



CITY OF LEE'S SUMMIT

P25 EXPANSION

NOVEMBER 21, 2017

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Control No. PS-000077406

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SECTION 1

CONTRACT

Please see the following pages for the Communications System Agreement (CSA).



Communications System Agreement

Motorola Solutions, Inc. ("Motorola") and City of Lee's Summit, Missouri ("Customer") enter into this "Agreement," pursuant to which Customer will purchase and Motorola will sell the System, as described below. Motorola and Customer may be referred to individually as a "Party" and collectively as the "Parties." For good and valuable consideration, the Parties agree as follows:

Section 1 EXHIBITS

The exhibits listed below are incorporated into and made a part of this Agreement. In interpreting this Agreement and resolving any ambiguities, the main body of this Agreement takes precedence over the exhibits and any inconsistency between Exhibits A through F will be resolved in their listed order.

Exhibit A	Motorola "Software License Agreement"
Exhibit B	"Pricing Summary" and "Payment Schedule"
B-1	"Pricing Summary" dated November 21, 2017
B-2	"Payment Schedule" undated
Exhibit C	"Technical and Implementation Documents"
C-1	"System Description" dated November 21, 2017
C-2	"Equipment List" dated November 21, 2017
C-3	"Statement of Work" dated November 21, 2017
C-4	"Acceptance Test Plan" or "ATP" dated November 21, 2017
C-5	"Performance Schedule" to be developed
Exhibit D	Service Statement(s) of Work and "Service Terms and Conditions"
Exhibit E	System Upgrade Agreement Statement of Work
Exhibit F	"System Acceptance Certificate"

Section 2 DEFINITIONS

Capitalized terms used in this Agreement have the following meanings:

- 2.1. "Acceptance Tests" means those tests described in the Acceptance Test Plan.
- 2.2. "Administrative User Credentials" means an account that has total access over the operating system, files, end user accounts and passwords at either the System level or box level. Customer's personnel with access to the Administrative User Credentials may be referred to as the Administrative User.
- 2.3. "Beneficial Use" means when Customer first uses the System or a Subsystem for operational purposes (excluding training or testing).
- 2.4. "Confidential Information" means any information that is disclosed in written, graphic, verbal, or machine-recognizable form, and is marked, designated, or identified at the time of disclosure as being confidential or its equivalent; or if the information is in verbal form, it is identified as confidential at the time of disclosure and is confirmed in writing within thirty (30) days of the disclosure. Confidential Information does not include any information that: is or becomes publicly known through no wrongful act of the receiving Party; is already known to the receiving Party without restriction when it is disclosed; is or becomes, rightfully and without breach of this Agreement, in the receiving Party's possession without any obligation restricting disclosure; is independently developed by the receiving Party without breach of this Agreement; or is explicitly approved for release by written authorization of the disclosing Party.
- 2.5. "Contract Price" means the price for the System, excluding applicable sales or similar taxes and freight charges, and including one (1) year of post warranty maintenance, support and upgrades ("Lifecycle Support Plan").
- 2.6. "Effective Date" means that date upon which the last Party executes this Agreement.

2.7. "Equipment" means the equipment that Customer purchases from Motorola under this Agreement. Equipment that is part of the System is described in the Equipment List.

2.8. "Force Majeure" means an event, circumstance, or act of a third party that is beyond a Party's reasonable control (e.g., an act of God, an act of the public enemy, an act of a government entity, strikes or other labor disturbances, hurricanes, earthquakes, fires, floods, epidemics, embargoes, war, and riots).

2.9. "Infringement Claim" means a third party claim alleging that the Equipment manufactured by Motorola or the Motorola Software directly infringes a United States patent or copyright.

2.10. "Motorola Software" means Software that Motorola or its affiliated company owns.

2.11. "Non-Motorola Software" means Software that another party owns.

2.12. "Open Source Software" (also called "freeware" or "shareware") means software with either freely obtainable source code, license for modification, or permission for free distribution.

2.13. "Proprietary Rights" means the patents, patent applications, inventions, copyrights, trade secrets, trademarks, trade names, mask works, know-how, and other intellectual property rights in and to the Equipment and Software, including those created or produced by Motorola under this Agreement and any corrections, bug fixes, enhancements, updates or modifications to or derivative works from the Software whether made by Motorola or another party.

2.14. "Software" means the Motorola Software and Non-Motorola Software, in object code format that is furnished with the System or Equipment.

2.15. "Specifications" means the functionality and performance requirements that are described in the Technical and Implementation Documents.

2.16. "Subsystem" means a major part of the System that performs specific functions or operations. Subsystems are described in the Technical and Implementation Documents.

2.17. "System" means the Equipment, Software, and incidental hardware and materials that are combined together into an integrated system; the System is described in the Technical and Implementation Documents.

2.18. "System Acceptance" means the Acceptance Tests have been successfully completed.

2.19. "Warranty Period" means one (1) year from the date of System Acceptance or Beneficial Use, whichever occurs first.

Section 3 SCOPE OF AGREEMENT AND TERM

3.1. **SCOPE OF WORK.** Motorola will provide, install and test the System, and perform its other contractual responsibilities, all in accordance with this Agreement. Customer will perform its contractual responsibilities in accordance with this Agreement.

3.2. **CHANGE ORDERS.** Either Party may request changes within the general scope of this Agreement. If a requested change causes an increase or decrease in the cost or time required to perform this Agreement, the Parties will agree to an equitable adjustment of the Contract Price, Performance Schedule, or both, and will reflect the adjustment in a change order. Neither Party is obligated to perform requested changes unless both Parties execute a written change order.



3.3. **TERM.** Unless terminated in accordance with other provisions of this Agreement or extended by mutual agreement of the Parties, the term of this Agreement begins on the Effective Date and continues until completion of one (1) year of Lifecycle Support Plan.

3.4. **ADDITIONAL EQUIPMENT OR SOFTWARE.** For three (3) years after the Effective Date, Customer may order additional Equipment or Software if it is then available. Each order must refer to this Agreement and must specify the pricing and delivery terms. Notwithstanding any additional or contrary terms in the order, the applicable provisions of this Agreement (except for pricing, delivery, passage of title and risk of loss to Equipment, warranty commencement, and payment terms) will govern the purchase and sale of the additional Equipment or Software. Title and risk of loss to additional Equipment will pass at shipment, warranty will commence upon delivery, and payment is due within twenty (20) days after the invoice date. Motorola will send Customer an invoice as the additional Equipment is shipped or Software is licensed. Alternatively, Customer may register with and place orders through Motorola Online ("MOL"), and this Agreement will be the "Underlying Agreement" for those MOL transactions rather than the MOL On-Line Terms and Conditions of Sale. MOL registration and other information may be found at <http://www.motorola.com/businessandgovernment/> and the MOL telephone number is (800) 814-0601.

3.5. **SYSTEM UPGRADES.** During the one (1) year of Lifecycle Support Plan, the applicable provisions of this Agreement (except for passage of title and risk of loss to Equipment, warranty commencement, and Exhibit C) will govern the implementation of the System Upgrades. Title and risk of loss to Equipment will pass at shipment, and warranty will commence upon delivery.

3.6. **MAINTENANCE SERVICE.** During the Warranty Period, in addition to warranty services, Motorola will provide maintenance services for the Equipment and support for the Motorola Software pursuant to the Statement of Work set forth in Exhibit D. Those services and support are included in the Contract Price. If Customer wishes to purchase additional maintenance and support services for the Equipment during the Warranty Period, or any maintenance and support services not included in the one (1) year of Lifecycle Support Plan for the Equipment after the Warranty Period, the description of and pricing for the services will be set forth in a separate document. If Customer wishes to purchase extended support for the Motorola Software after the Warranty Period, it may do so by ordering software subscription services. Unless otherwise agreed by the parties in writing, the terms and conditions applicable to the one (1) year of Lifecycle Support Plan and those other maintenance, support or software subscription services will be Motorola's standard Service Terms and Conditions, together with the appropriate statements of work.

3.7. **MOTOROLA SOFTWARE.** Any Motorola Software, including subsequent releases, is licensed to Customer solely in accordance with the Software License Agreement. Customer hereby accepts and agrees to abide by all of the terms and restrictions of the Software License Agreement.

3.8. **NON-MOTOROLA SOFTWARE.** Any Non-Motorola Software is licensed to Customer in accordance with the standard license, terms, and restrictions of the copyright owner on the Effective Date unless the copyright owner has granted to Motorola the right to sublicense the Non-Motorola Software pursuant to the Software License Agreement, in which case it applies and the copyright owner will have all of Licensor's rights and protections under the Software License Agreement. Motorola makes no representations or warranties of any kind regarding Non-Motorola Software. Non-Motorola Software may include Open Source Software. All Open Source Software is licensed to Customer in accordance with, and Customer agrees to abide by, the provisions of the standard license of the copyright owner and not the Software License Agreement. Upon request by Customer, Motorola will use commercially reasonable efforts to determine whether any Open Source Software will be provided under this Agreement; and if so, identify the Open Source Software and provide to Customer a copy of the applicable standard license (or specify where that license may be found); and provide to Customer a copy of the Open Source Software source code if it is publicly available without charge (although a distribution fee or a charge for related services may be applicable).

3.9. **SUBSTITUTIONS.** At no additional cost to Customer, Motorola may substitute any Equipment, Software, or services to be provided by Motorola, if the substitute meets or exceeds the Specifications and is of equivalent or better quality to the Customer. Any substitution will be reflected in a change order.



3.10. **OPTIONAL EQUIPMENT OR SOFTWARE.** This paragraph applies only if a "Priced Options" exhibit is shown in Section 1, or if the parties amend this Agreement to add a Priced Options exhibit. During the term of the option as stated in the Priced Options exhibit (or if no term is stated, then for one (1) year after the Effective Date), Customer has the right and option to purchase the equipment, software, and related services that are described in the Priced Options exhibit. Customer may exercise this option by giving written notice to Seller which must designate what equipment, software, and related services Customer is selecting (including quantities, if applicable). To the extent they apply, the terms and conditions of this Agreement will govern the transaction; however, the parties acknowledge that certain provisions must be agreed upon, and they agree to negotiate those in good faith promptly after Customer delivers the option exercise notice. Examples of provisions that may need to be negotiated are: specific lists of deliverables, statements of work, acceptance test plans, delivery and implementation schedules, payment terms, maintenance and support provisions, additions to or modifications of the Software License Agreement, hosting terms, and modifications to the acceptance and warranty provisions.

Section 4 PERFORMANCE SCHEDULE

The Parties will perform their respective responsibilities in accordance with the Performance Schedule. By executing this Agreement, Customer authorizes Motorola to proceed with contract performance. Customer affirms that a purchase order or notice to proceed is not required for subsequent years of service and that Customer will appropriate according to the Payment Schedule. The Customer will pay all invoices as received from Motorola and any changes in scope will be subject to the change order process as described in this Agreement. At the time of execution of this Agreement, the Customer will provide all necessary reference information to include on invoices for payment per this Agreement.

Section 5 CONTRACT PRICE, PAYMENT AND INVOICING

5.1. **CONTRACT PRICE.** The Contract Price in U.S. dollars is \$7,996,943.28. A Pricing Summary is included with the Payment Schedule in Exhibit B. The System price is \$7,996,943.28 and the one (1) year Lifecycle Support Plan price is included in the System price, based on initial System design. Motorola has priced the services, Software, and Equipment as an integrated system. A change in Software or Equipment quantities, or services, may affect the overall Contract Price, including discounts if applicable. Further, at the end of the first year of the Agreement and each year thereafter, a CPI percentage change calculation shall be performed. Should the annual inflation rate increase greater than 5% during the previous year, Motorola shall have the right to increase all future maintenance prices by the CPI increase amount exceeding 5%. The Midwest Region Consumer Price Index (<http://www.bls.gov/ro5/cpimid.htm>), All items, Not seasonally adjusted shall be used as the measure of CPI for this price adjustment. Measurement will take place once the annual average for the new year has been posted by the Bureau of Labor Statistics.

5.2. **INVOICING AND PAYMENT.** Motorola will submit invoices to Customer according to the Payment Schedule. Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within twenty (20) days after the date of each invoice. Customer will make payments when due in the form of a wire transfer, check, or cashier's check from a U.S. financial institution. Overdue invoices will bear simple interest at the maximum allowable rate. For reference, the Federal Tax Identification Number for Motorola Solutions, Inc. is 36-1115800.

FREIGHT, TITLE, AND RISK OF LOSS. Motorola will pre-pay and add all freight charges to the invoices. Title to the Equipment will pass to Customer upon shipment. Title to Software will not pass to Customer at any time. Risk of loss will pass to Customer upon delivery of the Equipment to the Customer. Motorola will pack and ship all Equipment in accordance with good commercial practices.

INVOICING AND SHIPPING ADDRESSES. Invoices will be sent to the Customer at the following address:

Attn: Chief of Police
10 NE Tudor Road
Lee's Summit, MO 64086



The address which is the ultimate destination where the Equipment will be delivered to Customer is:

Attn: Chief of Police
10 NE Tudor Road
Lee's Summit, MO 64086

The Equipment will be shipped to the Customer at the following address (insert if this information is known):

Attn: Chief of Police
10 NE Tudor Road
Lee's Summit, MO 64086

Customer may change this information by giving written notice to Motorola.

Section 6 SITES AND SITE CONDITIONS

6.1. ACCESS TO SITES. In addition to its responsibilities described elsewhere in this Agreement, Customer will provide a designated project manager; all necessary construction and building permits, zoning variances, licenses, and any other approvals that are necessary to develop or use the sites and mounting locations; and access to the work sites or vehicles identified in the Technical and Implementation Documents as reasonably requested by Motorola so that it may perform its duties in accordance with the Performance Schedule and Statement of Work. If the Statement of Work so indicates, Motorola may assist Customer in the local building permit process.

6.2. SITE CONDITIONS. Customer will ensure that all work sites it provides will be safe, secure, and in compliance with all applicable industry and OSHA standards. To the extent applicable and unless the Statement of Work states to the contrary, Customer will ensure that these work sites have adequate: physical space; air conditioning and other environmental conditions; adequate and appropriate electrical power outlets, distribution, equipment and connections; and adequate telephone or other communication lines (including modem access and adequate interfacing networking capabilities), all for the installation, use and maintenance of the System. Before installing the Equipment or Software at a work site, Motorola may inspect the work site and advise Customer of any apparent deficiencies or non-conformities with the requirements of this Section. This Agreement is predicated upon normal soil conditions as defined by the version of E.I.A. standard RS-222 in effect on the Effective Date.

6.3. SITE ISSUES. If a Party determines that the sites identified in the Technical and Implementation Documents are no longer available or desired, or if subsurface, structural, adverse environmental or latent conditions at any site differ from those indicated in the Technical and Implementation Documents, the Parties will promptly investigate the conditions and will select replacement sites or adjust the installation plans and specifications as necessary. If change in sites or adjustment to the installation plans and specifications causes a change in the cost or time to perform, the Parties will equitably amend the Contract Price, Performance Schedule, or both, by a change order.

Section 7 TRAINING

Any training to be provided by Motorola to Customer will be described in the Statement of Work in Exhibit C-3. Customer will notify Motorola immediately if a date change for a scheduled training program is required. If Motorola incurs additional costs because Customer reschedules a training program less than thirty (30) days before its scheduled start date, Motorola may recover these additional costs.

Section 8 SYSTEM ACCEPTANCE

8.1. **COMMENCEMENT OF ACCEPTANCE TESTING.** Motorola will provide to Customer at least ten (10) days notice before the Acceptance Tests commence. System testing will occur only in accordance with the Acceptance Test Plan.

8.2. **SYSTEM ACCEPTANCE.** System Acceptance will occur upon successful completion of the Acceptance Tests. Upon System Acceptance, the Parties will memorialize this event by promptly executing a System Acceptance Certificate. If the Acceptance Test Plan includes separate tests for individual Subsystems or phases of the System, acceptance of the individual Subsystem or phase will occur upon the successful completion of the Acceptance Tests for the Subsystem or phase, and the Parties will promptly execute an acceptance certificate for the Subsystem or phase. If Customer believes the System has failed the completed Acceptance Tests, Customer will provide to Motorola a written notice that includes the specific details of the failure. If Customer does not provide to Motorola a failure notice within thirty (30) days after completion of the Acceptance Tests, System Acceptance will be deemed to have occurred as of the completion of the Acceptance Tests. Minor omissions or variances in the System that do not materially impair the operation of the System as a whole will not postpone System Acceptance or Subsystem acceptance, but will be corrected according to a mutually agreed schedule.

8.3. **BENEFICIAL USE.** Customer acknowledges that Motorola's ability to perform its implementation and testing responsibilities may be impeded if Customer begins using the System before System Acceptance. Therefore, Customer will not commence Beneficial Use before System Acceptance without Motorola's prior written authorization, which will not be unreasonably withheld. Motorola is not responsible for System performance deficiencies that occur during unauthorized Beneficial Use. Upon commencement of Beneficial Use, Customer assumes responsibility for the use and operation of the System.

8.4 **FINAL PROJECT ACCEPTANCE.** Final Project Acceptance will occur after System Acceptance when all deliverables and other work have been completed. When Final Project Acceptance occurs, the parties will promptly memorialize this final event by so indicating on the System Acceptance Certificate.

Section 9 REPRESENTATIONS AND WARRANTIES

9.1. **SYSTEM FUNCTIONALITY.** Motorola represents that the System will perform in accordance with the Specifications in all material respects. Upon System Acceptance or Beneficial Use, whichever occurs first, this System functionality representation is fulfilled. Motorola is not responsible for System performance deficiencies that are caused by ancillary equipment not furnished by Motorola which is attached to or used in connection with the System or for reasons or parties beyond Motorola's control, such as natural causes; the construction of a building that adversely affects the microwave path reliability or radio frequency (RF) coverage; the addition of frequencies at System sites that cause RF interference or intermodulation; or Customer changes to load usage or configuration outside the Specifications.

9.2. **EQUIPMENT WARRANTY.** During the Warranty Period, Motorola warrants that the Equipment under normal use and service will be free from material defects in materials and workmanship. If System Acceptance is delayed beyond six (6) months after shipment of the Equipment by events or causes within Customer's control, this warranty expires eighteen (18) months after the shipment of the Equipment.

9.3. **Motorola Software Warranty.** Unless otherwise stated in the Software License Agreement, during the Warranty Period, Motorola warrants the Motorola Software in accordance with the terms of the Software License Agreement and the provisions of this Section 9 that are applicable to the Motorola Software. If System Acceptance is delayed beyond six (6) months after shipment of the Motorola Software by events or causes within Customer's control, this warranty expires eighteen (18) months after the shipment of the Motorola Software. **TO THE EXTENT, IF ANY, THAT THERE IS A SEPARATE LICENSE AGREEMENT PACKAGED WITH, OR PROVIDED ELECTRONICALLY WITH, A PARTICULAR PRODUCT THAT BECOMES EFFECTIVE ON AN ACT OF ACCEPTANCE BY THE END USER, THEN THAT AGREEMENT SUPERCEDES THIS SOFTWARE LICENSE AGREEMENT AS TO THE END USER OF EACH SUCH PRODUCT.**



9.4. **EXCLUSIONS TO EQUIPMENT AND MOTOROLA SOFTWARE WARRANTIES.** These warranties do not apply to: (i) defects or damage resulting from: use of the Equipment or Motorola Software in other than its normal, customary, and authorized manner; accident, liquids, neglect, or acts of God; testing, maintenance, disassembly, repair, installation, alteration, modification, or adjustment not provided or authorized in writing by Motorola; Customer's failure to comply with all applicable industry and OSHA standards; (ii) breakage of or damage to antennas unless caused directly by defects in material or workmanship; (iii) Equipment that has had the serial number removed or made illegible; (iv) batteries (because they carry their own separate limited warranty) or consumables; (v) freight costs to ship Equipment to the repair depot; (vi) scratches or other cosmetic damage to Equipment surfaces that does not affect the operation of the Equipment; and (vii) normal or customary wear and tear.

9.5. **WARRANTY CLAIMS.** To assert a warranty claim, Customer must notify Motorola in writing of the claim before the expiration of the Warranty Period. Upon receipt of this notice, Motorola will investigate the warranty claim. If this investigation confirms a valid warranty claim, Motorola will (at its option and at no additional charge to Customer) repair the defective Equipment or Motorola Software, replace it with the same or equivalent product, or refund the price of the defective Equipment or Motorola Software. That action will be the full extent of Motorola's liability for the warranty claim. Repaired or replaced product is warranted for the balance of the original applicable warranty period. All replaced products or parts will become the property of Motorola.

9.6. **ORIGINAL END USER IS COVERED.** These express limited warranties are extended by Motorola to the original user purchasing the System for commercial, industrial, or governmental use only, and are not assignable or transferable.

9.7. **DISCLAIMER OF OTHER WARRANTIES.** THESE WARRANTIES ARE THE COMPLETE WARRANTIES FOR THE EQUIPMENT AND MOTOROLA SOFTWARE PROVIDED UNDER THIS AGREEMENT AND ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES. MOTOROLA DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Section 10 DELAYS

10.1. **FORCE MAJEURE.** Neither Party will be liable for its non-performance or delayed performance if caused by a Force Majeure. A Party that becomes aware of a Force Majeure that will significantly delay performance will notify the other Party promptly (but in no event later than fifteen days) after it discovers the Force Majeure. If a Force Majeure occurs, the Parties will execute a change order to extend the Performance Schedule for a time period that is reasonable under the circumstances.

