



State of Washington
DEPARTMENT OF ENTERPRISE SERVICES
Master Contracts & Consulting

1500 Jefferson, PO Box 41411 • Olympia, Washington 98504-1411 • (360) 407-2210

<http://www.des.wa.gov>

**The State of Washington Department of Enterprise Services on behalf of the
WSCA-NASPO Cooperative Purchasing Program**



RFP Amendment 1

RFP Reference #: 06913

Title: Public Safety Communication Equipment

Date Issued: April 22, 2014

This **RFP** is amended as follows:

Purpose: Change Proposal Due Date

The RFP solicitation document will be amended as follows:

Page 12 Section 3.1 PROCUREMENT SCHEDULE, the Date/Time for the Proposal Due Date shall be changed from May 15, 2014 – 2:00 PM to June 11, 2014 – 2:00 PM. (This change should also be made on the Front Page of the document.)

(This delay will afford bidders additional time to review and respond to a second RFP amendment currently being drafted for WEBS posting.)

Please apply this change to your copy of the RFP solicitation document.

Bidders may complete and return this amendment with their proposal. All other terms, conditions, and specifications remain unchanged.

**Previously scheduled proposal due
date and time**

May 15, 2014 - 2:00 PM

New proposal due date and time

June 11, 2014 – 2:00 PM

Signed: Robert Paulson, Jr., C.P.M.
Procurement Coordinator

4/22/14
Date signed

Bidder may complete the following:

Company: _____

Authorized Representative: _____

Address: _____

Phone/Fax/E-mail: _____

Signature

Date



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**The State of Washington Department of Enterprise Services on behalf of the
WSCA-NASPO Cooperative Purchasing Program**



RFP Amendment 2

RFP Reference #: 06913

Title: Public Safety Communication Equipment

Date Issued: May 12, 2014

This **RFP** is amended as follows:

Purpose: Modify the RFP document.

As a result of discussions during the pre-proposal conference held April 9, 2014 at the Seattle Marriott Sea-Tac Airport Hotel and Bidder comments and questions received following the conference, the RFP solicitation document will be amended as follows. Please apply the changes/revisions listed on the following pages to your copy of the RFP document.

Bidders should complete and return this amendment with their proposal. All other RFP terms, conditions, and specifications remain unchanged.

Proposal Due Date & Time

Remains Unchanged: June 11, 2014 – 2:00 PM

Signed (Robert Paulson, Jr., C.P.M.)
Procurement Coordinator

5/12/14
Date signed

Bidder should complete the following:

Company: _____

Authorized Representative: _____

Federal ID #: _____

Address: _____

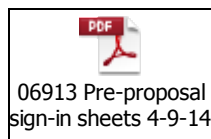
Phone/Fax/E-mail: _____

Signature

Date

Comments:

1. Vendor comments and questions received during and following the April 9, 2014 pre-proposal conference have been reviewed and changes/revisions to the RFP document have been provided below. Comments or questions asking for an explanation, confirmation, or clarification generally were not responded to because it was determined a response was unnecessary or the issue was already adequately addressed in the RFP document as written or as amended below.
2. Bidder's references may return a copy of the original APPENDIX G CUSTOMER REFERENCE QUESTIONNAIRE as published with the original RFP document or may submit an amended questionnaire that includes the change/revision described below.
3. In accordance with the revised procurement schedule (provided below) Bidders may submit comments and questions about Amendment #2 changes/revisions to the Procurement Coordinator before close-of-business May 19, 2014.
4. Provided below is an embedded pdf file that lists vendors who attended the April 9, 2014 pre-proposal conference.



Please make the following changes/revisions to your copy of the RFP document. (Page number references are those of the original RFP document.)

Page 8 Part I Solicitation Document, Section **1.7 MODEL CONTRACT**, in the first paragraph, delete the last sentence and replace it with the following new sentence: "In addition to the BIDDER'S AUTHORIZED OFFER, bidders should return the contract document with their response, without modification or contingency, except as provided for in Section 4.5 ALTERATIONS TO OFFICIAL DOCUMENTS AND CONFLICTING MATERIALS."

Page 9 Part I Solicitation Document, Section **1.10 MINORITY AND WOMEN OWNED BUSINESS ENTERPRISES (MWBE)**, in the fourth paragraph change “Appendix K” to “Appendix L”.

Page 10 Part I Solicitation Document, Section **2.1 PURPOSE**, change the third bullet to read “Desktop (single-band and dual-band). Add the following two new categories: “8. RF Transmission Lines,” and “9. RF Filtering Equipment”

Page 12 Part I Solicitation Document, Section **3.1 PROCUREMENT SCHEDULE**. Revise the schedule as follows - **Projected Schedule of Events**:

Date/Time	Event
March 12, 2014	Issue Solicitation document (available for download from www.des.wa.gov/webs)
April 9, 2014	Bidder Pre-proposal Conference (see Section 3.2 for location/directions, etc.)
April 22, 2014	Issue Amendment #1 (rescheduling proposal due date)
May 12, 2014	Issue Amendment #2
May 19, 2014	Deadline for Bidder Questions and Comments (related to Amendment #2 changes/revisions)
As necessary	Amendment issued, if applicable (bidders should begin checking the website for any amendments)
June 11, 2014- 2:00 PM	Revised Proposals Due date
Next Day	Evaluation begins
September 11, 2014	Anticipated announcement of Apparent Successful Bidder(s)
	Bidder debriefs (as requested)
September 12, 2014	Issuance of awarded Contracts
October 30, 2014	Anticipated Contract start

Page 17 Part I Solicitation Document, Section **4.9 PROPOSAL PRICING**. Change the second paragraph to read as follows: “Failure to identify all costs and prices in a manner consistent with the instructions in this RFP is sufficient grounds for disqualification.”

Page 17 Part I Solicitation Document, Section **4.10 CUSTOMER REFERENCES**. In the second paragraph change the second sentence to read: “The aggregate value of these purchases must have exceeded \$250,000 (\$100,000 for the categories/subcategories: In-vehicle Repeaters, Dispatch Consoles, Microwave Antennas, Mobile Radio Antennas, Base Station/Repeater Radio Antennas, RF Transmission Lines, and RF Filtering Equipment) during the past two years.”

Page 19 Part I Solicitation Document, **Section 4.15 SPECIFICATIONS**. In the second paragraph change the first bullet to read: “Portable (dual-band, single-band tier I, single-band tier II and single-band tier III)”; change the second bullet to read: “Mobile (dual-band, single-band tier I, single-band tier II and single-band tier III)”; and the third bullet to read: “Desktop (dual-band, single-band tier I and single-band tier II)”; Change the last sentence in this paragraph to read: “A single target product specification is used for the other categories, including: Gateway Devices,

Microwave Radios, Dispatch Consoles, Microwave Antennas, Mobile Radio Antennas, Base Station/Repeater Radio Antennas, RF Transmission Lines and RF Filtering Equipment.”

Page 20

Part I Solicitation Document, **Section 4.16 PRICING**. Change this entire section to read as follows:

Bidders are to offer pricing in Appendix H Price Worksheets for each category or subcategory for which they wish to be considered for an award. Bidders are to identify by manufacturer and model number the specific product offered which meets or exceeds target product specifications described in Appendix G Specifications. Identify a fixed percentage discount (rounded to the 1/10 of one percent) to be applied off the manufacturer’s list price for the entire product.

The manufacturer’s price list identified by the Bidder in Appendix H Price Worksheets must be a national published and/or web-posted product price list used to determine specific prices for public safety communication equipment and services made available to commercial and governmental customers.

In response to each specification line item, identify your part number which meets the specified performance, feature or accessory. If there is no specific part number then Bidder should state “No available part number” or “Included in Line Number X.X” or some similar wording to explain the situation. Then show by line item: the manufacturer’s list price; and the net price (i.e. the list price, less the fixed percentage discount listed/specified above, equals the net price rounded to the whole cent). Total line item net prices for the entire target product as configured shall be summed and used for evaluation purposes. If there is no applicable list price for the line item or the price is already included in the price of another line item, clearly indicate this is the case.

Bidders may also wish to offer pricing on Appendix H Price Worksheets for services that they offer, including but not limited to: equipment configuration and system design, equipment installation, equipment testing and customer acceptance, training, equipment repair and training. Pricing may be shown as a fixed percentage discount off the reference list price or as a per hour fixed charge.

Bidders who wish to offer other products they sell for this product category/subcategory may list these products on Appendix H Price Worksheets under the header “Other Available Products/Models” for consideration and possible inclusion in the contract award provided the level of price discount offered is equal to or greater than that offered for the target product. Additional product lines offered must meet established industry standards for the product.

When submitting a proposal for the dual-band radios Bidders may not offer under the header “Other Available Products/Models” single-band products.

However, for single-band tier II subcategories Bidders may not list any of their single-band tier I products under the header “Other Available Products/Models” on the price worksheets used for the following subcategories - portable, mobile, desktop/consoles and base station/repeater.

However, for single-band tier III subcategories Bidders may not list any of their single-band tier I or tier II products under the header “Other Available Products/Models” on the price worksheets used for the following subcategories – portable and mobile.

Page 23

Part I Solicitation Document, add the following new Section: **6.7 SOFTWARE LICENSE AGREEMENT**, For communication equipment ordered under the terms and conditions of this

Contract the Contractor may require the Purchaser/Purchasing Entity to agree to and sign a software license agreement prior to shipment of ordered equipment. Bidders should reference the Model Contract Section 5.10 Software License Agreement and Appendix M Software License Agreement. Bidders may suggest for MCC consideration modifications to this agreement provided the content is substantially the same.

- Page 24 Part I Solicitation Document, Section **7.3 VOLUME/PROMOTIONAL DISCOUNTS:** Replace the wording of this section with the following revised wording: “Contract prices are the ceiling or maximum price Contractor is permitted to charge Purchasers. However, the Contractor may also offer greater discounts for volume orders or for promotional purposes. See Model Contract, Section 3.4 Volume/Promotional Discounts.”
- Page 25 Part I Solicitation Document, Section **8.1.4 Best Value:** In the second paragraph change the last sentence to read as follows: “Subcategories for the radio category include: portable radios (dual-band and single-band tier I, tier II and tier III), mobile radios (dual-band and single-band tier I, tier II and tier III), desktop radios (dual-band and single-band tier I and tier II), base station/repeater (single-band tier I and tier II), and in-vehicle repeater.”
- Page 27 Part I Solicitation Document, Section **8.1.7 Specification Evaluation:** In the second sentence of the first paragraph change the word “seven” to “nine”. Also in the first paragraph change the third sentence to read “They include: radios, gateway devices, microwave radios and ancillary equipment, test equipment, portable radio accessories, dispatch consoles, RF Transmission Lines, and RF Filtering Equipment.”
- In the second paragraph change the first sentence to read as follows: “Within the category of radios target product specifications are provided for each of the following subcategories: portable radios (for dual-band and single-band (tier I, tier II and tier III performance level), mobile radios (for dual-band and single-band (tier I, tier II and tier III performance level), desktop radios (for dual-band and single-band (tier I and tier II performance level), and base station/repeater radios(for single-band (tier I and tier II performance level) equipment.”
- Page 28 Part I Solicitation Document, Section **8.1.9 Cost/Price Evaluation:** In the first sentence of the first paragraph change “4.19” to 4.16”.
- Pages 30 & 31 Part I Solicitation Document, Section **8.1.10 Evaluation and Award within Competitive Range:** In the section titled **Competitive Range Awards:** change the first sentence in the third paragraph to read as follows: “However, for the Radio subcategories of: portable radio (dual-band, single-band tier I, single-band tier II or single-band tier III), mobile radio (dual-band, single-band tier I, single-band tier II or single-band tier III), desktop radio (dual-band, single-band tier I or single-band tier II), and base station/repeater radio (single-band tier I or single-band tier II), if a Bidder is qualified to receive an award for at least two of these subcategories then steps may be taken by the Procurement Coordinator to qualify them for inclusion in the award of the other of these subcategories provided the other subcategory(ies) were included in the Bidder’s proposal.”
- Also in this section under 1. Radios, under Portable, under Single-band Tier II, insert a new bullet to read: “Tier III”. Under Mobile, under Single-band Tier II, insert a new bullet to read: “Tier III”. Then change the bullet “Desktop/Console” to “Desktop”. Add two new categories: “8. RF Transmission Lines” and “9. RF Filtering Equipment”.

- Page 31 Part I Solicitation Document, Section **8.3 ANNOUNCEMENT OF APPARENTLY SUCCESSFUL BIDDER**: Change “3.5” to “3.3”.
- Page 38 Part II Model Contract, Section **1.1 CONTRACT SCOPE**: Under category 1. Radios, under Portable, under Single-band Tier II, insert a new bullet to read: “Tier III”. Under Mobile, under Single-band Tier II, insert a new bullet to read: “Tier III”. Then change the bullet “Desktop/Console” to “Desktop”. Add two new categories: “8. RF Transmission Lines” and “9. RF Filtering Equipment”.
- Page 37 Part II Model Contract, Section **1.6 PURCHASERS/PURCHASING ENTITIES**, in the third paragraph add the state of “California - \$8,000,000/year.”
- Page 40 Part II Model Contract, Section **3.1 PRICE PROTECTION**, delete this entire section. Then renumber the following sections: 3.2 becomes 3.1; 3.3 becomes 3.2; 3.4 becomes 3.3; and 3.5 becomes 3.4.
- Page 40 Part II Model Contract, Section **3.2 CONTRACT PRICING**, change the first sentence to read as follows: “During the term of the Contract, Contractor must have and maintain a national published and/or web-posted product price list for all public safety communication equipment products and services available through the Contract, including those identified in Appendix H Price Worksheets.”
- Page 41 Part II Model Contract, Section **3.4 VOLUME/PROMOTIONAL DISCOUNTS**: Replace the wording of this section with the following revised wording: “Contract prices, including the applicable price discount, shall be the maximum or ceiling price Contractor can charge Purchasers. However, the Contractor may offer a Purchaser a greater price discount for a volume order or for promotional purposes which would result in even lower purchase prices.”
- Page 43 Part II Model Contract, Section **5.2 SHIPPING AND RISK OF LOSS**: Change the first paragraph to read as follows: “Contractor shall ship all products purchased pursuant to this Contract, freight charges prepaid by the Contractor, F.O.B. Purchaser’s specified destination with all transportation and handling charges included. However, for the category Microwave Antennas only, additional freight charges may be prepaid and added to the invoice to cover the additional cost of shipment from the nearest port city to the Purchaser’s receiving facility located outside the contiguous United States, provided the Purchaser approves the additional freight charge at the time of order placement.”
- Page 45 Part II Model Contract, add the following new Section “**5.10 SOFTWARE LICENSE AGREEMENT**, If the communication equipment ordered and delivered under the term and conditions of this Contract requires software or firmware to operate, the Contractor may require the Purchaser/Purchasing Entity to sign a software license agreement prior to shipment of the equipment. A software license agreement approved by the Contractor has been provided as Appendix M Software License Agreement.”
- Page 71 **APPENDIX C WSCA-NASPO MASTER AGREEMENT TERMS AND CONDITIONS**
Section **11. Shipping and Delivery**: In paragraph a. change the second sentence to read as follows: “Except for microwave antennas – reference Section 5.2 Shipping and Risk of Loss of

the Model Contract, all deliveries shall be F.O.B. destination, freight pre-paid, with all transportation and handling charges paid by the Contractor.”

