right to terminate any license or support services hereunder.

COMMONWEALTH'S RIGHTS TO SOFTWARE/FIRMWARE

Notwithstanding anything to the contrary in this Agreement, Authorized Users shall have:

a. Unlimited use of the software/firmware on the equipment for which it is acquired and any future upgrades of such equipment;

b. Use of such software/firmware with a backup system if the system(s) for which or with which it was acquired is for any reason inoperative, or during an emergency, or the performance of engineering changes or changes in features or model;

c. The right to use such software/firmware at any of Authorized User's installation to which the equipment may be transferred by the Authorized User;

d. The right to copy such software for safekeeping or backup purposes.

INVENTIONS AND COPYRIGHTS

The Contractor is prohibited from copyrighting any papers, reports, forms or other materials, and from obtaining any patent on any invention or other discovery resulting solely from its performance under the terms and conditions of this Contract.

PATENT/COPYRIGHT PROTECTION

Contractor, at its own expense, shall defend any suit brought against the Authorized User for the infringement of patents, copyrights or trade secrets enforceable in the United States if the claim of infringement is alleged to relate to or arise from the Contractor's or Authorized User's use of any equipment, software, materials or information prepared, developed or delivered in connection with performance of this Agreement. In such suit, Contractor shall indemnify the Authorized User, its agents, officers and employees for any loss, liability or expense incurred as a result of such suit.

The Authorized User shall notify the Contractor of such suit within a reasonable time after learning of it and shall give the Contractor the full right and opportunity to conduct the defense of the suit, subject however to the requirements of Section 2.2-510 and Section 2.2-514 of the Code of Virginia or any successor statute. If principles of governmental or public law are involved, the Authorized User may, at its option and expense, participate in the defense of the suit.

The Contractor shall not be required to indemnify the Authorized User for liability arising solely out of the Authorized User's own specifications or design or solely from the combination of equipment or software furnished hereunder with any equipment or software not supplied by the Contractor.

If any Equipment or Service becomes, or in the Contractor's opinion is likely to become, the subject of a claim of infringement, Contractor may, at its option, provide non-infringing substitutes that are satisfactory to the Authorized User, or at Contractor's option and expense, may obtain the right for the Authorized User to continue the use of such Equipment or Service.

If the use of such equipment or software by the Authorized User is prevented by permanent injunction or by Contractor's failure to procure the right for the Authorized User to continue using the software, the Contractor agrees to take back the infringing equipment, software, materials or information and refund the total amount the Authorized User has paid Contractor under this Agreement, less one half (1/2%) percent of the total paid for each month of use by the Authorized User. This obligation is in addition to the obligations cited in the first four subparagraphs above.

NON-APPROPRIATION

All funds for payment of equipment or services ordered under this Contract are subject to the availability of legislative appropriation for this purpose. In the event of non-appropriation of funds by the Legislature for the items under this Contract, the Commonwealth will terminate this Contract for those goods or services for which funds have not been appropriated. Written notice will be provided to the Contractor as soon as possible after legislative action is completed.

If any purchases are to be supported by federal funding, and such funding is not made available, the Commonwealth may terminate this Contract, or an Authorized User may terminate an order, for goods or services dependent on such federal funds without further obligation.

ENTIRE AGREEMENT

This Contract, the solicitation, bid response, solicitation instructions and all items specifically listed in the solicitation, and the notes in the solicitation constitute the entire agreement between the parties with respect to the subject matter of this Contract. All prior agreements, representations, negotiations and undertakings are hereby superseded with respect to Equipment and/or Services acquired by the Commonwealth under the terms and conditions of this Contract.

No other written documents regardless of form or content shall be executed by any agency or institution for equipment acquired under this Contract unless signed by the VITA authorized representative.

SPECIAL OR EDUCATIONAL DISCOUNTS

a. During the contract period, if the Contractor offers promotional discounts as a general practice or offers educational discounts to schools and institutions of higher education for items under this contract, with the result that those prices are lower than the prices available under this contract, then the promotional discounts shall be made available to all schools and institutions of higher education eligible to place orders against this contract.

b. The effective date for price changes/discounts will be the date that the lower prices/discounte are made available to the Contractor's customers generally or to schools and institutions of higher education as applicable.

c. If the Contractor does not sell to purchasers eligible to place orders against this state contract at the lower prices/discounts required by subsection (a) above, it shall owe a rebate to each affected purchaser which is equal to the amount of the overcharge. Said rebate shall be made within 30 days after the purchaser requests the rebate.

PRICE PROTECTION AND MOST FAVORED CUSTOMER

The Commonwealth shall not pay any costs above those specified in this Agreement or set forth on any Order or Attachment referencing this Agreement. Contractor agrees and warrants that for all products pursuant to this Contract, the prices are, and will continue to be at or below any prices offered to any “Authorized User” as defined herein.