10.2. **PERFORMANCE SCHEDULE DELAYS CAUSED BY CUSTOMER.** If Customer (including its other contractors) delays the Performance Schedule, it will make the promised payments according to the Payment Schedule as if no delay occurred; and the Parties will execute a change order to extend the Performance Schedule and, if requested, compensate Motorola for all reasonable charges incurred because of the delay. Delay charges may include costs incurred by Motorola or its subcontractors for additional freight, warehousing and handling of Equipment; extension of the warranties; travel; suspending and re-mobilizing the work; additional engineering, project management, and standby time calculated at then current rates; and preparing and implementing an alternative implementation plan.

Section 11 DISPUTES

The Parties will use the following procedure to address any dispute arising under this Agreement (a "Dispute").

11.1. **GOVERNING LAW.** This Agreement will be governed by and construed in accordance with the laws of the State in which the System is installed.

11.2. **NEGOTIATION.** Either Party may initiate the Dispute resolution procedures by sending a notice of Dispute ("Notice of Dispute"). The Parties will attempt to resolve the Dispute promptly through good faith negotiations including 1) timely escalation of the Dispute to executives who have authority to settle the Dispute and who are at a higher level of management than the persons with direct responsibility for the matter and 2) direct communication between the executives. If the Dispute has not been resolved within ten (10) days from the Notice of Dispute, the Parties will proceed to mediation.

11.3. **MEDIATION.** The Parties will choose an independent mediator within thirty (30) days of a notice to mediate from either Party ("Notice of Mediation"). Neither Party may unreasonably withhold consent to the selection of a mediator. If the Parties are unable to agree upon a mediator, either Party may request that American Arbitration Association nominate a mediator. Each Party will bear its own costs of mediation, but the Parties will share the cost of the mediator equally. Each Party will participate in the mediation in good faith and will be represented at the mediation by a business executive with authority to settle the Dispute.

11.4. **LITIGATION, VENUE and JURISDICTION.** If a Dispute remains unresolved for sixty (60) days after receipt of the Notice of Mediation, either Party may then submit the Dispute to a court of competent jurisdiction in the state in which the System is installed. Each Party irrevocably agrees to submit to the exclusive jurisdiction of the courts in such state over any claim or matter arising under or in connection with this Agreement.

11.5. **CONFIDENTIALITY.** All communications pursuant to subsections 11.2 and 11.3 will be treated as compromise and settlement negotiations for purposes of applicable rules of evidence and any additional confidentiality protections provided by applicable law. The use of these Dispute resolution procedures will not be construed under the doctrines of laches, waiver or estoppel to affect adversely the rights of either Party.

Section 12 DEFAULT AND TERMINATION

12.1. **DEFAULT BY A PARTY.** If either Party fails to perform a material obligation under this Agreement, the other Party may consider the non-performing Party to be in default (unless a Force Majeure causes the failure) and may assert a default claim by giving the non-performing Party a written and detailed notice of default. Except for a default by Customer for failing to pay any amount when due under this Agreement which must be cured immediately, the defaulting Party will have thirty (30) days after receipt of the notice of default to either cure the default or, if the default is not curable within thirty (30) days, provide a written cure plan. The defaulting Party will begin implementing the cure plan immediately after receipt of notice by the other Party that it approves the plan. If Customer is the defaulting Party, Motorola may stop work on the project until it approves the Customer's cure plan.

12.2. **FAILURE TO CURE.** If a defaulting Party fails to cure the default as provided above in Section 12.1, unless otherwise agreed in writing, the non-defaulting Party may terminate any unfulfilled portion of this Agreement. In the event of termination for default, the defaulting Party will promptly return to the non-defaulting Party any of its Confidential Information. If Customer is the non-defaulting Party, terminates this Agreement as permitted by this Section, and completes the System through a third Party, Customer may as its exclusive remedy recover from Motorola reasonable costs incurred to complete the System to a capability not exceeding that specified in this Agreement less the unpaid portion of the Contract Price. Customer will mitigate damages and provide Motorola with detailed invoices substantiating the charges.

12.3. **CONVENIENCE.** Customer may terminate this Agreement (in whole or part) at any time. To exercise this right, Customer must provide to Motorola formal written notice at least thirty (30) days in advance of the effective date of the termination. The notice must explicitly state the effective date of the termination and whether the contract termination is in whole or in part, and if in part, which part is being terminated. If Customer exercises this right to terminate for convenience, it will be liable to pay Motorola for (1) the portion of the Contract Price attributable to the Equipment and/or Software delivered, and all services performed, on or before the effective date of the termination; and (2) costs and expenses that Motorola incurs as a result of the termination of the Agreement, including but not limited to costs and expenses associated with cancellation of subcontracts, restocking fees, removal of installation or test equipment, etc. If the portion of the Contract Price and/or the recoverable costs and expenses attributable to the termination of the Agreement are not readily ascertainable,



Customer will be liable to pay Motorola for the reasonable value of such Equipment, Software, services, costs and expenses. Notwithstanding the above, Customer shall have no right to terminate this Agreement if Motorola has given Customer a notice of default and such default has not been cured.

12.4. **UNEARNED DISCOUNTS.** If the Customer terminates this Agreement before the end of the Term, for any reason other than Motorola default, then the Customer will pay to Motorola an early termination fee equal to the discount applied to the last three (3) years of service payments for the original Term. Annual discounts for the Term can be found on the Pricing exhibit.

Section 13 INDEMNIFICATION

13.1. **GENERAL INDEMNITY BY MOTOROLA.** Motorola will indemnify and hold Customer harmless from any and all liability, expense, judgment, suit, cause of action, or demand for personal injury, death, or direct damage to tangible property which may accrue against Customer to the extent it is caused by the negligence of Motorola, its subcontractors, or their employees or agents, while performing their duties under this Agreement, if Customer gives Motorola prompt, written notice of any the claim or suit. Customer will cooperate with Motorola in its defense or settlement of the claim or suit. This section sets forth the full extent of Motorola's general indemnification of Customer from liabilities that are in any way related to Motorola's performance under this Agreement.

13.2. **INTENTIONALLY OMITTED**

13.3. **PATENT AND COPYRIGHT INFRINGEMENT.**

13.3.1. Motorola will defend at its expense any suit brought against Customer to the extent it is based on a third-party claim alleging that the Equipment manufactured by Motorola or the Motorola Software ("Motorola Product") directly infringes a United States patent or copyright ("Infringement Claim"). Motorola's duties to defend and indemnify are conditioned upon: Customer promptly notifying Motorola in writing of the Infringement Claim; Motorola having sole control of the defense of the suit and all negotiations for its settlement or compromise; and Customer providing to Motorola cooperation and, if requested by Motorola, reasonable assistance in the defense of the Infringement Claim. In addition to Motorola's obligation to defend, and subject to the same conditions, Motorola will pay all damages finally awarded against Customer by a court of competent jurisdiction for an Infringement Claim or agreed to, in writing, by Motorola in settlement of an Infringement Claim.

13.3.2. If an Infringement Claim occurs, or in Motorola's opinion is likely to occur, Motorola may at its option and expense: (a) procure for Customer the right to continue using the Motorola Product; (b) replace or modify the Motorola Product so that it becomes non-infringing while providing functionally equivalent performance; or (c) accept the return of the Motorola Product and grant Customer a credit for the Motorola Product, less a reasonable charge for depreciation. The depreciation amount will be calculated based upon generally accepted accounting standards.

13.3.3. Motorola will have no duty to defend or indemnify for any Infringement Claim that is based upon: (a) the combination of the Motorola Product with any software, apparatus or device not furnished by Motorola; (b) the use of ancillary equipment or software not furnished by Motorola and that is attached to or used in connection with the Motorola Product; (c) Motorola Product designed or manufactured in accordance with Customer's designs, specifications, guidelines or instructions, if the alleged infringement would not have occurred without such designs, specifications, guidelines or instructions; (d) a modification of the Motorola Product by a party other than Motorola; (e) use of the Motorola Product in a manner for which the Motorola Product was not designed or that is inconsistent with the terms of this Agreement; or (f) the failure by Customer to install an enhancement release to the Motorola Software that is intended to correct the claimed infringement. In no event will Motorola's liability resulting from its indemnity obligation to Customer extend in any way to royalties payable on a per use basis or the Customer's revenues, or any royalty basis other than a reasonable royalty based upon revenue derived by Motorola from Customer from sales or license of the infringing Motorola Product.

13.3.4. This Section 13 provides Customer's sole and exclusive remedies and Motorola's entire liability in the event of an Infringement Claim. Customer has no right to recover and Motorola has no obligation to provide any other or further remedies, whether under another provision of this Agreement or any other legal theory or principle, in connection with an Infringement Claim. In addition, the rights and remedies provided in this Section 13 are subject to and limited by the restrictions set forth in Section 14.

Section 14 LIMITATION OF LIABILITY

Except for personal injury or death, Motorola's total liability, whether for breach of contract, warranty, negligence, strict liability in tort, indemnification, or otherwise, will be limited to the direct damages recoverable under law, but not to exceed the Contract Price. ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT MOTOROLA WILL NOT be liable for any commercial loss; inconvenience; loss of use, Time, DATA, GOOD WILL, REVENUEs, profits or savings; or other SPECIAL, incidental, INDIRECT, OR consequential damages IN ANY WAY RELATED TO OR ARISING FROM THIS AGREEMENT, THE SALE OR USE OF THE EQUIPMENT OR SOFTWARE, OR THE PERFORMANCE OF SERVICES BY MOTOROLA PURSUANT TO THIS AGREEMENT. This limitation of liability provision survives the expiration or termination of the Agreement and applies notwithstanding any contrary provision.

Section 15 CONFIDENTIALITY AND PROPRIETARY RIGHTS

15.1. CONFIDENTIAL INFORMATION. During the term of this Agreement, the parties may provide each other with Confidential Information. Each Party will: maintain the confidentiality of the other Party's Confidential Information and not disclose it to any third party, except as authorized by the disclosing Party in writing or as required by a court of competent jurisdiction; restrict disclosure of the Confidential Information to its employees who have a "need to know" and not copy or reproduce the Confidential Information; take necessary and appropriate precautions to guard the confidentiality of the Confidential Information, including informing its employees who handle the Confidential Information that it is confidential and is not to be disclosed to others, but these precautions will be at least the same degree of care that the receiving Party applies to its own confidential information and will not be less than reasonable care; and use the Confidential Information only in furtherance of the performance of this Agreement. Confidential Information is and will at all times remain the property of the disclosing Party, and no grant of any proprietary rights in the Confidential Information is given or intended, including any express or implied license, other than the limited right of the recipient to use the Confidential Information in the manner and to the extent permitted by this Agreement.

15.2. PRESERVATION OF MOTOROLA'S PROPRIETARY RIGHTS. Motorola, the third party manufacturer of any Equipment, and the copyright owner of any Non-Motorola Software own and retain all of their respective Proprietary Rights in the Equipment and Software, and nothing in this Agreement is intended to restrict their Proprietary Rights. All intellectual property developed, originated, or prepared by Motorola in connection with providing to Customer the Equipment, Software, or related services remain vested exclusively in Motorola, and this Agreement does not grant to Customer any shared development rights of intellectual property. Except as explicitly provided in the Software License Agreement, Motorola does not grant to Customer, either directly or by implication, estoppel, or otherwise, any right, title or interest in Motorola's Proprietary Rights. Customer will not modify, disassemble, peel components, decompile, otherwise reverse engineer or attempt to reverse engineer, derive source code or create derivative works from, adapt, translate, merge with other software, reproduce, distribute, sublicense, sell or export the Software, or permit or encourage any third party to do so. The preceding sentence does not apply to Open Source Software which is governed by the standard license of the copyright owner.

Section 16 GENERAL

16.1. TAXES. The Contract Price does not include any excise, sales, lease, use, property, or other taxes, assessments or duties, all of which will be paid by Customer except as exempt by law. If Motorola is required to pay any of these taxes, Motorola will send an invoice to Customer and Customer will pay to Motorola the amount of the taxes (including any interest and penalties) within twenty (20) days after the date of the invoice. Customer



will be solely responsible for reporting the Equipment for personal property tax purposes, and Motorola will be solely responsible for reporting taxes on its income or net worth.

16.2. **ASSIGNABILITY AND SUBCONTRACTING.** Except as provided herein, neither Party may assign this Agreement or any of its rights or obligations hereunder without the prior written consent of the other Party, which consent will not be unreasonably withheld. Any attempted assignment, delegation, or transfer without the necessary consent will be void. Notwithstanding the foregoing, Motorola may assign this Agreement to any of its affiliates or its right to receive payment without the prior consent of Customer. In addition, in the event Motorola separates one or more of its businesses (each a "Separated Business"), whether by way of a sale, establishment of a joint venture, spin-off or otherwise (each a "Separation Event"), Motorola may, without the prior written consent of the other Party and at no additional cost to Motorola, assign this Agreement such that it will continue to benefit the Separated Business and its affiliates (and Motorola and its affiliates, to the extent applicable) following the Separation Event. Motorola may subcontract any of the work, but subcontracting will not relieve Motorola of its duties under this Agreement.

16.3 **WAIVER.** Failure or delay by either Party to exercise a right or power under this Agreement will not be a waiver of the right or power. For a waiver of a right or power to be effective, it must be in a writing signed by the waiving Party. An effective waiver of a right or power will not be construed as either a future or continuing waiver of that same right or power, or the waiver of any other right or power.

16.4. **SEVERABILITY.** If a court of competent jurisdiction renders any part of this Agreement invalid or unenforceable, that part will be severed and the remainder of this Agreement will continue in full force and effect.

16.5. **INDEPENDENT CONTRACTORS.** Each Party will perform its duties under this Agreement as an independent contractor. The Parties and their personnel will not be considered to be employees or agents of the other Party. Nothing in this Agreement will be interpreted as granting either Party the right or authority to make commitments of any kind for the other. This Agreement will not constitute, create, or be interpreted as a joint venture, partnership or formal business organization of any kind.

16.6. **HEADINGS AND SECTION REFERENCES.** The section headings in this Agreement are inserted only for convenience and are not to be construed as part of this Agreement or as a limitation of the scope of the particular section to which the heading refers. This Agreement will be fairly interpreted in accordance with its terms and conditions and not for or against either Party.

16.7. **ENTIRE AGREEMENT.** This Agreement, including all Exhibits, constitutes the entire agreement of the Parties regarding the subject matter of the Agreement and supersedes all previous agreements, proposals, and understandings, whether written or oral, relating to this subject matter. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which shall constitute one and the same instrument. A facsimile copy or computer image, such as a PDF or tiff image, or a signature shall be treated as and shall have the same effect as an original signature. In addition, a true and correct facsimile copy or computer image of this Agreement shall be treated as and shall have the same effect as an original signed copy of this document. This Agreement may be amended or modified only by a written instrument signed by authorized representatives of both Parties. The preprinted terms and conditions found on any Customer purchase order, acknowledgment or other form will not be considered an amendment or modification of this Agreement, even if a representative of each Party signs that document.

16.8. **NOTICES.** Notices required under this Agreement to be given by one Party to the other must be in writing and either personally delivered or sent to the address shown below by certified mail, return receipt requested and postage prepaid (or by a recognized courier service, such as Federal Express, UPS, or DHL), or by facsimile with correct answerback received, and will be effective upon receipt:

Motorola Solutions, Inc.
Attn: Law Department
500 West Monroe Street, 43rd Floor
Chicago, IL 60661

Customer
Attn: Chief of Police
10 NE Tudor Road
Lee's Summit, MO 64086

16.9. **COMPLIANCE WITH APPLICABLE LAWS.** Each Party will comply with all applicable federal, state, and local laws, regulations and rules concerning the performance of this Agreement or use of the System. Customer will obtain and comply with all Federal Communications Commission ("FCC") licenses and authorizations required for the installation, operation and use of the System before the scheduled installation of the Equipment. Although Motorola might assist Customer in the preparation of its FCC license applications, neither Motorola nor any of its employees is an agent or representative of Customer in FCC or other matters.

16.10. **AUTHORITY TO EXECUTE AGREEMENT.** Each Party represents that it has obtained all necessary approvals, consents and authorizations to enter into this Agreement and to perform its duties under this Agreement; the person executing this Agreement on its behalf has the authority to do so; upon execution and delivery of this Agreement by the Parties, it is a valid and binding contract, enforceable in accordance with its terms; and the execution, delivery, and performance of this Agreement does not violate any bylaw, charter, regulation, law or any other governing authority of the Party.

16.11. **ADMINISTRATOR LEVEL ACCOUNT ACCESS.** Motorola will provide Customer with Administrative User Credentials. Customer agrees to only grant Administrative User Credentials to those personnel with the training or experience to correctly use the access. Customer is responsible for protecting Administrative User Credentials from disclosure and maintaining Credential validity by, among other things, updating passwords when required. Customer may be asked to provide valid Administrative User Credentials when in contact with Motorola System support. Customer understands that changes made as the Administrative User can significantly impact the performance of the System. Customer agrees that it will be solely responsible for any negative impact on the System or its users by any such changes. System issues occurring as a result of changes made by an Administrative User may impact Motorola's ability to perform its obligations under the Agreement or its Maintenance and Support Agreement. In such cases, a revision to the appropriate provisions of the Agreement, including the Statement of Work, may be necessary. To the extent Motorola provides assistance to correct any issues caused by or arising out of the use of or failure to maintain Administrative User Credentials, Motorola will be entitled to bill Customer and Customer will pay Motorola on a time and materials basis for resolving the issue.

16.12. **SURVIVAL OF TERMS.** The following provisions will survive the expiration or termination of this Agreement for any reason: Section 3.7 (Motorola Software); Section 3.8 (Non-Motorola Software); if any payment obligations exist, Sections 5.1 and 5.2 (Contract Price and Invoicing and Payment); Subsection 9.7 (Disclaimer of Implied Warranties); Section 11 (Disputes); Section 14 (Limitation of Liability); and Section 15 (Confidentiality and Proprietary Rights); and all of the General provisions in Section 16.

17. **INSURANCE.** Motorola shall secure and maintain, throughout the duration of this agreement, insurance of such types and in at least the amounts that are required herein. Motorola shall provide certificate(s) of insurance confirming the required protection on an ACORD 25 (or equivalent form). The Customer shall be notified by receipt of written notice from Motorola thirty (30) days prior to material modification or cancellation of any policy listed on the certificate(s). The Customer reserves the right to require PDF copies of any Additional Insured endorsement.

SUB-CONTRACTOR'S INSURANCE: If any part of the contract is to be sublet, Motorola shall:

Require each sub-contractor to secure insurance in amounts required of Motorola per their scope and work and submit such certificates to the City as outlined herein.

PUBLIC LIABILITY: Public liability insurance protection must be carried by Motorola, for the duration of the contract, in the minimum amount of \$1,000,000 including errors and/or omissions per U.S. DOT requirements as set forth under 49 Code of Federal Regulations, section 172.101.



COMMERCIAL GENERAL LIABILITY POLICY:

Limits:	Each occurrence	\$2,000,000
	Personal & Advertising Injury	\$2,000,000
	Products/Completed Operations Aggregate	\$2,000,000
	General Aggregate	\$2,000,000

Policy must include the following conditions:
 Bodily Injury and Property Damage
 Insured Contract's Contractual Liability
 Explosion, Collapse & Underground (if risk is present)
 Additional Insured: City of Lee's Summit, Missouri

AUTOMOBILE LIABILITY: Policy shall protect Motorola against claims for bodily injury and/or property damage arising out of the ownership or use of any owned, hired and/or non-owned vehicle and must include protection for either:
 Any Auto OR All Owned Autos; Hired Autos; and Non-Owned Autos

Limits:	
Each Accident, Combined Single Limits, Bodily Injury and Property Damage:	\$500,000

City of Lee's Summit, Missouri does NOT need to be named as additional insured on Automobile Liability

18. **NON-DISCRIMINATION IN EMPLOYMENT.** In connection with the furnishing of supplies or performance of work under this contract, the Contractor agrees to comply with the Fair Labor Standard Act, Fair Employment Practices, Equal Opportunity Employment Act, and all other applicable Federal and State Laws, and further agrees to insert the foregoing provision in all subcontracts awarded hereunder.
 The Parties hereby enter into this Agreement as of the Effective Date.

Motorola Solutions, Inc.

Customer

By: _____
 Name: _____
 Title: _____
 Date: _____

By: _____
 Name: _____
 Title: _____
 Date: _____

Exhibit A

SOFTWARE LICENSE AGREEMENT

This Exhibit A Software License Agreement ("Agreement") is between Motorola Solutions, Inc., ("Motorola"), and City of Lee's Summit, Missouri ("Licensee").

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

Section 1 DEFINITIONS

1.1 "Designated Products" means products provided by Motorola 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 "Open Source Software" means software with either freely obtainable source code, license for modification, or permission for free distribution.

1.4 "Open Source Software License" means the terms or conditions under which the Open Source Software is licensed.

1.5 "Primary Agreement" means the agreement to which this exhibit is attached.