Page 85

APPENDIX D BIDDER INFORMATION AND PROFILE: Section 10. Customer References after “\$250,000” insert the following new wording “(\$100,000 for the categories/subcategories: In-vehicle Repeaters, Dispatch Consoles, Microwave Antennas, Mobile Radio Antennas, Base Station/Repeater Radio Antennas, RF Transmission Lines; and RF Filtering Equipment)”

Page 87

APPENDIX E CONTRACT MANAGEMENT AND PERFORMANCE PLAN: Change the second paragraph to read as follows:

“The information provided below will apply the Bidder’s plan to sell and service communication equipment in the following categories and subcategories:

- | | |
|--|---|
| <input type="checkbox"/> Radios | <input type="checkbox"/> Microwave Radios |
| <input type="checkbox"/> Portable | <input type="checkbox"/> Dispatch Consoles |
| <input type="checkbox"/> Mobile | <input type="checkbox"/> Microwave Antennas |
| <input type="checkbox"/> Desktop | <input type="checkbox"/> Mobile Radio Antennas |
| <input type="checkbox"/> Base Station/Repeater | <input type="checkbox"/> Base Station/Repeater Radio Antennas |
| <input type="checkbox"/> In-vehicle Repeater | <input type="checkbox"/> RF Transmission Lines |
| <input type="checkbox"/> Gateway Devices | <input type="checkbox"/> RF Filtering Equipment” |

Page 88

APPENDIX F NATIONWIDE NETWORK OF SUBCONTRACTORS/DEALERS/DISTRIBUTORS: Change the second paragraph to read as follows:

“The information provided below will apply the Bidder’s plan to sell and service communication equipment in the following categories and subcategories:

- | | |
|--|---|
| <input type="checkbox"/> Radios | <input type="checkbox"/> Microwave Radios |
| <input type="checkbox"/> Portable | <input type="checkbox"/> Dispatch Consoles |
| <input type="checkbox"/> Mobile | <input type="checkbox"/> Microwave Antennas |
| <input type="checkbox"/> Desktop | <input type="checkbox"/> Mobile Radio Antennas |
| <input type="checkbox"/> Base Station/Repeater | <input type="checkbox"/> Base Station/Repeater Radio Antennas |
| <input type="checkbox"/> In-vehicle Repeater | <input type="checkbox"/> RF Transmission Lines |
| <input type="checkbox"/> Gateway Devices | <input type="checkbox"/> RF Filtering Equipment” |

Page 89

APPENDIX G SPECIFICATIONS: Provided below are numerous changes/revisions to already identified “Target Product” Specifications. Additionally, new specifications have been provided below for four new Target Products, including: the Category: Radio / Subcategory: Portable Radio, Single-Band, Tier III; and for Category: / Subcategory: Mobile Radio, Single-Band, Tier III; RF Transmission Lines; and RF Filtering Equipment.

Page 154

APPENDIX H PRICE WORKSHEETS: Provided below are numerous changes/revisions to already identified “Target Product” Price Worksheets. Additionally, new specifications have been provided below for four new Target Products, including: the Category: Radio / Subcategory: Portable Radio, Single-Band, Tier III; and for Category: / Subcategory: Mobile Radio, Single-Band, Tier III; RF Transmission Lines; and RF Filtering Equipment.

Page 244

APPENDIX I CUSTOMER REFERENCE QUESTIONNAIRE, after “\$250,000” insert the following new wording “(\$100,000 for the categories/subcategories: In-vehicle Repeaters,

Dispatch Consoles, Microwave Antennas, Mobile Radio Antennas, Base Station/Repeater Radio Antennas, RF Transmission Lines, and RF Filtering Equipment)” However, customer reference questionnaires returned without this change/revision will still be evaluated for identified communication equipment categories.

Additionally add the following two new equipment categories to the list below the category - “☐ Base Station/Repeater Radio Antennas”: ☐ RF Transmission Lines; ☐ RF Filtering Equipment” and circulate to your company references for completion and submission to the Procurement Coordinator.

Page 247 **APPENDIX J INTENT TO PARTICIPATE**, at the bottom of the list of states, add “California,” under the column State agencies list “\$3,500,000,” under the column Political subdivisions list “\$4,500,000” and under the column Aggregate total list “\$8,000,000.”

Page 248 **APPENDIX K INDIVIDUAL STATES’ TERMS AND CONDITIONS**, insert a new page at the end of this appendix titled: “California State Supplemental, General Provisions – Information Technology and Public Safety Radio Goods Special Provisions” then insert the following two documents provided in pdf format:



Page (new) **APPENDIX M SOFTWARE LICENSE AGREEMENT:** Has been provided below as a new appendix to this RFP solicitation document.

APPENDIX M SOFTWARE LICENSE AGREEMENT

This Appendix M Software License Agreement ("Agreement") has been made a part of the Contract/Master Agreement and shall be between the Purchaser/Purchasing Entity, and the *[Contractor]*.

For good and valuable consideration, the parties agree as follows:

1.0 DEFINITIONS

- 1.1 "Designated Products" means original or replacement products provided by Contractor to Licensee with which or for which the Software and Documentation is licensed for use.
- 1.2 "Documentation" means product and software documentation that specifies technical and performance features and capabilities, and the user, operation and training manuals for the Software (including all physical or electronic media upon which such information is provided).
- 1.3 "Licensee" means Purchaser/Purchasing Entity who has purchased communication equipment through the Contract/Master Agreement.
- 1.4 "Open Source Software" means software with either freely obtainable source code, license for modification, or permission for free distribution.
- 1.5 "Open Source Software License" means the terms or conditions under which the Open Source Software is licensed.
- 1.6 "Security Vulnerability" means a flaw or weakness in system security procedures, design, implementation, or internal controls that could be exercised (accidentally triggered or intentionally exploited) and result in a security breach such that data is compromised, manipulated or stolen or the system damaged.
- 1.7 "Software" (i) means proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Contractor; and (iii) may contain one or more items of software owned by a third party supplier. The term "Software" does not include any third party software provided under separate license or third party software not licensable under the terms of this Agreement.

2.0 SCOPE

Contractor and Licensee enter into this Agreement in connection with Contractor's delivery of certain proprietary Software or products containing embedded or pre-loaded proprietary Software, or both. This Agreement contains the terms and conditions of the license Contractor is providing to Licensee, and Licensee's use of the Software and Documentation.

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- 3.2 If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source Software Licenses of the copyright owner and not this Agreement. If there is a conflict between the

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terms and conditions of this Agreement and the terms and conditions of the Open Source Software Licenses governing Licensee's use of the Open Source Software, the terms and conditions of the license grant of the applicable Open Source Software Licenses will take precedence over the license grants in this Agreement. Contractor will use commercially reasonable efforts to: (i) determine whether any Open Source Software is provided under this Agreement; (ii) identify the Open Source Software and provide Licensee a copy of the applicable Open Source Software License (or specify where that license may be found); and, (iii) provide Licensee a copy of the Open Source Software source code, without charge, if it is publicly available. Contractor shall be responsible for any distribution fees may be applicable.

- 3.3 If the Software is or includes Integration Framework, Customer Service Request ("CSR"), or Cityworks software, such Software is licensed pursuant to this Agreement plus a separate document entitled "Software License Agreement Rider for Integration Framework, Customer Service Request, or Cityworks Software" (which document is incorporated by this reference and is attached to this Agreement).
- 3.4 Freedom of Use. Contractor understands that a Licensee may provide certain services to other Licensees that are agencies of local, state or federal government and other tax-supported entities. Contractor further understands that Licensees that are agencies of local, state or federal government and other tax-supported entities may provide services to the public. Software delivered hereunder may be used in the delivery of these services. Contractor acknowledges and agrees that such use of Software is acceptable under the licensing agreements contained herein.

4.0 LIMITATIONS ON USE

- 4.1 Other than as permitted in Section 3.4, Freedom of Use, Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," or "service bureau" basis or for any other similar commercial rental or sharing arrangement except as provided in Section 3.4.
- 4.2 Other than as permitted under Section 3.4, Freedom of Use, of this Agreement, Licensee will not, and will not allow or enable any third party to: (i) reverse engineer, disassemble, peel components, decompile, reprogram or otherwise reduce the Software or any portion to a human perceptible form or otherwise attempt to recreate the source code; (ii) modify, adapt, create derivative works of, or merge the Software; (iii) copy, reproduce, distribute, lend, or lease the Software or Documentation to any third party, grant any sublicense or other rights in the Software or Documentation to any third party, or take any action that would cause the Software or Documentation to be placed in the public domain; (iv) remove, or in any way alter or obscure, any copyright notice or other notice of Contractor's proprietary rights; or (v) provide, copy, transmit, disclose, divulge or make the Software or Documentation available to, or permit the use of the Software by any third party or on any machine except as expressly authorized by this Agreement. Licensee may make one copy of Software to be used solely for archival, back-up, or disaster recovery purposes; provided that Licensee may not operate that copy of the Software at the same time as the original Software is being operated. Licensee may make as many copies of the Documentation as it may reasonably require for the authorized use of the Software.
- 4.3 Unless otherwise authorized by Contractor in writing, Licensee will not, and will not enable or allow any third party to: (i) install a licensed copy of the Software on more than one unit of a Designated Product; or (ii) copy onto or transfer Software installed in one unit of a Designated Product onto one

APPENDIX M SOFTWARE LICENSE AGREEMENT

other device. Licensee may temporarily transfer Software installed on a Designated Product to another device if the Designated Product is inoperable or malfunctioning, if Licensee provides written notice to Contractor of the temporary transfer and identifies the device on which the Software is transferred. Temporary transfer of the Software to another device must be discontinued when the original Designated Product is returned to operation and the Software must be removed from the other device. Licensee must provide prompt written notice to Contractor at the time temporary transfer is discontinued.

- 4.4 When using Contractor's Radio Service Software ("RSS"), Licensee must purchase a separate license for each location at which Licensee uses RSS. Licensee's use of RSS at a licensed location does not entitle Licensee to use or access RSS remotely. Licensee may make one copy of RSS for each licensed location. Licensee shall provide Contractor with a list of all locations at which Licensee uses or intends to use RSS upon Contractor's request.
- 4.5 Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Contractor or an independent third party ("Auditor") may inspect Licensee's premises, books and records, upon fifteen (15) days prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations, no more than once per calendar year. Contractor is responsible for the payment of all expenses and costs of the Auditor. Any information obtained by Contractor and the Auditor will be kept in strict confidence by Contractor and the Auditor and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

5.0 OWNERSHIP AND TITLE

Contractor, its licensors, and its suppliers retain all of their proprietary rights in any form in and to the Software and Documentation, including, but not limited to, all rights in patents, patent applications, inventions, copyrights, trademarks, trade secrets, trade names, and other proprietary rights in or relating to the Software and Documentation (including any corrections, bug fixes, enhancements, updates, modifications, adaptations, translations, de-compilations, disassemblies, emulations to or derivative works from the Software or Documentation, whether made by Contractor or another party, or any improvements that result from Contractor's processes or, provision of information services). No rights are granted to Licensee under this Agreement by implication, estoppel or otherwise, except for those rights which are expressly granted to Licensee in this Agreement. Other than as provided in the Contract, all intellectual property developed, originated, or prepared by Contractor in connection with providing the Software, Designated Products, Documentation or related services, remains vested exclusively in Contractor, and Licensee will not have any shared development or other intellectual property rights.

6.0 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

- 6.1 The commencement date and the term of the Software warranty will be a period of ninety (90) days from System Acceptance (the "Warranty Period"). If Licensee is not in breach of any of its obligations under this Agreement, Contractor warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible material defect. Whether a defect occurs will be determined solely with reference to the Documentation. Contractor does not warrant that Licensee's use of the Software or the Designated Products will be uninterrupted, error-free, completely free of Security Vulnerabilities, or that the Software or the Designated Products will meet Licensee's particular requirements. Contractor makes no representations or warranties with respect to any third party software included in the Software.

APPENDIX M SOFTWARE LICENSE AGREEMENT

- 6.2 Contractor warrants that no licensed copy of the Software contains or will contain any virus, back door, time bomb, drop dead device, Trojan horse, worm or other software routines or Equipment components designed to permit unauthorized access; or, automatically with the passage of time or under the positive control of a person other than a licensee, to disable, erase, or otherwise harm software, Equipment, or data. [still open for Contractor]
- 6.3 Contractor's sole obligation to Licensee, and Licensee's exclusive remedy under this warranty, is to use reasonable efforts to remedy any material Software defect covered by this warranty. These efforts will involve either replacing the media or attempting to correct significant, demonstrable program or documentation errors or Security Vulnerabilities. If Contractor cannot correct the defect within a reasonable time, then at Contractor's option, Contractor will replace the defective Software with functionally-equivalent Software, license to Licensee substitute Software which will accomplish the same objective, or terminate the license and refund the Licensee's paid license fee.
- 6.4 All other warranty claims are described in the Contract.
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- 8.2 Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Contractor that all copies of the Software have been removed or deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Contractor or destroyed by Licensee and are no longer in use by Licensee.
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APPENDIX M SOFTWARE LICENSE AGREEMENT

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13.3 **ASSIGNMENTS AND SUBCONTRACTING.** With the prior written consent of Licensee, which consent shall not be unreasonably withheld, Contractor may assign this Agreement including the

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proceeds hereof, provided that such assignment shall not operate to relieve Contractor of any of its duties and obligations hereunder, nor shall such assignment affect any remedies available to Licensee that may arise from any breach of the sections of this Agreement, or warranties made herein including but not limited to, rights of setoff.

- 13.4 **GOVERNING LAW.** This Agreement is governed by the laws of the United States to the extent that they apply and otherwise by the internal substantive laws of the State to which the Software is shipped if Licensee is a sovereign government entity, or the internal substantive laws of the State of Contractor's U.S. home office if Licensee is not a sovereign government entity. The terms of the U.N. Convention on Contracts for the International Sale of Goods do not apply. In the event that the Uniform Computer Information Transaction Act, any version of this Act, or a substantially similar law (collectively "UCITA") becomes applicable to a party's performance under this Agreement, UCITA does not govern any aspect of this Agreement or any license granted under this Agreement, or any of the parties' rights or obligations under this Agreement. The governing law will be that in effect prior to the applicability of UCITA.
- 13.5 **THIRD PARTY BENEFICIARIES.** This Agreement is entered into solely for the benefit of Contractor and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third party software included in the Software will be a direct and intended third party beneficiary of this Agreement.
- 13.6 **SURVIVAL.** Sections 4, 5, 6.3, 7, 8, 9, 10, 11 and 13 survive the termination of this Agreement.
- 13.7 **ORDER OF PRECEDENCE.** In the event of inconsistencies between this Agreement and the Contract, the parties agree that this Agreement prevails, only with respect to the specific subject matter of this Agreement, and not the Contract or any other exhibit as it applies to any other subject matter.
- 13.8 **SECURITY.** Contractor uses reasonable means in the design and writing of its own Software and the acquisition of third party Software to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Contractor will take the steps set forth in Section 6 of this Agreement.

APPENDIX G SPECIFICATIONS

Please make the following changes/revisions to your copy of the RFP document and add the new sections as provided below.

