

**BID FORM**

MISSOURI DEPARTMENT OF TRANSPORTATION

GENERAL SERVICES

830 MoDOT DRIVE – P.O. BOX 270

JEFFERSON CITY, MO 65102

REQUEST NO.	2-110715FR		
ISSUE DATE	June 30, 2011		
PAGE NO.	1	NO. OF PAGES	35

SEALED BIDS, SUBJECT TO THE ATTACHED CONDITIONS WILL BE RECEIVED AT THIS OFFICE UNTIL

**2:00 PM, C.D.S.T., JULY 15, 2011**

AND THEN PUBLICLY OPENED AND READ FOR FURNISHING THE FOLLOWING SUPPLIES OR SERVICES.

**QUOTATIONS TO BE BASED F.O.B.**

**MISSOURI DEPARTMENT OF TRANSPORTATION**

Submit net bid as cash discount stipulations will not be considered

**Statewide**

**ALL BIDS SHOULD BE EXTENDED AND TOTALED.**

**BUYER: FRANKIE J. RYAN**

**BUYER TELEPHONE: 573-522-9481**

SUPPLIES OR SERVICES					
<p>Contract for furnishing “<b>KENWOOD RADIO UNITS</b>” for a contract period beginning date of award through July 31, 2012.</p> <p><b>PLEASE SEE ATTACHED PRICING PAGES</b></p> <p><b>Note to Respondent:</b> A vendor must be in compliance with the laws regarding conducting business in the State of Missouri. The compliance to conduct business in the state shall include but may not be limited to: Registration of business name, vendors <b>MUST</b> submit a bid/proposal that correctly and accurately identifies the company name that is registered to do business in the State of Missouri. All vendors who are required to execute a contractual agreement <b>MUST</b> submit a copy of their certificate with the signed copy of the contract agreement before the purchasing department can proceed with MoDOT legal contract approval.</p> <p><b>VENDOR MUST SIGN AND SUBMIT</b></p> <p><b><i>THIS FORM WITH THE PRICING PAGES</i></b></p>					<p>Bidders are encouraged to obtain minority business enterprise (<b>MBE</b>) and women business enterprise (<b>WBE</b>) participation in this work through the use of subcontractors, suppliers, joint ventures, or other arrangements that afford meaningful participation for M/WBEs. Bidders are encouraged to obtain 10% MBE and 5% WBE participation.</p>

(SEE ATTACHED FOR CONDITIONS AND INSTRUCTIONS)

*In compliance with the above request for bids, and subject to all conditions thereof, the undersigned bidder agrees to furnish and deliver any or all the items on which prices were quoted within the time frame outlined herein.*

**Date:** \_\_\_\_\_

**Firm Name:** \_\_\_\_\_

**Telephone No.:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Fax No.:** \_\_\_\_\_

**By (Signature):** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Type/Print Name** \_\_\_\_\_

**Title:** \_\_\_\_\_

## **BID SUBMITTAL**

Your written bid must be mailed in a sealed envelope or box, or else delivered by hand or courier service (UPS, Federal Express, DHL, etc.) to be *received on or before the date and time specified on the front page of this bid document*, at the office of:

Ms. Frankie Ryan, Senior Procurement Agent  
Missouri Department of Transportation  
General Services - Procurement  
830 MoDOT Drive (physical location: zip 65109)  
P.O. Box 270 (mailing address: zip 65102)  
Jefferson City, MO

All documents must be sealed and the outmost wrapping should be clearly marked "**Bid for Kenwood Radio Units**".

## **CONTRACTUAL REQUIREMENTS**

### **PRICES:**

All prices shall be firm and fixed. The Missouri Department of Transportation (herein after referred to as Department) shall not pay nor be liable for any other additional costs including but not limited to taxes, shipping charges, insurance, interest, penalties, termination payments, attorney fees, liquidated damages, etc. The Contractor shall not invoice federal excise tax unless otherwise required under federal law or regulation.

### **AWARD:**

Items will be awarded on an "All or None" basis using the lowest and best principle of award. Notification of award will be at the time the tabulation is posted to the Internet. It is the sole responsibility for all Bidders to check the website for bid results.

### **DELIVERY AND ASSEMBLY:**

Radio units shall be delivered within sixty (60) calendar days from the date on the purchase order(s) to the Department's office(s) as specified on the purchase order(s). A list of delivery locations is attached as Appendix A. **Charges for delivery shall be included in the bid price.**

Each radio shall be delivered to the location fully assembled. This assembly cost shall be included in the bid price.

### **COMPLIANCE WITH BID REQUIREMENTS:**

Failure to comply with the requirements published in this bid may result in the bid being subject to rejection. Product that does not meet specifications will cause all of the shipments to be returned at the bidders expense.

### **CONTRACT PERIOD:**

The original contract period shall be from date of award through July 31, 2012. The contract shall not bind, nor purport to bind, the Department for any contractual commitment in excess of the original contract period.

### **LIQUIDATED DAMAGES FOR DELIVERY AND/OR ACCEPTANCE:**

In the event the successful Contractor fails to deliver the material within the time specified, the Department and the public will sustain damages because of such delay in delivery, the exact extent of which would be difficult to ascertain, and in order to liquidate such damage in advance it is agreed that the sums noted herein of per day, per item, for each assessable calendar day, is reasonable and the best estimate which the parties can arrive at as liquidated damages. It is therefore agreed that said amounts will be withheld from payments due the Contractor or otherwise collected from the Contractor as liquidated damages.

Liquidated damages for failure to deliver shall be set at fifty dollars (\$50) per radio unit per day for each day beyond the sixty (60) calendar day delivery period, to be assessed in the event that some or all of the components making up a radio unit are not received by the specified delivery date.

In the event that any component of a radio unit received does not comply with the specifications as outlined in the bid documents, the Contractor shall make all corrections necessary to bring the radio unit into compliance. All costs resulting from this necessary repair/replacement shall be borne by the Contractor and shall be performed within fourteen (14) calendar days of its being reported to the Contractor unless otherwise agreed to by the Department's representative. Liquidated damages for failure to provide compliant products of fifty dollars (\$50) per radio unit per day, shall be assessed for each radio unit not in compliance after the fourteen (14) calendar days or the agreed upon deadline.

Damages will be limited to fifty percent (50%) of the total contract price. When this amount is reached the Department, at its discretion, reserves the right to cancel the remainder of the contract without being considered in breach of the contract and without any additional payment to the Contractor. Prior to the effective date of cancellation by the Department, the Department will purchase all radio units requested, received and found acceptable, less any liquidated damages as outlined in this section. The Department will apply liquidated damages per location not fulfilled.

Saturdays, Sundays, holidays and days whereas the Department has suspended work shall not be assessable days.

**PAYMENT:**

Invoices, per group, per delivery point, in triplicate per payment request per purchase order, should reflect the identical item as listed on the purchase order. These invoices should include the purchase order number, date of shipment, *and a unique serial number for each item.*

Payment for all radio units will be processed after all radio units have been delivered and found acceptable by the Department's representative.

**COOPERATIVE PROCUREMENT:**

The Department is interested in assisting Missouri governmental entities in purchasing equipment, various materials and supplies that meet the Department specifications. The bidder should complete and submit **Appendix E "Cooperative Procurement"** with the other required bid documents.

**CONTRACT PRICE ESCALATION:**

In the event the Contractor requests a price increase during the contract period (original contract period or contract renewal period, if applicable), the Contractor must provide a written request and documentation justifying the need for a price increase, and the amount of such price increase. MoDOT will review the Contractor's written request and documentation, and decide if a price increase is to be granted at that particular time. The Contractor shall understand and agree that MoDOT's decision shall be final and without recourse.

- a. No price increase shall be granted during the first 3 months of the original contract period, or if applicable, first 3 months of a contract renewal period.
- b. In the event a price increase is granted due to an approved escalation, the renewal percentage shall be based upon the current contract value.

**APPROVED MANUFACTURED AND BRANDED PRODUCT:**

MoDOT will only accept bids on **Kenwood** manufactured and branded products as specified herein. MoDOT *will not accept substitutions* of the specified manufactured and branded Kenwood products.

**NON-EXCLUSIVITY:**

The Missouri Department of Transportation reserves the right to obtain like or similar products of this or other manufacturers when use of such products is deemed in the best interest of MoDOT.

**VENDOR NAME REGISTRATION:**

On all bid documents, the bidder must use the firm name under which he/she is registered to do business in the state of Missouri. The bidder must ensure that his/her firm name is registered with the office of the Secretary of State.

**ADDITIONAL DOCUMENTS TO SIGN AND SUBMIT:**

The Bidder will be required to complete, sign, and submit the following documentation, in addition to the signed bid page:

- Pricing Pages (complete, sign and submit with bid)
- Appendix D: Vendor Information & Preference Certification Form (complete, sign and submit with bid)
- Appendix E: Cooperative Procurement Agreement (complete, sign and submit with bid)

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**PRICING PAGE**

**(3 pages with a total of 17 items)**

**Page 1 of 3**

Contract for furnishing “Kenwood Radios” for a **contract period beginning date of award through July 31, 2012**. COMPLETE, *SIGN WHERE INDICATED ON PRICING PAGE 3 OF 3*, AND SUBMIT WITH YOUR SIGNED BID FORM AND OTHER REQUIRED DOCUMENTATION.