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 Motorola; 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.

Section 2 SCOPE

Motorola and Licensee enter into this Agreement in connection with Motorola'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 Motorola is providing to Licensee, and Licensee's use of the Software and Documentation.

Section 3 GRANT OF LICENSE

3.1. Subject to the provisions of this Agreement and the payment of applicable license fees, Motorola grants to Licensee a personal, limited, non-transferable (except as permitted in Section 7) and non-exclusive license under Motorola's copyrights and Confidential Information (as defined in the Primary Agreement) embodied in the Software to use the Software, in object code form, and the Documentation solely in connection with Licensee's use of the Designated Products. This Agreement does not grant any rights to source code.

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 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. If requested by Licensee, Motorola 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 (although distribution fees may be applicable).

Section 4 LIMITATIONS ON USE

4.1. 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.

4.2. 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 Motorola's proprietary rights; (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; or (vi) use, or permit the use of, the Software in a manner that would result in the production of a copy of the Software solely by activating a machine containing the Software. 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 internal use of the Software.

4.3. Unless otherwise authorized by Motorola 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 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 Motorola 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 Motorola at the time temporary transfer is discontinued.

4.4. When using Motorola'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 Motorola with a list of all locations at which Licensee uses or intends to use RSS upon Motorola'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. Motorola or an independent third party ("Auditor") may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Motorola is responsible for the payment of all expenses and costs of the Auditor. Any information obtained by Motorola and the Auditor will be kept in strict confidence by Motorola and the Auditor and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

Section 5 OWNERSHIP AND TITLE

Motorola, 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 Motorola or another party, or any improvements that result from Motorola'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. All intellectual property developed, originated, or prepared by Motorola in connection with providing the Software, Designated Products, Documentation or related services, remains vested exclusively in Motorola, and Licensee will not have any shared development or other intellectual property rights.

Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. The commencement date and the term of the Software warranty for Software included in the System will be a period of one (1) year from the date of System Acceptance or Beneficial Use, whichever occurs first (the "Warranty Period"). The commencement date and the term of the Software warranty for Software licensed separately from the System in accordance with Section 3.4 of the Communications System Agreement will be a period of ninety (90) days from Motorola's shipment of the Software. If Licensee is not in breach of any of its obligations under this Agreement, Motorola warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect occurs will be determined by Motorola solely with reference to the Documentation. Motorola 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. Motorola makes no representations or warranties with respect to any third party software included in the Software.

6.2 Motorola'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 Motorola cannot correct the defect within a reasonable time, then at Motorola's option, Motorola 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.

6.3. Warranty claims are described in the Primary Agreement.

6.4. The express warranties set forth in this Section 6 are in lieu of, and Motorola disclaims, any and all other warranties (express or implied, oral or written) with respect to the Software or Documentation, including, without limitation, any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether or not Motorola knows, has reason to know, has been advised, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage of trade, or by course of dealing. In addition, Motorola disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

Section 7 TRANSFERS

Licensee will not transfer the Software or Documentation to any third party without Motorola's prior written consent. Motorola's consent may be withheld at its discretion and may be conditioned upon transferee paying all applicable license fees and agreeing to be bound by this Agreement. If the Designated Products are Motorola's radio products and Licensee transfers ownership of the Motorola radio products to a third party, Licensee may assign its right to use the Software (other than RSS and Motorola's FLASHport® software) which is embedded in



or furnished for use with the radio products and the related Documentation; provided that Licensee transfers all copies of the Software and Documentation to the transferee, and Licensee and the transferee sign a transfer form to be provided by Motorola upon request, obligating the transferee to be bound by this Agreement.

Section 8 TERM AND TERMINATION

8.1 Licensee's right to use the Software and Documentation will begin when the Primary Agreement is signed by both parties and will continue for the life of the Designated Products with which or for which the Software and Documentation have been provided by Motorola, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Motorola.

8.2 Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Motorola 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 Motorola or destroyed by Licensee and are no longer in use by Licensee.

8.3 Licensee acknowledges that Motorola made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Motorola for which monetary damages would be inadequate. If Licensee breaches this Agreement, Motorola may terminate this Agreement and be entitled to all available remedies at law or in equity (including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation unless Licensee is a Federal agency of the United States Government).

Section 9 UNITED STATES GOVERNMENT LICENSING PROVISIONS

This Section applies if Licensee is the United States Government or a United States Government agency. Licensee's use, duplication or disclosure of the Software and Documentation under Motorola's copyrights or trade secret rights is subject to the restrictions set forth in subparagraphs (c)(1) and (2) of the Commercial Computer Software-Restricted Rights clause at FAR 52.227-19 (JUNE 1987), if applicable, unless they are being provided to the Department of Defense. If the Software and Documentation are being provided to the Department of Defense, Licensee's use, duplication, or disclosure of the Software and Documentation is subject to the restricted rights set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 (OCT 1988), if applicable. The Software and Documentation may or may not include a Restricted Rights notice, or other notice referring to this Agreement. The provisions of this Agreement will continue to apply, but only to the extent that they are consistent with the rights provided to the Licensee under the provisions of the FAR or DFARS mentioned above, as applicable to the particular procuring agency and procurement transaction.

Section 10 CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain Motorola's valuable proprietary and Confidential Information and are Motorola's trade secrets, and that the provisions in the Primary Agreement concerning Confidential Information apply.

Section 11 LIMITATION OF LIABILITY

The Limitation of Liability provision is described in the Primary Agreement.

Section 12 NOTICES

Notices are described in the Primary Agreement.

Section 13 GENERAL

13.1. **COPYRIGHT NOTICES.** The existence of a copyright notice on the Software will not be construed as an admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.

13.2. **COMPLIANCE WITH LAWS.** Licensee acknowledges that the Software is subject to the laws and regulations of the United States and Licensee will comply with all applicable laws and regulations, including export laws and regulations of the United States. Licensee will not, without the prior authorization of Motorola and the appropriate governmental authority of the United States, in any form export or re-export, sell or resell, ship or reship, or divert, through direct or indirect means, any item or technical data or direct or indirect products sold or otherwise furnished to any person within any territory for which the United States Government or any of its agencies at the time of the action, requires an export license or other governmental approval. Violation of this provision is a material breach of this Agreement.

13.3. **ASSIGNMENTS AND SUBCONTRACTING.** Motorola may assign its rights or subcontract its obligations under this Agreement, or encumber or sell its rights in any Software, without prior notice to or consent of Licensee.

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 Illinois 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 Motorola 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, 6.4, 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 Exhibit and the Primary Agreement, the parties agree that this Exhibit prevails, only with respect to the specific subject matter of this Exhibit, and not the Primary Agreement or any other exhibit as it applies to any other subject matter.

13.8. **SECURITY.** Motorola 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, Motorola will take the steps set forth in Section 6 of this Agreement.



Exhibit B-1
PRICING SUMMARY

1.1 PRICING SUMMARY

Table 1-1: Consoles

Description	Price (\$)
Fire	
Equipment	\$378,904.00
System Installation, (1) One Year Warranty and (1) One Year Post Warranty and Services Per SOW's	\$120,103.00
<i>Includes install, optimize, program of consoles, consolettes, Eventide logger and training</i>	
Police	
Equipment	\$565,596.00
System Installation, (1) One Year Warranty and (1) One Year Post Warranty and Services Per SOW's	\$239,597.00
<i>Includes install, optimize, program of consoles, consolettes, Eventide logger and training</i>	
Sub Total	\$1,304,200.00

Table 1-2: Subscribers

Description	Price
Police	
APX6000 Single	\$997,015.05
Accessories	\$89,612.61
APX6500 Remote	\$517,635.21
APX8500 Motorcycle	\$27,589.52
APX6500 Dual Head	\$6,487.84
APX6500 Dash Mount	\$17,472.81
Sub Total	\$1,655,813.04
Fire	
APX8000XE Dual Band	\$670,670.26
Accessories (Dual Band)	\$85,009.96
APX4000 Single Band	\$58,094.78



Description	Price
Accessories (Single Band)	\$3,127.32
APX8500 Remote (Dual Head)	\$57,526.72
APX8500 (Dash Mount)	\$19,570.86
APX8500 (Remount Mount)	\$239,370.48
Accessories for Remote Mount	\$2,535.00
APX Consolette (Single Band)	\$38,044.68
Sub Total	\$1,173,951.06
Public Works	
APX900	\$47,657.97
Accessories	\$1,695.61
APX1500 Mobile	\$120,868.02
APX1500 Base	\$6,772.14
Sub Total	\$176,993.74
Water	
APX900	\$30,837.51
Accessories	\$1,341.74
APX1500 Mobile	\$108,471.30
Consolette & 3 Desksets	\$12,627.34
Sub Total	\$153,277.89
Airport	
APX900	\$28,034.10
Accessories	\$745.33
APX4500 Remote Mount	\$14,358.96
Sub Total	\$43,138.39
Net Total with Accessories	\$3,203,173.12
Subscriber Installation	
Subscriber Installation, Program and optimization	\$302,263.00

Table 1-3: Backhaul

Description	Price (\$)
Microwave–Cambium PTP810 with 50 Mbps license	\$120,132.00
License for 200 Mbps	\$18,039.00

Table 1-4: Core System Level Equipment

Description	Price (\$)
Site Licenses, Enhanced Data, UNS, Core Ethernet Switch Equipment	\$36,625.00
Intelligent Middleware Core Equipment	\$23,155.00
System Installation, (1) One Year Warranty and (1) One Year Post Warranty and Services Per SOW's	\$35,836.00
Sub Total	\$95,616.00

Table 1-5: Fixed Network Equipment

Description	Price (\$)
Equipment	\$2,993,397.80
Intelligent Middleware User Licenses	\$24,721.20
System Installation, (1) One Year Warranty and (1) One Year Post Warranty and Services Per SOW's	\$1,290,114.00
<i>Install, program, optimize the FNE, Microwave equipment including the relocation of the MW equipment, removal of the existing UHF simulcast system, FCC licensing coordination fees, DC Battery Labor, Coverage Acceptance Testing, documentation</i>	
Sub Total	\$4,308,233.00

Table 1-6: Civil Equipment and System Integration

Description	Price (\$)
Woods Chapel	\$150,632.00
Ranson Road	\$151,922.00
Scherer	\$318,103.00
Clearwire New Shelter	\$234,947.00
Lee's Summit Police Dispatch	\$41,935.00
Lee's Summit Fire Dispatch	\$59,500.00
Sub Total	\$957,039.00



Table 1-7: CompassCOM

Description	Price (\$)
CompassCOM Equipment, System Installation, (1) One Year Warranty and (1) One Year Post Warranty and Services Per SOW's	142,025.00

Table 1-8: Project Totals

Description	Price (\$)
Project Total	\$10,450,720.87
Existing Radios Upgrade Value Subscriber Trade-In @ 1000.00 per radio as proposed for completed Nov 20, 2017 order.	(\$545,000)
Existing Consoles Upgrade Value Console Trade-In @ \$4000.00 per Console (14x4) for completed Nov 20, 2017 order	(\$56,000)
Contract Incentives Based on As-Proposed. Removal of items or scope will change contract incentives.	(\$1,849,778)
Technology Credit – 3 IP Cameras at Clearwire Site	(\$3,000)
Project Grand Total with Incentives and Upgrade Credits	\$7,996,943.28

The Pricing is based off Johnson County Kansas Agreement LS Bid# 2012-010/6R

1.2 POST PURCHASE OPTIONAL SERVICES

Table 1-9: SUAll and Maintenance (See below for detail)

Description	Price (\$)
Year 3	\$355,839.21
Year 4	\$382,744.78
Year 5	\$391,209.59
Sub Total	\$1,129,793.58



Table 1-10: SUAll

Description	Price (\$)
Paid annually	
<p>The Motorola Solutions System Upgrade Agreement II (SUAll) is comprehensive approach to technology refreshment of the ASTRO 25 system, aligned with the Motorola Solutions lifecycle roadmap. As major system releases become available, the SUAll will provide up to one system upgrade every two years (Motorola Solutions combines features of two releases in a single upgrade jump). Customers that take advantage of the ASTRO 25 System Upgrade Agreement II will be provided with the hardware and software updates necessary to maintain their system at the highest level of support and availability. Labor and technical resources to implement eligible system upgrades, such as Upgrade Operations (UO), Field Engineering, Program Management, Systems Technologist and local service shop, are included within the coverage of this agreement. Keeping current via the SUAll also provides access to the latest standard and optional features available in each system release. (Note: This may require an additional fee for optional feature licensing and hardware).</p>	
Year 3	\$104,450.58
Year 4	\$104,586.21
Year 5	\$104,726.79
Sub Total	\$313,763.58

Table 1-11: SUS

Description	Price (\$)
Paid annually	
<p>The Motorola Solutions Systems Support Center's (SSC) Technical Support Operation is staffed with experienced technologists who specialize in the diagnosis and resolution of system performance issues. The Technical Support service provides centralized remote telephone support for technical issues that require a high level of communications systems expertise and troubleshooting. Technical experts are available 24 x 7 to characterize issues to ensure top priority problems receive immediate attention and resolution:</p> <ul style="list-style-type: none"> • Case management and escalation procedures are in place to help ensure that contracted response and restore times are met, each and every time, along with tracking of what has been done so everyone has a consistent view to the issue at hand. • A fully equipped system lab is used to duplicate more complex issues. • Technologists have access to Motorola Solutions Development Engineering resources for complicated technical issues. 	

Description	Price (\$)
Year 3	\$28,424.00
Year 4	\$28,424.00
Year 5	\$28,424.00
Sub Total	\$85,272.00

Table 1-12: Technical Support

Description	Price (\$)
Paid annually	
<p>Technical Support (7x24)</p> <p>The Motorola Solutions Systems Support Center's (SSC) Technical Support Operation is staffed with experienced technologists who specialize in the diagnosis and resolution of system performance issues. The Technical Support service provides centralized remote telephone support for technical issues that require a high level of communications systems expertise and troubleshooting. Technical experts are available 24 x 7 to characterize issues to ensure top priority problems receive immediate attention and resolution.</p> <ul style="list-style-type: none"> • Case management and escalation procedures are in place to help ensure that contracted response and restore times are met, each and every time, along with tracking of what has been done so everyone has a consistent view to the issue at hand • A fully equipped system lab is used to duplicate more complex issues. • Technologists have access to Motorola Solutions Development Engineering resources for complicated technical issues. 	
Year 3	\$17,916.80
Year 4	\$17,916.80
Year 5	\$17,916.80
Sub Total	\$53,750.40

Table 1-13: Onsite, Dispatch, Cambium Microwave and Eventide

Description	Price (\$)
Paid annually	
<p>Onsite Infrastructure Response (7x24) (Requires Dispatch Service)</p> <p>Professional dispatch agents take your call, open a case to track, triage it to the appropriate response team, and monitor technician site arrival, response, and restore time to ensure compliance to committed response times:</p> <ul style="list-style-type: none"> • Trained and qualified technicians, backed by centralized Motorola Solutions resources, will arrive onsite within committed response times to ensure maximum system uptime. • Onsite Infrastructure Response means you don't have to dedicate technical resources or invest in the tools, training and inventory required to respond to system issues. • Flexibility to choose from four-hour response times on an 8x5 or 24x7 coverage basis, depending on your organizational needs. <p>Dispatch</p> <p>Ensures that local, trained and qualified technicians (provided by the customer or by Motorola Solutions) will arrive at the customer's location to diagnose and restore the communications network:</p> <ul style="list-style-type: none"> • Provides a single toll-free telephone number that answers 24 hours a day, seven days a week, 365 days a year, for service requests and warranty claims. • A single call to dispatch will ensure that trained, qualified technicians arrive onsite within committed response times to ensure maximum system uptime. Once the Motorola Solutions System Support Center (SSC) receives a request for service, a case will be opened and used to track the entire event from start to restoral or the closing of the case. • A proven escalation procedure ensures that, if your local authorized technician cannot respond, the issue will progress through a pre-defined progressive accountability process to meet your contracted response times. • Our centralized resources will ensure maximum system uptime without the customer needing to invest in a dedicated 24x7x365 support team. • Tracking the event through the Case Management system provides a record of events associated with the case, which can then be presented to the customer in the form of case activity reports. The case management system can also be accessed remotely via the Internet on the Motorola Solutions Online web portal. • Dispatch service can also be used to dispatch the customer's technical staff. • Dispatch service required if On Site is purchased. 	
Year 3	\$99,323.47
Year 4	\$126,093.41
Year 5	\$134,417.64
Sub Total	\$359,834.52

Table 1-14: Infrastructure Repair

Description	Price (\$)
Paid annually	
<p>Infrastructure Repair provides for the repair of the equipment in the proposed solution, whether it is manufactured by Motorola Solutions or by another vendor. All equipment will be sent to Motorola Solutions Solution's Infrastructure Depot Operations Center (IDO), a centralized location, where factory-trained technicians will use ISO9001 and TL9000-certified methodologies to troubleshoot, repair, and test the equipment to bring it to working order. Motorola Solutions will also send third-party equipment to the original equipment manufacturer or third-party vendor for service, coordinating and tracking its repair and return. All components will be repaired or replaced prior to return to Lee's Summit.</p>	
Year 3	\$51,738.72
Year 4	\$51,738.72
Year 5	\$51,738.72
Sub Total	\$155,216.16

Table 1-15: Preventive Maintenance

Description	Price (\$)
Paid annually	
<p>Motorola Solutions-certified field technicians inspect the network on a routine basis to help ensure that equipment continues to meet original manufacturer's specifications. If necessary, technicians are dispatched to the customers' site to perform hands-on examination and diagnostics:</p> <ul style="list-style-type: none"> • Optimize network performance; Identify potential faults to enable quick response before they can cause communication disruptions. • Prolong the life and maximize the performance of the communications system. • When your network is more reliable, trouble calls decrease and total cost of ownership is considerably reduced. • Proactively detects potential issues, which keeps equipment optimized and helps you to manage your maintenance budget. 	
Year 3	\$13,646.16
Year 4	\$13,646.16
Year 5	\$13,646.16
Sub Total	\$40,938.48



Table 1-16: Network Monitoring

Description	Price (\$)
Paid annually	
<p>Network Monitoring Service can help keep your network at optimum availability so it is ready to serve mission critical communications needs. By watching over the network continuously, Network Monitoring Service takes action whenever needed, and resolves network problems. We often intervene and correct the problem before you even know a problem exists. Network Monitoring Service provides improved productivity and enhanced network performance, which in turn helps to increase your technology Return–On–Investment.</p> <p>Using a combination of network monitoring software, automated alerts, and remote diagnostics inquiries, our System Support technologists actively monitor your network to maximize network uptime and overall preparedness...for the expected and unexpected. Upon receiving an alert, our team immediately performs a series of diagnostics to assess the problem. Often the situation can be resolved remotely, but when additional attention is required, local field technicians are dispatched immediately to your site to achieve restoration.</p> <p>Our Network Monitoring service is a vital component of an intelligent communication support plan that keeps your business operating smoothly, your costs down, and assures maximum preparedness at all times.</p> <p>Specifically, Network Monitoring Service provides:</p> <ul style="list-style-type: none"> • Improved network availability. • Remote and timely resolution to minimize downtime. • Cost efficiencies. • Optimize time at site due to assessment and knowledge transfer before dispatch. • Minimize unnecessary trips to site. • Mitigate need for 24x7 operations monitoring center. • Detailed Reports. 	
Year 3	\$16,140.96
Year 4	\$16,140.96
Year 5	\$16,140.96
Sub Total	\$48,422.88

Table 1-17: Security Monitoring

Description	Price (\$)
Paid annually	
<p>Our Security Operations Center (SOC) is a specialized and secured facility that will monitor Lee's Summit equipment for attacks on the system 24x7x365. SOC security analysts use advanced correlation and visualization tools to detect, identify, and respond to any security events. Monthly reporting will keep Lee's Summit informed about network activity, including the number of adverse events and actions taken to mitigate them.</p>	
Year 3	\$14,369.52
Year 4	\$14,369.52
Year 5	\$14,369.52
Sub Total	\$43,108.56

Table 1-18: CompassCOM

Description	Price (\$)
Paid annually	
Compass COM Annual Software Maintenance	
Year 3	\$9,829.00
Year 4	\$9,829.00
Year 5	\$9,829.00
Sub Total	\$29,487.00

Exhibit B-2
PAYMENT SCHEDULE

For System Purchase:

Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within twenty (20) days after the date of each invoice. Customer will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution and in accordance with the following milestones.

1. 25% of the System Price minus subscribers due upon contract execution;
2. 60% of the System Price minus subscribers due upon shipment of equipment;
3. 5% of the System Price minus subscribers due upon installation of equipment;
4. 5% of the System Price minus subscribers upon system acceptance or start of beneficial use; and
5. 5% of the System Price minus subscribers due upon Final Acceptance.

Subscribers will be billed separately upon shipment to customer designated ship-to location.

Motorola reserves the right to make partial shipments of equipment and to request payment upon shipment of such equipment. In addition, Motorola reserves the right to invoice for installations or civil work completed on a site-by-site basis, when applicable.

For Lifecycle Support Plan (based on initial System design)

Motorola will invoice Customer annually in advance of each year of the plan not included in the contract price. Customer will make payments to Motorola within twenty (20) days after the date of each invoice. Customer will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution in accordance with the following schedule.