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, DUAL-BAND

1.7	FM Hum and Noise Ratio: -45/-46 dB (12.5kHz) -47/48 dB/(25KHz)	
2.3	Digital Sensitivity: (5%BER) (-119dBm)	
2.5	Spurious Response Rejection: 75 dB (12.5 kHz)	
2.7	Hum and Noise Ratio: 47dB (12.5KHz) 52dB (25KHz)	
6.9	Programmable side buttons	

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER I

1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)	
2.5	Spurious Response Rejection: 75 dB (12.5 kHz)	
6.9	Programmable side buttons	

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER II

2.5	Spurious Response Rejection: 75 dB (12.5 kHz)	
6.3	On/Off volume knob, and channel selector. Mounted on the top.	
6.7	Programmable side buttons	

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, DUAL-BAND

1.2.1	VHF 10-30 Watts	
1.7	FM Hum and Noise Ratio: 48 dB (12.5kHz) 50 dB/(25KHz)	
2.5	Spurious Response Rejection: 90dB (12.5KHz) 90dB (25KHz)	
2.6	Intermodulation Rejection: 82dB (12.5KHz) 80dB (25KHz)	
3.2	Tracking Sensitivity: -152 dBm	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER I

1.7	FM Hum and Noise Ratio: 48 dB (12.5kHz)	
2.5	Spurious Response Rejection: 90 dB (12.5 kHz)	
2.6	Intermodulation Rejection: 80 dB (12.5 kHz)	
3.2	Tracking Sensitivity: -152 dBm	

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER II

Category: Radio / Subcategory Description: Single-Band Mobile Radio, Tier II, P25 Phase I GPS capable.
Channel capacity 1000 (min). Software – Defined Radio Architecture.

1.2.1	VHF 10-30 Watts	
3.2	Tracking Sensitivity: -152 dBm	

CATEGORY: RADIO / SUBCATEGORY: DESKTOP RADIO, DUAL-BAND

Category: Radio / Subcategory Description: Dual-Band Desk Top Radio P25 Phase I 12.5 kHz and P25 Phase II 6.25 kHz equivalent capable, backwards compatible. Channel capacity 1000 (min). Software – Defined Radio Architecture.

4.4	Standby current at 110VAC 10VA Draw (MAX)	
4.5	Receive Current at 110VAC 35VA Draw (max)	

CATEGORY: RADIO / SUBCATEGORY: DESKTOP RADIO, SINGLE-BAND, TIER I

Category: Radio / Subcategory Description: Desktop Radio, Single-Band Tier I, Project 25 Phase I 12.5 kHz and P25 Phase II 6.25 kHz equivalent capable, backwards compatible. Channel capacity 1000 (min). Software – Defined Radio Architecture.

4.4	Standby current at 110VAC 10VA Draw (MAX)	
4.5	Receive Current at 110VAC 35VA Draw (max)	

CATEGORY: RADIO / SUBCATEGORY: DESKTOP RADIO, SINGLE-BAND, TIER II

Category: Radio / Subcategory Description: Desktop Radio, Single-Band, Tier II, P25 Phase I, Channel capacity 1000 (min). Software – Defined Radio Architecture.

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: BASE STATION/REPEATER RADIO, SINGLE-BAND, TIER I

1.6	Audio Distortion %: <2.0/ (12.5 kHz)	
2.3	Digital Sensitivity: (5%BER) (-119dBm)	
2.5	Spurious Response Rejection: 90 dB (12.5 kHz)	
2.6	Intermodulation Rejection: 85 dB (12.5 kHz)	
2.7	Hum and Noise Ratio: 45 dB (12.5KHz)	
4.2	DC power base station with a 12V and/or 48V input.	
4.3	Input Voltage: 10.8 to 16.6DC and/or 36.0 to 60.0 DC	
4.4	Standby current at 110VAC .3A Draw (MAX)	
4.5	Receive Current at 110VAC .8A Draw (max)	
4.6	Transmit Current at 110VAC 10A Draw (max) at 100 Watts	
4.7	DC source Battery (site provided)	
4.8	10.8 to 16.6 VDC Negative Ground	
4.9	Standby at 13.8V <0.30A Draw (max)	
4.10	Receive Current at 13.8 <0.30A Draw (max)	
4.11	Transmit Current at 13.8V <25A Draw (max) at 100 Watts	

CATEGORY: RADIO / SUBCATEGORY: BASE STATION/REPEATER RADIO, SINGLE-BAND, TIER II

4.2	DC powered base station with a 12V and/or 48V input.	
4.3	Input voltage: 10.8 to 16.6 DC and/or 36.0 to 60.0 DC	
4.4	Standby current at 110VAC 0.3A Draw (max)	
4.5	Receive Current at 110VAC 0.8A Draw (max)	
4.6	Transmit Current at 110VAC 10A Draw (max) at 100 Watts	
4.7	DC source Battery (site provided)	
4.8	10.8 to 16.6 VDC Negative Ground	
4.9	Standby at 13.8V 3A Draw (max)	
4.10	Receive Current at 13.8 3A Draw (max)	
4.11	Transmit Current at 13.8V 25A Draw (max) at 100 Watts	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: IN-VEHICLE REPEATER

Category: Radio / Subcategory Description: Vehicular Repeater Systems (VRS) P25 Trunking capable backwards compatible (to analog conventional), and encryption capable.

2.1	Frequency Range (MHz) Simplex	
7.1.1	Time-Out-Timer, factory adjusted for one minute. The electronic transmission timer shall limit the duration of each VRS transmission, whether initiated locally or remotely. The timer shall be adjustable to time-out over the minimum range of 1 to 4 minutes. Interruption of the transmitter remote keying circuit shall cause the timer to reset within 100 milliseconds.	

CATEGORY: RADIO / SUBCATEGORY: GATEWAY DEVICES

1.7.3	The local phone circuit shall produce ring voltage, loop current, busy signal, and dial tone so an interfaced conventional phone acts as though it is hooked to the central office even though it is connected to the interoperability device over nothing but a 2-wire direct circuit.	
1.9	The gateway device will use digital delay to guarantee no lost syllables resulting from channel acquisition times when cross-connecting trunking radios. The digital delay capability shall be DSP-based and shall delay speech going into the transmit side of a trunking radio until channel acquisition occurs.	

APPENDIX G SPECIFICATIONS

1.10 1.9	The gateway device will also allow interfacing with remote radios over dial-up lines, leased lines, microwave circuits, LANs, WANs or the Internet. It shall offer VoIP capability optimized for radio performance, and be capable of operating transparently over a network. It shall allow network interfacing over T1, E1, Frame Relay, DSL and Cable Modem. The VoIP performance of the unit shall allow use of a wide area data network more efficiently by including radio voice communications comprised of transmit audio, keyline, receive audio and COR.	
1.11 1.10	The audio gateway device shall perform either as an unmanned gateway or as a manned gateway while providing interoperability over multiple radios.	
2.1.4	DSP Algorithms: VOX or VMR Voice Detection; TD-Mode Noise Reduction; Audio Equalizer; TX and/or RX Audio delay; Peak Limiter; COR Sampling; TX keying tones.	
2.2.1	RFC Supported: 3261	
2.2.2	SIP Support Vocoders	
2.3.2	DSP Algorithms: DTMF Detection and Generation; DSP VOX.	
2.4	Radio voice over IP.	
2.4.2	Radio-Centric Features: Audio delay and jitter buffer to handle network latency.	

CATEGORY: RADIO / SUBCATEGORY: MICROWAVE RADIOS

	SECTION A Requirements	
3	Channel Sizes Supported: 5,10,30, and 60 MHz	
4.3	Native and/or Circuit Emulated TDM that supports legacy simulcast LMR systems and current P25 systems 4,8,16,28,32,56,61,70,84,100,127xDS1, 1-4x DS3, 1-2x OC3	
4.4	1 to 4x DS3 , 1to 2x OC3	

APPENDIX G SPECIFICATIONS

10	Resolution/Speed: 0.5 dB steps / 50 dB per second	
13	Resiliency and Protection	
13.1	1+1 Hot Standby including 1+1 Equipment Protection Switching (EPS)	
13.2	G.8032 Ring Protection for microwave ring topologies	
	SECTION B Environmental	
14.1	Operating Temperature: conforms to Telcordia standards GR-63	
1.1	Guaranteed: -27 deg to +131 deg F	
1.2	Extended: -58 deg to +149 deg F	
14.2	Humidity: Conforms to Telcordia standards GR-63	
14.3	Altitude: Conforms to Telcordia standards GR-63	
	SECTION C Microwave Antenna	
15.1	High Performance Antenna Similar to HPX6-59 5.925-6.425 GHz	
15.2	High Performance Antenna Similar to HPX6-65 6.425-7.125 GHz	
15.3	Standard Antenna Similar to PARX6-59W 5.925-7.125 GHz	

CATEGORY: RADIO / SUBCATEGORY: DISPATCH CONSOLES

1.	Software based Dispatch Console System	
1.1.	Software-Only operator position; system does not require an external interface sub-system; console positions are connected on an IP network to communicate with other console positions and communicate with digital radios and IP gateways to analog radios.	
1.2.	Runs on current generation personal computer and current generation Windows operating system	
1.3.	Support for multiple monitors	

APPENDIX G SPECIFICATIONS

1.9.	Interface to speakers, microphones, headset adapter box, and foot switch	
1.14.	Support for Project-25 Digital Fixed Station Interface (DFSI) to connect digital base radios to IP network	
1.15.	Radio to IP gateway device to connect analog base radios to IP network	
1.16.	Console system with minimum 6 operator positions	
1.17.	Console system with minimum 24 analog radio channels	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

Category: Radio / Subcategory Description: Portable Radio, Hand Held, Single-Band, Tier III, Channel capacity 8 (min).
Software – Defined Radio Architecture.

The following specifications are the minimum target product requirements for this category/subcategory of public safety communication equipment. It is the Bidder's responsibility to fully describe or explain how the product offered meets or exceeds each identified requirement. If more space is needed, Bidders may submit additional pages (up to a maximum equivalent of five single-sided pages – 12 point font). Only one product may be offered to meet or exceed these specifications on a pass/fail basis. (Reference Section 4.15 Specifications, Part I Solicitation Document)

Manufacturer: _____

Product Model Name/Number: _____

Vendors should submit descriptive literature for the product offered confirming its compliance with specifications.

SECTION A Transmitter – Typical Performance Specifications		
Item #	Description	Describe/explain how Vendor meets or exceeds specifications
1.1	Frequency Range (MHz)	
1.1.1	VHF (136-174)	
1.2	Rated RF output power minimum: 4 watts	
1.3	Conducted Spurious Emissions: 65 dBc (12.5kHz)	
1.4	FM Hum & Noise: 45/40 dB 25KHz / 12.5 KHz	
1.5	Audio Distortion %: less than 5	
SECTION B Receiver – Typical Performance Specifications		
Item #	Description	Describe/explain how Vendor meets or exceeds specifications
2.1	Frequency Range (MHz)	
2.1.1	VHF (136-174 MHz)	
2.2	Sensitivity: 12dB SINAD: 0.25/0.35uV 25KHz/12.5 KHz	
2.3	Adjacent Channel Selectivity: 65/60 dB 25KHz/12.5KHz	
2.4	Intermodulation: 65/60 dB 25KHz/12.5KHz	
2.5	Spurious Response Rejection: 70 dB	
2.6	Audio Distortion: less than 10%	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

SECTION C Batteries and Chargers Typical Performance Specifications		
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
3.1	Rechargeable battery pack: Li-Ion	
3.2	Battery Life: 7 hours (minimum) Based on (5-5-90 duty)	
3.3	Rapid charge-able: Less than 5 hours	
3.4	Battery Charger - Single unit.	
3.5	Operates from 120 VAC.	
SECTION D Physical Requirements		
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
4.1	Flexible antenna with threaded connector.	
4.2	Antenna optimized for frequency range specified on P.O.	
4.3	Rotary channel selector knob mounted on top. Separate from volume control.	
SECTION E User Training		
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
5.1	Operator Manual:	
5.1.1	Provide a hardcopy of the manual	
5.1.2	Provide soft copy on digital media (CD,DVD or flash drive)	
5.2	Contents of manual.	
5.2.1	Location of all switches, controls and indicators.	
5.2.2	Step-by-step instructions to operate all equipment features.	
SECTION F Repairs and Warranties		
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
6.1	Service Options; Optional Repair Service starts at end of standard radio warranty.	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

6.2	5 Year Repair Service	
	SECTION G Accessories/Optional Features	
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
7.1	Battery power save option	
7.2	Earpiece microphone	
7.3	Nylon carry case w/3" belt loop for standard battery size.	
7.4	Belt clip	
7.5	Remote speaker Microphone	
7.6	Software License agreement to include two years of updates	
7.7	Programing/Cloning:	
7.7.1	PC programing software and cables.	
7.7.2	Radio Cloning cable kit	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER III

Category: Radio / Subcategory Description: Single-Band Mobile Radio, Tier III. Channel capacity 8 (min). Software – Defined Radio Architecture.

The following specifications are the minimum target product requirements for this category/subcategory of public safety communication equipment. It is the Bidder's responsibility to fully describe or explain how the product offered meets or exceeds each identified requirement. If more space is needed, Bidders may submit additional pages (up to a maximum equivalent of five single-sided pages – 12 point font). Only one product may be offered to meet or exceed these specifications on a pass/fail basis. (Reference Section 4.15 Specifications, Part I Solicitation Document)

Manufacturer: _____

Product Model Name/Number: _____

Vendors should submit descriptive literature for the product offered confirming its compliance with specifications.

SECTION A Transmitter – Typical Performance Specifications		
Item #	Description	Describe/explain how Vendor meets or exceeds specifications
1.1	Frequency Range (MHz)	
1.1.1	VHF (136-174)	
1.2	Rated RF Output Power minimum: VHF 2-25 Watts	
1.3	Carrier Frequency Stability. (-30° to +60° C) - \pm 2.5 PPM	
1.4	Spurious Emissions: 70 dB (min) 12.5 kHz	
1.4.1	Modulation Limiting: \pm 2.5 kHz (12.5 kHz)	
1.5	Audio Response: +1,-3 dB	
1.6	Audio Distortion %: 3/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: <40 dB (12.5kHz)	
1.8	Conducted Spurious Emissions: -70 dBc (12.5kHz)	
1.9	Channel Spacing kHz: 12.5/25	
SECTION B Receiver – Typical Performance Specifications		
Item #	Description	Describe/explain how Vendor meets or exceeds specifications
2.1	Frequency Range (MHz)	
2.1.1	VHF (136-174 MHz)	
2.2	Sensitivity: (at 12 Db SINAD) 0.25uV typ.	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER III

2.3	Digital Sensitivity: (5%BER) (-119dBm)	
2.4	Adjacent Channel Rejection: 45 dB (12.5 kHz)	
2.5	Spurious Response Rejection: 75 dB (12.5 kHz)	
2.6	Intermodulation Rejection: 75 dB (12.5 kHz)	
2.7	Hum and Noise Ratio: 35 dB (12.5kHz)	
	SECTION C Electrical Requirements Typical Performance Specifications	
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
3.1	System Operation Voltage	
3.2	10.8 to 16.6 VDC Negative Ground	
3.3	Standby at 13.8V 0.85A Draw (max)	
3.4	Receive Current at 13.8V 3.2A Draw (max)	
3.5	Transmit Current at 13.8V 11A Draw (max) at 30 Watts	
	SECTION D Physical Requirements	
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
4.1	Transmitter/Receiver assembly	
4.1.1	Station Chassis Configured for mounting in the trunk of a vehicle.	
4.2	Installation kit	
4.2.1	Mounting Hardware	
4.2.2	Control cable minimum length 14 feet.	
4.2.3	Power cable minimum length 17 feet.	
4.3	Antenna	
4.3.1	¼ wave Broadband (136-174MHz) optimized for frequency range specified on P.O.	
4.4	Multifunction Volume/Channel knob	
4.5	Microphone Palm type W/mounting bracket	
4.6	Programmable one touch buttons	
4.7	External Speaker	
4.7.1	4 Watt (min)	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER III

SECTION E User Training		
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
5.1	Operator Manual:	
5.1.1	Provide a hardcopy of the manual	
5.1.2	Provide soft copy on digital media (CD,DVD or flash drive)	
5.2	Contents of manual.	
5.2.1	Location of all switches, controls and indicators.	
5.2.2	Step-by-step instructions to operate all equipment features.	
SECTION F Repairs and Warranties		
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
6.1	Service Options; Optional Repair Service starts at end of standard radio warranty.	
6.1.2	5 Year Repair Service	
SECTION G Accessories/Optional Features		
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
7.1	Software License agreement to include two years of updates	
7.2	DTMF microphone	
7.3	Desktop microphone	

APPENDIX G SPECIFICATIONS

CATEGORY: RF TRANSMISSION LINES

Category: RF Transmission Lines, (Includes: Base station coaxial cables and waveguide for microwave installations along with associated connectors and hardware)

The following specifications are the minimum target product requirements for this category/subcategory of public safety communication equipment. It is the Bidder's responsibility to fully describe or explain how the product offered meets or exceeds each identified requirement. If more space is needed, Bidders may submit additional pages (up to a maximum equivalent of five single-sided pages – 12 point font). Only one product may be offered to meet or exceed these specifications on a pass/fail basis. (Reference Section 4.15 Specifications, Part I Solicitation Document)

Manufacturer: _____

Product Model Name/Number: _____

Vendors should submit descriptive literature for the product offered confirming its compliance with specifications.