**SECTION 1: Full-Power Mobile Radio Units (1 item)**  
*Refer to ATTACHMENT A for specifications and requirements*

Item #	Description	Kenwood Manufacturer Model #	Est Qty	Unit Price	Extended Total
001	VHF Full-Power Mobile Radio Units	Kenwood TK-790HBK9BHS1	30	\$	\$
<i>Must bid on all items in the section</i>		<b>Total for Full-Power Mobile Radios</b>			\$

**SECTION 2: Mid-Power Mobile Radio Units (12 items)**  
*(Refer to ATTACHMENT B for specifications and requirements)*

Item #	Description	Kenwood Manufacturer Model #	Est Qty	Unit Price	Extended Total
002	50 watts, <b>under dash</b>	# TK 7150	20	\$	\$
003	50 watts, <b>remote mount</b>	# TK 7150	10	\$	\$
004	25 watts, <b>under dash only</b>	# 7360HVK	10	\$	\$
005	50 watts, <b>under dash only</b>	# TK7360HV	25	\$	\$
006	30 watts, <b>under dash</b>	# TK 7180	15	\$	\$
007	30 watts, <b>remote mount</b>	# TK 7180	15	\$	\$
008	50 watts, <b>under dash</b>	# TK7180HK	25	\$	\$
009	50 watts, <b>remote mount</b>	# TK7180HK	25	\$	\$
010	50 watts, project 25 digital <b>under dash</b>	# TK 5710	10	\$	\$
011	50 watts, project 25 digital <b>remote mount</b>	# TK 5710	5	\$	\$
012	45 watts, <b>under dash</b>	# TK790	10	\$	\$
013	45 watts, <b>remote mount</b>	# TK790	5	\$	\$
<i>Must bid on all items in the section</i>		<b>Total for Mid-Power Mobile Radios</b>			\$

**PRICING PAGE**

<b>SECTION 3: UHF and VHF Hand Held Radio Units (4 items)</b>					
<i>Refer to <u>ATTACHMENT C FOR UHF</u> specifications and requirements and <u>ATTACHMENT D FOR VHF</u> specifications and requirements</i>					
<b>Item #</b>	<b>Description</b>	<b>Kenwood Manufacturer Model #</b>	<b>EST QTY</b>	<b>Unit Price</b>	<b>Extended Total</b>
014	<b>16 Channel UHF</b> Handheld Radio Units	TK-3360LKP Kenwood 16 Channel Hand-Held	75	\$	\$
015	<b>128 Channel UHF</b> Handheld Radio Units	Kenwood TK-3180K3 with DTMF Pad Hand-Held	40	\$	\$
016	<b>16 Channel VHF</b> Handheld Radio Units	Kenwood TK-2360LKP	30	\$	\$
017	<b>128 Channel VHF</b> Handheld Radio Units	Kenwood TK2180	50	\$	\$
<i>Must bid on all items in the section</i>		<b>Total for Hand Held Radios</b>			\$

**GRAND TOTAL FOR ALL 3 SECTIONS:** \$ \_\_\_\_\_

**RENEWAL OPTIONS:** *In the event that the Department exercises its option to renew the contract for three (3) one-year periods, or any portion thereof, pursuant to the applicable provisions outlined in this document, the Bidder shall provide below the maximum percentage of increase. The Bidder is cautioned that the percentage shall be computed against the CURRENT contract prices during renewal period. Furthermore, the Bidder is advised that the Department does not automatically grant increases at the time of renewing the contract and that if an increase is requested, documentation of need must be provided at the time of renewal.*

**If the Bidder does not indicate a percentage, MoDOT will assume the maximum increase is 0%**

**1<sup>st</sup> 1-year Renewal Period** \_\_\_\_\_ % of maximum increase

**2<sup>nd</sup> 1-year Renewal Period** \_\_\_\_\_ % of maximum increase

**3<sup>rd</sup> 1-year Renewal Period** \_\_\_\_\_ % of maximum increase

**(CONTINUE TO PRICING PAGE 3 OF 3 FOR ADDITIONAL INFORMATION AND SIGNATURE LINES)**

**PRICING PAGE**

**Page 3 of 3**

**NOTE ON CURRENT LIST PRICE DISCOUNT:** In the event the Department exercises its option to purchase additional accessories and equipment as available in the Contractor’s product catalog, the Contractor will be required to offer all accessories and equipment to the Department with the below listed discount. This is a minimum, guaranteed discount. MoDOT reserves the right to discuss additional discounts based on the quantity of any products purchased from the Contractor’s catalog:

\_\_\_\_\_ % **Discount off of the Manufacturer’s Current Catalog List Price.**

\_\_\_\_\_ % **Discount off of the Manufacturer’s Current Catalog List Price for Battery Purchases Only**

BIDDER **MUST** PROVIDE A PERCENTAGE OF DISCOUNT AS PART OF THIS BID, EVEN IF THAT DISCOUNT IS 0%. However, the Bidder is cautioned that the determination of lowest, responsive bid will not include an evaluation of the discount offered.

**NOTE ON AWARD:** For the purposes of this bid, ***items will be awarded “ALL OR NONE”***. Bidder **must bid on all items listed** in each section in order to be considered for contract award. Notification of award will be at the time the tabulation is posted to the Internet. It is the sole responsibility for all Bidders to check the website for bid results.

**NOTE ON QUANTITIES:** The quantities shown ***are estimated*** for the period specified. MoDOT reserves the right to increase or decrease the quantity as needed.

**NO SUBSTITUTIONS:** MoDOT *will not accept substitutions* of the specified manufactured and branded Kenwood products.

**NOTE ON PACKAGING:** Product shall be shipped in the original OEM packaging and be clearly marked as to manufacturer, model number, quantity, brand, and all other appropriate, identifying information.

\_\_\_\_\_  
**Name of the Bidders Firm**

\_\_\_\_\_  
**Signature of Contractor’s Authorized Representative**

\_\_\_\_\_  
**Date Signed**

**~ END OF PRICING PAGES ~**

**ATTACHMENT A**  
**SPECIFICATIONS FOR VHF FULL-POWER MOBILE RADIO UNITS**  
**GENERAL**

The Missouri Department of Transportation (hereinafter referred to as the Department) desires to establish a contract for the purchase of two-way very high frequency (VHF) radio units with a minimum RF output power of one hundred (100) watts. The radio units shall support a minimum of one hundred twenty-eight (128) transmit-receive/tone frequency combinations. The radio units shall be compatible with and work into the Department's statewide two-way radio system and be FCC type accepted. The units shall transmit and receive on the VHF frequencies assigned by the Department. Continuous "sub audible" tones, as assigned, shall operate with the transmit and receive frequencies.

**CONTRACTOR REQUIREMENTS**

General Requirements

The contractor shall provide radio units for the Department in accordance with the terms and conditions stated herein.

All equipment and services shall be provided to the sole satisfaction of the Department.

Unless stated differently, the contractor shall provide all equipment and personnel needed to fulfill the terms of the contract.

**GENERAL SPECIFICATIONS**

These units shall be complete with transmitter-receiver, remote mount control head, microphone, external speaker, cabling, and mobile mount antenna. The radio shall support a minimum of one hundred twenty-eight (128) transmit-receive/tone frequency combinations and a minimum of ten (10) channel groups.

Power Requirements

All radios shall operate from the vehicle's 12 volt DC, negative ground electrical system. The radio shall operate without sustaining any memory loss, frequency variation or degradation of any kind when operating from the vehicle's electrical system. Adequate protective devices shall be incorporated into all incoming voltage points to protect the unit from damage from spikes, high-voltage, and all other transients, which may be present or occur in the vehicle's electrical system.

Memory Backup

The radio shall have one of the following:

1. An internal lithium battery to maintain all programming. The battery shall have a minimum life of 5 years.
2. A non-volatile memory that retains all programming and status without a battery.

Ignition Sense

The radio shall be furnished with an ignition sense kit that disconnects power to the radio when the vehicles' ignition is turned off unless otherwise specified on the purchase order.

Power Amplifier Protection

The radio shall have shutdown circuits to guard against reflected power from a shorted or missing antenna. If shutdown circuits are not present, the design of the final power amplifier transistors and their associated components shall be such that they will not be damaged should the transmitter be operated with a shorted or missing antenna.

### Internal Speaker

In addition to the required external speaker the radio shall have a built in speaker capable of adequate audio output in a noisy truck environment.

### Automatic Unit Identification

All radios shall be equipped with an automatic unit identification system

## **DETAILED GENERAL SPECIFICATIONS**

General Specifications	
Channels – Minimum	128
Channel Groups – Minimum	10
Frequency Range – MHz	144-174
Operating Temperature - °C	-30 to +60
Channel Spacing – kHz	25/12.5
Channel Stepping – kHz	2.5/5.0/6.25
Current Consumption – Max Amps Standby	0.75
Automatic Unit Identification	Included
Ignition Sense Kit	Included
3 dB Gain Mobile Antenna	Included
Microphone	Included
Cabling	Included
External Speaker	Included
Dash Mounting Hardware	Included
Alphanumeric Display – Minimum Characters	8
Warranty – Minimum	1 Year

### Transmitter

The transmitter shall have a minimum output of one hundred (100). The transmitter shall have a time-out-timer to shut down the transmitter if on continuously for approximately 60 seconds and send an alarm to the operator after the transmitter is shut down until the push-to-talk is released.

The transmitter shall meet the following minimum requirements:

TRANSMITTER SPECIFICATIONS	
RF Output Power – Watts	100
Time-out-Timer – Seconds	60
Frequency Stability –30°C to +60°C – PPM	+/- 2.5
Modulation/Deviation – kHz	+/- 2.5
Spurious and Harmonics – dB	At least 70 below carrier
Audio Distortion at 1 kHz	3 % or less
FM Hum and Noise – Db	At least –40
Current Consumption at 100 Watt – Max Amps	25.0
Transmit Indicator	Included

### Receiver

The receiver shall produce an audio output of at least five (5) watts into an external speaker. There shall be no noticeable audio distortion at the maximum volume level.