Exhibit C

TECHNICAL AND IMPLEMENTATION DOCUMENTS

Please see the following pages.



Exhibit C-1
System Description

1.3 SYSTEM DESCRIPTION

1.3.1 System Overview

Motorola Solutions, Inc. (Motorola Solutions) is proposing a P25 radio system solution to provide adequate coverage, capacity, and reliability throughout the city of Lee's Summit, MO. In this proposal Motorola Solutions is offering an eight channel Simulcast Sub System with 4 RF Subsites with a Geo-Redundant Prime, and two MCC7500 dispatch sites for Lee's Summit. The proposed sites will tie into the current MARRS P25 radio system.

The Simulcast Remote Subsites will be FDMA and TDMA capable with Dynamic Channel Assignment. Dynamic Channel Assignment provides improved station efficiency and grade of service by enabling dynamic switching between Phase 1 FDMA mode and Phase 2 TDMA mode. Each of the four RF subsites include two transmit antennas for redundancy.

Motorola Solutions is proposing two MCC7500 dispatch sites for Lee's Summit. The dispatch sites will be located at the Lee's Summit Police Department and Lee's Summit Fire Department. Motorola Solutions is proposing eight MCC7500 console operator positions at the Police Department, and six MCC7500 console operator positions at the Fire Department.

1.3.2 ASTRO 25 Infrastructure

Our ASTRO 25 networks are designed to meet the current and future requirements for Project 25 (P25) solutions. Our portfolio of RF stations, receivers, site controllers, and comparators is designed to maximize channel up-time, simplify system technology refresh, enable smaller, more efficient site design, and minimize the cost of ownership.

G-series site equipment has many features built in to support ease of service. Six basic modules create the entire G-series platform resulting in reduced spare parts inventory. Modules have front access to improve serviceability, with hot-swap support to ensure channels are back on the air in minimum possible time. Standard Battery Revert and Charging capability is built into every G-series power supply. Integrating these capabilities eliminates the need for a large uninterrupted power supply and saves valuable site space.

Software upgrades are more stable and performed with less downtime in the GTR 8000 base radio. One version of software can run actively while another version is downloading. Using a remote IP connection, the user can decide when to switch between the two versions of software allowing the system manager to prepare for software downloads.

Information Assurance capabilities are standard with G-series equipment and can be configured or disabled depending on your specific system maintenance and security requirements. G-series products provide the necessary boundary defense capabilities required in mission-critical infrastructure today including local user accounts and password controls, user privilege model support (two levels), local and remote access services controls, secure shell services support, SNMPv3, central authentication, general operating system and network services hardening, and device test services controls.

Motorola Solutions' proposed solution for Lee's Summit is our ASTRO 25 Simulcast site addition to the existing MARRS ASTRO 25 system.

1.3.3 Simulcast Site Overview

A simulcast land mobile radio system provides continuous coverage over a large geographic region using a single set of frequencies. Simulcast solutions extend a system's RF coverage, especially in areas where available frequencies are limited, and in areas where physical barriers (for example, mountains and buildings) can cause reduced signal coverage.

Trunked simulcast was developed by Motorola Solutions to meet the needs of users who were outgrowing their single-site radio systems. Simulcast offers the following advantages:

- **Improved Coverage**—One radio site may not provide the coverage necessary for the application in question. Simulcast expands the coverage area by expanding the number of radio sites without adding additional frequencies.
- **Efficient Use of Frequencies**—Adding sites typically requires more frequencies. In a simulcast system, the same frequencies are used at every site in the system. This makes very efficient use of the available spectrum.
- **Simplified Radio Operations**—Because the simulcast architecture operates like a single-site system, operations are simplified and radios are easy to use.

The ASTRO 25 simulcast infrastructure consists of a central simulcast prime site and up to 32 distributed simulcast remote sites, each with up to 30 channels. The prime site acts as a control and digitized audio center for the simulcast subsystem. Audio is routed to the prime site from each simulcast remote site. To ensure that the best audio from the simulcast receivers is processed, a voting comparator selects the best signal.


The prime site contains the prime site simulcast controller, simulcast comparators, and networking equipment to interface to the remote simulcast sites. The simulcast RF transmitters and receivers are located at the simulcast remote sites. These sites simultaneously transmit identical information from each site to the radios. The receivers at these sites receive the audio from the user radios, and pass the audio back to the prime site for voting. Audio and site control comes from the prime and master sites. Equipment at a simulcast remote site includes a simulcast base radios, fault management equipment, and networking equipment to interface to the prime site.

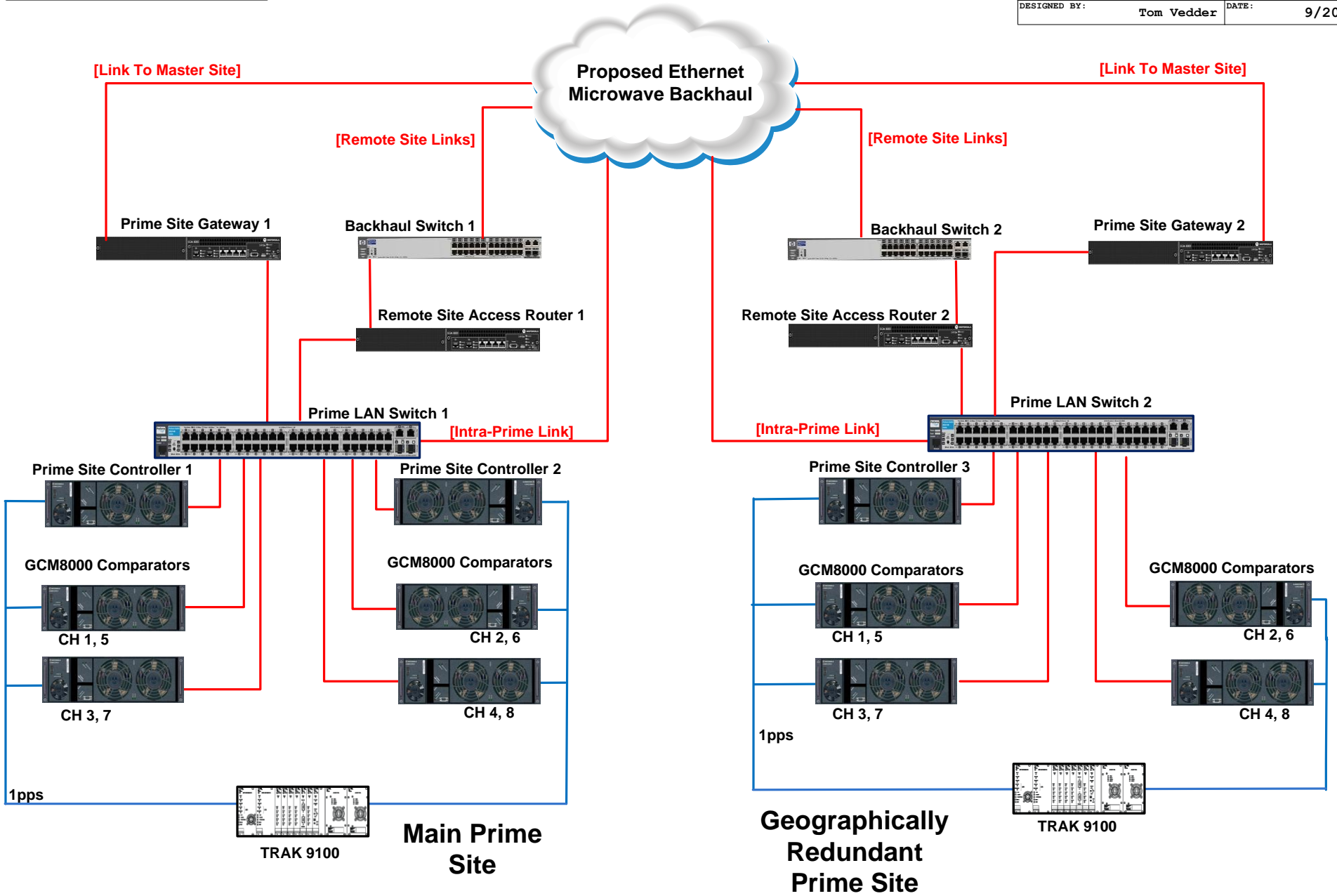
The standard Simulcast prime site architecture supports redundancy to protect against single points of failure that may occur within the prime site, however, it does not account for events that could knock out an entire prime site. Geo-Prime addresses this concern by geographically separating a secondary prime site. The secondary prime site can function fully in the case of a primary site failure.



LEGEND

- 10/100 BaseT
- Freq Reference
- Other

 MOTOROLA SOLUTIONS	
PROJECT:	Lee's Summit
TITLE:	Geo-Redundant Prime Sites
DESIGNED BY:	Tom Vedder
DATE:	9/2017



The Lee's Summit ASTRO 25 Simulcast Prime Site will be located at the Scherer Road Water Tower site which consists of the following components, described in the Component Descriptions section of this System Description:

- Two GCP 8000 Site Controller.
- Eight GCM 8000 Comparator.
- One GGM 8000 Site Gateway.
- One TRAK 9100 Simulcast Site Reference.
- One Sub-site Access Router.
- One Prime Site Ethernet Switch.
- One Sub-site Ethernet Switch.

Simulcast Geo-Redundant Prime Site

The Lee's Summit ASTRO 25 Simulcast Geo-Redundant Prime Site will be located at the Clearwire Tower site which consists of the following components, described in the Component Descriptions section of this System Description:


- One GCP 8000 Site Controller.
- Eight GCM 8000 Comparator.
- One GGM 8000 Site Gateway.
- One TRAK 9100 Simulcast Site Reference.
- One Sub-site Access Router.
- One Prime Site Ethernet Switch.
- One Sub-site Ethernet Switch.

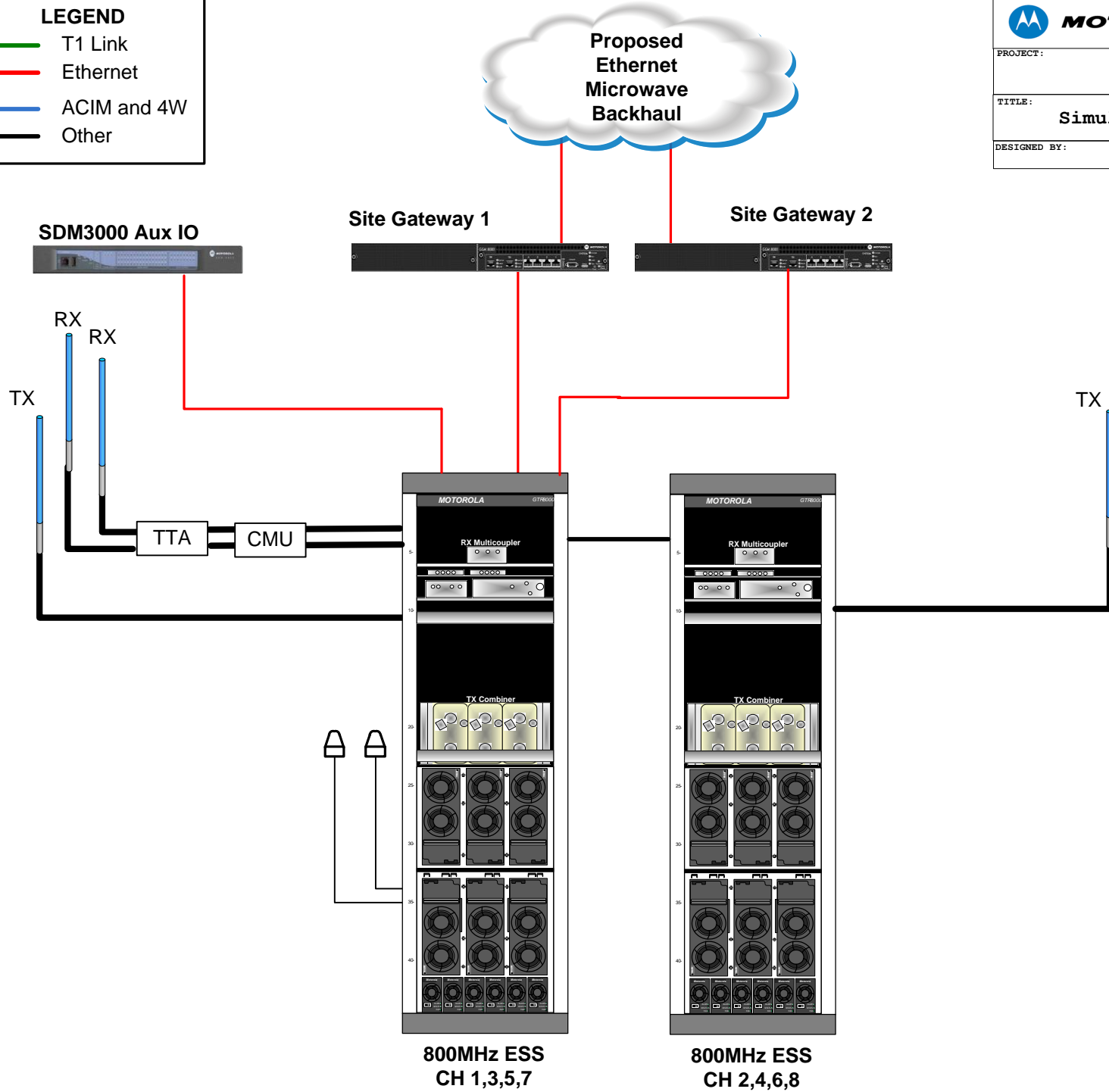
Simulcast Remote Site



LEGEND

- T1 Link
- Ethernet
- ACIM and 4W
- Other

 MOTOROLA SOLUTIONS	
PROJECT: Lee's Summit	
TITLE: Simulcast Remote Sites	
DESIGNED BY: Tom Vedder	DATE: 9/2017



The Lee's Summit ASTRO 25 Simulcast Remote Sites will be located at the Scherer Road Water Tower, Clearwire Tower, Ranson Road Water Tower, and Wood's Chapel Water Tower. These Remote Sites will consist of the following components, described in the Component Descriptions section of this System Description:

- GTR 8000 Expandable Site Subsystem (ESS).
- Eight GTR 8000 Repeater/Base Radio.
- Two GGM 800 Site Gateway.
- One TRAK 9100 Simulcast Site Reference.

1.3.3.1 Components

GTR 8000 Expandable Site Subsystem

The GTR 8000 Expandable Site Subsystem (ESS) enclosure can contain reconfigured GTR 8000 base stations, site LAN switches, and GCP 8000 controllers, along with an optional Radio Frequency Distribution System (RFDS), depending on your configuration needs.

Voice traffic is routed from each of the site base stations to the system for distribution all sites associated with the call. Benefits of the ESS include:

- **Integrated Design**—Provides a smaller footprint at the site.
- **Front/Top Access Design**—Minimized cabling reduces install and service labor.
- **Increased Power Supply**—Provides redundancy through common power bus.

GTR 8000 Site Repeater/Base Radio

The GTR 8000 Base Radio consists of a transceiver module, power amplifier module, fan module, and power supply. The transceiver module includes the functionality for the exciter, receiver, and station control. The base radio software, configuration, and network management, as well as inbound/outbound traffic handling, are performed through this transceiver module. On-board serial and Ethernet ports are located on this module for local servicing via Configuration/Service Software (CSS).

The power amplifier module amplifies the low-level modulated RF signal from the transceiver module and delivers the amplified signal on the path to the transmit antenna. The power supply module supports the transceiver and power amplifier modules, and can also provide auxiliary power to a connected site controller or Receive Multicoupler/Low Noise Amplifier (RMC/LNA).

GGM 8000 Gateway

The GGM 8000 Gateway is a modular multi-purpose network communications platform, designed to interconnect devices and networks within ASTRO 25 public safety network systems.

The GGM 8000 provides a connection to a Wide Area Network (WAN) with no conventional channel interface (V.24, analog, and/or IP). A GGM 8000 with a connection to a WAN and with a conventional channel interface (v.24, analog, and/or IP) functions as a Site and Conventional Channel Gateway.

GCP 8000 Site Controller

The GCP 8000 Site Controller (GCP 8000) is the control interface between the transmitter/receiver subsystem and the Zone Controller. The GCP 8000 Site Controller comprises redundant site controller modules; one site controller module acts as the active module, and the second module acts as a standby. The redundancy minimizes the possibility of a single point of failure at the site.

The GCP 8000 provides the following functions:

- Manages the channels to maximize throughput and channel availability.
- Administers registration and context activation requests.
- Monitors base stations and RF distribution equipment and interacts with the MOSCAD site device manager to facilitate centralized alarm and control monitoring.
- Provides redundant site control.
- Enables redundant site link routing for patch redundancy.

Additionally, the GCP 8000 provides the following functions at the simulcast site:

- Provides a time and frequency reference signal to the base stations, maximizing frequency stability and allowing for further site separation in a simulcast configuration.
- Provides IP simulcast capability, enabling true end-to-end IP connectivity in a simulcast configuration.

GCM 8000 Site Comparator

The GCM 8000 Comparator ensures the broadcast of the best possible voice signal by combining the best parts of a single signal that has been received by multiple sites in a Multisite (simulcast) system.

The comparator features a digital voting methodology: Frame Diversity Reception. The comparator selects the data frame or signals with the lowest Bit Error Rate (BER) and forwards it. By using the best pieces of each input signal, the result is the best possible composite signal.

Radio Frequency Distribution System

The Radio Frequency Distribution System (RFDS) provides interconnect between the base radios and antennas, allowing for a completely contained and more compact installation footprint. For the transmitters, this can include isolators, combiners, TX filters, diplexers, and power monitors.

For the receivers, this can include duplexers, site preselectors, and multicouplers. Various RFDS options exist for each of the GTR 8000 Base Radio, GTR 8000 Site Subsystem, and GTR 8000 Expandable Site Subsystem.

1.3.3.2 TRAK 9100 Simulcast Site Reference

The TRAK 9100 Simulcast Site Reference is a GPS-based frequency and time reference. The TRAK frequency reference provides the simulcast system 1 PPS (Pulse per Second), 5 MPPS, and 1 PPS + 5 MPPS composite signals. These signals are used to synchronize the transmission of a simulcast system to improve overall performance and coverage.

This unit provides a high-level redundancy, including redundant GPS receivers, backup rubidium standard, and redundant power supplies.

Sub-Site Access Routers

The sub-site access routers, located at the prime site, provide the IP network routing interfaces between the prime site and all of the sub-sites. In the single sub-site link configuration, two sub-site access routers are deployed in a cooperative WAN routing arrangement for T1/E1 subsystems. In the dual sub-site link configuration, two sub-site access routers each serve as the endpoint for one of the sub-site's WAN links. The sub-site access routers support T1, FT1, E1, FE1 and Ethernet sub-site links.

Note that the total number of access routers utilized at a trunking IP multi-site subsystem depends on the number of sub-sites. IP multi-site subsystems with 15 or less sub-sites require two access routers. Subsystems with more than 15 sub-sites, however, require two access router pairs (that is, four access routers) where each access router pair can support up to 16 sub-sites.

Prime Site Ethernet Switch

Two paired Ethernet switches form the prime site LAN in an IP multi-site subsystem. They are paired for redundancy so if one of them fails, half of the hosts (site controllers, comparators) on the LAN are still connected to a working Ethernet switch.

In a dual prime site link configuration, there are two prime site routers, each of which is attached to a different prime site LAN switch. This ensures that if either switch fails, there is still a path to a prime site router for connectivity to the master site.