If for any reason, during the term of this Agreement, and any renewals thereof, the Contractor enters into an Agreement with any Authorized User or any similarly situated COV governmental entity, for the same products or services offered under this Agreement which results in a price less than that provided under this Agreement, the Commonwealth shall receive an equivalent reduction in price for such products and services delivered to all Authorized Users under this Agreement from the date that the Contractor provided the lower price to the Authorized User. In the event the Commonwealth becomes aware of an Authorized User, who has received such lower prices, during the Term of this Agreement, VITA will notify the Contractor of such prices for such products and elect to make the more favorable prices applicable to the Commonwealth from the date those prices were available to the Authorized User.

PURCHASE PRICE AND PRICE PROTECTION

Prices for Products and Services shall not increase for a period of not less than two (2) years from the effective date of this Contract. Thereafter, any increase in price shall be limited to once per twelve (12) month period and shall not exceed the lesser of 3% or the annual increase in the Consumer Price Index for All Urban Consumers (CPI-U), Seasonally adjusted U.S. city average, all items less food, as published by the Bureau of Labor Statistics of the Department of Labor (http://www.bls.gov/), for the effective date of the increase compared with the same index one (1) year prior. Contractor shall demonstrate the added value for any requested price increase. Any change in price shall be submitted to VITA in writing in accordance with the above and shall not become effective for sixty (60) days thereafter. Semi-annually the prices for Products and Services shall be checked against CPI-U, as defined above, and the prices shall be appropriately reduced to ensure continued price competitiveness, if required.

CONTRACTUAL RECORDS

All Contractual books, records and other documents related to matters under this Contract shall be made available by Contractor to the Commonwealth and its designated agents for a period of three (3) years after final payment for purposes of audit and examination.

Contractual records are hereby further defined as this Contract and all delivery/purchase orders, invoices or correspondence directly relating to this agreement.

TERMINATION AND CANCELLATION

The Commonwealth shall have the unilateral right to terminate this Contract for Default, in the event that any one or more of the following events of default occur or continue during the term of this agreement, (a) the vendor shall fail to deliver the equipment or services required by this Contract or (b) the vendor shall repeatedly fail to respond to requests for maintenance or other services within the time limits set forth in the Contract or (c) the vendor shall breach any of the other terms set forth within this agreement or (d) the vendor shall fail to cure any breach after receiving a "Show Cause Notice" identifying the failure, and providing the vendor ten (10) days to cure the failure/nonperformance. If the vendor fails to answer the cure notice, or does not correct the deficiencies noted, the Commonwealth may immediately terminate the agreement for Default.

In such event, the Authorized User will only be liable for cost incurred to the date of termination. All costs of de-installation and return of the Equipment will be the vendor's expense.

The Commonwealth's failure to exercise its right to terminate for default under this provision shall not be construed as a waiver of its right to terminate, rescind or revoke this Contract in the event of any subsequent breach of any provisions of this agreement.

TERMINATION FOR CONVENIENCE

This Agreement may be terminated for any reason upon thirty (30) days written notice by VITA. There are no additional financial obligations to the Commonwealth upon termination for convenience.

CONTRACTUAL DISPUTES

In accordance with §2.2-4363 of the Code of Virginia, Contractual claims, whether for money or other relief, shall be submitted in writing to the public body from whom the relief is sought no later than sixty (60) days after final payment; however, written notice of the Contractor's intention to file such claim must be given to VITA at the time of the occurrence or beginning of the work upon which the claim is based. Pendency of claims shall not delay payment of amounts agreed due in the final payment. The purchasing agency shall render a final decision in writing within thirty (30) days after its receipt of the Contractor's written claim.

The Contractor may not invoke any available administrative procedure under §2.2-4365 of the Code of Virginia nor institute legal action prior to receipt of the purchasing agency's decision on the claim, unless that agency fails to render its decision within thirty (30) days. The decision of the purchasing agency shall be final and conclusive unless the Contractor, within six (6) months of the date of the final decision on the claim, invokes appropriate action under §2.2-4364, Code of Virginia or the administrative procedure authorized by §2.2-4365, Code of Virginia.

Upon request from the public body from whom the relief is sought, Contractor agrees to submit any and all contractual disputes arising from this Contract to VITA's alternative dispute resolution (ADR) procedures. Contractor may invoke VITA's ADR procedures at any time and concurrently with any other statutory remedies prescribed by the Code of Virginia.

In the event of any breach by VITA, Contractor's remedies shall be limited to claims for damages and Prompt Payment Act interest and, if available and warranted, equitable relief, all such claims to be processed pursuant to this Section. In no event shall Contractor's remedies include the right to terminate any license or support services hereunder.

ADVERTISING AND USE OF PROPRIETARY MARKS

Supplier shall not use any Authorized User's name or refer to any Authorized User, directly or indirectly, in any press release or formal advertisement without receiving prior written consent of such Authorized User. In no event may Supplier use a proprietary mark without receiving the prior written consent of the Authorized User.