The receiver shall be equipped with a priority scan feature.

The receiver shall meet the following minimum requirements:

RECEIVER SPECIFICATIONS	
Frequency Stability $-30^{\circ}\text{C}$ to $+60^{\circ}\text{C}$ – PPM	+/- 2.5
Sensitivity EIA 12dB SINAD – mV	0.33
Selectivity adjacent channel – dB	-70
Intermodulation – Db	-65 or better
Audio Output 1 kHz, 4 Ohms, 5 % THD – Watts	4
Current Consumption Receive – Max Amps	3.0
Priority Scan	Included

### Controls

The following controls shall be provided.

1. On-off control (can be integrated into the volume control)
2. Volume control
3. Channel control
4. Group/zone up and down
5. A "Transmit" indicator
6. A "Home" button. By pressing the Home button, the radio will bring the user back to a programmable, pre-selected channel.
7. User operated squelch control

### Front Panel Display

The radio shall have a lighted LCD display on the front panel. At a minimum this display shall indicate the channel name, the group name or number, and scan status. The display shall be alphanumeric with a minimum of 8 characters for the channel name.

### Programming Capabilities

All radios shall be programmable from a personal computer and shall be able to transfer or clone its information to or from another like unit using a connecting cable between radios. Each unit shall be delivered pre-programmed. Programming shall be as shown in Appendix B unless otherwise indicated on the purchase order.

### CTCSS Circuitry

All receivers and transmitters shall be equipped with continuous tone coded squelch system (CTCSS) capability programmable by channel. Tones shall be continuously transmitted with the carrier frequency. The CTCSS capability shall be equipped with reverse burst signaling to eliminate squelch tail.

### Mounting

The radio shall be configured for remote mounting of the control head. The radio shall include the following at no additional cost.

1. A compact, separate control head with all controls, internal speaker and microphone connection. The head shall be furnished with a bracket and hardware permitting dash mounting for the head unit in American-made vehicles and trucks.
2. The power amplifier deck shall be furnished with a mounting bracket and hardware for remote mounting in a trunk, behind a truck seat or other locations.
3. A minimum 15 foot control cable shall be provided. All control cable connections shall be protected with covers to protect them from damage. All hardware, covers, connectors and any other required items shall be provided for complete connection of the cable.

### Provided Accessories

The following accessories shall be included in the bid price of each radio unit.

1. Mobile Mount Antenna Kit. Each radio shall be provided with 3 dB gain NMO mobile mount whip antenna and a through-hole NMO type antenna mount with a minimum of 15 feet of coaxial cable. The cable shall be equipped with an end compatible with the radio. The antenna shall be designed to operate in the frequency range of the radio.
2. External Speaker. Each radio shall be equipped with a heavy duty external speaker. The external speaker shall have a 4 inch round speaker mounted in a matched enclosure and capable of handling a minimum of 30 watts. The speaker shall have a maximum impedance of 4 ohms. The speaker shall produce no noticeable distortion at the maximum volume setting on the radio. The speaker shall be equipped with a mobile mount bracket.
3. Hand Microphone. A heavy-duty mil-spec matched hand microphone shall be provided with each radio. The microphone shall include a matched hanger.
4. Cabling. Each radio unit shall be provided with a 15 foot minimum fused power cable, fused ignition sense cable, external speaker cable, remote head cable, and any other cables required for proper operation.

### FCC Compliance

All radios shall by type accepted for use with 47 CFR Part 90.

## **MANUALS AND DOCUMENTATION**

### Operating Manual

One operating manual shall be delivered with each radio. At a minimum, the manuals shall include information on installation, setup, configuration and programming (if applicable), operating guidelines, safety, and connections. The cost of the operating manuals shall be included in the bid price.

### Service Manual

Twelve (12) service manuals showing all circuits, part numbers, part installations, operating voltage, theory of operation, programming, and maintenance procedures shall be furnished at no additional charge. One (1) service manual shall be furnished to each District and two (2) service manuals shall be provided for General Headquarters Traffic.

### Service Bulletins

Service bulletins shall also be provided, at no additional charge, to each delivery location and to General Headquarters Traffic for a minimum of seven (7) years from the date of the purchase order. The service bulletin shall show all updates pertaining to maintenance of the units.

## **PROGRAMMING AND SOFTWARE**

Twelve (12) sets of programming software compatible with the following Operating Systems: Windows 2000/XP/7 and licenses, for Department furnished computers, and connecting cables, including a USB to RS232 Serial adapter needed for programming shall be provided at no additional charge. One (1) programming software set shall be furnished to each District and two (2) programming software sets shall be provided for General Headquarters Traffic. The Department shall receive all software updates for a minimum of five (5) years from the date of purchase order at no charge to the Department.

The bidder shall include the following in the bid price:

1. Twelve (12) sets of programming software and licenses. The bidder shall include a programming manual with each software package.
1. Twelve (12) connecting cables and all necessary equipment used in the cloning process.
2. Twelve (12) connecting cables used between the radio and a computer along with twelve (12) individual software package rights for department furnished computers. The programming cable shall be fully equipped to connect to a standard 9-pin male D-sub serial connector on the computer.

#### **OPTIONAL EQUIPMENT**

The following optional equipment must be available for purchase at the Department's discretion:

1. Tester, if required for troubleshooting or bench work the bidder shall include as a separate bid item the cost of such testers. The bidder shall also provide technical data sheets for the tester.
2. Replacement hand microphone identical to the microphone provided with radio.
3. DTMF hand microphone compatible with the unit offered.
4. Voice-activated (with push-to-talk option) microphone/headset combination compatible with the unit offered.
5. A minimum 25 foot control cable meeting the specifications above.

These optional bid items will not be considered as part of the bid, but are required to be available. A firm quote should be given for each item, should the Commission deem it necessary to purchase such accessories as identified on the purchase order.

#### **OTHER OPTIONAL EQUIPMENT AND ACCESSORIES**

The Department shall have the option to purchase additional accessories at the percent discount off of Manufacture's List Price as indicated on the Pricing Page.

#### **SERVICE AND SUPPORT**

##### Service

The bidder shall supply location, contact and shipping information for the authorized company or associated service shop where warranty work can be accomplished.

The successful bidder shall also provide contact information (name, address, phone, e-mail) for technical support representative(s). The representative(s) shall be available during normal weekday hours by phone and e-mail to assist with setup, programming, operation and other technical aspects of the equipment. All costs for technical support shall be included in the bid price.

The contractor must make available spare parts for a minimum of seven (7) years from the date of installation as recorded on the installation measurements records.

##### Warranty

All parts and materials shall be guaranteed to be free from defects or defective workmanship for a minimum of one (1) year from the date of installation or initial operation as recorded by Department staff. For the guarantee limits, it will be considered that all units will be placed in service within twelve (12) months after receipt.

##### Technical Orientation

The successful bidder shall present a complete course of instruction to the Department's radio maintenance personnel. The course shall cover programming, operation, trouble-shooting, and maintenance of the radio. This course will be held in Jefferson City or other Missouri city at a time mutually agreeable by the bidder and the Department. The bidder shall provide all equipment and instruction materials necessary for the course. This course shall be at no cost to the Department.

*~ End of Specification ~*

## **ATTACHMENT B**

### **SPECIFICATIONS FOR VHF MID-POWER MOBILE RADIO UNITS**

#### **GENERAL**

The Missouri Department of Transportation (hereinafter referred to as the Department) desires to establish a contract for the purchase of two-way very high frequency (VHF) radio units with a minimum RF output power of fifty (50) watts from the power amplifier. The radio units shall support a minimum of one hundred twenty-eight (128) transmit-receive/tone frequency combinations.

The radio units shall be compatible with and work into the Department's statewide two-way radio system and be FCC-type accepted. The radio units shall transmit and receive on the VHF frequencies assigned by the Department. Continuous "sub audible" tones, as assigned, shall operate with the transmit and receive frequencies.

#### **CONTRACTOR REQUIREMENTS**

##### **General Requirements**

The Contractor shall provide radio units for the Department in accordance with the terms and conditions stated herein.

All equipment and services shall be provided to the sole satisfaction of the Department.

Unless stated differently, the Contractor shall provide all equipment and personnel needed to fulfill the terms of the contract.

#### **GENERAL TECHNICAL SPECIFICATIONS AND RADIO UNIT COMPONENTS**

Each radio unit shall be complete with, but not necessarily limited to, the transmitter-receiver, microphone, external speaker, cabling, mobile mount antenna, dash mounting hardware and operating manual. The radio shall support a minimum of one hundred twenty-eight (128) transmit-receive/tone frequency combinations and a minimum of thirteen (13) channel groups.

##### **Power Requirements**

All radio units shall operate from the vehicle's 12 volt DC, negative ground electrical system. The radio unit shall operate without sustaining any memory loss, frequency variation or degradation of any kind when operating from the vehicle's electrical system. Adequate protective devices shall be incorporated into all incoming voltage points to protect the radio unit from damage from spikes, high-voltage, and all other transients, which may be present or occur in the vehicle's electrical system.

##### **Memory Backup**

Each radio unit shall have an internal power source to maintain all programming. The battery shall have a minimum life of five (5) years.

##### **Ignition Sense**

Each radio unit shall be furnished with an ignition sense kit that disconnects power to the radio unit when the vehicles' ignition is turned off, unless otherwise specified on the purchase order.

##### **Power Amplifier Protection**

Each radio unit shall have shutdown circuits to guard against reflected power from a shorted or missing antenna. If shutdown circuits are not present, the design of the final power amplifier transistors and their associated components shall be such that they will not be damaged should the transmitter be operated with a shorted or missing antenna.