Item #	Description	Describe/explain how Vendor Meets or Exceeds Specifications
1.	Standard 1/2" Base Station Coaxial Cable	
1.1.	Nominal size = 1/2 inch	
1.2.	Jacket Color/Material = Black/Polyethylene	
1.3.	Outer Conductor Material = Corrugated copper	
1.4.	Inner Conductor Material = Copper-clad aluminum wire	
1.5.	Dielectric Material = Low Density Polyethylene foam	
1.6.	Minimum Bend Radius, Multiple Bends < 6 inches	
1.7.	Operating Temperature = -55 °C to +85 °C	
1.8.	Cable Impedance = 50 ohm ±1 ohm	
1.9.	Operating Frequency Band = 1 – 8800 MHz	
1.10.	Peak Power = 40.0 kW	
1.11.	Velocity = 88%	
1.12.	Attenuation per 100 Feet @ 150 MHz < 0.8 Db. @ 450 MHz < 1.4 Db. @ 960 MHz < 2.1 Db. @ 5000 MHz < 5.4 Db.	

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CATEGORY: RF TRANSMISSION LINES

APPENDIX G SPECIFICATIONS

APPENDIX G SPECIFICATIONS

CATEGORY: RF FILTERING EQUIPMENT

Category: RF Filtering Equipment, (Includes: Filter cavities, duplexers, ferrite circulators, receiver multi-couplers, and RF combining equipment)

The following specifications are the minimum target product requirements for this category/subcategory of public safety communication equipment. It is the Bidder's responsibility to fully describe or explain how the product offered meets or exceeds each identified requirement. If more space is needed, Bidders may submit additional pages (up to a maximum equivalent of five single-sided pages – 12 point font). Only one product may be offered to meet or exceed these specifications on a pass/fail basis. (Reference Section 4.15 Specifications, Part I Solicitation Document)

Manufacturer: _____

Product Model Name/Number: _____

Vendors should submit descriptive literature for the product offered confirming its compliance with specifications.

Item #	Description	Describe/explain how Vendor Meets or Exceeds Specifications
1.	VHF Duplexer	
1.1.	Frequency Range, minimum = 150 to 165 MHz	
1.2.	Frequency Separation, minimum = 3 MHz.	
1.3.	Insertion Loss, maximum = 0.8 Db.	
1.4.	Isolation, minimum = 80 Db.	
1.5.	Impedance = 50 ohms	
1.6.	VSWR, maximum = 1.5:1	
1.7.	Temperature Range = -30°C to +60°C	
1.8.	Average Power Input Rating = 120 Watts	
1.9.	Mounting: standard 19" Rack	
1.10.	Connections = N or BNC	

APPENDIX H PRICE WORKSHEETS

Please make the following changes/revisions to your copy of the RFP document and add the new sections as provided below.

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, DUAL-BAND

1.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)			
	For bidding and pricing purposes, Bidders are to offer and price a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: -45/-46 dB (12.5kHz) -47/48 dB/(25KHz)		\$ _____	\$ _____
2.3	Digital Sensitivity: (5%BER) (-119dBm)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 75		\$ _____	\$ _____
2.7	Hum and Noise Ratio: 47dB (12.5KHz) 52dB (25KHz)		\$ _____	\$ _____
6.9	Programmable side buttons		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (i.e. dual-band or multi-band portables only) which are being offered at the same of greater level of price discount off the reference manufacturer's price list.

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER I

1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 75 dB (12.5 kHz)		\$ _____	\$ _____
6.9	Programmable side buttons		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include single-band tier I portables only) which are being offered at the same of greater level of price discount off the reference manufacturer's price list.

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER II

2.5	Spurious Response Rejection: 75 dB (12.5 kHz)		\$ _____	\$ _____
6.3	On/Off volume knob, and channel selector. Mounted on the top.		\$ _____	\$ _____
6.7	Programmable side buttons		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include single-band tier II portables only) which are offered at the same of greater level of price discount off the reference manufacturer's price list.

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, DUAL-BAND

1.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)			
	For bidding and pricing purposes, Bidders are to offer and price a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.		\$ _____	\$ _____
1.2.1	VHF 10-30 Watts		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 48 dB (12.5kHz) 50 dB/(25KHz)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 90dB (12.5KHz) 90dB (25KHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 82dB (12.5KHz) 80dB (25KHz)		\$ _____	\$ _____
3.2	Tracking Sensitivity: -152 dBm		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (i.e. dual-band or multi-band mobiles only) which are being offered at the same of greater level of price discount off the reference manufacturer's price list.

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER I

APPENDIX H PRICE WORKSHEETS

1.7	FM Hum and Noise Ratio: 48 dB (12.5kHz)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 90 dB (12.5 kHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 80 dB (12.5 kHz)		\$ _____	\$ _____
3.2	Tracking Sensitivity: -152 dBm		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include single-band tier I mobiles only) which are being offered at the same of greater level of price discount off the reference manufacturer's price list.

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER II

Category: Radio / Subcategory Description: Single-Band Mobile Radio, Tier II, P25 Phase I GPS capable.
Channel capacity 1000 (min). Software – Defined Radio Architecture.

1.2.1	VHF 10-30 Watts		\$ _____	\$ _____
3.2	Tracking Sensitivity: -152 dBm		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include single-band tier I mobiles only) which are offered at the same of greater level of price discount off the reference manufacturer's price list.

CATEGORY: RADIO / SUBCATEGORY: DESKTOP RADIO, DUAL-BAND

Category: Radio / Subcategory Description: Dual-Band Desktop Radio P25 Phase I 12.5 kHz and P25 Phase II 6.25 kHz equivalent capable, backwards compatible. Channel capacity 1000 (min). Software – Defined Radio Architecture.

1.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)			
	For bidding and pricing purposes, Bidders are to offer and price a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.		\$ _____	\$ _____
4.4	Standby current at 110VAC 10VA Draw (MAX)		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

4.5	Receive Current at 110VAC 35VA Draw (max)		\$ _____	\$ _____
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In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (i.e. dual-band or multi-band desktop radios only) which are being offered at the same of greater level of price discount off the reference manufacturer's price list.

CATEGORY: RADIO / SUBCATEGORY: DESKTOP RADIO, SINGLE-BAND, TIER I

Category: Radio / Subcategory Description: Desktop Radio, Single-Band Tier I, Project 25 Phase I 12.5 kHz and P25 Phase II 6.25 kHz equivalent capable, backwards compatible. Channel capacity 1000 (min). Software – Defined Radio Architecture.

4.4	Standby current at 110VAC 10VA Draw (MAX)		\$ _____	\$ _____
4.5	Receive Current at 110VAC 35VA Draw (max)		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include other tier I desktop radios only) which are being offered at the same of greater level of price discount off the reference manufacturer's price list.

CATEGORY: RADIO / SUBCATEGORY: DESKTOP RADIO, SINGLE-BAND, TIER II

Category: Radio / Subcategory Description: Desktop Radio, Single-Band, Tier II, P25 Phase I, Channel capacity 1000 (min). Software – Defined Radio Architecture.

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include other tier II desktop radios only) which are offered at the same of greater level of price discount off the reference manufacturer's price list. However, no single-band tier I products may be listed.

CATEGORY: RADIO / SUBCATEGORY: BASE STATION/REPEATER RADIO, SINGLE-BAND, TIER I

1.6	Audio Distortion %: <2.0/ (12.5 kHz)		\$ _____	\$ _____
2.3	Digital Sensitivity: (5%BER) (-119dBm)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 90 dB (12.5 kHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 85 dB (12.5 kHz)		\$ _____	\$ _____
2.7	Hum and Noise Ratio: 45 dB (12.5KHz)		\$ _____	\$ _____
4.2	DC power base station with a 12V and/or 48V input.		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

4.3	Input Voltage: 10.8 to 16.6DC and/or 36.0 to 60.0 DC		\$ _____	\$ _____
4.4	Standby current at 110VAC .3A Draw (MAX)		\$ _____	\$ _____
4.5	Receive Current at 110VAC .8A Draw (max)		\$ _____	\$ _____
4.6	Transmit Current at 110VAC 10A Draw (max) at 100 Watts		\$ _____	\$ _____
4.7	DC source Battery (site provided)		\$ _____	\$ _____
4.8	10.8 to 16.6 VDC Negative Ground		\$ _____	\$ _____
4.9	Standby at 13.8V <0.30A Draw (max)		\$ _____	\$ _____
4.10	Receive Current at 13.8 <0.30A Draw (max)		\$ _____	\$ _____
4.11	Transmit Current at 13.8V <25A Draw (max) at 100 Watts		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include other tier I base station/repeater radios only) which are being offered at the same or greater level of price discount off the reference manufacturer's price list.

CATEGORY: RADIO / SUBCATEGORY: BASE STATION/REPEATER RADIO, SINGLE-BAND, TIER II

4.2	DC powered base station with a 12V and/or 48V input.		\$ _____	\$ _____
4.3	Input voltage: 10.8 to 16.6 DC and/or 36.0 to 60.0 DC		\$ _____	\$ _____
4.4	Standby current at 110VAC 0.3A Draw (max)		\$ _____	\$ _____
4.5	Receive Current at 110VAC 0.8A Draw (max)		\$ _____	\$ _____
4.6	Transmit Current at 110VAC 10A Draw (max) at 100 Watts		\$ _____	\$ _____
4.7	DC source Battery (site provided)		\$ _____	\$ _____
4.8	10.8 to 16.6 VDC Negative Ground		\$ _____	\$ _____
4.9	Standby at 13.8V 3A Draw (max)		\$ _____	\$ _____
4.10	Receive Current at 13.8 3A Draw (max)		\$ _____	\$ _____
4.11	Transmit Current at 13.8V 25A Draw (max) at 100 Watts		\$ _____	\$ _____

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include other tier II base station/repeater radios only) which are offered at the same or greater level of price discount off the reference manufacturer's price list.

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: IN-VEHICLE REPEATER

Category: Radio / Subcategory Description: Vehicular Repeater Systems (VRS) P25 Trunking capable backwards compatible (to analog conventional), and encryption capable.

2.1	Frequency Range (MHz) Simplex		\$ _____	\$ _____
7.1.1	Time-Out-Timer, factory adjusted for one minute. The electronic transmission timer shall limit the duration of each VRS transmission, whether initiated locally or remotely. The timer shall be adjustable to time-out over the minimum range of 1 to 4 minutes. Interruption of the transmitter remote keying circuit shall cause the timer to reset within 100 milliseconds.		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: GATEWAY DEVICES

1.7.3	The local phone circuit shall produce ring voltage, loop current, busy signal, and dial tone so an interfaced conventional phone acts as though it is hooked to the central office even though it is connected to the interoperability device over nothing but a 2-wire direct circuit.		\$ _____	\$ _____
1.9	The gateway device will use digital delay to guarantee no lost syllables resulting from channel acquisition times when cross-connecting trunking radios. The digital delay capability shall be DSP-based and shall delay speech going into the transmit side of a trunking radio until channel acquisition occurs.		\$ _____	\$ _____
1.10 1.9	The gateway device will also allow interfacing with remote radios over dial-up lines, leased lines, microwave circuits, LANs, WANs or the Internet. It shall offer VoIP capability optimized for radio performance, and be capable of operating transparently over a network. It shall allow network interfacing over T1, E1, Frame Relay, DSL and Cable Modem. The VoIP performance of the unit shall allow use of a wide area data network more efficiently by including radio voice communications comprised of transmit audio, keyline, receive audio and COR.		\$ _____	\$ _____
1.11 1.10	The audio gateway device shall perform either as an unmanned gateway or as a manned gateway while providing interoperability over multiple radios.		\$ _____	\$ _____
2.1.4	DSP Algorithms: VOX or VMR Voice Detection; TD-Mode Noise Reduction; Audio Equalizer; TX and/or RX Audio delay; Peak Limiter; COR Sampling; TX keying tones.		\$ _____	\$ _____
2.2.1	RFC Supported: 3261		\$ _____	\$ _____
2.2.2	SIP Support Vocoders		\$ _____	\$ _____
2.3.2	DSP Algorithms: DTMF Detection and Generation; DSP VOX.		\$ _____	\$ _____
2.4	Radio voice over IP.		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

2.4.2	Radio-Centric Features: Audio delay and jitter buffer to handle network latency.		\$ _____	\$ _____
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CATEGORY: RADIO / SUBCATEGORY: MICROWAVE RADIOS

	SECTION A Requirements			
3	Channel Sizes Supported: 5,10,30, and 60 MHz		\$ _____	\$ _____
4.3	Native and/or Circuit Emulated TDM that supports legacy simulcast LMR systems and current P25 systems 4,8,16,28,32,56,61,70,84,100,127xDS1, 1-4x DS3, 1-2x OC3		\$ _____	\$ _____
4.4	1 to 4x DS3 , 1to 2x OC3		\$ _____	\$ _____
10	Resolution/Speed: 0.5 dB steps / 50 dB per second		\$ _____	\$ _____
13	Resiliency and Protection		\$ _____	\$ _____
13.1	1+1 Hot Standby including 1+1 Equipment Protection Switching (EPS)		\$ _____	\$ _____
13.2	G.8032 Ring Protection for microwave ring topologies		\$ _____	\$ _____
	SECTION B Environmental			
14.1	Operating Temperature: conforms to Telcordia standards GR-63		\$ _____	\$ _____
1.1	Guaranteed: -27 deg to +131 deg F			
1.2	Extended: -58 deg to +149 deg F			
14.2	Humidity: Conforms to Telcordia standards GR-63			
14.3	Altitude: Conforms to Telcordia standards GR-63		\$ _____	\$ _____
	SECTION C Microwave Antenna			
15.1	High Performance Antenna Similar to HPX6-59 5.925-6.425 GHz		\$ _____	\$ _____
15.2	High Performance Antenna Similar to HPX6-65 6.425-7.125 GHz		\$ _____	\$ _____
15.3	Standard Antenna Similar to PARX6-59W 5.925-7.125 GHz		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: DISPATCH CONSOLES

1.	Software based Dispatch Console System		\$ _____	\$ _____
1.1	Software-Only operator position; system does not require an external interface sub-system; console positions are connected on an IP network to communicate with other console positions and communicate with digital radios and IP gateways to analog radios.		\$ _____	\$ _____
1.2	Runs on current generation personal computer and current generation Windows operating system		\$ _____	\$ _____
1.3	Support for multiple monitors		\$ _____	\$ _____
1.9.	Interface to speakers, microphones, headset adapter box, and foot switch		\$ _____	\$ _____
1.14.	Support for Project-25 Digital Fixed Station Interface (DFSI) to connect digital base radios to IP network		\$ _____	\$ _____
1.15.	Radio to IP gateway device to connect analog base radios to IP network		\$ _____	\$ _____
1.16.	Console system with minimum 6 operator positions		\$ _____	\$ _____
1.17.	Console system with minimum 24 analog radio channels		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

Category: Radio / Subcategory Description: Portable Radio, Hand Held, Single-Band, Tier III, Channel capacity 8 (min).
Software – Defined Radio Architecture.