1.3.4 Dispatch Overview

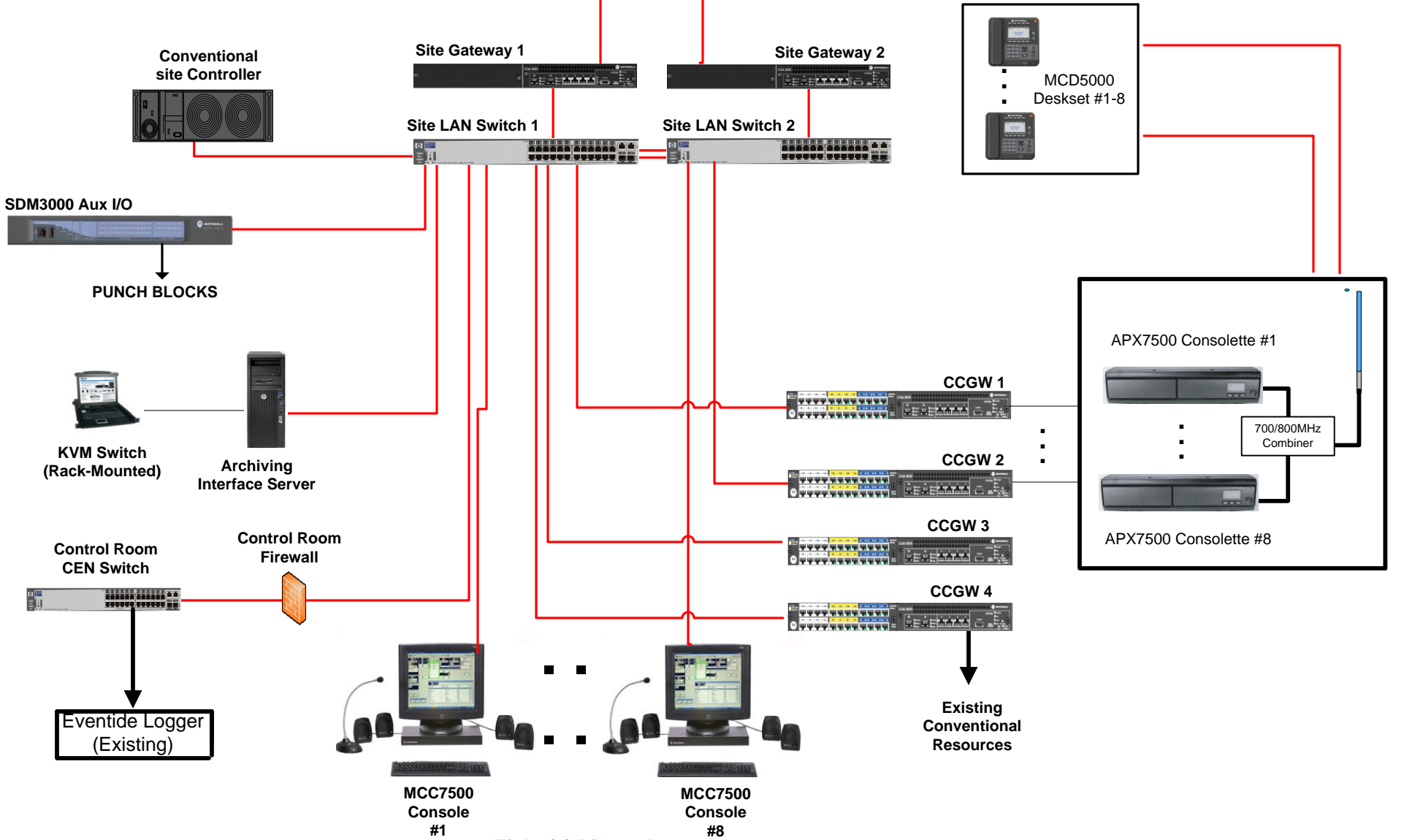
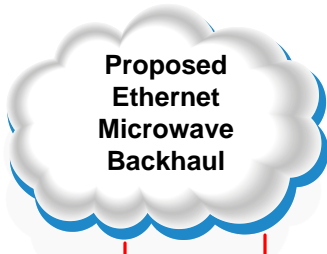
Our proposed dispatch solution for Lee's Summit is our MCC 7500 Dispatch Console, offering IP-based seamless connectivity between dispatch operators and field personnel. The MCC 7500 Dispatch Console will provide Lee's Summit with scalable and flexible system architecture, sophisticated network management and security, and an easy migration to future capabilities.

The proposed solution for Lee's Summit includes eight MCC 7500 Dispatch Consoles at Lee's Summit Police Department and six MCC 7500 Dispatch Consoles at Lee's Summit Fire Department. The following tables summarize the proposed console equipment and peripherals included in our proposal. All licenses necessary for operation have also been included as part of the solution

1.3.4.1 Elements of the MCC 7500 at the Police Department

LEGEND

- T1 Link
- Ethernet
- ACIM and 4W
- Other



Eight (8) Dispatch

As proposed to Lee's Summit, each MCC 7500 Dispatch console includes the following elements at Lee's Summit Police Department:

Table 1-19: Elements of each MCC 7500 Dispatch Console at Lee's Summit Police Department

Quantity	Description
Operator Positions	
8	Personal Computer
8	Voice Processor Module
8	Computer Display
16	Headset Jack
16	Headsets
24	Desktop Speakers
8	Footswitch
8	Gooseneck Microphone
8	Instant Recorder Port
Additional Equipment	
2	Console LAN Switch
2	Console Site Router
4	GGM 8000 Gateway with a Conventional Gateway Interface (CCGW)
1	GCP 8000 Conventional Site Controller
1	SDM 3000 Auxiliary Input/Output Server
1	Archiving Interface Server
8	APX 7500 Consolettes
8	APX 7500 Consolette Antenna System
8	MCD5000 Deskset
8	MCD5000 Headset Jack
1	KVL 4000 Key Variable Loader (KVL) for Encryption
8	Instant Recall Recorder

1.3.4.2 Elements of the MCC 7500 at the Fire Department

LEGEND

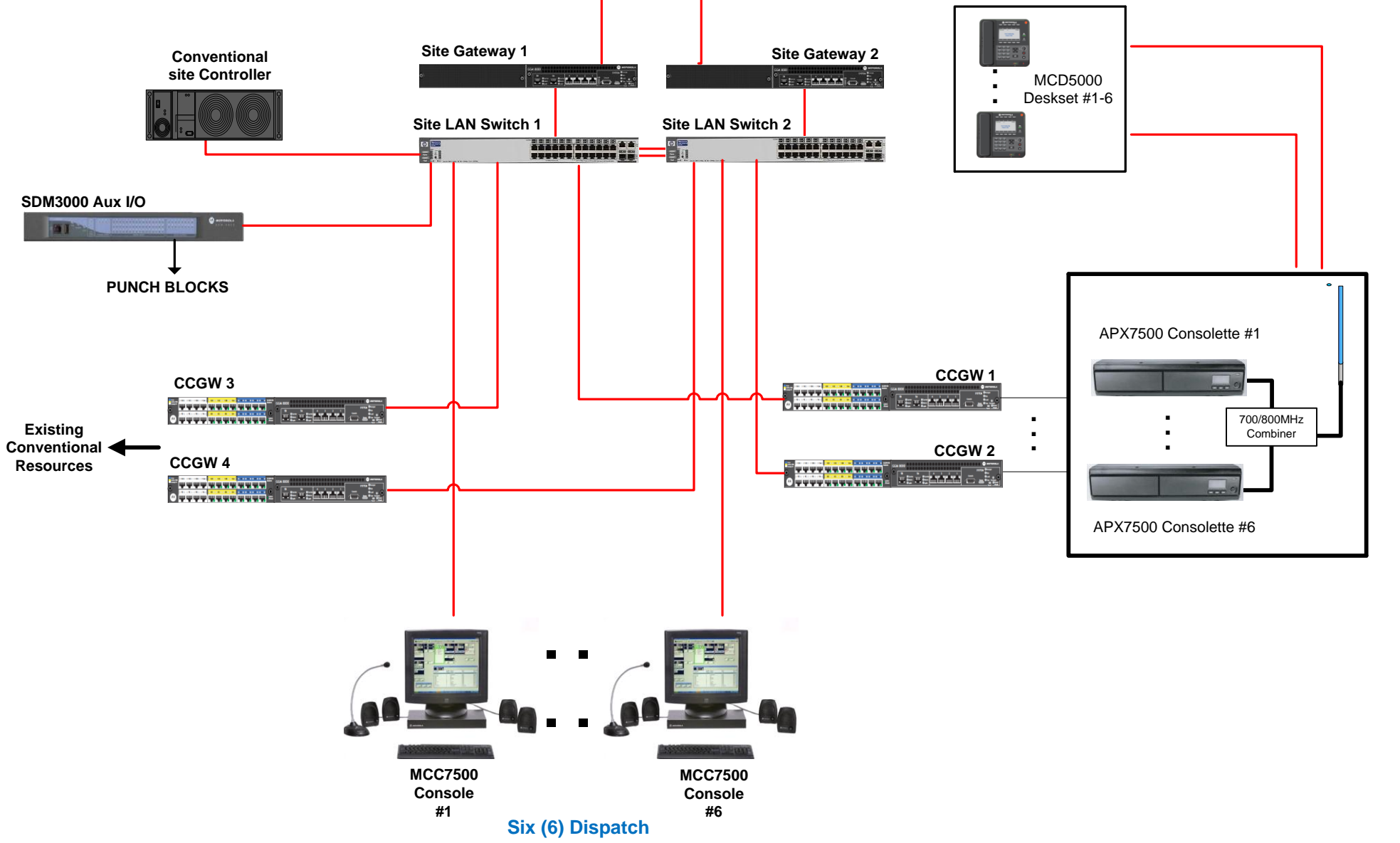
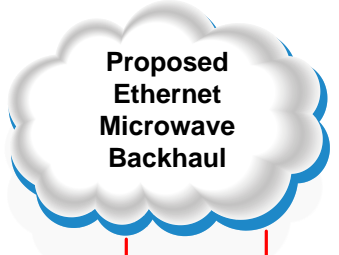
- T1 Link
- Ethernet
- ACIM and 4W
- Other

MOTOROLA SOLUTIONS

PROJECT: **Lee's Summit**

TITLE: **Lee's Summit Fire Dept**

DESIGNED BY: **Tom Vedder** DATE: **9/2017**



MCD5000 Deskset #1-6

APX7500 Console #1

700/800MHz Combiner

APX7500 Console #6

As proposed to Lee's Summit, each MCC 7500 Dispatch console includes the following elements at Lee's Summit Fire Department:

Table 1-20: Elements of each MCC 7500 Dispatch Console at Lee's Summit Fire Department

Quantity	Description
Operator Positions	
6	Personal Computer
6	Voice Processor Module
6	Computer Display
12	Headset Jack
12	Headsets
36	Desktop Speakers
6	Footswitch
6	Gooseneck Microphone
Additional Equipment	
2	Console LAN Switch
2	Console Site Router
4	GGM 8000 Gateway with a Conventional Gateway Interface (CCGW)
1	GCP 8000 Conventional Site Controller
1	SDM 3000 Auxiliary Input/Output Server
6	APX 7500 Consolettes
6	APX 7500 Consolette Antenna System
6	MCD5000 Deskset
6	MCD5000 Headset Jack
1	KVL 4000 Key Variable Loader (KVL) for Encryption

Personal Display

This personal computer included with the console position runs Microsoft Windows 7, and is certified by Motorola Solutions to ensure that the dispatch software, voice cards, and secure cards are properly installed and configured.

Computer Display

A 22" Computer Display with Touch Screen is provided with each MCC7500 dispatch console.



Headset Jack

The dispatch console supports two headset jacks, both push-to-talk (PTT) and non-PTT-enabled for simultaneous use by the dispatch operator and a supervisor. The headset jack contains two volume controls for the separate adjustment of received radio and telephone audio.

Gooseneck Microphone

The microphone controls the dispatch console's general transmit and monitor features through two buttons on its base. The microphone can be fastened down or left loose. It can be used alone or in conjunction with a headset.

Voice processor Module (VPM)

The secure VPM provides vocoding and audio processing for the dispatch console, and also serves as the hub for the console's speakers, microphone, footswitch, headset jacks, and recorders.

Footswitch

Each dispatch console includes a dual pedal footswitch that can be configured to control general transmit and monitor functions.

Desktop Speakers

Three audio speakers have been included with each console position and can be configured to transmit audio from a specific talkgroup or set of talkgroups. Each speaker is a self-contained unit, with individual volume controls and can be placed on a desktop, or mounted on a rack or computer display.

1.3.4.3 Additional Equipment

Per your request, we have included the following additional items to extend the functionality of the MCC7500 to meet Lee's Summit needs.

SDM 3000 Auxiliary Input/Output Server

The SDM 3000 provides console operators with the ability to control and monitor external devices, such as doors and lights, from the console user interface. The console interface uses icons to display the state of external devices via auxiliary inputs and outputs, which support momentary and latched inputs, as well as latched and interlocked latched outputs.

GGM8000 Gateway with Conventional Channel Gateway Interface (CCGW)

The GGM 8000 interfaces analog and ASTRO 25 conventional channels to your ASTRO 25 radio system. The proposed GGM 8000 contains eight analog ports, eight V 24 ports, and an Ethernet port, supporting up to 16 conventional channels. It will also support up to 16 IP based channels, bringing the total number of supported channels to 32. The GGM 8000 can simultaneously support a combination of analog, MDC 1200, ACIM Link, digital, and mixed mode channels.

1.3.4.4 GCP 8000 Conventional Site Controller

The GCP 8000 Conventional Site Controller supports site conventional operation where a Conventional Channel Gateway (CCGW) is located at an MCC 7500 console site. If the link between the dispatch site and the master site is lost, the GCP 8000 enables dispatchers to communicate over conventional resources.

APX 7500 Control Station

The APX 7500 control station provides backup communications for your dispatchers. It comes with a front panel equipped with a LCD display, numeric keypad, programmable buttons, VU meter, internal local speaker, auxiliary display, keyload port, IV&D port, and a myriad of ports for additional control and programming. It also has a dedicated logging port for use with logging recorders.

The control station will be connected to a GGM 8000 as an interface to mutual aid audio or other systems, enabling dispatchers to communicate with field users on the control station via the MCC 7500 console. In the unlikely event that the dispatch center loses connectivity to the system core, dispatchers can also continue to use their consoles to communicate with field users via the control stations.

MCD 5000 Desksets

The MCD 5000 Deskset is the Motorola Solutions Solution's next generation radio dispatch deskset platform that utilizes VoIP technology. The MCD 5000 Deskset is part of the MCD 5000 Deskset System that provides radio dispatch capability when connected to a two-way radio device. MCD 5000 Desksets can be placed anywhere on the IP network. Each MCD 5000 Deskset connects to a single radio device at a time. Headset jacks are included for console operators to seamlessly switch to backup communications.

KVL 4000 Key Variable Loader (KVL)

Encryption keys ensure that only the sender and the recipient of voice traffic can decode and understand that voice traffic. The proposed solution includes a KVL 4000, which is a handheld device used to load or erase keys, as well as view or modify secure configuration parameters of secure devices. An operator or administrator can manually enter encryption keys into the KVL, and then transfer them to secure consoles and subscriber radios.

1.3.5 Microwave Overview

Motorola Solutions has proposed a six-hop triple loop PTP microwave configuration to connect the four RF sites and two dispatch sites in Lee's Summit. There will be two hops into the MARRS system from Lee's Summit MW network. One hop will be from Lee's Summit Police Department to 68th & Booth (MARRS tower), and the other will be from Wood's Chapel Water Tower to Wood's Chapel (MARRS tower).

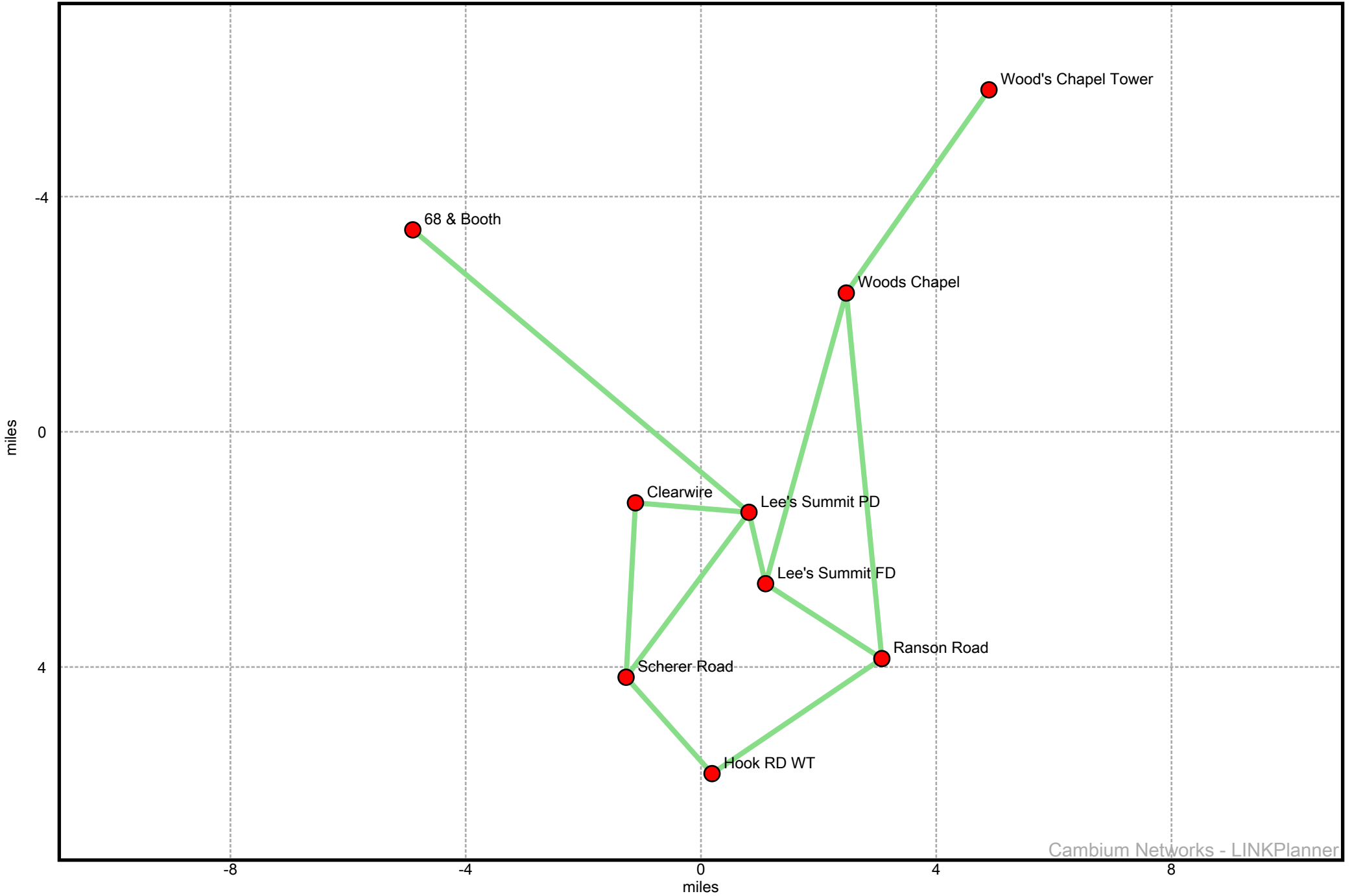


Two new PTP820 hops will be added between the Clearwire tower to Lee's Summit PD, and the Clearwire tower to Scherer Road WT. A new PTP820 hop will be added between the Woods Chapel WT and the Woods Chapel MARRS Tower for a redundant path to the core at North Patrol. The existing PTP800/PTP810 hops between the Scherer WT to PD, PD to FD, FD to Woods Chapel WT, and Woods Chapel WT to Ranson Rd WT will be utilized for Lee's Summit MW loop. The existing PTP links from Scherer Road WT to the Hook WT and the Hook WT to Ranson Rd WT will be also be utilized for the Lee's Summit MW loop. The completed configuration will provide a 3-loop MW system with redundant paths into the MARRS system.

The two new PTP820 links from the Clearwire tower are on the 11 GHz band, with 3' HP antennas, with 99.9999% reliability, and 200 MB IP throughput.



center = 38.95109N 094.39666W



Each Lee's Summit site has a Nokia 7705 MPLS router with dual routing engine for redundancy. One Nokia 7705 MPLS router will be positioned at the Wood's Chapel MARRS site connecting into Lee's Summit microwave ring. The Nokia 7705 routers utilizing MPLS were chosen to stay in line with the MARRS regional plan to convert the circuit based network to an MPLS Ethernet backhaul throughout the regional system.

Motorola will configure a separate port on the 7705 routers at the Clearwire site and dispatch to route the IP camera traffic from Clearwire to the Lee's Summit camera management system.

MPLS Infrastructure

The proposed Alcatel Lucent 7705 MPLS router, shown in Figure 1-1, features redundant power supplies, fans, controller cards, Ethernet cards, and Ethernet SFP optics modules to provide the highest levels of resiliency. The MPLS design offers fast reroute feature for resiliency where traffic is rerouted around a failure with sub-50 millisecond restoration time. This ensures that services on the network are not affected.

The proposed MPLS solution also supports software redundancy by using the proposed redundant Control and Switching Modules (CSMs) installed. The CSMs both are running the identical version of system software. The CSMs operate together as an active and standby pair. Each of the CSMs has the same software features and either can be in control as the active CSM. Should the active CSM fail, the standby CSM will take over control of the system, becoming the new active CSM.

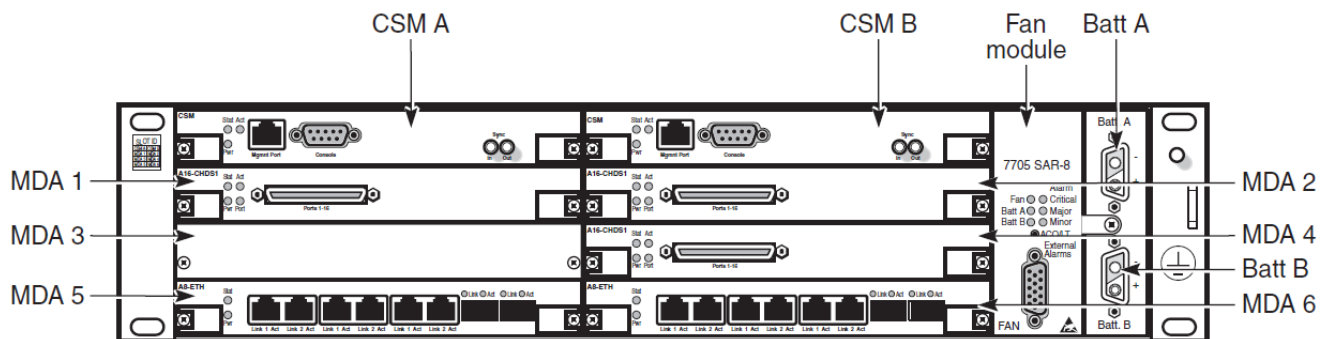


Figure 1-1: Front View of the Alcatel Lucent 7705 MPLS Router, Showing Redundant Control and Switching Modules

When an active CSM goes offline (due to reboot, removal, or failure), the standby CSM will take control without rebooting or initializing itself. It is assumed that the CSMs are synchronized; therefore, there is no delay in operability. When the CSM that went offline boots and then comes back online, it becomes the standby CSM.