##### **Internal Speaker**

In addition to the required external speaker, each radio unit shall have a built in speaker capable of adequate audio output in a noisy truck environment.

### Automatic Radio Unit Identification

All radio units shall be equipped with an automatic radio unit identification system programmed in to transceiver.

### **DETAILED GENERAL SPECIFICATIONS**

<b>General Specifications</b>	
Channels – Minimum	128
Channel Groups – Minimum	13
Frequency Range – MHz	144-174
Operating Temperature - °C	-30 to +60
Channel Spacing – kHz	25/12.5
Channel Stepping – kHz	2.5/5.0/6.25
Current Consumption Standby – Max Amps	0.75
Automatic Radio Unit Identification	<b>Included</b>
Ignition Sense Kit	<b>Included</b>
3 dB Gain Mobile Antenna	<b>Included</b>
Microphone	<b>Included</b>
Cabling	<b>Included</b>
External Speaker	<b>Included</b>
Dash Mounting Hardware	<b>Included</b>
Alphanumeric Display – Minimum Characters	8
Warranty – Minimum	1 Year

### Transmitter

The transmitter shall meet the following minimum requirements:

<b>Transmitter Specifications</b>	
RF Output Power – Watts	50
Time-out-Timer – Seconds	60 +/- 5
Frequency Stability –30°C to +60°C – PPM	+/- 2.5
Modulation/Deviation – kHz	+/- 2.5
Spurious and Harmonics – dB	At least 70 below carrier
Audio Distortion at 1 kHz	3 % or less
FM Hum and Noise – Db	At least –40
Current Consumption at 50 Watt – Max Amps	13.5
Transmit Indicator	<b>Included</b>

### Receiver

The receiver shall meet the following minimum requirements:

<b>Receiver Specifications</b>	
Frequency Stability –30°C to +60°C – PPM	+/- 2.5
Sensitivity EIA 12dB SINAD – mV	0.33
Selectivity adjacent channel – dB	-70
Intermodulation – Db	-65 or better
Audio Output 1 kHz, 4 Ohms, 5 % THD – Watts	4
Current Consumption Receive – Max Amps	3.0
Priority Scan	<b>Included</b>

## Controls

At a minimum, the following controls shall be provided:

1. On-off control (can be integrated into the volume control).
2. Volume control.
3. Channel control.
4. Group/zone up and down.
5. A "Transmit" indicator.
6. A "Home" button. By pressing the Home button, the radio unit will return the user to a programmable, pre-selected channel.
7. User operated squelch control.

## Front Panel Display

Each radio unit shall have a lighted LCD display on the front panel. At a minimum this display shall indicate the channel name, the group name or number, and scan status. The display shall be alphanumeric with a minimum of eight (8) characters for the channel name.

## Programming Capabilities

All radio units shall be programmable from a personal computer and shall be able to transfer or clone its information to or from another like radio unit using a connecting cable between radio units. Each radio unit shall be delivered pre-programmed. Programming shall be as shown in Appendix B unless otherwise indicated on the purchase order.

## CTCSS Circuitry

All receivers and transmitters shall be equipped with continuous tone coded squelch system (CTCSS) capability programmable by channel. Tones shall be continuously transmitted with the carrier frequency. The CTCSS capability shall be equipped with reverse burst signaling to eliminate squelch tail.

## Mounting

The transceiver shall be furnished with hardware permitting under the dash mounting in vehicles and trucks in MoDOT's Fleet. For this bid, remote mount radio units ***will not*** be accepted.

## Provided Accessories

The following accessories shall be included in the bid price of each radio unit:

1. *Mobile Mount Antenna Kit.* Each radio unit shall be provided with 3 dB gain NMO mobile mount whip antenna and a through-hole NMO type antenna mount with a minimum of fifteen (15) feet of coaxial cable. The cable shall be equipped with an end compatible with the radio unit. The antenna shall be designed to operate in the frequency range of the radio unit.
2. *External Speaker.* Each radio unit shall be equipped with a heavy duty external speaker. The external speaker shall have an approximately four (4) inch speaker mounted in a matched enclosure and capable of handling a minimum of thirty (30) watts. The speaker shall have a maximum impedance of four (4) ohms. The speaker shall produce no noticeable distortion at the maximum volume setting on the radio unit. The speaker shall be equipped with a mobile mount bracket.
3. *Hand Microphone.* A heavy-duty mil-spec matched hand microphone shall be provided with each radio unit. The microphone shall include a matched hanger.
4. *Cabling.* Each radio unit shall be provided with a minimum fifteen (15) foot fused power cable, fused ignition sense cable, external speaker cable and all other cables required for proper operation.

## FCC Compliance

All radio units must be of a type accepted for use with 47 CFR Part 90.

## MANUALS AND DOCUMENTATION

### Operating Manual

One (1) operating manual shall be delivered with each radio unit. At a minimum, the manual shall include information on installation, setup, configuration and programming (if applicable), operating guidelines, safety, and connections. The cost of the operating manual shall be included in the bid price for each radio unit.

### Service Bulletins

Service bulletins shall be provided, at no additional charge, to each delivery location and to Central Office Traffic Division for a minimum of seven (7) years from the date of the purchase order. The service bulletin shall show all updates pertaining to the maintenance and operation of the radio units.

### Optional Equipment

At a minimum, the following optional equipment must be available for purchase at the Department's discretion, with the discount offered by the Bidder as outlined on the Pricing Page, to include all available technical data sheets for each item ordered. The Department may also elect to procure all other products available in the Bidder's most recent parts/equipment catalog's Manufacture's List Price utilizing the aforementioned discount percentage:

1. Testers.
2. Replacement hand microphones identical in functionality to the microphone provided with radio unit.
3. DTMF hand microphone compatible with the radio unit.
4. Voice-activated (with push-to-talk option) microphone/headset combination compatible with the radio unit.
5. 3 dB gain mobile mount antenna with magnetic mount with connector to match the radio unit, and a minimum of fifteen (15) feet of line cord.
6. Programming software compatible with the current Department furnished computers compatible with the following Operating Systems: Windows 2000/XP/7.
7. Service Manuals for the radio unit.

These optional items ***will not*** be considered as part of the bid award, but are required to be available for purchase by MoDOT. A firm percentage off the current catalog's Manufacture's List Price should be given as noted on the Pricing Page, should the Department deem it necessary to purchase such optional items, as will be identified on the purchase order. The Bidder will also make available the listed discount percentage for all other products available in the Bidder's most recent parts/equipment catalog accessories.

## SERVICE AND TECHNICAL SUPPORT

### Service

The Contractor shall supply location, contact and shipping information for the authorized company or associated service shop where warranty work can be accomplished.

### Technical Support

The Contractor shall be required to provide contact information (name, address, telephone, e-mail, etc.) for technical support representative(s). The representative(s) shall be available to assist Department personnel, at a minimum, during weekdays beginning at 8:00 a.m. through 5:00 p.m., Central Standard Time., by telephone and email to assist with setup, programming, operation and other technical aspects of the equipment. All costs for technical support shall be included in the bid price.

### Replacement and Repair Parts

The Contractor must make available radio unit replacement and repair parts for a minimum of seven (7) years from the date of Department's payment of the purchase order for the radio unit(s).

### WARRANTY

All parts and materials shall be guaranteed to be free from defects or defective workmanship for a minimum of one (1) year from the date of radio unit installation as recorded by Department staff. For the guarantee limits, it will be considered that all radio units will be placed in service within twelve (12) months after acceptance and payment for the radio units by the Department.

### TRAINING AND TECHNICAL ORIENTATION

The Contractor shall present a complete course of instruction to the Department's radio maintenance personnel as part of the contract. The cost of the initial course shall be included in the bid price. The course shall cover programming, operation, trouble-shooting, and maintenance of the radio unit. This course will be held in Jefferson City or other Missouri city at a time and date mutually agreeable to the Bidder and the Department.

The Contractor shall provide all equipment and instruction materials necessary for the initial course. The Contractor will be required to provide one (1) such initial training and technical orientation course to the Department, for approximately twenty (20) students, during the course of the original contract period noted in the bid documents herein.

Additional training and technical orientation courses requested by the Department during the original contract period shall be as mutually agreed to by the Contractor and the Department as to cost per student, scheduling issues and location.

### MODEL NUMBER CHANGES OR CHANGES IN MANUFACTURE SPECIFICATIONS

#### Model Number Changes

In the event the radio unit manufacturer changes the original model numbers to the radio units purchased by the Department as part of the bid contract, and no other aspect of the radio unit's functionality has been changed/modified/upgraded, the Department will note such change(s) in the purchase orders issued by the Department for these radio units. No other action by the Department will be necessary to continue purchasing these radio units as part of the bid contract.

#### Changes in Manufacturer Specifications

In the event the radio unit manufacturer changes the functionality of the radio units purchased under the bid contract, and such changes/modifications/upgrades do not result in a reduction of the minimum technical specifications for the radio unit noted herein, and the prices as noted in the current contract with the Contractor remain unchanged, the Department will note such change(s) in the purchase orders issued by the Department for these radio units. No other action by the Department will be necessary to continue purchasing these radio units as part of the bid contract.

In the event the radio unit manufacturer makes changes/modifications/upgrades to any component of the radio units purchased by the Department as part of this bid, that result in any change(s) to the radio unit's functionality or operation/maintenance, the Contractor shall provide all equipment and instruction materials necessary to complete a course of instruction to the Department's radio maintenance personnel related to any changes/modifications/upgrades. This training shall be as mutually agreed to by the Contractor and the Department as to cost per student, scheduling issues and location.