SUPPLIER REPORT OF SALES AND INDUSTRIAL FUNDING ADJUSTMENT

The Contractor shall submit the "Supplier Monthly Report of Sales", a template for which will be provided to Contractor upon Contract award. The report shall be submitted in electronic form via electronic mail to the VITA Contract Administrator and the VITA Controller (email addresses to be provided upon award), by the 10th day of every month, reporting all sales to all Authorized Users for the preceding month. The report shall also show a cumulative record of all sales which shall carry forward for the duration of the Contract. The Supplier Monthly Report of Sales template (in MS Excel format) is required to be populated by the Contractor and provided to VITA.

The "Supplier Monthly Report of Sales" is a detailed record of all sales to Authorized Users pursuant to this Contract. Data submitted shall include Contract Number, Purchase Order Number/eVA number, PO Date, PO Amount, Customer, Name of Project or Description of Product/Service, and Federal ID Number.

At the same time as submitting the "Supplier Monthly Report of Sales", the Contractor shall submit Industrial Funding Adjustment payment in the form of a check or electronic funds disbursement made payable to the Controller of VITA, based on 2% of total sales under this Contract. Contractor shall include this Contract number, "report amounts" and "report period" with all Industrial Funding Adjustment payments. Contractor shall remit Industrial Funding Adjustment payments made via check to: VITA, ATTN: Controller; 110 South 7th Street, 3rd Floor; Richmond, VA 23219-3931. Failure to comply with reporting and payment requirements of this section shall result in default of Contract.

SMALL BUSINESS, WOMEN AND MINORITY-OWNED BUSINESSES

Where is practicable for any portion of the awarded contract to be subcontracted to other suppliers, the contractor shall give full and fair consideration so small businesses and women or minority-owned businesses. When such business has been subcontracted to such firms, the Contractor agrees to furnish the VITA Contract Administrator quarterly reports that include the following information: name of the SWAM-owned firm, contact name and phone number, total dollar amount subcontracted and type of product/service provided by the subcontracted firm.

TAXES - FEDERAL, STATE AND LOCAL

The Commonwealth of Virginia is exempt from Federal excise and all State and Local taxes. Such taxes shall not be included in Contract prices. Tax exemption certificates will be furnished if requested by the Contractor.

PMC Associates, Inc
Wireless Communications

8 Crown Plaza, Unit 106 Hazlet, NJ 07730
Phone: 732-888-9300 Fax: 732-739-3933
Website: www.pmcreps.com

GENERAL NOTES
IFB – 2005-36

- All Vertex Standard radios carry a three-year warranty. Parts and accessories are one year. Post-warranty maintenance shall commence after the third year on all Vertex lots.

- All other electronics and hardware items on this bid are covered by at least a two-year warranty. Post-warranty maintenance shall commence after the third year on all SCA lots.

- The VX-4000 Series radios have been replaced on this bid with the VX-5500. The VX-5500 Series is exactly the same in form and function as the VX-4000, but it offers voice companding and better technical specifications overall. Although the VX-5500 is more expensive than the VX-4000, the factory has agreed to offer the Commonwealth of Virginia similar pricing to the 4000.

- We have chosen to submit additional bids that feature new Vertex models that may be more appropriate for some communications applications for lots 11, 12, 16B, 21, 22 and 25B. They are denoted on the tabs as: Lot XX, alt.

- One complete set of service manuals, programming cables, technical bulletins and programming software will be sent to VITA at no charge for each lot awarded on the Contract.

PMC Associates, Inc
Wireless Communications

8 Crown Plaza, Unit 106 Hazlet, NJ 07730
Phone: 732-888-9300 Fax: 732-739-3933
Website: www.pmcreps.com

SHIPPING POINTS

Lots: 1, 8 and 18	SCA Corporation Paula Penn 6744 Melrose Ln. Oklahoma City, OK 73127 (800) 627-4722 Fax (405) 789-9370 paula@sca-incorp.com
Lots: 2, 3, 4, 9, 9A, 10, 16, 16A, 16B, 17, 19, 19A, 20, 20A, 25, 25A, 25B, 26, 36 – 41.	Vertex Standard USA Nori Romero 10900 Walker St. Cypress, CA 90630 (800) 283-7839 (434) 971-8139 (800) 477-9237 n.romero@vxstdusa.com
Lots: 4, 5, 6, 11, 12, 12B, 13, 14, 15, 21 – 24B	PMC Associates, Inc. Mike Casciano 8 Crown Plaza, Unit 106 Hazlet, NJ 07730 (732) 888-9300 (732) 739-3933 mikec@pmcreps.com or Select Communications, Inc. Tim Millican 7653-C Fullerton Rd. Springfield, VA 22153 (703) 569-4400 Fax (703) 569-4490 vertex@selcom.org