For the proposed MPLS configuration, redundancy is assured through communication and message exchange between the two CSMs when the system is so configured and is in a normal state.

The proposed MPLS router also includes redundant fans. If one fan fails, the others will continue to operate and provide cooling to the system without impacting traffic. An alarm will indicate the failure of a fan. Similarly, redundant power supply feeds enable one power feed to be removed without impact on traffic. Finally, the 7705 includes hot swappable cards, so that components in a live system can be replaced or become active without taking the system down or affecting traffic flow to/from other modules.

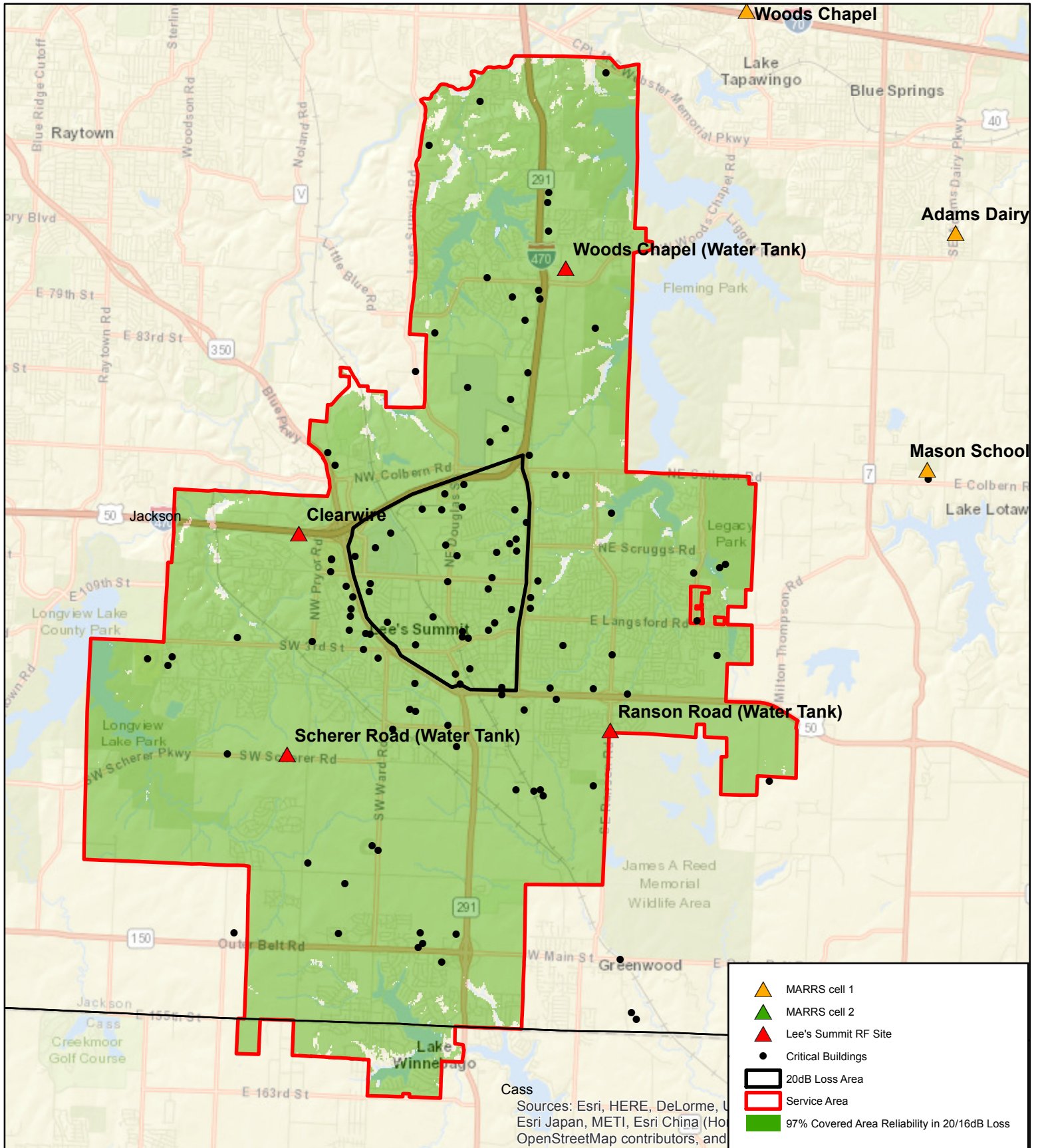
1.3.6 Coverage Analysis

Lee's Summit 800MHz Project 25 simulcast voice radio system has been designed to provide 97% talk-in and talk-out Service Area Reliability (SAR) at a Delivered Audio Quality (DAQ) level equal to 3.4 or better at a portable radio equipped as follows:

- Portable radio in a swivel case worn at the hip for both transmit and receive, $\frac{1}{4}$ wavelength antenna in the city limits of Lee's Summit, MO.

The 97% Service Area Reliability includes a 20 dB In Building Loss within the intersections of I470, US50, and US291, and 16dB within the remaining areas in Lee's Summit and Unity Village. The Subscriber used is the APX6000 with a $\frac{1}{4}$ wave length antenna and used with a remote speaker microphone. Below is the expected covered area with 97% Service Area Reliability with a 20 dB and 16 dB In Building Loss.

Lee's Summit P25 TDMA Simulcast Cell w/ MARRS coverage overlay 20dB & 16dB AreaWide 97% Service Area Guarantee



0 0.5 1 2 Miles
1 inch = 1.82 miles

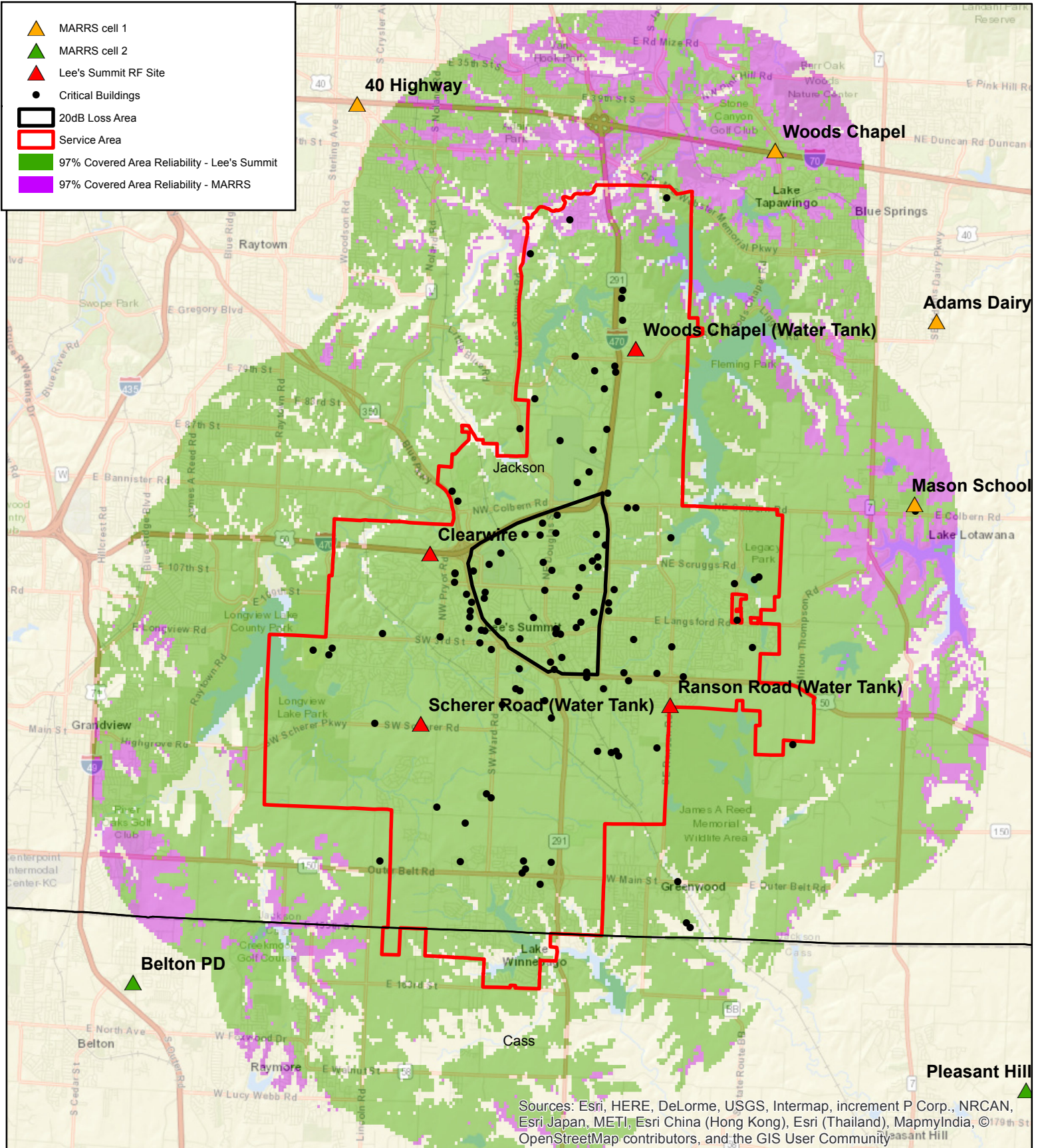
Inbound Coverage shown for Portable APX 8000
DAQ 3.4, 3W, 20dB Inside Denoted Area, 16dB elsewhere
Tx & Rx on Hip level using Remote Speaker Mic, 1/4-wave antenna

D93
CCDTLAB-302
VXG367

Lee's Summit will be connecting to the MARRS radio system, and will gain some coverage from the existing MARRS RF sites. The next page shows the coverage map of Lee's Summit's sites coverage, and existing MARRS RF sites' coverage. The green represents the coverage from Lee's Summit's sites, and the purple represents the coverage from the existing MARRS coverage. Lee's Summit's city limit is highlighted, along with a 3 miles buffer around the city. The coverage simulation was run with the same parameters as the coverage map on the previous page.



Lee's Summit P25 TDMA Simulcast Cell w/ MARRS coverage overlay



0 0.75 1.5 3 Miles
1 inch = 2.37 miles

Inbound Coverage shown for Portable APX 8000
DAQ 3.4, 3W, 20dB Inside Denoted Area, 16dB elsewhere
Tx & Rx on Hip level using Remote Speaker Mic, 1/4-wave antenna

D93
CCDTLAB-302
VXG367

1.3.7 Location Services

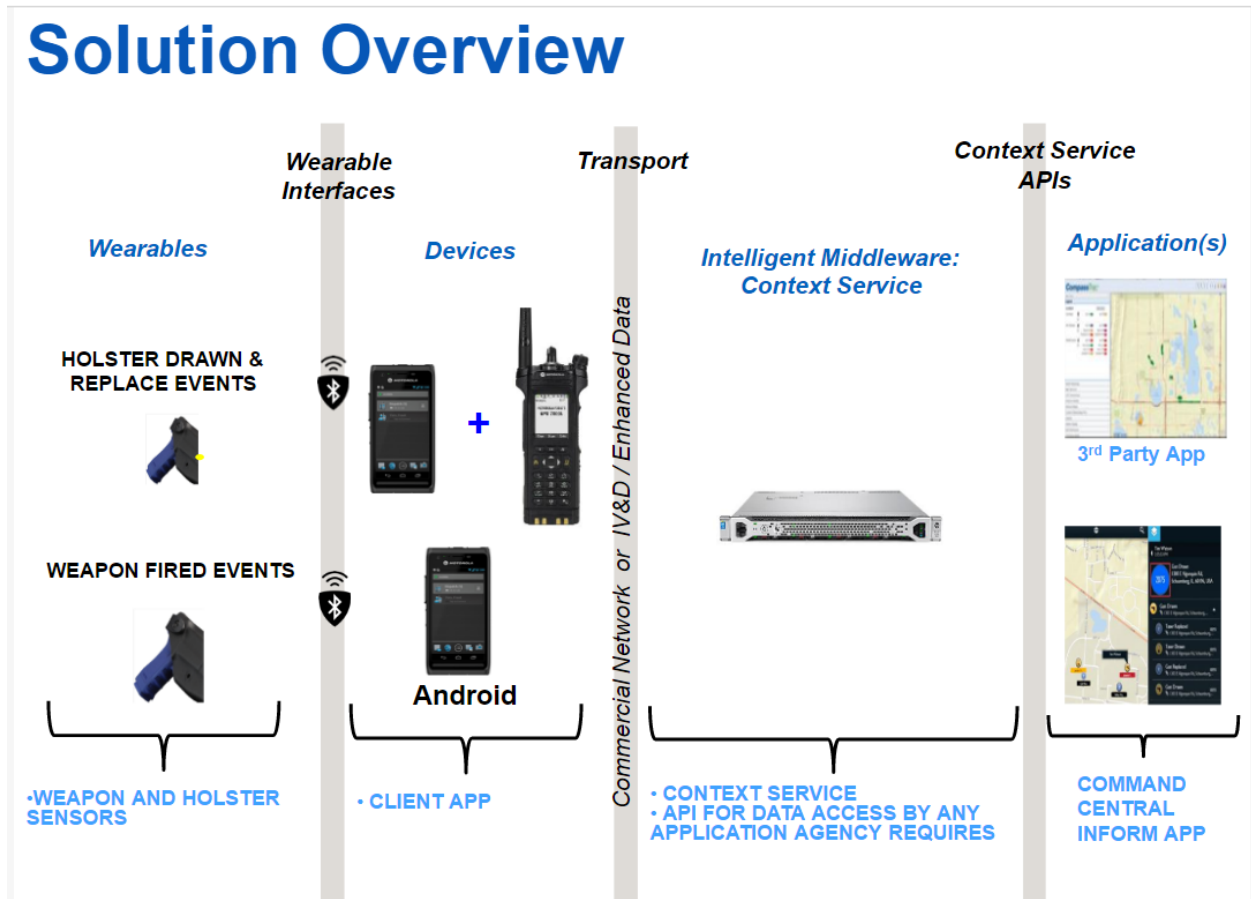


Figure 1-2: Solution Overview

Knowing the location of your personnel is essential for deploying them effectively and keeping them safe. The ASTRO 25 Outdoor Location Solution provides location data in real time with pinpoint accuracy. It works with Global Positioning System (GPS) devices connected to ASTRO 25 mobile and portable radios. Personnel who are out of their vehicle, operating in large office complexes or assigned to alternate modes of transportation including; bicycles, ATVs, horseback and boats have traditionally went without the benefits of GPS tracking due to the extra equipment needed and network limitations. Enhanced Data allows you to track large numbers of Motorola Solutions GPS equipped two-way radios. Motorola Solutions has partnered up with a few mapping application developers to give our customers a choice of reliable GPS mapping solution that integrates GPS coordinates provided by the Motorola Solutions radios and infrastructure. These partners make usage of a pre existing mapping base (e.g. ESRI) and overlay information that enables fleet management, ensuring worker safety, accountability and efficiency.



1.3.7.1 Enhanced Data

Enhanced Data is optimized to handle different message sizes and variable update rates from different applications. Multiple agencies can benefit from the ability to share ASTRO 25 core and RF site infrastructure with an existing ASTRO 25 system, resulting in lower overall cost. Add Enhanced Data to your integrated Data system with a software installation and improve data channel efficiency and enable denser network traffic.

Enhanced Data uses can include:

- GPS Location—Personnel who are out of their vehicle operating in large office complexes or assigned to alternative modes of transportation traditionally went without the benefit of GPS tracking due to the extra equipment needed and network limitations. Enhanced Data allows you to track large numbers of Motorola Solutions GPS equipped portable and mobile two-way radios.
- Telemetry—Keep track of your fleet and personnel with telemetry updates to ensure safety, health, and maintenance. With monitoring of vehicle speed, crash notifications, maintenance needs and environmental conditions, as well as personal biometrics, you can manage remote assets and have a clearer operational picture.

1.3.7.2 IMW Solution Description

Intelligent Middleware (IMW) is the Motorola Solutions software platform that provides common services, such as Presence and Location for multiple MSI networks. IMW replaces the MUPS Service in the ASTRO25 Outdoor Location Solution, as well as, Presence Notifier for POP25, OTAR and TMS.

IMW provides standard web based API's for mapping tools and applications that utilize Presence and Location and allows application development to be more efficient. IMW Location, Presence, Messaging and Group Management APIs are available to Third Party Application Developers in order to support customers with an end-to-end Solution.

The IMW provides a number of services with corresponding APIs for Motorola Solutions Internal Applications as well as Third Party Applications. Motorola has proposed the CompassCom GPS mapping solution.

1.3.7.3 Data Capacity

Lee's Summit's P25 simulcast cell has been designed to be able to provide 167 Enabled Radios at a 3 minute cadence during normal operations, and a 30 sec cadence during emergencies. This configuration will utilize 2 enhanced data radio channels on the Lee's Summit simulcast cell. This design reflects a 95% message success rate for location updates. Exceeding the number of users supported at a site or decreasing the cadence length can result in inconsistent location updates.



1.3.7.4 GPS Mapping Solution—CompassCom

CompassCom®, a Motorola Solutions 3rd Party partner, provides real time location, mapping & messaging solutions bringing value to the Motorola Solutions ASTRO 25 system. CompassCom is integrated with Motorola Solutions infrastructure and enables mobile resource management, ensuring worker safety, efficiency and accountability through reliable solutions that deliver real time data at multiple tiers, On Demand, Real Time GPS or GPS plus Telemetry.

CompassCom specializes in the integration of Mobile Resource Management (MRM) systems. The overall MRM solution allows commercial-off-the-shelf (COTS) hardware, wireless connectivity components, and mapping software and is proven to work reliably, with a long track record of success. CompassCom proposes an On-Premise software solution as a Common Operating Picture to serve the City of Lee's Summit. The CompassCom solution can be expanded for software growth and wireless hardware additions for Motorola Solutions ASTRO, cellular, WiFi or satellite use.

CompassCom has designed the system architecture to easily adapt to third-party hardware and software, now and into the future. The CompassCom MRM server Location Data Engine (LDE) is the destination of all position status and messaging data originating from MRM-equipped vehicles. CompassCom provides CompassTrac as a viewing product that incorporates your Esri ArcGIS® maps to show real-time mobile asset locations on your desktop monitors, mobile laptops and through a browser based web service, in a completely scalable yet secure program

The CompassCom MRM solution is comprised of the primary elements described below (Figure 1-3):

- **LDE MRM Server Software:** The CompassLDE® software allows the City of Lee's Summit to share MRM data with any connected client terminal via the TCP/IP protocol. CompassLDE server software can interface with virtually any type of hardware in any combination using any type of wireless format. It is also able to share this information not just among our clients, but also third party software systems, such as Computer Aided Dispatch, Work-Order systems, other MRM systems, and even small scale or legacy software systems. CompassLDE is a message switch along with a data switch, allowing the dispatcher to communicate directly or through third party solutions.
- **MRM Workstation Software:** CompassTrac® client software gives City of Lee's Summit an Esri-based MRM mapping package that shows the real-time (and historical) position of all vehicles in a dispatch environment. However, security is also built in, as through CompassTrac the user can see only the vehicles for which he/she is authorized. CompassTrac is a very powerful tool that gives the manager/dispatcher full management control. Each CompassTrac license also gives direct access to our full suite of reports offered by CompassReports™.

The CompassLDE server, along with the Intelligent Middleware Server (IMW), is flexible to reside in any of Lee's Summit Dispatch centers, or at the master core at North Patrol. Either location allows Lee's Summit, and any other regional users, to access their GPS tracked devices on their own MRM Workstations located at dispatch or any location they choose.



Figure 1-3: CompassLDE® Inputs and Outputs

Technical Summary—System Capabilities

Here is an overview of some of the CompassTrac capabilities:

- **Data Integration:** The CompassTrac display client can support and integrate the City of Lee's Summit GIS data:
 - CompassTrac can accommodate integration of streets, highways, and related route and metadata such as names, speed load, and turn restrictions. Geo-coded address information is also usable.
 - The system will support administratively-defined layers for major geographical features, landmarks, jurisdictional boundaries, railroad tracks and more.
- **Data Display:** All display labeling and symbolization of point, line, and polygonal GIS features are configurable by the in-house administrator, and interface capability is available to the user.
- **Data Upgrade and Maintenance:** No proprietary data formats are used within our solution. CompassCom allows the end user to utilize the database of their choice in a non-proprietary format. CompassCom also allows the customer full administrative control over their database, allowing the customer to set best practice rules in maintenance, backup and recovery, purging, or archiving their data.
- **Data Export:** CompassCom supports several options in exporting data. Data can be exported in Report forms displayed in CompassReports™, or export just the report data to be utilized in another report format (such as CSV files). CompassReports also allows the user to export large blocks of data by date to a file of the users' choosing.