*~ End of Specification ~*

**ATTACHMENT C**  
**SPECIFICATIONS FOR UHF HAND HELD RADIO UNITS**

**GENERAL**

The Missouri Department of Transportation (hereinafter referred to as the Department) desires to establish a contract for the purchase of two-channel hand held radios operating in the UHF frequency band with an RF output power of two (2) watts. These radios shall be built to provide the utmost reliability and durability while operating in an outdoor environment. The units purchased shall be compatible with and work into the Department's statewide two-way radio system and be FCC type accepted. The units shall transmit and receive on the UHF frequencies assigned herein. Continuous "sub audible" tones, as assigned, shall operate with the transmit and receive frequencies.

**CONTRACTOR REQUIREMENTS**

**General Requirements**

The contractor shall provide radio units for the Department in accordance with the terms and conditions stated herein.

All equipment and services shall be provided to the sole satisfaction of the Department.

Unless stated differently, the contractor shall provide all equipment and personnel needed to fulfill the terms of the contract.

**TECHNICAL SPECIFICATIONS**

**General Specifications**

Each radio shall be a handheld UHF radio with two (2) watts of RF a output power, a minimum of eight (8) channels, a replaceable antenna, and provided with two (2) batteries, belt clip, carrying case and a lapel speaker/microphone.

**Antenna**

The antenna shall be a durable flexible antenna. No "stubby" or compact antennas will be allowed.

**Battery**

Each radio shall be furnished with two (2) rechargeable Lithium Ion battery packs with a guaranteed minimum 5-5-90 duty cycle at two (2) watts for ten (10) hours. Use of battery savers that disable the receiver shall not be allowed.

**Recharger**

One compatible recharger, operating on 120 volt, A.C., 60 Hertz power, shall be provided for each radio. Each unit shall be capable of fully charging one radio and/or battery pack.

The recharger shall be a "smart charger." The recharger shall have an indicator light to show that the battery is recharging and shall control charging so as not to cause damage to the batteries. The recharger shall have automatic shutoff control, with an indicator light to denote a full charge. The battery pack shall be fully recharged in a period of less than 10 hours.

**Programming Capabilities**

The supplier shall program all radios. All radios shall be programmable from a personal computer and shall be able to transfer or clone its information to or from another like unit using a connecting cable

between radios. Each radio shall be programmed as indicated on Appendix C unless otherwise indicated on the purchase order. The unit shall be configured so that if the unit is turned to a channel that is not programmed, a tone will sound notifying the operator. In addition, the unit will not be operational on the additional channels.

Memory Backup

The radio shall have one of the following:

3. An internal lithium battery to maintain all programming. The battery shall have a minimum life of 5 years.
4. A non-volatile memory that retains all programming and status without a battery.

Environmental Specifications

Independent laboratory certification on the following environmental specifications shall be required:

<u>MIL-STD 810D</u>	<u>Methods/Procedures</u>
Low Pressure	Method 500.2 Procedure 1
High Pressure	Method 501.2 Procedure 1 & 2
Low Temperature	Method 502.2 Procedure 2
Temperature Shock	Method 503.2 Procedure 1
Solar Radiation	Method 505.2 Procedure 1
Rain	Method 506.2 Procedure 2
Humidity	Method 507.2 Procedure 2
Dust	Method 510.2 Procedure 1
Vibration	Method 514.3 Procedure 1
Shock	Method 516.3 Procedure 1 & 4

**PERFORMANCE SPECIFICATIONS**

General

Frequency Range	450 to 470 MHz
Number of Channels	8
Channel Spacing	25 KHz, 12.5 KHz
PLL Step	5, 6.25 KHz
Battery Life (5-5-90 duty cycle with battery saver off)	10 Hours
Operating Temperature Range	-22° F to +140° F (-30° C to +60°C)
Antenna Impedance	50 Ohms

Transmitter

RF Power Output	2 Watts
Frequency Stability:	± 0.0005% at 2 watts (-30°C to +60°C)
Spurious and Harmonics:	-60dB
FM Noise:	-45dB
Audio Response:	+1dB, -3dB from 300Hz to 2800Hz
Audio Distortion:	5% or less at 1000Hz (at 60% deviation)
Frequency Separation:	10MHz

Receiver

Frequency Stability:	± 0.0005% (-30°C to +60°C)
----------------------	----------------------------

Modulation Acceptance:	±7 KHz
Sensitivity (12dB SINAD):	0.35uV
Selectivity (EIA SINAD):	-65dB
Squelch Sensitivity:	0.28 uV
Image Rejection:	-65dB
Spurious Rejection:	-65dB
Inter modulation:	-65dB
Audio Output:	500mW at 5% or less distortion

### Controls

The following controls shall be provided.

1. Volume control
2. On-off control (can be integrated into the volume control)
3. Channel control
4. A "Transmit" indicator

### CTCSS Circuitry

All receivers and transmitters shall be equipped with continuous tone coded squelch system (CTCSS) capability programmable by channel. Tones must be continuously transmitted with the carrier frequency. The CTCSS capability shall be equipped with reverse burst signaling to eliminate squelch tail.

### Provided Accessories

The following accessories shall be included in the bid price of each radio unit.

1. A spring loaded belt clip
2. A durable carrying case (leather or urethane) and a D-clip type belt attachment
3. An external speaker/microphone that can be attached to a lapel

### FCC Compliance

All radios shall by type accepted for use with 47 CFR Part 90.

## **MANUALS AND DOCUMENTATION**

### Operating Manual

One operating manual shall be delivered with each radio. At a minimum, the manuals shall include information on installation, setup, configuration and programming (if applicable), operating guidelines, safety, and connections. The cost of the operating manuals shall be included in the bid price.

### Service Manual

Twelve (12) service manuals showing all circuits, part numbers, part installations, operating voltage, theory of operation, programming, and maintenance procedures shall be furnished at no additional charge. One (1) service manual shall be furnished to each District and two (2) service manuals shall be provided for General Headquarters Traffic.

Service bulletins shall also be provided, at no additional charge, to each delivery location and to General Headquarters Traffic for a minimum of seven (7) years from the date of the purchase order. The service bulletin shall show all updates pertaining to maintenance of the units.

## **PROGRAMMING AND SOFTWARE**

Twelve (12) sets of programming software (compatible with the following Operating Systems: Windows 2000/XP/7) and licenses, for Department furnished computers, and connecting cables including a USB to

RS232 serial Adapter needed for programming shall be provided at no additional charge. One (1) programming software set shall be furnished to each District and two (2) programming software sets shall be provided for General Headquarters Traffic. The Department shall receive all software updates for a minimum of five (5) years from the date of purchase order at no charge to the Department.

The bidder shall include the following in the bid price:

1. Twelve (12) sets of programming software and licenses. The bidder shall include a programming manual with each software package.
2. Twelve (12) connecting cables and all necessary equipment used in the cloning process.
3. Twelve (12) connecting cables used between the radio and a computer along with twelve (12) individual software package rights for department furnished computers. The programming cable shall be fully equipped to connect to a standard 9-pin male D-sub serial connector on the computer.

### **OPTIONAL EQUIPMENT**

The following optional equipment must be available for purchase at the Department's discretion:

1. Tester, if required for troubleshooting or bench work the bidder shall include as a separate bid item the cost of such testers. The bidder shall also provide technical data sheets for the tester
2. Replacement battery identical to battery provided with radio.
3. Replacement antenna identical to the antenna provided with the radio.
4. Replacement carrying case identical to the carrying case provided with the radio.
5. Replacement lapel speaker/microphone identical to the lapel speaker/microphone provided with radio.
6. Voice-activated (with push-to-talk option) microphone/headset combination compatible with the unit offered.

These optional bid items will not be considered as part of the bid, but are required to be available. A firm quote should be given for each item, should the Commission deem it necessary to purchase such accessories as identified on the purchase order.

### **OTHER OPTIONAL EQUIPMENT AND ACCESSORIES**

The Department shall have the option to purchase additional accessories at the percent discount off of Manufacture's List Price as indicated on the Pricing Page.

### **SERVICE AND SUPPORT**

#### **Service**

The bidder shall supply location, contact and shipping information for the authorized company or associated service shop where warranty work can be accomplished.

The successful bidder shall also provide contact information (name, address, phone, e-mail) for technical support representative(s). The representative(s) shall be available during normal weekday hours by phone and e-mail to assist with setup, programming, operation and other technical aspects of the equipment. All costs for technical support shall be included in the bid price.

#### **Warranty**

All parts and materials shall be guaranteed to be free from defects or defective workmanship for a minimum of one (1) year from the date of installation or initial operation as recorded by Department staff.

For the guarantee limits, it will be considered that all units will be placed in service within twelve (12) months after receipt.

Technical Orientation

The successful bidder shall present a complete course of instruction to the Department's radio maintenance personnel. The course shall cover programming, operation, trouble-shooting, and maintenance of the radio. This course will be held in Jefferson City or other Missouri city at a time mutually agreeable by the bidder and the Department. The bidder shall provide all equipment and instruction materials necessary for the course. This course shall be at no cost to the Department.

*~ End of Specification ~*

## **ATTACHMENT D**

### **Specifications for VHF Hand-Held Radio Units**

#### **GENERAL**

The Missouri Department of Transportation (hereinafter referred to as the Department) desires to establish a contract for the purchase of two-way very high frequency (VHF) radio units with a minimum RF output power of five (5) watts from the power amplifier. The radio units shall support a minimum of one hundred twenty-eight (128) transmit-receive/tone frequency combinations.

The radio units shall be compatible with and work into the Department's statewide two-way radio system and be FCC-type accepted. The radio units shall transmit and receive on the VHF frequencies assigned by the Department. Continuous "sub audible" tones, as assigned, shall operate with the transmit and receive frequencies.