Bidders are to identify below the same specific product they offered to meet target product specifications described in Appendix G Specifications. Identify below the manufacturer, product model name/number, a fixed price percentage discount (rounded to the 1/10 of one percent) to be applied to the product offered and all parts, features, and accessories. List by line item part number: the manufacturer's list price and the net price after discount (rounded to the whole cent). The total of line item prices for the entire target product as configured below shall be used for evaluation purposes. Enclose a copy of the manufacturer's reference price list with the proposal response. Additionally, Bidders may identify by listing below other products they market within this category/subcategory that they wish to include in the contract in the event of contract award. (Reference Section 4.16 Pricing, Part I Solicitation Document and Section 3.4 Contract Pricing of the Model Contract)

Manufacturer: _____ Product Model Name/Number: _____

Manufacturer's Reference Price List: _____ Price Percentage Discount Offered: _____ %

SECTION A Transmitter – Typical Performance Specifications				
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
1.1	Frequency Range (MHz)		\$ _____	\$ _____
1.1.1	VHF (136-174)		\$ _____	\$ _____
1.2	Rated RF output power minimum: 4 watts		\$ _____	\$ _____
1.3	Conducted Spurious Emissions: 65 dBc (12.5kHz)		\$ _____	\$ _____
1.4	FM Hum & Noise: 45/40 dB 25KHz / 12.5 KHz		\$ _____	\$ _____
1.5	Audio Distortion %: less than 5		\$ _____	\$ _____
SECTION B Receiver – Typical Performance Specifications				
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
2.1	Frequency Range (MHz)		\$ _____	\$ _____
2.1.1	VHF (136-174 MHz)		\$ _____	\$ _____
2.2	Sensitivity: 12dB SINAD: 0.25/0.35uV 25KHz/12.5 KHz		\$ _____	\$ _____
2.3	Adjacent Channel Selectivity: 65/60 dB 25KHz/12.5KHz		\$ _____	\$ _____
2.4	Intermodulation: 65/60 dB 25KHz/12.5KHz		\$ _____	\$ _____
2.5	Spurious Response Rejection: 70 dB		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

2.6	Audio Distortion: less than 10%		\$ _____	\$ _____
	SECTION C Batteries and Chargers Typical Performance Specifications			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
3.1	Rechargeable battery pack: Li-Ion		\$ _____	\$ _____
3.2	Battery Life: 7 hours (minimum) Based on (5-5-90 duty)		\$ _____	\$ _____
3.3	Rapid charge-able: Less than 5 hours		\$ _____	\$ _____
3.4	Battery Charger - Single unit.		\$ _____	\$ _____
3.5	Operates from 120 VAC.		\$ _____	\$ _____
	SECTION D Physical Requirements			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
4.1	Flexible antenna with threaded connector.		\$ _____	\$ _____
4.2	Antenna optimized for frequency range specified on P.O.		\$ _____	\$ _____
4.3	Rotary channel selector knob mounted on top. Separate from volume control.		\$ _____	\$ _____
	SECTION E User Training			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
5.1	Operator Manual:		\$ _____	\$ _____
5.1.1	Provide a hardcopy of the manual		\$ _____	\$ _____
5.1.2	Provide soft copy on digital media (CD,DVD or flash drive)		\$ _____	\$ _____
5.2	Contents of manual.		\$ _____	\$ _____
5.2.1	Location of all switches, controls and indicators.		\$ _____	\$ _____
5.2.2	Step-by-step instructions to operate all equipment features.		\$ _____	\$ _____
	SECTION F Repairs and Warranties			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

6.1	Service Options; Optional Repair Service starts at end of standard radio warranty.		\$ _____	\$ _____
6.2	5 Year Repair Service		\$ _____	\$ _____
	SECTION G Accessories/Optional Features			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
7.1	Battery power save option		\$ _____	\$ _____
7.2	Earpiece microphone		\$ _____	\$ _____
7.3	Nylon carry case w/3" belt loop for standard battery size.		\$ _____	\$ _____
7.4	Belt clip		\$ _____	\$ _____
7.5	Remote speaker Microphone		\$ _____	\$ _____
7.6	Software License agreement to include two years of updates		\$ _____	\$ _____
7.7	Programing/Cloning:		\$ _____	\$ _____
7.7.1	PC programing software and cables.		\$ _____	\$ _____
7.7.2	Radio Cloning cable kit		\$ _____	\$ _____
Total Net Evaluation Price:				\$ _____

Bidder offers the following services commonly available for this product category/subcategory at the percentage discounts listed below off manufacturer's (or subcontractor's/dealer's/distributor's) list prices or at the per hour price specified.

Services	Percent Discount Off List	or	Charge Per Hour
Equipment configuration and system design:	_____ % Discount	or	\$ _____/Hour
Technical support services:	_____ % Discount	or	\$ _____/Hour
Equipment installation:	_____ % Discount	or	\$ _____/Hour
Equipment repair:	_____ % Discount	or	\$ _____/Hour
Training:	_____ % Discount	or	\$ _____/Hour

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

Other Services

_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product category/subcategory (may include single-band tier III portables only) which are being offered at the same or greater level of price discount off the reference manufacturer's price list.

Other Available Products/Models	Percent Discount Off List
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER III

Category: Radio / Subcategory Description: Single-Band Mobile Radio, Tier III. Channel capacity 8 (min). Software – Defined Radio Architecture.

Bidders are to identify below the same specific product they offered to meet target product specifications described in Appendix G Specifications. Identify below the manufacturer, product model name/number, a fixed price percentage discount (rounded to the 1/10 of one percent) to be applied to the product offered and all parts, features, and accessories. List by line item part number: the manufacturer's list price and the net price after discount (rounded to the whole cent). The total of line item prices for the entire target product as configured below shall be used for evaluation purposes. Enclose a copy of the manufacturer's reference price list with the proposal response. Additionally, Bidders may identify by listing below other products they market within this category/subcategory that they wish to include in the contract in the event of contract award. (Reference Section 4.16 Pricing, Part I Solicitation Document and Section 3.4 Contract Pricing of the Model Contract)

Manufacturer: _____ Product Model Name/Number: _____

Manufacturer's Reference Price List: _____ Price Percentage Discount Offered: _____ %

SECTION A Transmitter – Typical Performance Specifications				
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
1.1	Frequency Range (MHz)		\$ _____	\$ _____
1.1.1	VHF (136-174)		\$ _____	\$ _____
1.2	Rated RF Output Power minimum: VHF 2-25 Watts		\$ _____	\$ _____
1.3	Carrier Frequency Stability. (-30° to +60° C) - ± 2.5 PPM		\$ _____	\$ _____
1.4	Spurious Emissions: 70 dB (min) 12.5 kHz		\$ _____	\$ _____
1.4.1	Modulation Limiting: ±2.5 kHz (12.5 kHz)		\$ _____	\$ _____
1.5	Audio Response: +1,-3 dB		\$ _____	\$ _____
1.6	Audio Distortion %: 3/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: <40 dB (12.5kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -70 dBc (12.5kHz)		\$ _____	\$ _____
1.9	Channel Spacing kHz: 12.5/25		\$ _____	\$ _____
SECTION B Receiver – Typical Performance Specifications				
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
2.1	Frequency Range (MHz)		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER III

2.1.1	VHF (136-174 MHz)		\$ _____	\$ _____
2.2	Sensitivity: (at 12 Db SINAD) 0.25uV typ.		\$ _____	\$ _____
2.3	Digital Sensitivity: (5%BER) (-119dBm)		\$ _____	\$ _____
2.4	Adjacent Channel Rejection: 45 dB (12.5 kHz)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 75 dB (12.5 kHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 75 dB (12.5 kHz)		\$ _____	\$ _____
2.7	Hum and Noise Ratio: 35 dB (12.5kHz)		\$ _____	\$ _____
	SECTION C Electrical Requirements Typical Performance Specifications			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
3.1	System Operation Voltage		\$ _____	\$ _____
3.2	10.8 to 16.6 VDC Negative Ground		\$ _____	\$ _____
3.3	Standby at 13.8V 0.85A Draw (max)		\$ _____	\$ _____
3.4	Receive Current at 13.8V 3.2A Draw (max)		\$ _____	\$ _____
3.5	Transmit Current at 13.8V 11A Draw (max) at 30 Watts		\$ _____	\$ _____
	SECTION D Physical Requirements			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
4.1	Transmitter/Receiver assembly		\$ _____	\$ _____
4.1.1	Station Chassis Configured for mounting in the trunk of a vehicle.		\$ _____	\$ _____
4.2	Installation kit		\$ _____	\$ _____
4.2.1	Mounting Hardware		\$ _____	\$ _____
4.2.2	Control cable minimum length 14 feet.		\$ _____	\$ _____
4.2.3	Power cable minimum length 17 feet.		\$ _____	\$ _____
4.3	Antenna		\$ _____	\$ _____
4.3.1	¼ wave Broadband (136-174MHz) optimized for frequency range specified on P.O.		\$ _____	\$ _____
4.4	Multifunction Volume/Channel knob		\$ _____	\$ _____
4.5	Microphone Palm type W/mounting bracket		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER III

4.6	Programmable one touch buttons		\$ _____	\$ _____
4.7	External Speaker		\$ _____	\$ _____
4.7.1	4 Watt (min)		\$ _____	\$ _____
	SECTION E User Training			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
5.1	Operator Manual:		\$ _____	\$ _____
5.1.1	Provide a hardcopy of the manual		\$ _____	\$ _____
5.1.2	Provide soft copy on digital media (CD,DVD or flash drive)		\$ _____	\$ _____
5.2	Contents of manual.		\$ _____	\$ _____
5.2.1	Location of all switches, controls and indicators.		\$ _____	\$ _____
5.2.2	Step-by-step instructions to operate all equipment features.		\$ _____	\$ _____
	SECTION F Repairs and Warranties			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
6.1	Service Options; Optional Repair Service starts at end of standard radio warranty.		\$ _____	\$ _____
6.2	5 Year Repair Service		\$ _____	\$ _____
	SECTION G Accessories/Optional Features			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
7.1	Software License agreement to include two years of updates		\$ _____	\$ _____
7.2	DTMF microphone		\$ _____	\$ _____
7.3	Desktop microphone		\$ _____	\$ _____
Total Net Evaluation Price:				\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER III

Bidder offers the following services commonly available for this product category/subcategory at the percentage discounts listed below off manufacturer's (or subcontractor's/dealer's/distributor's) list prices or at the per hour price specified.

Services	Percent Discount Off List	or	Charge Per Hour
Equipment configuration and system design:	_____ % Discount	or	\$_____/Hour
Technical support services:	_____ % Discount	or	\$_____/Hour
Equipment installation:	_____ % Discount	or	\$_____/Hour
Equipment repair:	_____ % Discount	or	\$_____/Hour
Training:	_____ % Discount	or	\$_____/Hour

Other Services

_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product subcategory (may include single-band tier III mobiles only) which are offered at the same or greater level of price discount off the reference manufacturer's price list.

Other Available Products/Models	Percent Discount Off List
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount

APPENDIX H PRICE WORKSHEETS

CATEGORY: RF TRANSMISSION LINES

Category: RF Transmission Lines, (Includes: Base station coaxial cables and waveguide for microwave installations along with associated connectors and hardware)

Bidders are to identify below the same specific product they offered to meet target product specifications described in Appendix G Specifications. Identify below the manufacturer, product model name/number, a fixed price percentage discount (rounded to the 1/10 of one percent) to be applied to the product offered and all parts, features, and accessories. List by line item part number: the manufacturer's list price and the net price after discount (rounded to the whole cent). The total of line item prices for the entire target product as configured below shall be used for evaluation purposes. Enclose a copy of the manufacturer's reference price list with the proposal response. Additionally, Bidders may identify by listing below other products they market within this category/subcategory that they wish to include in the contract in the event of contract award. (Reference Section 4.16 Pricing, Part I Solicitation Document and Section 3.4 Contract Pricing of the Model Contract)

Manufacturer: _____ Product Model Name/Number: _____

Manufacturer's Reference Price List: _____ Price Percentage Discount Offered: _____ %

Item #	Description	Part Number	Mfg. List Price Per Foot	Net Price Per Foot After Discount
1.1	Standard 1/2" Base Station Coaxial Cable (Product offered and priced meets all specification requirements as listed in Appendix G Specifications.)		\$ _____	\$ _____
Total Net Evaluation Price:				\$ _____

Bidder offers the following services commonly available for this product category/subcategory at the percentage discounts listed below off manufacturer's (or subcontractor's/dealer's/distributor's) list prices or at the per hour price specified.

Services	Percent Discount Off List	or	Charge Per Hour
Equipment configuration and system design:	_____ % Discount	or	\$ _____/Hour
Technical support services:	_____ % Discount	or	\$ _____/Hour
Equipment installation:	_____ % Discount	or	\$ _____/Hour
Equipment repair:	_____ % Discount	or	\$ _____/Hour
Training:	_____ % Discount	or	\$ _____/Hour

APPENDIX H PRICE WORKSHEETS

CATEGORY: RF TRANSMISSION LINES

Other Services

_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product category/subcategory which are being offered at the same or greater level of price discount off the reference manufacturer’s price list.