Technical Summary—GPS Tracking Features

1. CompassLDE (server software) and CompassTrac (client software) work in conjunction to display the GPS data accurately. CompassLDE monitors and records user activity.
2. CompassCom's solution allows the City of Lee's Summit administrator to assign any radio and/or cellular LTE/4G modem/smartphone to any grouping for data tracking.
3. CompassLDE can receive information from all vehicles fitted with MRM, simultaneously and seamlessly into the SQL or Oracle database (whichever is preferred by City of Lee's Summit). These vehicles can have different GPS hardware model units; GPS information can be transmitted over different wireless formats, Motorola Solutions ASTRO, cellular, satellite or WiFi.
4. CompassTrac provides a "Ping-On-Demand" for those Motorola Solutions radios that are not using standard GPS polling but now want to view and record historical data of an individual with a Motorola Solutions radio in pursuit of another individual. A "dot on the map" will appear for each GPS poll creating a "breadcrumb trail" of where that individual went during the pursuit.
5. The GPS unit reports everything it collects: operational status, location, speed and all associated inputs related to the vehicle ID, including customized inputs such as lights & siren on/off. Every transition collected from field GPS units has a vehicle identifier associated with the data. This identifier is always collected and stored on the server with the data from each GPS unit.
6. CompassTrac can view and print current and historical vehicle location information on a selected mapping background. A print button will print the display along with all of the user-defined layers.
7. CompassTrac includes a measuring tool to calculate each route segment and total distance of the desired route or distance between points. The measuring tool can follow a road or any path the user selects.
8. CompassTrac provides 48 colors to choose for vehicle, equipment or smart device icons. For example: vehicle icons could be RED if vehicle is rolling with lights and siren, GREEN if vehicle is rolling, BLUE if vehicle is parked and GREY if the vehicle has not had a GPS cadence in 60 minutes. Routes or Geo-Fences can also be color coded for quick visual recognition during an incident.

1.3.8 KCMO Core Equipment

Lee's Summit's proposed radio system requires certain zone-level hardware, software, and licenses that will greatly benefit other customers that are a part of the MARRS regional radio system. Current customers throughout the MARRS regional radios system have expressed interest in the following features:

- Location Services (IMW) Server
- Enhanced Data for Zone
- Phase 2 TDMA Trunking capability for Zone
- Ethernet site links for Zone

Location Services can be shared with other customers throughout the region that are interested in the solution. IMW hardware and software, and the Enhanced Data zone-level license have been included in Lee's Summit's proposal, which can be utilized by other customers on the MARRS system. The IMW server will be located in KCMO's (Zone 4) CEN (Customer Enterprise Network).

The Phase 2 TDMA Trunking Operation zone license for KCMO has also been included in this proposal. This zone-level license will allow new or current sites on the MARRS system to upgrade to Phase 2 TDMA Trunking. Site-level licenses will be the responsibility of new or existing users adding or migrating to TDMA.

Core backhaul switches at the KCMO core have been included in this proposal to allow Lee's Summit and other customers to connect to the KCMO core via Ethernet site links. This will make KCMO North Patrol zone ready for Ethernet site links going forward.

1.4 RACK DRAWINGS

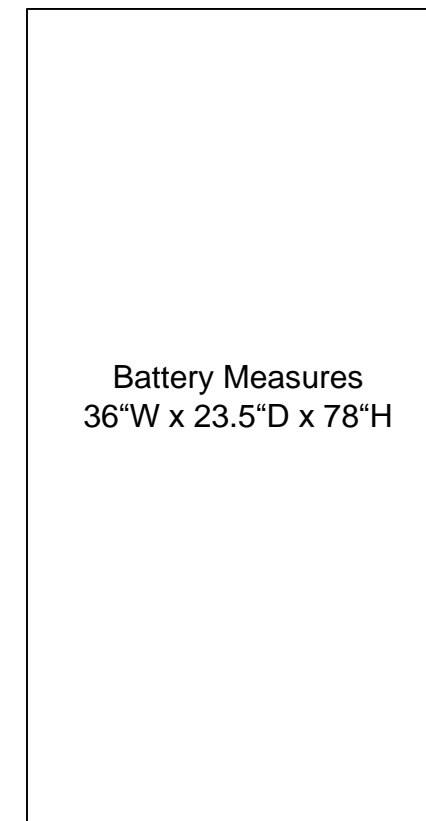
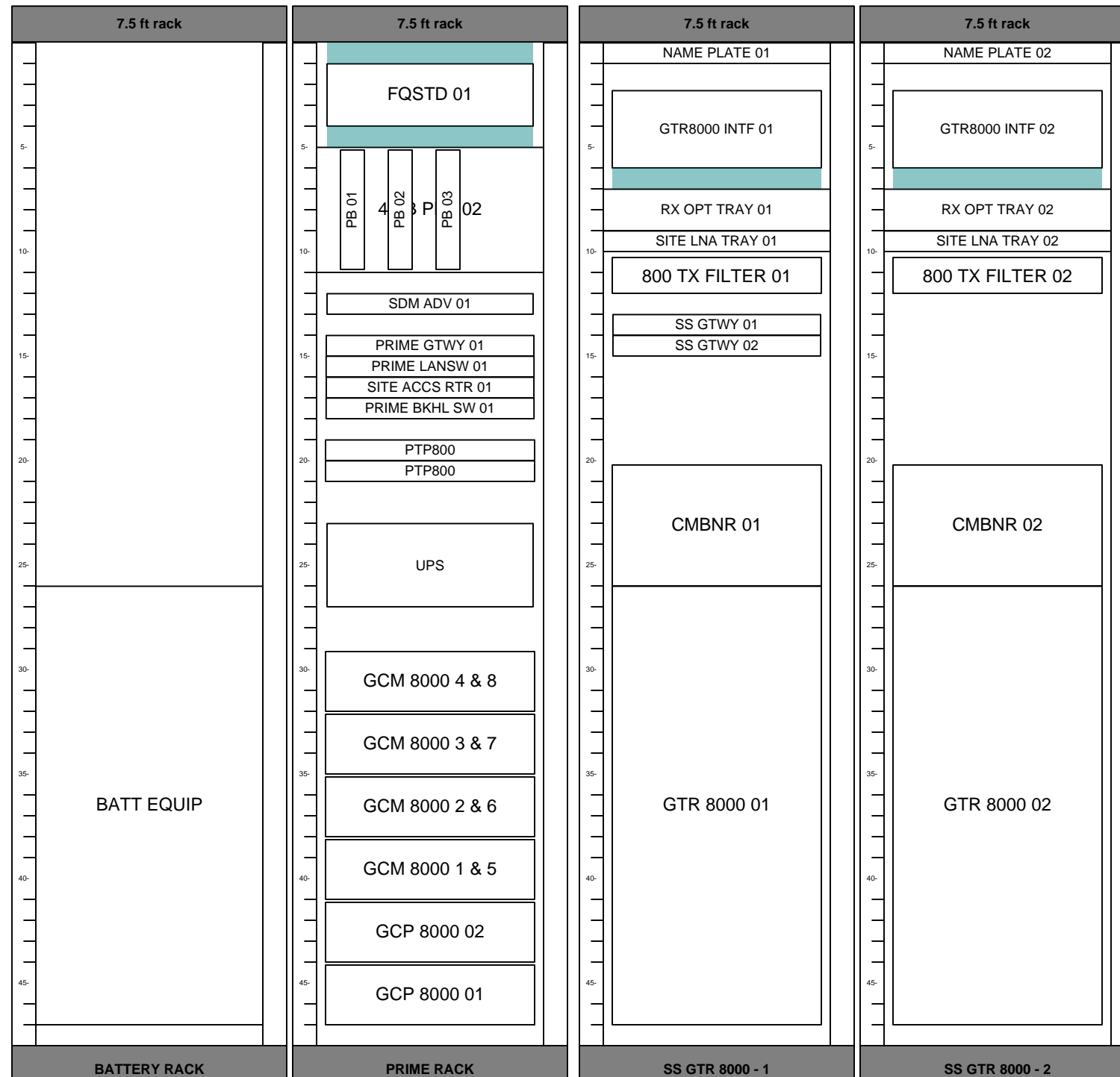
Provided on the following pages.



PROJECT: Lee's Summit P25

TITLE: Scherer Road Prime Site (w/ CoLocated SubSite)

DESIGNED BY: Nick Mennella DATE: 5/30/2017



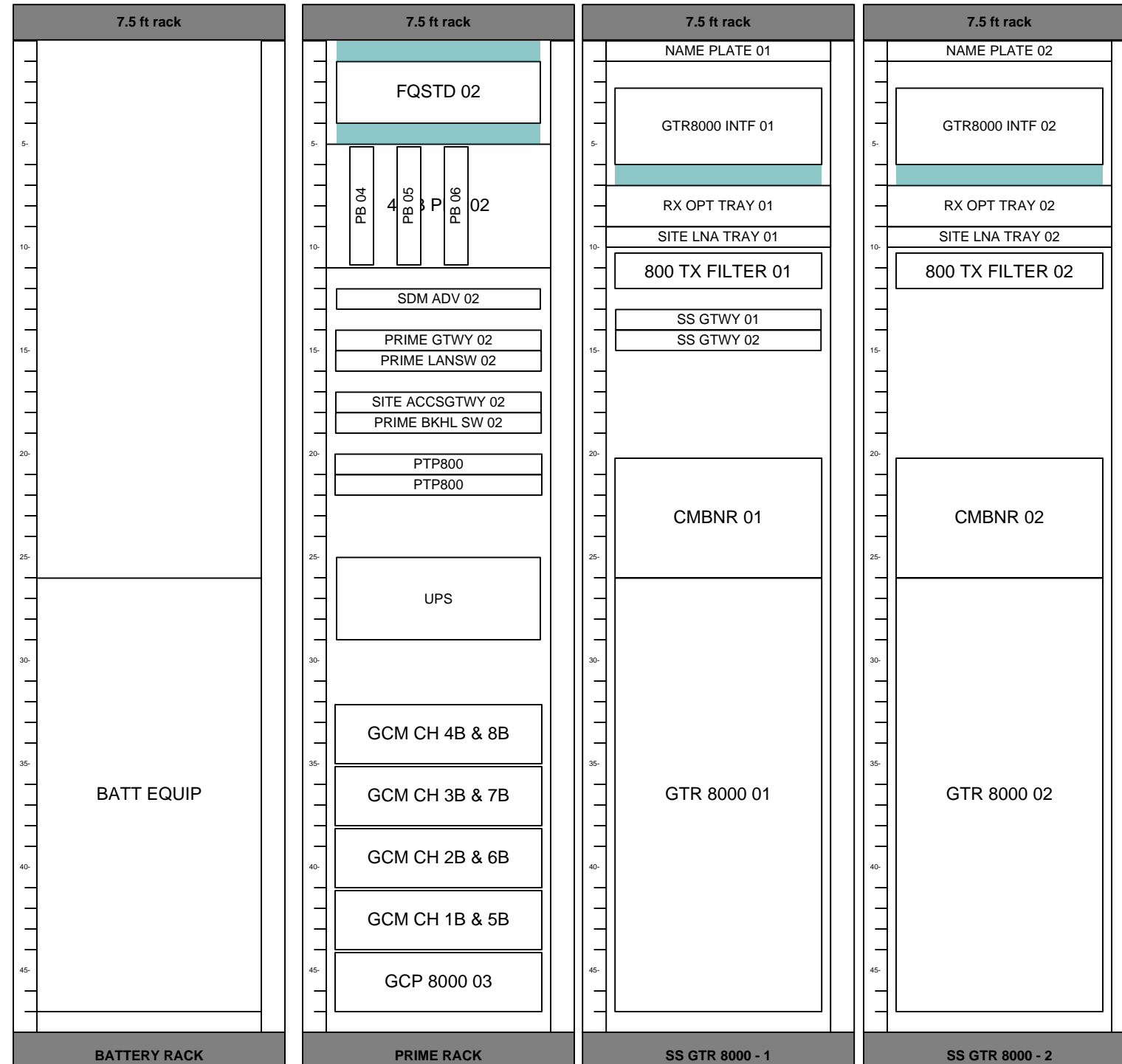
BATTERY RACK

PRIME RACK

SS GTR 8000 - 1

SS GTR 8000 - 2

PROJECT:	Lee's Summit P25	
TITLE:	Clearwire Geo-Prime Site (w/ CoLocated SubSite)	
DESIGNED BY:	Nick Mennella	DATE: 5/30/2017

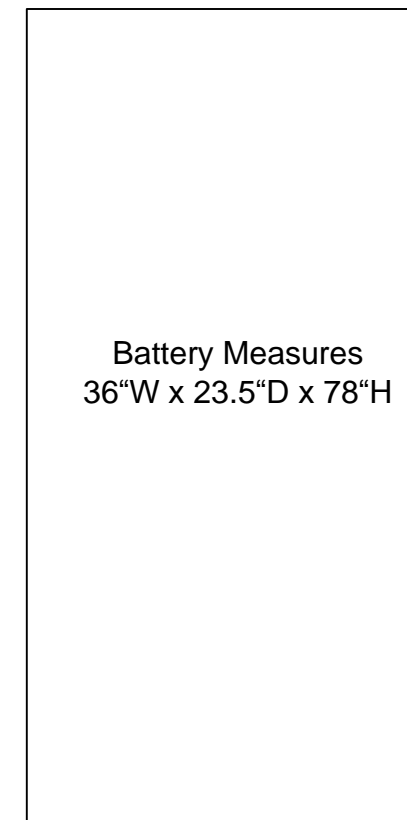


BATTERY RACK

PRIME RACK

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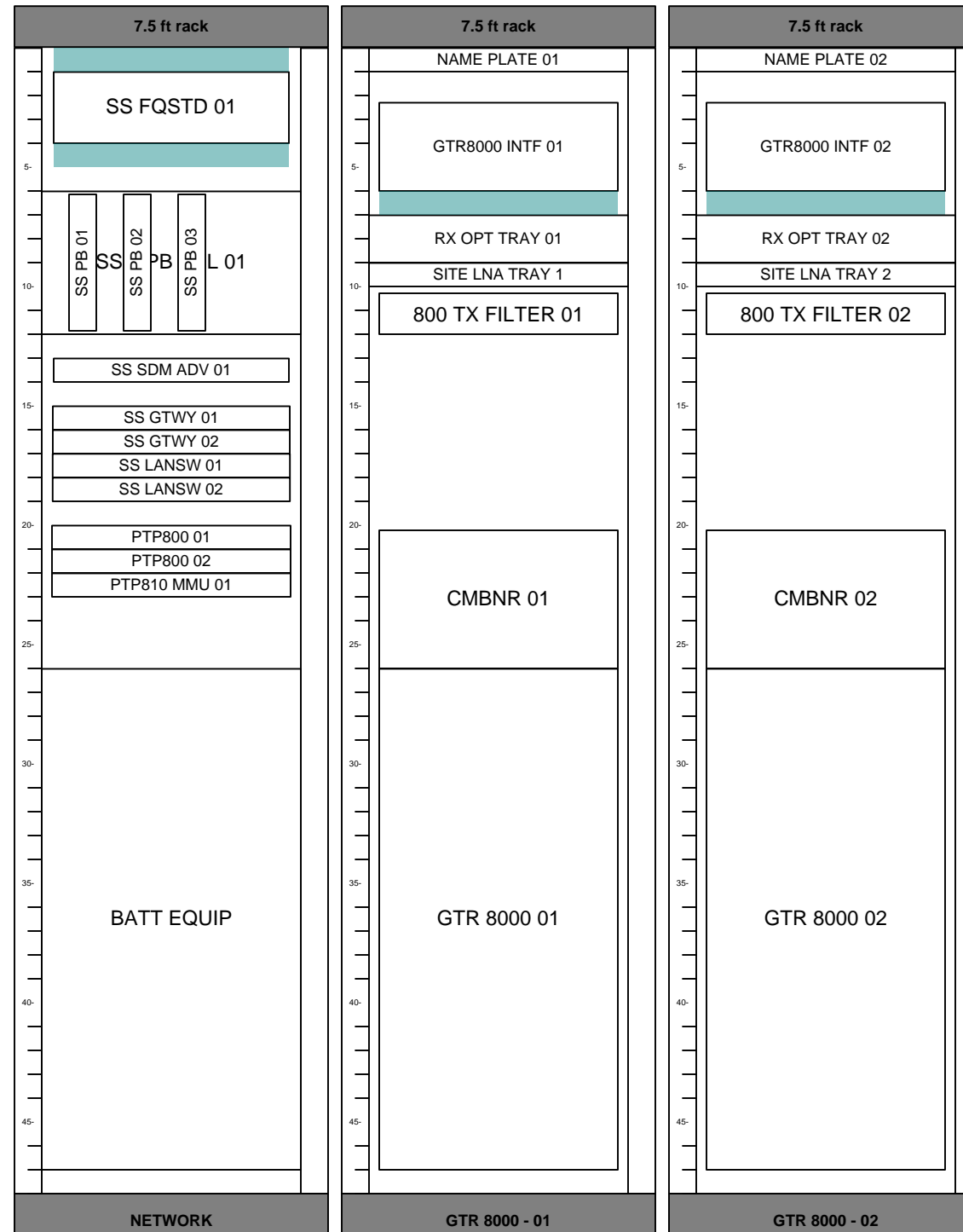
SS GTR 8000 - 2



PROJECT: **Lee's Summit P25**

TITLE: **Ranson Road and Wood's Chapel Road Sub Sites**

DESIGNED BY: **Nick Mennella** DATE: **5/30/2017**



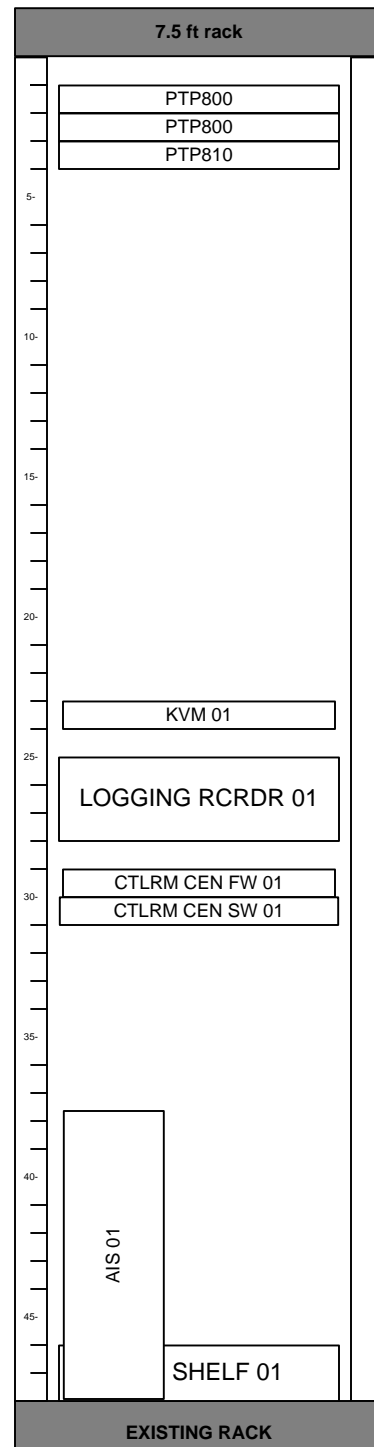
NETWORK

GTR 8000 - 01

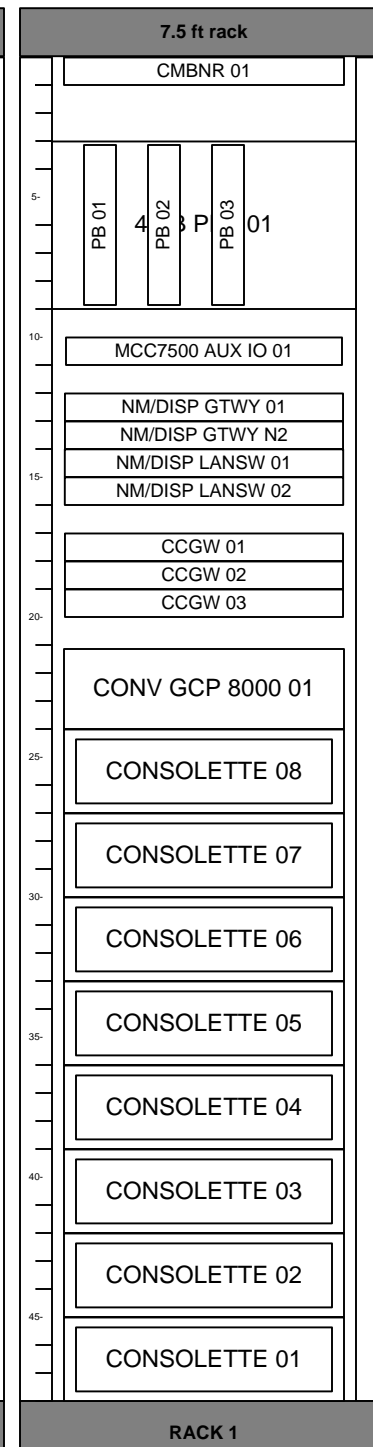
GTR 8000 - 02

Battery Measures
36"W x 23.5"D x 78"H

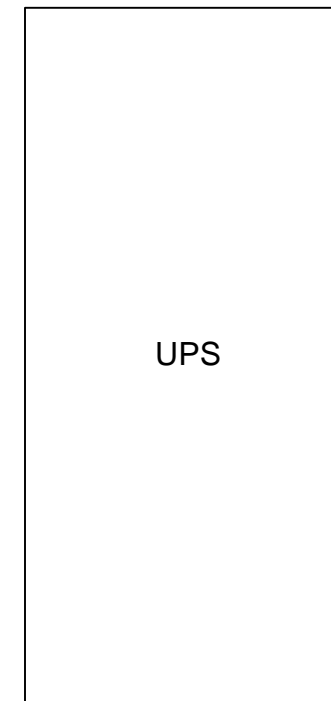
PROJECT:		Lee's Summit P25	
TITLE:		Lee's Summit PD	
DESIGNED BY:	Nick Mennella	DATE:	5/30/2017