#### **CONTRACTOR REQUIREMENTS**

##### General Requirements

The Contractor shall provide radio units for the Department in accordance with the terms and conditions stated herein.

All equipment and services shall be provided to the sole satisfaction of the Department.

Unless stated differently, the Contractor shall provide all equipment and personnel needed to fulfill the terms of the contract.

#### **GENERAL TECHNICAL SPECIFICATIONS AND RADIO UNIT COMPONENTS**

Each radio unit shall be complete with, but not necessarily limited to, the transmitter-receiver, microphone, external speaker, cabling, mobile mount antenna, dash mounting hardware and operating manual. The radio shall support a minimum of one hundred twenty-eight (128) transmit-receive/tone frequency combinations and a minimum of thirteen (13) channel groups.

##### Antenna

The antenna shall be a durable flexible antenna. No "stubby" or compact antennas will be allowed.

##### Battery

Each radio shall be furnished with two (2) rechargeable Lithium Ion battery packs with a guaranteed minimum 5-5-90 duty cycle at two (2) watts for ten (10) hours. Use of battery savers that disable the receiver shall not be allowed.

##### Recharger

One compatible recharger, operating on 120 volt, A.C., 60 Hertz power, shall be provided for each radio. Each unit shall be capable of fully charging one radio and/or battery pack.

The recharger shall be a "smart charger." The recharger shall have an indicator light to show that the battery is recharging and shall control charging so as not to cause damage to the batteries. The recharger shall have automatic shutoff control, with an indicator light to denote a full charge. The battery pack shall be fully recharged in a period of less than 10 hours.

### Programming Capabilities

The supplier shall program all radios. All radios shall be programmable from a personal computer and shall be able to transfer or clone its information to or from another like unit using a connecting cable between radios. Each radio shall be programmed as indicated on Appendix B unless otherwise indicated on the purchase order. The unit shall be configured so that if the unit is turned to a channel that is not programmed, a tone will sound notifying the operator. In addition, the unit will not be operational on the additional channels.

### Memory Backup

The radio shall have one of the following:

5. An internal lithium battery to maintain all programming. The battery shall have a minimum life of 5 years.
6. A non-volatile memory that retains all programming and status without a battery.

### **DETAILED GENERAL SPECIFICATIONS**

<b>General Specifications</b>	
Channels – Minimum	128
Channel Groups – Minimum	13
Frequency Range – MHz	144-174
Operating Temperature - °C	-30 to +60
Channel Spacing – kHz	25/12.5
Channel Stepping – kHz	2.5/5.0/6.25
Current Consumption Standby – Max Amps	0.75
Alphanumeric Display – Minimum Characters	8
Warranty – Minimum	1 Year

### Transmitter

The transmitter shall meet the following minimum requirements:

<b>Transmitter Specifications</b>	
RF Output Power – Watts	5 (Max)
Time-out-Timer – Seconds	60 +/- 5
Frequency Stability –30°C to +60°C – PPM	+/- 2.5
Modulation/Deviation – kHz	+/- 2.5
Spurious and Harmonics – dB	At least 70 below carrier
Audio Distortion at 1 kHz	3 % or less
FM Hum and Noise – Db	At least –40
Current Consumption at 50 Watt – Max Amps	13.5
Transmit Indicator	<b>Included</b>

### Receiver

The receiver shall meet the following minimum requirements:

<b>Receiver Specifications</b>	
Frequency Stability –30°C to +60°C – PPM	+/- 2.5
Sensitivity EIA 12dB SINAD – mV	0.33
Selectivity adjacent channel – dB	-70
Intermodulation – Db	-65 or better
Audio Output 1 kHz, 4 Ohms, 5 % THD – Watts	4
Current Consumption Receive – Max Amps	3.0
Priority Scan	<b>Included</b>

## Controls

At a minimum, the following controls shall be provided:

1. On-off control (can be integrated into the volume control).
2. Volume control.
3. Channel control.
4. Group/zone up and down.
5. A "Transmit" indicator.
6. A "Home" button. By pressing the Home button, the radio unit will return the user to a programmable, pre-selected channel.
7. User operated squelch control.

## Front Panel Display

Each radio unit shall have a lighted LCD display on the front panel. At a minimum this display shall indicate the channel name, the group name or number, and scan status. The display shall be alphanumeric with a minimum of eight (8) characters for the channel name.

## Programming Capabilities

All radio units shall be programmable from a personal computer and shall be able to transfer or clone its information to or from another like radio unit using a connecting cable between radio units. Each radio unit shall be delivered pre-programmed. Programming shall be as shown in Appendix B unless otherwise indicated on the purchase order.

## CTCSS Circuitry

All receivers and transmitters shall be equipped with continuous tone coded squelch system (CTCSS) capability programmable by channel. Tones shall be continuously transmitted with the carrier frequency. The CTCSS capability shall be equipped with reverse burst signaling to eliminate squelch tail.

## Provided Accessories

The following accessories shall be included in the bid price of each radio unit.

4. A spring loaded belt clip.
5. A durable carrying case (leather or urethane) and a D-clip type belt attachment.
6. An external speaker/microphone that can be attached to a lapel.

## FCC Compliance

All radio units must be of a type accepted for use with 47 CFR Part 90.

## **MANUALS AND DOCUMENTATION**

### Operating Manual

One (1) operating manual shall be delivered with each radio unit. At a minimum, the manual shall include information on installation, setup, configuration and programming (if applicable), operating guidelines, safety, and connections. The cost of the operating manual shall be included in the bid price for each radio unit.

### Service Bulletins

Service bulletins shall be provided, at no additional charge, to each delivery location and to Central Office Traffic Division for a minimum of seven (7) years from the date of the purchase order. The service bulletin shall show all updates pertaining to the maintenance and operation of the radio units.

## **OPTIONAL EQUIPMENT**

The following optional equipment must be available for purchase at the Department's discretion:

1. Tester, if required for troubleshooting or bench work the bidder shall include as a separate bid item the cost of such testers. The bidder shall also provide technical data sheets for the tester
2. Replacement battery identical to battery provided with radio.
3. Replacement antenna identical to the antenna provided with the radio.
4. Replacement carrying case identical to the carrying case provided with the radio.
5. Replacement lapel speaker/microphone identical to the lapel speaker/microphone provided with radio.
6. Voice-activated (with push-to-talk option) microphone/headset combination compatible with the unit offered.

These optional bid items will not be considered as part of the bid, but are required to be available. A firm quote should be given for each item, should the Commission deem it necessary to purchase such accessories as identified on the purchase order.

### **SERVICE AND TECHNICAL SUPPORT**

#### **Service**

The Contractor shall supply location, contact and shipping information for the authorized company or associated service shop where warranty work can be accomplished.

#### **Technical Support**

The Contractor shall be required to provide contact information (name, address, telephone, e-mail, etc.) for technical support representative(s). The representative(s) shall be available to assist Department personnel, at a minimum, during weekdays beginning at 8:00 a.m. through 5:00 p.m., Central Standard Time, by telephone and email to assist with setup, programming, operation and other technical aspects of the equipment. All costs for technical support shall be included in the bid price.

#### **Replacement and Repair Parts**

The Contractor must make available radio unit replacement and repair parts for a minimum of seven (7) years from the date of Department's payment of the purchase order for the radio unit(s).

### **WARRANTY**

All parts and materials shall be guaranteed to be free from defects or defective workmanship for a minimum of one (1) year from the date of radio unit installation as recorded by Department staff. For the guarantee limits, it will be considered that all radio units will be placed in service within twelve (12) months after acceptance and payment for the radio units by the Department.

### **TRAINING AND TECHNICAL ORIENTATION**

The Contractor shall present a complete course of instruction to the Department's radio maintenance personnel as part of the contract. The cost of the initial course shall be included in the bid price. The course shall cover programming, operation, trouble-shooting, and maintenance of the radio unit. This course will be held in Jefferson City or other Missouri city at a time and date mutually agreeable to the Bidder and the Department.

The Contractor shall provide all equipment and instruction materials necessary for the initial course. The Contractor will be required to provide one (1) such initial training and technical orientation course to the Department, for approximately twenty (20) students, during the course of the original contract period noted in the bid documents herein.

Additional training and technical orientation courses requested by the Department during the original contract period shall be as mutually agreed to by the Contractor and the Department as to cost per student, scheduling issues and location.

## **MODEL NUMBER CHANGES OR CHANGES IN MANUFACTURE SPECIFICATIONS**

### **Model Number Changes**

In the event the radio unit manufacturer changes the original model numbers to the radio units purchased by the Department as part of the bid contract, and no other aspect of the radio unit's functionality has been changed/modified/upgraded, the Department will note such change(s) in the purchase orders issued by the Department for these radio units. No other action by the Department will be necessary to continue purchasing these radio units as part of the bid contract.

### **Changes in Manufacturer Specifications**

In the event the radio unit manufacturer changes the functionality of the radio units purchased under the bid contract, and such changes/modifications/upgrades do not result in a reduction of the minimum technical specifications for the radio unit noted herein, and the prices as noted in the current contract with the Contractor remain unchanged, the Department will note such change(s) in the purchase orders issued by the Department for these radio units. No other action by the Department will be necessary to continue purchasing these radio units as part of the bid contract.

In the event the radio unit manufacturer makes changes/modifications/upgrades to any component of the radio units purchased by the Department as part of this bid, that result in any change(s) to the radio unit's functionality or operation/maintenance, the Contractor shall provide all equipment and instruction materials necessary to complete a course of instruction to the Department's radio maintenance personnel related to any changes/modifications/upgrades. This training shall be as mutually agreed to by the Contractor and the Department as to cost per student, scheduling issues and location.