Other Available Products/Models	Percent Discount Off List
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount

APPENDIX H PRICE WORKSHEETS

CATEGORY: RF FILTERING EQUIPMENT

Category: RF Transmission Lines, (Includes: Base station coaxial cables and waveguide for microwave installations along with associated connectors and hardware)

Bidders are to identify below the same specific product they offered to meet target product specifications described in Appendix G Specifications. Identify below the manufacturer, product model name/number, a fixed price percentage discount (rounded to the 1/10 of one percent) to be applied to the product offered and all parts, features, and accessories. List by line item part number: the manufacturer's list price and the net price after discount (rounded to the whole cent). The total of line item prices for the entire target product as configured below shall be used for evaluation purposes. Enclose a copy of the manufacturer's reference price list with the proposal response. Additionally, Bidders may identify by listing below other products they market within this category/subcategory that they wish to include in the contract in the event of contract award. (Reference Section 4.16 Pricing, Part I Solicitation Document and Section 3.4 Contract Pricing of the Model Contract)

Manufacturer: _____ Product Model Name/Number: _____

Manufacturer's Reference Price List: _____ Price Percentage Discount Offered: _____ %

Item #	Description	Part Number	Mfg. List Price Per Foot	Net Price After Discount
1	VHF Duplexer		\$ _____	\$ _____
1.1	Frequency Range, minimum = 150 to 165 MHz		\$ _____	\$ _____
1.2	Frequency Separation, minimum = 3 MHz.		\$ _____	\$ _____
1.3	Insertion Loss, maximum = 0.8 Db.		\$ _____	\$ _____
1.4	Isolation, minimum = 80 Db.		\$ _____	\$ _____
1.5	Impedance = 50 ohms		\$ _____	\$ _____
1.6	VSWR, maximum = 1.5:1		\$ _____	\$ _____
1.7	Temperature Range = -30°C to +60°C		\$ _____	\$ _____
1.8	Average Power Input Rating = 120 Watts		\$ _____	\$ _____
1.9	Mounting: standard 19" Rack		\$ _____	\$ _____
1.10	Connections = N or BNC		\$ _____	\$ _____
Total Net Evaluation Price:				\$ _____

Bidder offers the following services commonly available for this product category/subcategory at the percentage discounts listed below off manufacturer's (or subcontractor's/dealer's/distributor's) list prices or at the per hour price specified.

APPENDIX H PRICE WORKSHEETS

CATEGORY: RF FILTERING EQUIPMENT

Services	Percent Discount Off List	or	Charge Per Hour
Equipment configuration and system design:	_____ % Discount	or	\$_____/Hour
Technical support services:	_____ % Discount	or	\$_____/Hour
Equipment installation:	_____ % Discount	or	\$_____/Hour
Equipment repair:	_____ % Discount	or	\$_____/Hour
Training:	_____ % Discount	or	\$_____/Hour

Other Services

_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount

In the event of contract award, Bidder agrees to include the following additional manufacturer products sold under this product category/subcategory which are being offered at the same or greater level of price discount off the reference manufacturer's price list.

Other Available Products/Models	Percent Discount Off List
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount
_____	_____ % Discount



State of Washington
DEPARTMENT OF ENTERPRISE SERVICES
Master Contracts & Consulting
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<http://www.des.wa.gov>

The State of Washington Department of Enterprise Services on behalf of the WSCA-NASPO Cooperative Purchasing Program



RFP Amendment 3

RFP Reference #: 06913

Title: Public Safety Communication Equipment

Date Issued: May 29, 2014

This **RFP** is amended as follows:

Purpose: Reschedule proposal due date.

The Proposal Due Date has been rescheduled to July 16, 2014 at 2:00 PM. Additional RFP changes/revisions are currently being drafted in response to additional vendor comments and questions following the release of Amendment #2. We expect to issue the next amendment with further RFP provision, specification and price worksheet modifications within the next two weeks.

Bidders may choose to return this amendment with their proposal. All other RFP terms, conditions, and specifications remain unchanged unless revised by a subsequent amendment.

**Previously scheduled proposal due
date and time**

June 11, 2014 - 2:00 PM

New proposal due date and time

July 16, 2014 – 2:00 PM

Signed (Robert Paulson, Jr., C.P.M.)
Procurement Coordinator

5/29/14
Date signed



State of Washington
DEPARTMENT OF ENTERPRISE SERVICES
Master Contracts & Consulting
1500 Jefferson, PO Box 41411 • Olympia, Washington 98504-1411 • (360) 407-2210
<http://www.des.wa.gov>

**The State of Washington Department of Enterprise Services on behalf of the
WSCA-NASPO Cooperative Purchasing Program**



RFP Amendment 4

RFP Reference #: 06913

Title: Public Safety Communication Equipment

Date Issued: June 23, 2014

This **RFP** is amended as follows:

Purpose: Further modify the RFP document.

Please apply the changes/revisions listed on the following pages to your copy of the RFP document.

Bidders should complete and return this amendment with their proposal. All other RFP terms, conditions, and specifications remain unchanged.

Proposal Due Date & Time

Remains Unchanged: July 16, 2014 – 2:00 PM

Signed (Robert Paulson, Jr., C.P.M.)
Procurement Coordinator

6/23/14
Date signed

Bidder should complete the following:

Company: _____

Authorized Representative: _____

Federal ID #: _____

Address: _____

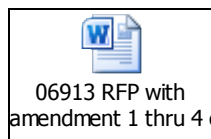
Phone/Fax/E-mail: _____

Signature

Date

Comments:

1. Vendor comments and questions received following the release of RFP Amendment #2 and additional input from our sourcing team members have been reviewed and necessary changes/revisions to the RFP document have been provided below. Comments or questions that asked for an explanation, confirmation, or clarification were generally not responded to when it was determined a response was unnecessary or it was an issue that was already adequately addressed in the RFP document as written or as amended by Amendment #2. Not all typographical errors may have been corrected and Bidders will need to use their best judgment to deal with this issue.
2. Bidder's customer references may return a copy of the original APPENDIX I (*not G*) CUSTOMER REFERENCE QUESTIONNAIRE as published with the original RFP document or may submit an amended questionnaire that includes the changes/revisions described in Amendment #2 and below in this Amendment #4.
3. To assist Bidders in preparing their proposal response to the RFP solicitation document, we have provided (as an embedded document) an unofficial updated RFP document showing changes/revisions covered in Amendment #2 (highlighted in yellow) and below in this Amendment #4 (highlighted in blue). We hope Bidders find this RFP update helpful when preparing its proposal response.



Please make the following additional changes/revisions to your copy of the RFP document. These changes/revisions are in addition to those made by Amendment #2. (Page number references are those of the original RFP document.)

Date/Time	Event
July 16, 2014- 2:00 PM	Revised Proposals Due date

- Page 17 Part I Solicitation Document, Section **4.10 CUSTOMER REFERENCES**. In the first sentence of the first paragraph, add the words “or commercial” after the word “governmental.”
- In the second paragraph change the second sentence to read as follows to now include Microwave Radios: “The aggregate value of these purchases must have exceeded \$250,000 (\$100,000 for the categories/subcategories: In-vehicle Repeaters, Microwave Radios, Dispatch Consoles, Microwave Antennas, Mobile Radio Antennas, Base Station/Repeater Radio Antennas, RF Transmission Lines, and RF Filtering Equipment) during the past two years.”
- Page 26 Part I Solicitation Document, Section **8.15 Reference Evaluation**. In the first sentence of the first paragraph, add the words “or commercial” after the word “governmental”.
- Page 43 Part II Model Contract, Section **5.2 SHIPPING AND RISK OF LOSS**: Change this section to read as follows which will include both paragraphs below:
- Contractor shall ship all products purchased pursuant to this Contract, freight charges prepaid by the Contractor, F.O.B. Purchaser’s specified destination with all transportation and handling charges included. However, for the category Microwave Antennas only, additional freight charges may be prepaid and added to the invoice to cover the additional cost of shipment from the nearest port city to the Purchaser’s receiving facility located outside the contiguous United States, provided the Purchaser approves the additional freight charge at the time of order placement.
- The method of shipment shall be consistent with the nature of the products and hazards of transportation. Regardless of FOB point, Contractor agrees to bear all risks of loss, damage, or destruction of the products ordered hereunder that occurs prior to delivery, except loss or damage attributable to Purchaser’s fault or negligence; and such loss, damage, or destruction shall not release Contractor from any obligation hereunder. After delivery, the risk of loss or damage shall be borne by Purchaser, except loss or damage attributable to Contractor’s fault or negligence.
- Page 48 Part II Model Contract, Section **7.4 WARRANTIES**: In the second sentence of the second paragraph, delete the words “proves to be inadequate, or”.
- Add the following wording as a new third paragraph: “THESE WARRANTIES ARE THE COMPLETE WARRANTIES FOR THE EQUIPMENT AND SOFTWARE PROVIDED UNDER THIS AGREEMENT AND ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES. CONTRACTOR DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED.”
- Page 54 Part II Model Contract, Section **16.4 LIMITATION OF LIABILITY**: Add the following wording as the new fifth paragraph: “Except for breach of confidentiality, personal injury, or death, Contractor’s total liability, whether for breach of contract, warranty, negligence, strict liability in tort or otherwise, will be limited to the value of the prior year’s Contract sales.”
- Page 72 **APPENDIX C WSCA-NASPO MASTER AGREEMENT TERMS AND CONDITIONS**
Section **14. Indemnification**: In paragraph b. delete the first sentence which begins “The

Contractor..." and add the following new wording: "Contractor will defend at its expense any suit or claim brought against Indemnified Parties arising out of a third-party claim alleging that the Equipment or the Software infringes a United States or EU patent or copyright ("Infringement Claim"). Contractor will pay all damages finally awarded against Indemnified Parties by a court of competent jurisdiction for an Infringement Claim or agreed to by Contractor in settlement of an Infringement Claim."

Add the following new paragraph as number two: "(2) If an Infringement Claim occurs, or in Contractor's opinion is likely to occur, Contractor may at its expense: (a) procure for Customer the right to continue using the Motorola Product; (b) replace or modify the Equipment or Software so that it becomes non-infringing while providing functionally equivalent performance; or (c) accept the return of the Equipment or Software and grant Customer a credit for the Equipment or Software, less a reasonable charge for depreciation. The depreciation amount will be calculated based upon generally accepted accounting standards as a four year straight line depreciation."

Renumber the previous number two paragraph to "(3)".

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APPENDIX C WSCA-NASPO MASTER AGREEMENT TERMS AND CONDITIONS

Section 19. License of Pre-Existing Intellectual Property: In the first sentence delete the following wording "publish, translate, reproduce, modify," In the second sentence after the word "Property," insert the following new wording "and reasonable and statutory restrictions."

Page 79

APPENDIX C WSCA-NASPO MASTER AGREEMENT TERMS AND CONDITIONS

Section 29. Warranty: Delete the wording of this section and insert the following new wording: "Reference Section **7.4 WARRANTIES** of the Model Contract."

Page 79

APPENDIX C WSCA-NASPO MASTER AGREEMENT TERMS AND CONDITIONS

Section 31. Title of Product: Change the wording of the third sentence to read as follows: "If Purchasing Entity subsequently transfers title of the Product to another entity, Purchasing Entity shall have the right to transfer the license to use such Embedded Software as necessary for the device to perform its functionality with the transfer of Product title."

Page 85

APPENDIX D BIDDER INFORMATION AND PROFILE: Section 10. Customer

References after "\$250,000" insert the following revised wording "\$100,000 for the categories/subcategories: In-vehicle Repeaters, Microwave Radios, Dispatch Consoles, Microwave Antennas, Mobile Radio Antennas, Base Station/Repeater Radio Antennas, RF Transmission Lines; and RF Filtering Equipment)"... This change adds "Microwave Radios" to the list of product categories/subcategories.

Page 89

APPENDIX G SPECIFICATIONS: Provided below are additional changes/revisions to "Target Product" Specifications.

Page 154

APPENDIX H PRICE WORKSHEETS: Provided below are additional changes/revisions to "Target Product" Price Worksheets.

Additionally, in Appendix G Specifications and Appendix H Price Worksheets, we have dropped the use of the > and < symbols. The common technical value of the number listed to describe the required level of performance will apply.

Page 244 **APPENDIX I CUSTOMER REFERENCE QUESTIONNAIRE**, In the first large paragraph, change the third sentence to read as follows: “In furtherance of this RFP requirement, we ask that your governmental organization or commercial company complete this form and to return it to the RFP Procurement Coordinator identified below.” Then, after “\$250,000” insert the following revised wording “(\$100,000 for the categories/subcategories: In-vehicle Repeaters, Microwave Radios, Dispatch Consoles, Microwave Antennas, Mobile Radio Antennas, Base Station/Repeater Radio Antennas, RF Transmission Lines; and RF Filtering Equipment)”...

Page 268 **APPENDIX K INDIVIDUAL STATES’ TERMS AND CONDITIONS**, make the following revision to the **Washington State Supplemental Standard Terms and Conditions**, Section 6. **Contractor qualifications and requirements**, add the following new section:

“b. Prevailing wage requirements,

Some on-site services performed within the state of Washington under the provisions of this Contract may fall under the requirements of Washington State law (Chapter 39.12 RCW) for the payment of prevailing wages to Contractor’s/Subcontractor’s employees. The Washington State Department of Labor and Industries publishes labor classifications and prevailing wage rates for public work (work, construction, alteration, repair or improvement) performed at a cost to the state or any municipality. Additional information is available from the Department of Labor and Industries website at -

<http://www.lni.wa.gov/TradesLicensing/PrevWage/default.asp>

Specific wage rates and job classifications for work to be performed must be identified in the purchaser’s order document and Contractor/Subcontractor must submit approved “Intent to Pay Prevailing Wages” and an “Affidavit of Wages Paid” documents with invoices to receive payments. The prevailing wage rates in effect at the time of order placement shall apply for the work performed.”

APPENDIX G SPECIFICATIONS

Please make the following changes/revisions to your copy of the RFP document (and as amended by Amendment #2) as provided below.

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, DUAL-BAND

1.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)	
	For bidding purposes, Bidders are to offer a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.	
1.4.2	±5 kHz (25 kHz)	
1.6	Audio Distortion %: 1.25/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 45dB (12.5kHz)	
1.8	Conducted Spurious Emissions: -75dBc (12.5kHz)	
1.9	Channel Spacing KHz: 12.5	
2.2	Analog Sensitivity: -119 dBm (12.5KHz) (12 dB SINAD)	
2.4	Adjacent Channel Rejection: 65 dB (12.5 kHz)	
2.6	Intermodulation Rejection: -75dB (12.5KHz)	
2.7	Hum and Noise Ratio: 47dB (12.5KHz)	
3.2	Tracking Sensitivity: -152 dBm	
3.3	Accuracy: 10 meters (95%)	
6.1	Military Test Standard: Mil-STD 810C/D/E/F	
6.1.1	Ruggedness and Submersible: IP67 Rating	
6.6	Emergency Alert button: programmable	
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	
9.4	Bluetooth Operation	
9.4.1	Bluetooth software	
9.4.2	Bluetooth Wireless ACCY KIT	
9.4.3	Bluetooth headset	

APPENDIX G SPECIFICATIONS

9.4.4	Bluetooth earpiece	
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CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER I

1.1.1	806-824 MHz	
1.6	Audio Distortion %: 1.25/ (12.5 kHz)	
1.8	Conducted Spurious Emissions: -75dBc (12.5kHz)	
2.1.1	806-824 MHz	
2.2	Analog Sensitivity: (-119dBm) (12 dB SINAD)	
2.3	Digital Sensitivity: (5%BER) (-119dBm)	
3.2	Tracking Sensitivity: -152 dBm	
3.3	Accuracy: 10 meters (95%)	
6.1	Military Test Standard: Mil-STD 810C/D/E/F	
6.1.1	Ruggedness and Submersible: IP67 Rating	
6.6	Emergency Alert button: programmable	
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	
9.9	Programmable side buttons	

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER II

1.6	Audio Distortion %: 2.00/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)	
2.2	Analog Sensitivity: 119dBm (12 dB SINAD)	
2.3	Digital Sensitivity: (5%BER) (-119dBm)	
3.2	Tracking Sensitivity: -152 dBm	
3.3	Accuracy: 10 meters (95%)	
6.1	Military Test Standard: Mil-STD 810C/D/E/F	
6.1.1	Ruggedness and Submersible: IP67 Rated	
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

1.4	FM Hum & Noise: 40 dB-(12.5 KHz)	
1.5	Audio Distortion %: 5	
1.6	Conducted Spurious Emissions: -65 dBc (12.5kHz)	
2.2	Analog Sensitivity: 0.25uV (12.5 KHz) 12dB SINAD	
2.3	Adjacent Channel Selectivity: 60 dB (12.5KHz)	
2.4	Intermodulation: 60 dB (12.5KHz)	
2.7	Intermodulation Rejection: 60 dB (12.5 kHz)	
2.8	Hum and Noise Ratio : 40dB (12.5kHz)	
5.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	
7.1	Battery power save option	
7.7.2	Radio Cloning cable kit	

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, DUAL-BAND

1.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)	
	For bidding purposes, Bidders are to offer a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.	
1.4.2	±5 kHz (25 kHz)	
1.6	Audio Distortion %: 2.0/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)	
1.8	Conducted Spurious Emissions: -75 dBc (12.5kHz)	
1.9	Channel Spacing KHz: 12.5	

APPENDIX G SPECIFICATIONS

2.2	Analog Sensitivity: (-119dBm) (12.5 KHz) (12 dB SINAD)	
2.4	Adjacent Channel Rejection: 65 dB (12.5 kHz)	
2.5	Spurious Response Rejection: 80 dB (12.5KHz)	
2.6	Intermodulation Rejection: 80 dB (12.5KHz)	
2.7	Hum and Noise Ratio: 47dB(12.5KHz)	
3.3	Accuracy: 10 meters (95%)	
6.2.2	Control cable minimum length 17 feet.	
6.3.1	¼ wave Broadband (UHF(380-470 MHz) (806-824MHz) optimized for frequency range specified on P.O.	
6.5.3	Volume Control / Channel Control	
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	
9.4	Bluetooth Operation	
9.4.1	Bluetooth software	
9.4.2	Wireless computer programing no cable connections required.	