*~ End of Specification ~*

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**APPENDIX A: Anticipated Delivery Locations**

**All prices must include completed delivery to any of the below listed delivery destinations.**

Missouri Department of Transportation  
Northwest District  
St. Joseph, Missouri 64506

Missouri Department of Transportation  
St. Louis District  
Ballwin, Missouri 63021

Missouri Department of Transportation  
Northeast District  
Macon, Missouri 63552

Missouri Department of Transportation  
Southwest District  
Joplin, Missouri 64804

Missouri Department of Transportation  
Northeast District  
Hannibal, Missouri 63401

Missouri Department of Transportation  
Southwest District  
Springfield, Missouri 65804

Missouri Department of Transportation  
Kansas City District  
Lee Summit Missouri 64064

Missouri Department of Transportation  
Southeast District  
Willow Springs, Missouri 65793

Missouri Department of Transportation  
Central District  
Jefferson City, Missouri 65101

Missouri Department of Transportation  
Southeast District  
Sikeston, Missouri 63801

**~ END OF APPENDIX A ~**

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## APPENDIX B

Page 1 of 4

### VHF STANDARD LOAD CHANNEL LISTINGS

**IMPORTANT NOTICE:** Due to MoDOT's reorganization, the below information may change within the original contract period. MoDOT will update this information for the Contractor as soon as it is available. Any changes will be issued via an amendment to the contract as allowed herein.

Dist	Group	Tower	Channel Name	Frequency RX	Tone RX	Frequency TX	Tone TX	Narrow/Wide
D-1	1	Martinsville	<b>MRTIN</b>	151.1300	156.7	156.1350	114.8	N
		Skidmore	<b>SKID</b>	151.1300	156.7	156.1350	127.3	N
		Polo	<b>POLO1</b>	151.1300	156.7	156.1350	141.3	N
		St. Joseph	<b>STJOE</b>	151.1300	156.7	156.1350	156.7	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
			<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N
		<b>WX1</b>	162.4000	None	None	None	W	
D-2	2	Avalon	<b>AVALON</b>	151.0400	156.7	156.0450	88.5	N
		Macon	<b>MACON</b>	151.0400	156.7	156.0450	127.3	N
		Fayette	<b>FAYET</b>	151.0400	156.7	156.0450	141.3	N
		Queens City	<b>QNCITY</b>	151.0400	156.7	156.0450	156.7	N
		Hughesville	<b>HUGHS2</b>	151.0400	156.7	156.0450	167.9	N
		Harris	<b>HARRIS</b>	151.0400	156.7	156.0450	179.9	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
		Striping Crew East	<b>STRP2E</b>	151.1300	156.7	151.1300	156.7	N
Striping Crew West	<b>STRP2W</b>	151.0400	156.7	151.0400	156.7	N		
D-3	3	Mexico	<b>MEXICO</b>	151.0700	156.7	156.0150	114.8	N
		Fairmont	<b>FAIRMT</b>	151.0700	156.7	156.0150	127.3	N
		Eolia	<b>EOLIA</b>	151.0700	156.7	156.0150	156.7	N
		Hannibal	<b>HANNBL</b>	151.0700	156.7	156.0150	179.9	N
		Warrenton	<b>WAREN3</b>	151.0700	156.7	156.0150	192.8	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
	<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N		
	Striping Crew	<b>STRP3</b>	156.0450	69.3	156.0450	69.3	N	
D-4	4	Polo	<b>POLO4</b>	151.0700	156.7	156.0150	141.3	N
		Platte City	<b>PLAT-C</b>	151.0700	156.7	156.0150	156.7	N
		Aullville	<b>AULVL</b>	151.0700	156.7	156.0150	167.9	N
		Urich	<b>URICH4</b>	151.0700	156.7	156.0150	179.9	N
		KC Regional	<b>KC/REG</b>	151.0700	156.7	156.0150	192.8	N
		KC Metro	<b>KC/MET</b>	151.1000	156.7	156.0450	118.8	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
	<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N		
		<b>WX7</b>	162.5500	None	None	None	W	

**APPENDIX B**

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**VHF STANDARD LOAD CHANNEL LISTINGS**

Dist	Group	Tower	Channel Name	Frequency RX	Tone RX	Frequency TX	Tone TX	Narrow/Wide
D-5	5	Ashland	<b>ASHLAN</b>	151.1300	156.7	156.1350	88.5	N
		Hughesville	<b>HUGHS5</b>	151.1300	156.7	156.1350	167.9	N
		Freeburg	<b>FREBUR</b>	151.1300	156.7	156.1350	127.3	N
		Macks Creek	<b>MACKS5</b>	151.1300	156.7	156.1350	114.8	N
		Cole Camp	<b>COLCMP</b>	151.1300	156.7	156.1350	156.7	N
		Warrenton	<b>WAREN5</b>	151.1300	156.7	156.1350	192.8	N
		Jefferson City	<b>JC</b>	151.0150	141.3	159.1150	141.3	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
			<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N
	Striping Crew	<b>STRP5</b>	156.0450	210.7	156.0450	210.7	N	
D-6	6	House Springs	<b>HS SP</b>	151.0400	156.7	156.0450	114.8	N
		St. Louis Metro	<b>TNCTY</b>	151.3850	156.7	156.1350	103.5	N
		North St. Louis County	<b>N-CNTY</b>	151.0400	156.7	156.0450	127.3	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
			<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N
		Striping Crew	<b>STRP6</b>	156.0150	100.0	156.0150	100.0	N
		Taum Sauk	<b>TAMSK6</b>	151.0400	156.7	156.0450	179.9	N
		Leesburg	<b>LSBRG6</b>	151.0400	156.7	156.0450	88.5	N
Warrenton	<b>WAREN6</b>	151.0400	156.7	156.0450	192.8	N		
D-7	7	Urich	<b>URICH7</b>	151.1300	156.7	156.1350	179.9	N
		Jerico Springs	<b>JERIC</b>	151.1300	156.7	156.1350	192.8	N
		Avilla	<b>AVILA</b>	151.1300	156.7	156.1350	141.3	N
		Ridgeley	<b>RIDGE</b>	151.1300	156.7	156.1350	127.3	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
			<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N
		Striping Crew	<b>STRP7</b>	151.1300	225.7	151.1300	225.7	N

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### VHF STANDARD LOAD CHANNEL LISTINGS

Dist	Group	Tower	Channel Name	Frequency RX	Tone RX	Frequency TX	Tone TX	Narrow/Wide
D-8	8	Macks Creek	<b>MACKS8</b>	151.0400	156.7	156.0450	114.8	N
		Strafford	<b>STRFRD</b>	151.0400	156.7	156.0450	127.3	N
		Romance	<b>ROMNC8</b>	151.0400	156.7	156.0450	141.3	N
		Flat	<b>FLAT8</b>	151.0400	156.7	156.0450	156.7	N
		Mountain Grove	<b>MTGRV8</b>	151.0400	156.7	156.0450	167.9	N
		Lebanon	<b>LEBNON</b>	151.0400	156.7	156.0450	192.8	N
		Branson	<b>BRNSON</b>	151.0400	156.7	156.0450	88.5	N
		Humansville	<b>HVILLE</b>	151.0400	156.7	156.0450	179.9	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
			<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N
			Striping Crew A	<b>STRP8A</b>	151.0700	77.0	151.0700	77.0
	Striping Crew B	<b>STRP8B</b>	151.1300	77.0	151.1300	77.0	N	
D-9	9	Poplar Bluff	<b>PBLUF9</b>	151.0700	156.7	156.0150	114.8	N
		Alton	<b>ALTON</b>	151.0700	156.7	156.0150	127.3	N
		Romance	<b>ROMNC9</b>	151.0700	156.7	156.0150	141.3	N
		Flat	<b>FLAT9</b>	151.0700	156.7	156.0150	156.7	N
		Mountain Grove	<b>MTGRV9</b>	151.0700	156.7	156.0150	167.9	N
		Taum Sauk	<b>TAMSK9</b>	151.0700	156.7	156.0150	179.9	N
		Winona	<b>WINONA</b>	151.0700	156.7	156.0150	192.8	N
		Leasburg	<b>LSBRG9</b>	151.0700	156.7	156.0150	88.5	N
			<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N
			<b>C/C 1</b>	151.1300	None	151.1300	None	N
			<b>C/C 2</b>	151.0400	None	151.0400	None	N
			<b>C/C 3</b>	151.0700	None	151.0700	None	N
D-10	10	Poplar Bluff	<b>PBLUF0</b>	151.1300	156.7	156.1350	114.8	N
		Bell City	<b>BELCTY</b>	151.1300	156.7	156.1350	127.3	N
		Wardell	<b>WARDEL</b>	151.1300	156.7	156.1350	141.3	N
		Perryville	<b>PVILLE</b>	151.1300	156.7	156.1350	156.7	N
		Taum Sauk	<b>TAMSK0</b>	151.1300	156.7	156.1350	179.9	N
		Sikeston	<b>SIKESN</b>	151.1300	156.7	156.1350	167.9	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
			<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N
			Striping Crew	<b>STRP10</b>	156.0450	100.0	156.0450	100.0

## APPENDIX B

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### VHF STANDARD LOAD CHANNEL LISTINGS

Dist	Group	Tower	Channel Name	Frequency RX	Tone RX	Frequency TX	Tone TX	Narrow/Wide
Car to Car	11	MoDOT Car-to-Car Channels	<b>C/C 1</b>	151.1300	None	151.1300	None	N
			<b>C/C 2</b>	151.0400	None	151.0400	None	N
			<b>C/C 3</b>	151.0700	None	151.0700	None	N
			<b>C/C 1T</b>	151.1300	156.7	151.1300	156.7	N
			<b>C/C 2T</b>	151.0400	156.7	151.0400	156.7	N
			<b>C/C 3T</b>	151.0700	156.7	151.0700	156.7	N
Interop	12	Inter-Agency Interoperability Channels	<b>VCALL</b>	155.7525	None	155.7525	None	N
			<b>VTAC1</b>	151.1375	None	151.1375	156.7	N
			<b>VTAC2</b>	154.4525	None	154.4525	156.7	N
			<b>VTAC3</b>	158.7375	None	158.7375	156.7	N
			<b>VTAC4</b>	159.4725	None	159.4725	156.7	N
			<b>MTAC</b>	154.6800	None	154.6800	156.7	W
Weather	13	NOAA Weather Channels	<b>WX1</b>	162.4000	None	None	None	W
			<b>WX2</b>	162.4250	None	None	None	W
			<b>WX3</b>	162.4500	None	None	None	W
			<b>WX4</b>	162.4750	None	None	None	W
			<b>WX5</b>	162.5000	None	None	None	W
			<b>WX6</b>	162.5250	None	None	None	W
			<b>WX7</b>	162.5500	None	None	None	W

~ END OF APPENDIX B ~

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# APPENDIX C

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## UHF STANDARD LOAD CHANNEL LISTINGS

Group	Group Name	Channel Name	Frequency RX	Tone RX	Frequency TX	Tone TX	Narrow/Wide
1	MoDOT	MoDOT 1	453.1625	None	453.1625	None	W
		MoDOT 2	453.2625	None	453.2625	None	W
		MoDOT 3	453.1625	114.8	453.1625	114.8	W
		MoDOT 4	453.2625	114.8	453.2625	114.8	W
		MoDOT 5	453.1625	127.3	453.1625	127.3	W
		MoDOT 6	453.2625	127.3	453.2625	127.3	W
		MoDOT 7	453.1625	141.3	453.1625	141.3	W
		MoDOT 8	453.2625	141.3	453.2625	141.3	W
		MoDOT 1T	453.1625	156.7	453.1625	156.7	W
		MoDOT 2T	453.2625	156.7	453.2625	156.7	W
2	INTER	UCALL	453.2125	None	453.2125	None	W
		UTAC1	453.4625	None	453.4625	156.7	W
		UTAC2	453.7125	None	453.7125	156.7	W
		UTAC3	453.8625	None	453.8625	156.7	W
<b>NOTE: For 8 Channel Radios, use Group 1 Channels 1-8</b>							

~ END OF APPENDIX C ~

**APPENDIX D**

**VENDOR INFORMATION & PREFERENCE CERTIFICATION FORM**

**Vendor Information All bidders must furnish ALL applicable information requested below**

Vendor Name/Mailing Address:  Email Address:	Vendor Contact Information (including area codes):  <b>Phone #:</b> Cellular #: Fax #:
<b>Printed Name of Responsible Officer or Employee:</b>	<b>Signature:</b>
<b>For Corporations - State in which incorporated:</b>	<b>For Others - State of domicile:</b>

If the address listed in the Vendor Name/Mailing Address block above is not located in the State of Missouri, list the address of Missouri offices or places of business:

*If additional space is required, please attach an additional sheet and identify it as **Addresses of Missouri Offices or Places of Business.***

**M/WBE INFORMATION:** List all certified Minority or Women Business Enterprises (**M/WBE**) utilized in the fulfillment of this bid. Include percentages for subcontractors and identify the M/WBE certifying agency:

<u>M/WBE Name</u>	<u>Percentage of Contract</u>	<u>M/WBE Certifying Agency</u>

*If additional space is required, please attach an additional sheet and identify it as **M/WBE Information***

**Preference Certification**

**All bidders must furnish ALL applicable information requested below**

**GOODS/PRODUCTS MANUFACTURED OR PRODUCED IN USA:** If any or all of the goods or products offered in the attached bid which the bidder proposes to supply to the MHTC are **not** manufactured or produced in the "United States", or imported in accordance with a qualifying treaty, law, agreement, or regulation, list below, by item or item number, the country other than the United States where each good or product is manufactured or produced.

Item (or item number)	Location Where Item is Manufactured or Produced

*If additional space is required, please attach an additional sheet and identify it as **Location Products are Manufactured or Produced.***

**MISSOURI SERVICE-DISABLED VETERAN BUSINESS:** Please complete the following if applicable. Additional information may be requested if preference is applicable. See below definitions for qualification criteria:

**Service-Disabled Veteran** is defined as any individual who is disabled as certified by the appropriate federal agency responsible for the administration of veterans' affairs.

**Service-Disabled Veteran Business** is defined as a business concern:

- a. Not less than fifty-one (51) percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than fifty-one (51) percent of the stock of which is owned by one or more service-disabled veterans; and
- b. The management and daily business operations of which are controlled by one or more service-disabled veterans.

Service-Disabled Veteran's Name (Please Print)	Service-Disabled Veteran Business Name
Service-Disabled Veteran's Signature	Missouri Address of Service Disabled Veteran Business

**APPENDIX E**  
**COOPERATIVE PROCUREMENT**

The Department is interested in assisting Missouri governmental entities in purchasing equipment, various materials and supplies that meet the Highway and Transportation Department specifications.

Each bidder is asked to indicate below whether they would be willing to offer KENWOOD MOBILE RADIO UNITS listed herein the attached bid documents for sale to these local political entities at the same bid price offered to this Department.

It is understood the Department will not issue purchase orders, accept delivery nor make payment for these items ordered by any of these political entities/agencies. It is further understood the price is based on the radio units meeting the Department specifications. Any added options, deletions, or extra freight costs would be negotiated between the local agency and the Contractor.

**INDICATE BELOW WHETHER YOUR COMPANY IS WILLING TO OFFER SUCH COOPERATIVE PURCHASING FOR MISSOURI COUNTIES, CITIES OR OTHER POLITICAL ENTITIES.**

*YES* \_\_\_\_\_ *NO* \_\_\_\_\_

Indicate the last deadline date that orders will be accepted: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE NUMBER \_\_\_\_\_

PRINTED NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

Missouri Highways and Transportation Commission  
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

**STANDARD SOLICITATION PROVISIONS**

- a. The solicitation for the procurement of the supplies referenced therein, to which these "Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions" are attached, is being issued under, and governed by, the provisions of Title 7 – Missouri Department of Transportation, Division 10 – Missouri Highways and Transportation Commission, Chapter 11 – Procurement of Supplies, of the Code of State Regulations. The Missouri Highways and Transportation Commission (**MHTC**), acting by and through its operating arm, the Missouri Department of Transportation (**MoDOT**), draws the Bidder's attention to said 7 CSR 10-11 for all the provisions governing solicitation and receipt of bids/quotes and the award of the contract pursuant to this solicitation.
- b. All bids/quotes must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.

**GENERAL TERMS AND CONDITIONS**

**Definitions**

Capitalized terms as well as other terms used but not defined herein shall have the meaning assigned to them in section 7 CSR 10-11.010 Definition of Terms.

**Nondiscrimination**

- a. The Contractor shall comply with all state and federal statutes applicable to the Contractor relating to nondiscrimination, including, but not limited to, Chapter 213, RSMo; Title VI and Title VII of Civil Rights Act of 1964 as amended (42 U.S.C. Sections 2000d and 2000e, *et seq.*); and with any provision of the "Americans with Disabilities Act" (42 U.S.C. Section 12101, *et seq.*)
- b. **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MHTC shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
  - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
  - ii. cancellation, termination or suspension of the contract, in whole or in part.

**Contract/Purchase Order**

- a. *By submitting a bid/quote, the Bidder agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.*
- b. *A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's bid response, and (3) the MHTC's acceptance of the bid by post-award contract or purchase order.*
- c. *A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized notice to proceed and/or purchase order.*

**Applicable Laws and Regulations**

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri, Missouri Department of Revenue, and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MHTC a copy of their current Authority Certificate from the Secretary of State of the State of Missouri and/or a copy of their Certificate of No Tax Due from the Missouri Department of Revenue.
- c. Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MHTC a copy of their current Transient Employer Certificate from the Missouri Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.

**Executive Order:**

The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6<sup>th</sup>) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.

- 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
- 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
- 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Missouri Highways and Transportation Commission  
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

**Preferences**

- a. In the evaluation of bids/quotes, preferences shall be applied in accordance with 7 CSR 10-11.020(7). Contractors should apply the same preferences in selecting subcontractors. The attached document entitled "**VENDOR INFORMATION AND PREFERENCE CERTIFICATION FORM**" must be completed and returned with the solicitation documents.
- b. Bidders are encouraged to obtain minority business enterprise (MBE) and women business enterprise (WBE) participation in this work through the use of subcontractors, suppliers, joint ventures, or other arrangements that afford meaningful participation for M/WBEs. Bidders are encouraged to obtain 10% MBE and 5% WBE participation.

**Cancellation of Contract**

The MHTC may cancel the Contract at any time for a material breach of contractual obligations or for convenience by providing Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.

**Bankruptcy or Insolvency**

Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntarily, or upon the appointment of a receiver, trustee, or assignee, for the benefit of creditors, the Commission reserves the right and sole discretion to either cancel the Agreement or affirm the Agreement and hold the Contractor responsible for damages.

**Warranty**

The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by the MHTC, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.

**Status of Independent Contractor**

The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

**Non-Waiver**

If one of the parties agrees to waive its right to enforce any term of this Contract, that party does not waive its right to enforce such term at any other time or to enforce any or all other terms of this Contract.

**Indemnification**

The Contractor shall defend, indemnify and hold harmless MHTC, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Contractor's performance of its obligations under the contract awarded pursuant to this solicitation.