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER I

1.1.1	806-824 MHz	
1.2.1	VHF 10-30 Watts	
1.6	Audio Distortion %: 2.0/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)	
1.8	Conducted Spurious Emissions: -75 dBc (12.5kHz)	
2.1.1	806-824 MHz	
2.2	Analog Sensitivity: (-119dBm) (12.5 KHz) (12 dB SINAD)	
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)	
2.7	Hum and Noise Ratio: 57 dB (12.5KHz)	
3.3	Accuracy: 10 meters (95%)	
6.2.2	Control cable minimum length 17 feet.	
6.5.3	Volume Control / Channel Control	

APPENDIX G SPECIFICATIONS

7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	
9.4	Bluetooth Operation	
9.4.1	Bluetooth software	
9.4	Wireless computer programing no cable connections required.	

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER II

1.6	Audio Distortion %: 2.0/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 40 dB (12.5kHz)	
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)	
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)	
2.6	Intermodulation Rejection: 80 dB (12.5 kHz)	
2.7	FM Hum and Noise Ratio: 35 dB (12.5kHz)	
3.3	Accuracy: 10 meters (95%)	
6.2.2	Control cable minimum length 17 feet.	
6.5.3	Volume Control / Channel Control	
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO, SINGLE-BAND, TIER III

1.2	Rated RF Output Power minimum: VHF 10-25 Watts	
1.6	Audio Distortion %: 5/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 40 dB (12.5kHz)	
1.9	Channel Spacing kHz: 12.5	
2.2	Analog Sensitivity: (at 12 dB SINAD) 0.25uV typ.	
2.5	Spurious Response Rejection: 70 dB (12.5 kHz)	
2.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)	
4.1.1	Station Chassis Configured for mounting in the trunk of a vehicle.	

APPENDIX G SPECIFICATIONS

4.2.2	Control cable minimum length 14 feet.	
4.2.2	Power cable minimum length 17 feet.	
4.4	Multifunction Volume/Channel knob	
4.4	Microphone Palm type W/mounting bracket	
4.6	Programmable one touch buttons	
4.5	External Speaker	
4.5.1	4 Watt (min)	
5.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	

CATEGORY: RADIO / SUBCATEGORY: DESKTOP RADIO, DUAL-BAND

Category: Radio / Subcategory Description: Dual-Band Desktop Radio P25 Phase I 12.5 kHz and P25 Phase II 6.25 kHz equivalent capable, backwards compatible. Channel capacity 1000 (min). Software – Defined Radio Architecture.

1.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)	
	For bidding purposes, Bidders are to offer a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.	
1.2.1	VHF 10-30 Watts	
1.6	Audio Distortion %: 1.0/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)	
2.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)	

APPENDIX G SPECIFICATIONS

	For bidding purposes, Bidders are to offer a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.	
2.2	Analog Sensitivity: (-119dBm) (12 dB SINAD)	
2.4	Adjacent Channel Rejection: 60 dB (12.5 kHz)	
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)	
2.6	Intermodulation Rejection: 75 dB (12.5 kHz)	
2.7	Hum and Noise Ratio: 48 dB (12.5KHz)	
6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	
9.1	Bluetooth Operation	
9.1.1	Bluetooth software	
9.1	Wireless computer programing no cable connections required.	

CATEGORY: RADIO / SUBCATEGORY: DESKTOP RADIO, SINGLE-BAND, TIER I

1.2.1	VHF 10-30 Watts	
1.6	Audio Distortion %: 2.0/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)	
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)	
2.4	Adjacent Channel Rejection: 60 dB (12.5 kHz)	
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)	
2.6	Intermodulation Rejection: 75 dB (12.5 kHz)	
2.7	Hum and Noise Ratio: 45 dB (12.5KHz)	
4.4	Standby current at 110VAC 310VA Draw (MAX)	
4.5	Receive Current at 110VAC 358VA Draw (max)	
4.6	Transmit Current at 110VAC 138VA Draw (max) at 30 Watts	
4.9	Standby at 13.8V 0.85A Draw (max)	
4.10	Receive Current at 13.8V 3.2A Draw (max)	
4.11	Transmit Current at 13.8V 11A Draw (max) at 30 Watts	

APPENDIX G SPECIFICATIONS

6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	
9.1	Bluetooth Operation	
9.1.1	Bluetooth software	
9.1	Wireless computer programing no cable connections required.	

CATEGORY: RADIO / SUBCATEGORY: DESKTOP/CONSOLE RADIO, SINGLE-BAND, TIER II

1.2.1	VHF 10-30 Watts	
1.6	Audio Distortion %: 1.5/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 40 dB (12.5kHz)	
1.8	Conducted Spurious Emissions: -60 dBc (12.5kHz)	
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)	
2.4	Adjacent Channel Rejection: 60 dB (12.5 kHz)	
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)	
4.4	Standby current at 110VAC .3A Draw (MAX)	
4.5	Receive Current at 110VAC .8A Draw (max)	
4.6	Transmit Current at 110VAC 13.8A Draw (max) at 30 Watts	
4.9	Standby at 13.8V 0.85A Draw (max)	
4.10	Receive Current at 13.8V 3.2A Draw (max)	
4.11	Transmit Current at 13.8V 11A Draw (max) at 30 Watts	
6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	

CATEGORY: RADIO / SUBCATEGORY: BASE STATION/REPEATER RADIO, SINGLE-BAND, TIER I

1.6	Audio Distortion %: 2.0/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 55 dB (12.5kHz)	
1.8	Conducted Spurious Emissions: -55 dBc (12.5kHz)	
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)	

APPENDIX G SPECIFICATIONS

4.3	DC power base station with a 12V and/or 48V input.	
4.4	Input Voltage: 10.8 to 16.6 DC and/or 36.0 to 60.0 DC.	
6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	

CATEGORY: RADIO / SUBCATEGORY: BASE STATION/REPEATER RADIO, SINGLE-BAND, TIER II

1.6	Audio Distortion %: 3.0/ (12.5 kHz)	
1.7	FM Hum and Noise Ratio: 40 dB (12.5kHz)	
1.8	Conducted Spurious Emissions: -55 dBc (12.5kHz)	
2.2	Analog Sensitivity: (-119dBm) dBm (12.5KHz) (12 dB SINAD)	
2.3	Digital Sensitivity: (5%BER) (-119dBm)	
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)	
2.6	Intermodulation Rejection: 75 dB (12.5 kHz)	
2.7	Hum and Noise Ratio: 40dB (12.5kHz)	
6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	

CATEGORY: RADIO / SUBCATEGORY: IN-VEHICLE REPEATER

1.1.1	Bidder's model identified above must be capable of being ordered in any of the following bands: VHF (136-174MHz) UHF (380-470MHz) Range1 UHF (450-520MHz) Range2 (769-775MHz) (799-805MHz) (806-824MHZ) 851-869MHZ)	
	For bidding purposes, Bidders are to offer a model for the VHF (136-174MHz) band.	
1.4.2	±5 kHz (25 kHz)	
1.5	Audio Response: +1, 3 dB	
1.6	Audio Distortion : 3%	
1.5	FM Hum and Noise Ratio: 40 dB	

APPENDIX G SPECIFICATIONS

1.6	Conducted Spurious Emissions: -50 dBc	
1.7	Channel Spacing KHz: 12.5	
2.1.1	Bidder's model identified above must be capable of being ordered in any of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775 MHz) (799-805MHz) (806-824MHz) (851-869MHz)	
	For bidding purposes, Bidders are to offer a model for the VHF (136-174MHz) band.	
2.5	Spurious Response Rejection: 70dB (12.5KHz)	
2.7	Audio Frequency Response: ± 1, 3dB, 300-300Hz	
2.8	Audio Output minimum: 600mV rms	
2.9	Audio Distortion: 3%	
	SECTION C Not Applicable Encryption System Typical Performance Specifications	
Item#	Description	Describe/explain how Vendor meets or exceeds specifications
3.1	Supported Encryption Algorithms: AES,DES,DES OFB	
3.2	Encryption Algorithm Capacity: 4(min)	
3.3	Encryption Type: Digital	
4.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)	

CATEGORY: RADIO / SUBCATEGORY: GATEWAY DEVICES

1.4.1	The gateway device shall include RS-232 serial remote control and DTMF control of cross-connects over RF links, public phone circuits, PBX circuits, SATCOM paths and cellular circuits.	
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APPENDIX G SPECIFICATIONS

1.5	The gateway device shall use a Windows-based software control package to provide a user-friendly GUI (Graphic User Interface) depicting system operation allowing programming of features, and shall permit password protection of all features, and allow priority access and rejection relative to individual passwords.	
2.1.1	Audio Input: Un-balanced 600 ohms or Hi-Z; -26dBm to +12dBm levels; 300Hz to 3000Hz.	
2.1.2	Audio Output: Balanced or Un-balanced 600 ohms; -26dBm to +12dBm levels; 300Hz to 3000Hz.	
5.1.2	Provide soft copy on digital media (CD, DVD or flash drive or web download)	

CATEGORY: RADIO / SUBCATEGORY: MICROWAVE RADIOS

1	Frequency Range (GHz): 6 GHz (Other bands available)	
14.1	Operating Environment (Temperature, Humidity, Altitude): conforms to Telcordia standards GR-63	
14.2	Humidity: Conforms to Telcordia standards GR-63	
14.3	Altitude: Conforms to Telcordia standards GR-63	
	SECTION C Not Applicable Microwave Antenna	
Item #	Description	Describe/explain how Vendor meets or exceeds specifications
15.1	High Performance Antenna Similar to HPX6-59 5.925-6.425 GHz	
15.2	High Performance Antenna Similar to HPX6-65 6.425-7.125 GHz	
15.3	Standard Antenna Similar to PARX6-59W 5.925-7.125 GHz	

APPENDIX G SPECIFICATIONS

CATEGORY: RADIO / SUBCATEGORY: DISPATCH CONSOLES

1.1.	Software-Only operator position; system/hardware does not require an external interface sub-system/hardware; console positions are connected on an IP network to communicate with other console positions and communicate with digital radios and IP gateways to analog radios.	
1.5.	Support for Project-25 Digital Fixed Station Interface (DFSI) to connect digital base radios to IP network	

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO ANTENNAS

1.5.	VSWR 2.0:1	
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APPENDIX H PRICE WORKSHEETS

Please make the following changes/revisions to your copy of the RFP document (and as amended by Amendment #2) as provided below.

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, DUAL-BAND

1.4.2	±5 kHz (25 kHz)		\$ _____	\$ _____
1.6	Audio Distortion %: 1.25/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: -45dB (12.5kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -75dBc (12.5kHz)		\$ _____	\$ _____
2.2	Analog Sensitivity: -119 dBm (12.5KHz) (12 dB SINAD)		\$ _____	\$ _____
2.4	Adjacent Channel Rejection: 65 dB (12.5 kHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: -75dB (12.5KHz)		\$ _____	\$ _____
2.7	Hum and Noise Ratio: 47dB (12.5KHz)		\$ _____	\$ _____
3.2	Tracking Sensitivity: -152 dBm		\$ _____	\$ _____
3.3	Accuracy: 10 meters (95%)		\$ _____	\$ _____
6.1	Military Test Standard: Mil-STD 810C/D/E/F		\$ _____	\$ _____
6.1.1	Ruggedness and Submersible: IP67 Rated		\$ _____	\$ _____
6.6	Emergency Alert button: programmable		\$ _____	\$ _____
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____
9.4	Bluetooth Operation		\$ _____	\$ _____
9.4.1	Bluetooth software		\$ _____	\$ _____
9.4.2	Bluetooth Wireless ACCY KIT		\$ _____	\$ _____
9.4.3	Bluetooth headset		\$ _____	\$ _____
9.4.4	Bluetooth earpiece		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER I

1.1.1	806-824 MHz		\$ _____	\$ _____
1.6	Audio Distortion %: 1.25/ (12.5 kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -75dBc (12.5kHz)		\$ _____	\$ _____
2.1	Frequency Range (MHz)		\$ _____	\$ _____
2.1.1	VHF (136-174 MHz)		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

2.2	Analog Sensitivity: (-121dBm)		\$ _____	\$ _____
2.3	Digital Sensitivity: (5%BER) (-121dBm)		\$ _____	\$ _____
2.1.1	806-824 MHz		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12 dB SINAD)		\$ _____	\$ _____
2.3	Digital Sensitivity: (5%BER) (-119dBm)		\$ _____	\$ _____
3.2	Tracking Sensitivity: -152 dBm		\$ _____	\$ _____
3.3	Accuracy: 10 meters (95%)		\$ _____	\$ _____
6.1	Military Test Standard: Mil-STD 810C/D/E/F		\$ _____	\$ _____
6.1.1	Ruggedness and Submersible: IP67 Rated		\$ _____	\$ _____
6.6	Emergency Alert button: programmable		\$ _____	\$ _____
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____
9.3.1	P25-OTAP			
9.3.2	Radio Authentication			
9.3.4	Multicast Voting Scan			
9.3.5	Noise reduction			
9.3.6	P25-OTAR			
9.4	Bluetooth Operation			
9.4.1	Bluetooth software			
9.4.2	Bluetooth Wireless ACCY KIT			
9.4.3	Bluetooth headset			
9.4.4	Bluetooth earpiece			
9.5	Nylon carry case w/3" belt loop for standard battery size.			
9.6	Radio colored housing: standard black/high visibility			
9.7	Remote Speaker Microphones. Remote speaker Microphone W/vol control.			
9.8	Software License agreement to include two years of updates			
9.9	Programing/Cloning:			
9.9.1	PC programing software and cables.			
9.9.2	Radio Cloning cable kit			
9.9.3	Radio to Radio wireless cloning			

APPENDIX H PRICE WORKSHEETS

9.9	Programmable side buttons		\$ _____	\$ _____
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CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER II

1.6	Audio Distortion %: 2.00/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)		\$ _____	\$ _____
2.2	Analog Sensitivity: -119dBm (12.5KHz) (12 dB SINAD)		\$ _____	\$ _____
2.3	Digital Sensitivity: (5%BER) (-119dBm)		\$ _____	\$ _____
3.2	Tracking Sensitivity: -152 dBm		\$ _____	\$ _____
3.3	Accuracy: 10 meters (95%)		\$ _____	\$ _____
6.1	Military Test Standard: Mil-STD 810C/D/E/F		\$ _____	\$ _____
6.1.1	Ruggedness and Submersible: IP67 Rated		\$ _____	\$ _____
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: PORTABLE RADIO, SINGLE-BAND, TIER III

1.4	FM Hum & Noise: 40 dB 12.5 KHz		\$ _____	\$ _____
1.5	Audio Distortion %: 5		\$ _____	\$ _____
1.6	Conducted Spurious Emissions: -65 dBc (12.5kHz)		\$ _____	\$ _____
2.2	Analog Sensitivity: 0.25uV (12.5 KHz) 12dB SINAD		\$ _____	\$ _____
2.3	Adjacent Channel Selectivity: 60 dB (12.5KHz)		\$ _____	\$ _____
2.4	Intermodulation: 60 dB (12.5KHz)		\$ _____	\$ _____
2.7	Intermodulation Rejection: 60 dB (12.5 kHz)		\$ _____	\$ _____
2.8	Hum and Noise Ratio : 40dB (12.5kHz)		\$ _____	\$ _____
5.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____
7.1	Battery power save option		\$ _____	\$ _____
7.7.2	Radio Cloning cable kit		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: MOBILR RADIO, DUAL-BAND

1.4.2	±5 kHz (25 kHz)		\$ _____	\$ _____
1.6	Audio Distortion %: 2.0/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -75 dBc (12.5kHz)		\$ _____	\$ _____
1.9	Channel Spacing KHz: 12.5		\$ _____	\$ _____
2.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)			
	For bidding and pricing purposes, Bidders are to offer and price a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12.5 KHz) (12 dB SINAD)		\$ _____	\$ _____
2.4	Adjacent Channel Rejection: 65 dB (12.5 kHz)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 80 dB (12.5KHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 80 dB (12.5KHz)		\$ _____	\$ _____
2.7	Hum and Noise Ratio: 47dB(12.5KHz)		\$ _____	\$ _____
3.3	Accuracy: 10 meters (95%)		\$ _____	\$ _____
6.2.2	Control cable minimum length 17 feet.		\$ _____	\$ _____
6.3.1	¼ wave Broadband (UHF(380-470 MHz) (806-824MHz) optimized for frequency range specified on P.O.		\$ _____	\$ _____
6.5.3	Volume Control / Channel Control		\$ _____	\$ _____
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____
9.4	Bluetooth Operation		\$ _____	\$ _____
9.4.1	Bluetooth software		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

9.4	Wireless computer programing no cable connections required.		\$ _____	\$ _____
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CATEGORY: RADIO / SUBCATEGORY: MOBILR RADIO, SINGLE-BAND, TIER I

1.1.1	806-824 MHz		\$ _____	\$ _____
1.2.1	VHF 10-30 Watts		\$ _____	\$ _____
1.6	Audio Distortion %: 1.0/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -75 dBc (12.5kHz)		\$ _____	\$ _____
2.1.1	806-824 MHz		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12.5 KHz) (12 dB SINAD)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)		\$ _____	\$ _____
2.7	Hum and Noise Ratio (dB): 57 dB (1(2.5KHz)		\$ _____	\$ _____
3.3	Accuracy: 10 meters (95%)		\$ _____	\$ _____
6.2.2	Control cable minimum length 17 feet.		\$ _____	\$ _____
6.5.3	Volume Control / Channel Control		\$ _____	\$ _____
7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: MOBILR RADIO, SINGLE-BAND, TIER II

1.6	Audio Distortion %: 2.0/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 40 dB (12.5kHz)		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 80 dB (12.5 kHz)		\$ _____	\$ _____
2.7	FM Hum and Noise Ratio: 35 dB (12.5kHz)		\$ _____	\$ _____
3.3	Accuracy: 10 meters (95%)		\$ _____	\$ _____
6.2.2	Control cable minimum length 17 feet.		\$ _____	\$ _____
6.5.3	Volume Control / Channel Control		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

7.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____
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CATEGORY: RADIO / SUBCATEGORY: MOBILR RADIO, SINGLE-BAND, TIER III

1.2	Rated RF Output Power minimum: VHF 10-25 Watts		\$ _____	\$ _____
1.6	Audio Distortion %: 5 (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 40 dB (12.5kHz)		\$ _____	\$ _____
1.9	Channel Spacing kHz: 12.5		\$ _____	\$ _____
2.2	Analog Sensitivity: (at 12 dB SINAD) 0.25uV typ.		\$ _____	\$ _____
2.5	Spurious Response Rejection: 70 dB (12.5 kHz)		\$ _____	\$ _____
2.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)		\$ _____	\$ _____
4.1.1	Station Chassis Configured for mounting in the trunk of a vehicle.		\$ _____	\$ _____
4.2.2	Control cable minimum length 14 feet.		\$ _____	\$ _____
4.4	Multifunction Volume/Channel knob		\$ _____	\$ _____
4.6	Programmable one touch buttons		\$ _____	\$ _____
4.5	External Speaker		\$ _____	\$ _____
4.5.1	4 Watt (min)		\$ _____	\$ _____
5.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: DESKTOP, DUAL-BAND

Category: Radio / Subcategory Description: Dual-Band Desktop Radio P25 Phase I 12.5 kHz and P25 Phase II 6.25 kHz equivalent capable, backwards compatible. Channel capacity 1000 (min). Software – Defined Radio Architecture.

1.2.1	VHF 10-30 Watts		\$ _____	\$ _____
1.6	Audio Distortion %: 1.0/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

2.1.1	Bidder's model identified above must be capable of being ordered in any two of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775MHz) (799-805MHz) (806-824MHz) (851-869MHz)		\$ _____	\$ _____
	For bidding and pricing purposes, Bidders are to offer and price a model for the following two bands: UHF(380-470 MHz and 806-824 MHz.		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12.5HKz) (12 dB SINAD)		\$ _____	\$ _____
2.4	Adjacent Channel Rejection: 60 dB (12.5 kHz)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 75 dB (12.5 kHz)		\$ _____	\$ _____
2.7	Hum and Noise Ratio: 48 dB (12.5KHz)		\$ _____	\$ _____
6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____
9.1	Operation mode		\$ _____	\$ _____
9.1.1	Digital CAT Operation Comply with TIA/EIA suite 102.		\$ _____	\$ _____
9.1	Wireless computer programing no cable connections required.		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: DESKTOP, SINGLE-BAND, TIER I

1.2.1	VHF 10-30 Watts		\$ _____	\$ _____
1.6	Audio Distortion %: 2.0/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 45 dB (12.5kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -70 dBc (12.5kHz)		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)		\$ _____	\$ _____
2.4	Adjacent Channel Rejection: 60 dB (12.5 kHz)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 75 dB (12.5 kHz)		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

2.7	Hum and Noise Ratio: 45 dB (12.5KHz)		\$ _____	\$ _____
4.4	Standby current at 110VAC 310VA Draw (MAX)		\$ _____	\$ _____
4.5	Receive Current at 110VAC 835VA Draw (max)		\$ _____	\$ _____
4.6	Transmit Current at 110VAC 138VA Draw (max) at 30 Watts		\$ _____	\$ _____
4.9	Standby at 13.8V 0.85A Draw (max)		\$ _____	\$ _____
4.10	Receive Current at 13.8V 3.2A Draw (max)		\$ _____	\$ _____
4.11	Transmit Current at 13.8V 11A Draw (max) at 30 Watts		\$ _____	\$ _____
6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____
9.1	Bluetooth Operation		\$ _____	\$ _____
9.1.1	Bluetooth software		\$ _____	\$ _____
9.1	Wireless computer programing no cable connections required.		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: DESKTOP, SINGLE-BAND, TIER II

1.2.1	VHF 10-30 Watts		\$ _____	\$ _____
1.6	Audio Distortion %: 1.5/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 40 dB (12.5kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -60 dBc (12.5kHz)		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)		\$ _____	\$ _____
2.4	Adjacent Channel Rejection: : 60 dB (12.5 kHz)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)		\$ _____	\$ _____
4.4	Standby current at 110VAC .3A Draw (MAX)		\$ _____	\$ _____
4.5	Receive Current at 110VAC .8A Draw (max)		\$ _____	\$ _____
4.6	Transmit Current at 110VAC 13.8A Draw (max) at 30 Watts		\$ _____	\$ _____
4.9	Standby at 13.8V 0.85A Draw (max)		\$ _____	\$ _____
4.10	Receive Current at 13.8V 3.2A Draw (max)		\$ _____	\$ _____
4.11	Transmit Current at 13.8V 11A Draw (max) at 30 Watts		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____
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CATEGORY: RADIO / SUBCATEGORY: BASE STATION/REPEATER, SINGLE-BAND, TIER I

1.6	Audio Distortion %: 2.0/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 55 dB (12.5kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -55 dBc (12.5kHz)		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)		\$ _____	\$ _____
4.3	DC power base station with a 12V and/or 48V input.		\$ _____	\$ _____
4.4	Input Voltage: 10.8 to 16.6 DC and/or 36.0 to 60.0 DC.		\$ _____	\$ _____
6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: BASE STATION/REPEATER, SINGLE-BAND, TIER II

1.6	Audio Distortion %: 3.0/ (12.5 kHz)		\$ _____	\$ _____
1.7	FM Hum and Noise Ratio: 40 dB (12.5kHz)		\$ _____	\$ _____
1.8	Conducted Spurious Emissions: -55 dBc (12.5kHz)		\$ _____	\$ _____
2.2	Analog Sensitivity: (-119dBm) (12.5KHz) (12 dB SINAD)		\$ _____	\$ _____
2.3	Digital Sensitivity: (5%BER) (-119dBm)		\$ _____	\$ _____
2.5	Spurious Response Rejection: 80 dB (12.5 kHz)		\$ _____	\$ _____
2.6	Intermodulation Rejection: 75 dB (12.5 kHz)		\$ _____	\$ _____
2.7	Hum and Noise Ratio: 40dB (12.5kHz)		\$ _____	\$ _____
6.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

CATEGORY: RADIO / SUBCATEGORY: IN-VEHICLE REPEATER

1.1.1	Bidder's model identified above must be capable of being ordered in any of the following bands: VHF (136-174MHz) UHF (380-470MHz) Range1 UHF (450-520MHz) Range2 (769-775MHz) (799-805MHz) (806-824MHz) 851-869MHz)			
	For bidding purposes, Bidders are to offer a model for the VHF (136-174MHz) band.		\$ _____	\$ _____
1.4.2	±5 kHz (25 kHz)		\$ _____	\$ _____
1.5	Audio Response: +1, 3 dB		\$ _____	\$ _____
1.6	Audio Distortion: 3%		\$ _____	\$ _____
1.5	FM Hum and Noise Ratio: 40 dB		\$ _____	\$ _____
1.6	Conducted Spurious Emissions: -50 dBc		\$ _____	\$ _____
1.7	Channel Spacing KHz: 12.5		\$ _____	\$ _____
2.1.1	Bidder's model identified above must be capable of being ordered in any of the following bands: VHF (136-174 MHz) UHF(380-470 MHz) Range 1 UHF(450-520 MHz) Range 2 (769-775 MHz) (799-805MHz) (806-824MHz) (851-869MHz)		\$ _____	\$ _____
	For bidding purposes, Bidders are to offer a model for the VHF (136-174MHz) band.		\$ _____	\$ _____
2.5	Spurious Response Rejection: 70dB (12.5KHz)		\$ _____	\$ _____
2.7	Audio Frequency Response: ±1, 3dB, 300-300Hz		\$ _____	\$ _____
2.8	Audio Output minimum: 600mV rms		\$ _____	\$ _____
2.9	Audio Distortion: 3%		\$ _____	\$ _____
	SECTION C Encryption System Typical Performance Specifications			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
3.1	Supported Encryption Algorithms: AES,DES,DES-OFB		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

3.2	Encryption Algorithm Capacity: 4(min)		\$ _____	\$ _____
3.3	Encryption Type: Digital		\$ _____	\$ _____
4.1.2	Provide soft copy on digital media (CD,DVD or flash drive or web download)		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: GATEWAY DEVICES

1.4.1	The gateway device shall include RS-232 serial remote control DTMF control of cross-connects over RF links, public phone circuits, PBX circuits, SATCOM paths and cellular circuits.		\$ _____	\$ _____
1.5	The gateway device shall use a Windows-based software control package to provide a user-friendly GUI (Graphic User Interface) depicting system operation allowing programming of features, and shall permit password protection of all features, and allow priority access and rejection relative to individual passwords.		\$ _____	\$ _____
2.1.1	Audio Input: Un-balanced 600 ohms or Hi-Z; -26dBm to +12dBm levels; 300Hz to 3000Hz.		\$ _____	\$ _____
2.1.2	Audio Output: Balanced or Un-balanced 600 ohms; -26dBm to +12dBm levels; 300Hz to 3000Hz.		\$ _____	\$ _____
5.1.2	Provide soft copy on digital media (CD, DVD or flash drive or web download)		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: MICROWAVE RADIOS

1	Frequency Range (GHz): 6 GHz (Other bands available)		\$ _____	\$ _____
14.1	Operating Environment (Temperature, Humidity, Altitude): conforms to Telcordia standards GR-63		\$ _____	\$ _____
14.2	Humidity: Guaranteed: 100 % - Conforms to Telcordia standards GR-63		\$ _____	\$ _____

APPENDIX H PRICE WORKSHEETS

14.3	Altitude: Guaranteed: 15,000 ft - Conforms to Telecordia standards GR-63		\$ _____	\$ _____
	SECTION C Not Applicable-Microwave Antenna			
Item #	Description	Part Number	Mfg. List Price	Net Price After Discount
15	High Performance Antenna Similar to HPX6-59 5.925-6.425 GHz		\$ _____	\$ _____
15.2	High Performance Antenna Similar to HPX6-65 6.425-7.125 GHz		\$ _____	\$ _____
15.3	Standard Antenna Similar to PARX6-59W 5.925-7.125 GHz		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: DISPATCH CONSOLES

1.1.	Software-Only operator position system/hardware; does not require an external interface sub-system; console positions are connected on an IP network to communicate with other console positions and communicate with digital radios and IP gateways to analog radios.		\$ _____	\$ _____
1.5.	Support for Project-25 Digital Fixed Station Interface (DFSII) to connect digital base radios to IP network		\$ _____	\$ _____

CATEGORY: RADIO / SUBCATEGORY: MOBILE RADIO ANTENNAS

1.5	VSWR 2.0:1		\$ _____	\$ _____
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