EXISTING RACK

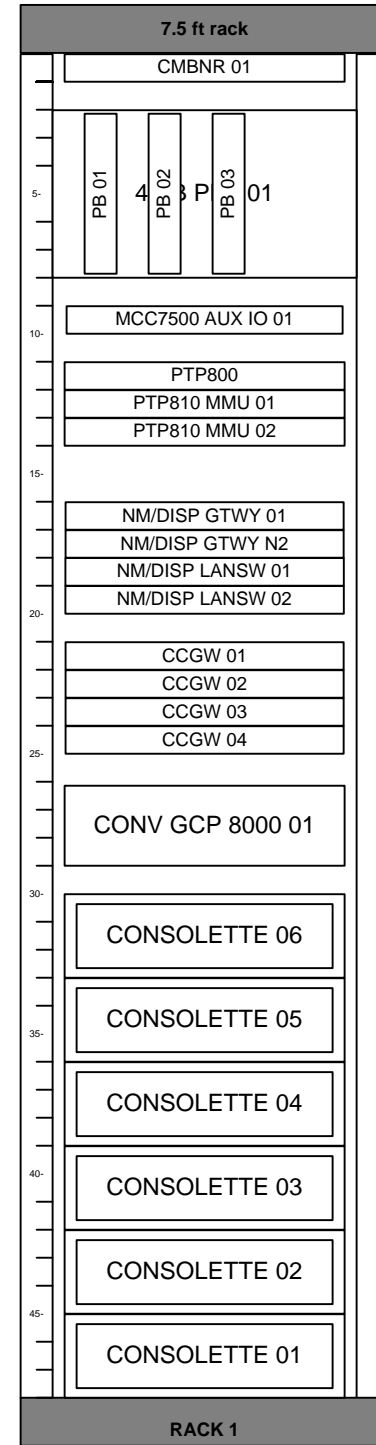


RACK 1





PROJECT:		Lee's Summit P25	
TITLE:		Lee's Summit FD	
DESIGNED BY:	Nick Mennella	DATE:	5/30/2017



RACK 1

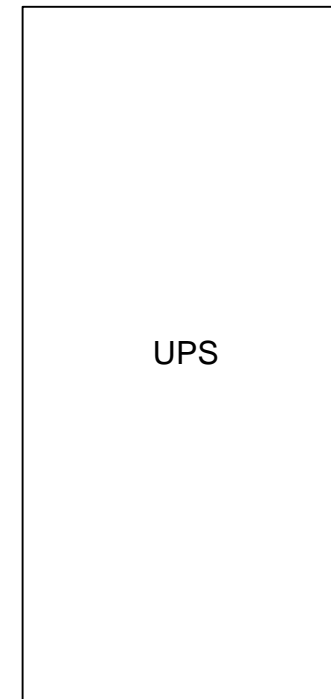


Exhibit C-2
Equipment List

1.5 EQUIPMENT LIST

Table 1-21: Lee's Summit Fire Dispatch

QTY	NOMENCLATURE	DESCRIPTION
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
6	B1933	MOTOROLA VOICE PROCESSOR MODULE
6	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
6	CA01643AA	ADD: MCC 7500 / MCC 7100 TRUNKING OPERATION
6	CA00147AF	ADD: MCC 7500 SECURE OPERATION
6	CA00182AB	ADD: AES ALGORITHM
6	CA00245AA	ADD: ADP ALGORITHM
6	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
6	DSEV221	TECH GLOBAL EVOLUTION SERIES 22INCH WITH TOUCH
6	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
6	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
36	B1912	MCC SERIES DESKTOP SPEAKER
6	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
12	B1913	MCC SERIES HEADSET JACK
12	RLN6098	HDST MODULE BASE W/PTT, 15' CBL
12	RMN5077B	SUPRAPLUS SINGLE MUFF HEADSET
6	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
6	T7885	MCAFFEE WINDOWS AV CLIENT
2	CLN1856	2620-24 ETHERNET SWITCH
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER



QTY	NOMENCLATURE	DESCRIPTION
1	F4543	SITE MANAGER BASIC
1	VA00874	ADD: AUX I-O SERV FW CURR ASTRO REL
1	V266	ADD: 90VAC TO 260VAC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	F2463	RTU_PER_DEVICE_SW_LICENSES
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01136AA	MCC 7500 CONVEN SITE OPER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
6	DSGXTT1350N006	UPS, GXT TOWER 1500VA/1350W, 120V, 6 MINUTE RUNTIME,120/120V, SOFTWARE
1	DSA4200070512	UPS, APS 20KVA/18KW 208/240V, EXT MBB, ISO XFMR, 7 MIN RUN AT FULL
1	TRN7343	SEVEN AND A HALF FOOT RACK
2	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TSJ AND WPH SERIES DATA SPDS
6	L30URS9PW1 N	APX CONSOLETTTE 7/800
6	CA01598	ADD: AC LINE CORD US
6	G361	ADD: P25 TRUNKING SOFTWARE



QTY	NOMENCLATURE	DESCRIPTION
6	G996	ENH: OVER THE AIR PROVISIONING
6	G51	ENH: SMARTZONE OPERATION APX
6	G806	ADD: ASTRO DIGITAL CAI OPERATION
6	G851	ADD: AES/DES-XL/DES-OFB ENCRYPTION
6	L999	ADD: FULL FP W/05/KEYPAD/CLOCK/VU
6	QA01648	ADD: ADVANCED SYSTEM KEY - HARDWARE KEY
6	G298	ENH: ASTRO 25 OTAR W/ MULTIKEY
6	W947	ADD: ASTRO 25 INTEGRATED VOICE & DATA
6	GA00580	ADD: TDMA OPERATION
6	GA00255AD	ENH: SFS COMPREHENSIVE 5 YR
1	HKN6184C	CABLE CH, PROGRAMMING,USB
6	HKN6233C	APX CONSOLETTA RACK MOUNT KIT
1	DSCS0496080531	SHORT HAUL CONTROL STATION COMBINER, 40-960 MHZ 8 CH.
2	DSMFBW7463	WIDEBAND FIBERGLASS OMNI ANTENNA 746-869 NFM BULKHEAD
12	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
60	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
150	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
4	DSF4PNMV2	F4PNMV2 1/2" TYPE N MALE CONNECTOR IN FSJ4-50B CABLE
1	DSISB50LNC2	RF SPD, 10-1000MHZ DC BLOCK BROADBAND BULKHEAD MT, NF ANT, NF EQUIP
3	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
3	0784469Y02	BRKT, CBL SUPPORT
6	F2380	MCD 5000 DESKSET
6	B1943	MCD 5000 LICENSING
6	FVN5847	MCD 5000 DESKSET SYSTEM CONFIG TOOL - SYSTEM W/OUT OMC
6	FKN8695	ETHERNET CABLE 10' WITH RED & BLACK LABELS
6	FHN7469	MCD 5000 DESKSET / RGU POWER SUPPLY WITH USA POWER CORD
6	FVN5959	MCD 5000 WINDOWS SUPPLEMENTAL TRANSPARENT
2	FVN5847	MCD 5000 DESKSET SYSTEM CONFIG TOOL - SYSTEM W/OUT OMC



QTY	NOMENCLATURE	DESCRIPTION
1	B1912	MCC SERIES DESKTOP SPEAKER
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
1	B1913	MCC SERIES HEADSET JACK
1	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
1	B1934	MCC 7500 VOICE PROCESSOR MODULE FRU
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
1	CLN1856	2620-24 ETHERNET SWITCH
1	DLN6966	FRU: GCP 8000/GCM 8000/GPB 8000
1	DLN6781	FRU: POWER SUPPLY
1	T7537B	KVL 4000 PDA SNAP-ON
1	U239AD	ADD: ASTRO 25 MODE
1	X795AJ	ADD: ASN MODE
1	CA01598AA	ADD: AC LINE CORD US
1	CA00243AG	ADD: ADP PRIVACY
1	CA00182AP	ADD: AES ENCRYPTION SOFTWARE
1	C543	ADD: CABLE FOR RNC, DIU, MGEG
1	C724	CABLE, KEYLOAD
1	CA01603AA	ADD: USB COMM/CHARGE CABLE W/ CUP
1	HKN6182B	CABLE KEYLOADING ADAPTER CGAI
6	FHN7470	MCD 5000 DESKSET HEADSET JACK BOX & CABLE

Table 1-22: Lee's Summit FNE Equipment

QTY	NOMENCLATURE	DESCRIPTION
1	SQM01SUM0273	MASTER SITE CONFIGURATION
1	CA02629AB	ADD: EXPAND 7.16 M CORE
3	UA00156AA	ADD: MCC7500 CONSOLE LICENSES (QTY 5)
4	UA00153AA	ADD: ASTRO 25 FDMA SITE LICENSE
4	UA00159AA	ADD: P25 PHASE 2 TDMA TRKNG OP SITE LIC

QTY	NOMENCLATURE	DESCRIPTION
4	UA00160AA	ADD: PHASE 2 DYNAMIC TG ASGNMT SITE LIC
28	UA00161AA	ADD: P25 PHASE 2 TDMA SW BASE RADIO LIC
28	UA00162AA	ADD: PHASE 2 DYNAMIC CH BASE RADIO LIC
2	UA00152AA	ADD:500 RADIO USER LICENSES
2	CA02473AA	ENH: 500 ENHANCED TRUNKED DATA USER LICENSES
1	UA00226AA	ADD: MICROWAVE MAP AND SEGMENT VIEW
1	CA01316AA	ADD: UNC ADDTL DEVICE LIC (QTY 10)
1	UA00227AA	ADD: UEM SNMP ELEMENT MANAGEMENT TOOLKIT (QTY 10)
1	SQM01SUM0257	INTELLIGENT MIDDLEWARE
1	CA02384AE	ADD: UNIFIED NETWORK SERVICES SOFTWARE
1	CA02354AA	ADD: ASTRO NETWORK APPLICATION INTERFACE
1	CA02362AE	ADD: MCAFEE STANDALONE ANTI VIRUS SOFTWARE
1	UA00013AA	ADD: 201-400 RESOURCES FOR LOCATION
1	UA00054AA	ADD: 201-400 RESOURCES FOR PRESENCE
1	CA02053AE	ADD: SUPPLEMENTAL CD IA (IMW)
1	T7321	GCM 8000 COMPARATOR
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
2	CA01974AA	TRUNKING REDUNDANT COMPRTR SW
2	CA01400AA	ADD: POWER CABLE, DC
1	T7321	GCM 8000 COMPARATOR
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
2	CA01974AA	TRUNKING REDUNDANT COMPRTR SW
2	CA01400AA	ADD: POWER CABLE, DC



QTY	NOMENCLATURE	DESCRIPTION
1	T7321	GCM 8000 COMPARATOR
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
2	CA01974AA	TRUNKING REDUNDANT COMPRTTR SW
2	CA01400AA	ADD: POWER CABLE, DC
1	T7321	GCM 8000 COMPARATOR
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
1	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
2	CA01974AA	TRUNKING REDUNDANT COMPRTTR SW
2	CA01400AA	ADD: POWER CABLE, DC
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
4	CA03004AA	ADD:SMLCST RMT ST LIC IV&D+ENH DATA
1	CA01194AA	IP BASED MULTISITE SITE CONTROLLER SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
4	CA03004AA	ADD:SMLCST RMT ST LIC IV&D+ENH DATA
1	CA01194AA	IP BASED MULTISITE SITE CONTROLLER SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	DSTRAK91008EDC	PRIME/MASTER SITE REDUNDANT MODULAR FREQUENCY TIMING SYSTEM DC
50	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
4	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
1	CLN1859	2620-48 ETHERNET SWITCH



QTY	NOMENCLATURE	DESCRIPTION
1	CLN1856	2620-24 ETHERNET SWITCH
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	TRN7343	SEVEN AND A HALF FOOT RACK
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LINE GBE (1000MBPS) R56 COMPLIANT
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TSJ AND WPH SERIES DATA SPDS
1	T7321	GCM 8000 COMPARATOR
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
2	CA01974AA	TRUNKING REDUNDANT COMPRTR SW
2	CA01400AA	ADD: POWER CABLE, DC
1	T7321	GCM 8000 COMPARATOR
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
2	CA01974AA	TRUNKING REDUNDANT COMPRTR SW
2	CA01400AA	ADD: POWER CABLE, DC
1	T7321	GCM 8000 COMPARATOR
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
2	CA01974AA	TRUNKING REDUNDANT COMPRTR SW
2	CA01400AA	ADD: POWER CABLE, DC



QTY	NOMENCLATURE	DESCRIPTION
1	T7321	GCM 8000 COMPARATOR
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
1	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
2	CA01974AA	TRUNKING REDUNDANT COMPRTTR SW
2	CA01400AA	ADD: POWER CABLE, DC
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
1	CA02474AA	ADD:GEO-REDUN BACK-UP SC LIC
1	CA01194AA	IP BASED MULTISITE SITE CONTROLLER SOFTWARE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	DSTRAK91008EDC	PRIME/MASTER SITE REDUNDANT MODULAR FREQUENCY TIMING SYSTEM DC
50	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
4	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	CLN1856	2620-24 ETHERNET SWITCH
1	CLN1859	2620-48 ETHERNET SWITCH
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	TRN7343	SEVEN AND A HALF FOOT RACK
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LINE GBE (1000MBPS) R56 COMPLIANT
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TSJ AND WPH SERIES DATA SPDS
1	DSTRAK91061	FOUR PORT DDM
1	CLN1859	2620-48 ETHERNET SWITCH
1	DLN6966	FRU: GCP 8000/GCM 8000/GPB 8000
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE



QTY	NOMENCLATURE	DESCRIPTION
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO REL
1	VA00905	ADD:24/48 VDC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	F2463	RTU_PER_DEVICE_SW_LICENSES
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00855AA	ADD: 700/800 MHZ
4	CA01842AA	ADD: P25 TDMA SOFTWARE
4	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
4	CA01193AA	IP BASED MULTISITE BASE RADIO SOFTWARE
1	CA01943AA	ADD:2ND BRANCH DIVERSITY
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILITY OF 7-24 BRS
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00883AA	ADD: 800 MHZ TX FILTER W/PMU
2	CA00884AA	ADD: QTY (1) XHUB
1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00855AA	ADD: 700/800 MHZ
3	CA01842AA	ADD: P25 TDMA SOFTWARE
3	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
4	CA01193AA	IP BASED MULTISITE BASE RADIO SOFTWARE
1	CA01943AA	ADD:2ND BRANCH DIVERSITY

QTY	NOMENCLATURE	DESCRIPTION
1	CA00877AA	ADD: CABINET RMC FOR EXPANSION RACK
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00883AA	ADD: 800 MHZ TX FILTER W/PMU
2	CA00884AA	ADD: QTY (1) XHUB
1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
1	DSGXTR0900N007	UPS, GXT RACKMOUNT 1000VA/900W, 7 MIN RUNTIME 120V SOFTWIRED
1	DS320477SYS1	DC POWER SYSTEM, FP2-48/600- 2BD450A SPW/WEB
6	DS241115105	RECTIFIER, FLATPACK 2 48/2000 HE
10	DS236408	BLIND PANEL FP2 HE BLACK G1
1	DS206039	BATTERY, 48V1105AH BATT DDM85-27 3WX8H STACK
1	DS502666	100 AMP CIRCUIT BREAKER
1	DS43783I01C48	CONTROL MONITORING UNIT, 796-824MHZ,DUAL DIVERSITY,ETHERNET,48VDC
1	DS43783I01T	TTA, 796-824MHZ, SINGLE / DUAL NETWORK, TEST PORT
1	DSTRAK91061	FOUR PORT DDM
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE
1	DLN6781	FRU: POWER SUPPLY
1	DLN6846	FRU: GTR ESS INTEGRATION KIT FOR EXT GGM 8000 GATEWAY
1	DLN6895	FRU: PA 7/800 MHZ
1	DLN6885	FRU: XCVR 7/800 MHZ V2
1	DLN6898	FRU: FAN MODULE
1	DLN6634	FRU: 700/800 MHZ SITE LNA
1	DLN1306	FRU: 700/800 MHZ CABINET RMC MODULE
1	DLN6677	FRU: G-SERIES XHUB
1	DSSC412HF2LDFE5765	COLLINEAR OMNI, 11.5DBD HD NULL FILL, PIP RATED LOW PIM 746-869 MHZ
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING



QTY	NOMENCLATURE	DESCRIPTION
350	L3599	AVA6-50 CABLE: 1-1/4" AVA6-50, COAX CORRUG COPPER, BLACK PE JACKET
2	DS114EZDF	114EZ DIN FEMALE CONNECTOR
7	DSSG11412B2U	SG114-12B2U 1-1/4" SUREGROUND GROUNDING KIT
2	DSL6SGRIP	L6SGRIP 1-1/4" SUPPORT HOIST GRIP
12	TDN7519	42396A-1 1-1/4" CABLE HANGER KIT STAINLESS
1	DSTSXDFFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
1	DSSC412HF2LDFE5765	COLLINEAR OMNI, 11.5DBD HD NULL FILL, PIP RATED LOW PIM 746-869 MHZ
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
350	L3599	AVA6-50 CABLE: 1-1/4" AVA6-50, COAX CORRUG COPPER, BLACK PE JACKET
2	DS114EZDF	114EZ DIN FEMALE CONNECTOR
7	DSSG11412B2U	SG114-12B2U 1-1/4" SUREGROUND GROUNDING KIT
2	DSL6SGRIP	L6SGRIP 1-1/4" SUPPORT HOIST GRIP
12	TDN7519	42396A-1 1-1/4" CABLE HANGER KIT STAINLESS
1	DSTSXDFFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
1	DSSC412HF2LDFE5608	COLLINEAR OMNI ANTENNA, 11.5 DBD GAIN, 746-869 MHZ, 20% NULL FILL
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT

QTY	NOMENCLATURE	DESCRIPTION
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
350	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER, 7/8 IN, BLACK PE JACKET
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
7	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
2	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
350	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
7	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
2	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
12	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180/EW220/EW-HANGER KIT STAINLESS-10PK
12	MDN6817	42396A-5 7/8" CABLE HANGER STAINLESS, 10 PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
2	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	DSSC412HF2LDFE5608	COLLINEAR OMNI ANTENNA, 11.5 DBD GAIN, 746-869 MHZ, 20% NULL FILL
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
4	TDN9289	221213 CABLE WRAP WEATHERPROOFING



QTY	NOMENCLATURE	DESCRIPTION
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
350	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER, 7/8 IN, BLACK PE JACKET
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
7	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
2	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
12	MDN6817	42396A-5 7/8" CABLE HANGER STAINLESS, 10 PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO REL
1	VA00905	ADD:24/48 VDC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	F2463	RTU_PER_DEVICE_SW_LICENSES
1	DSTRAK91009EDC	REMOTE SITE REDUNDANT MODULAR FREQUENCY TIMING SYSTEM DC
1	DSTRAK91071	FOUR PORT IRIG B TIME CODE FDM
2	DSTRAK91061	FOUR PORT DDM
50	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
4	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00855AA	ADD: 700/800 MHZ
4	CA01842AA	ADD: P25 TDMA SOFTWARE
4	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE



QTY	NOMENCLATURE	DESCRIPTION
1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
4	CA01193AA	IP BASED MULTISITE BASE RADIO SOFTWARE
1	CA01943AA	ADD:2ND BRANCH DIVERSITY
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILITY OF 7-24 BRS
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00883AA	ADD: 800 MHZ TX FILTER W/PMU
2	CA00884AA	ADD: QTY (1) XHUB
1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00855AA	ADD: 700/800 MHZ
3	CA01842AA	ADD: P25 TDMA SOFTWARE
3	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
4	CA01193AA	IP BASED MULTISITE BASE RADIO SOFTWARE
1	CA01943AA	ADD:2ND BRANCH DIVERSITY
1	CA00877AA	ADD: CABINET RMC FOR EXPANSION RACK
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00883AA	ADD: 800 MHZ TX FILTER W/PMU
2	CA00884AA	ADD: QTY (1) XHUB
1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
1	DS320477SYS1	DC POWER SYSTEM, FP2-48/600- 2BD450A SPW/WEB
6	DS241115105	RECTIFIER, FLATPACK 2 48/2000 HE
10	DS236408	BLIND PANEL FP2 HE BLACK G1
1	DS206039	BATTERY, 48V1105AH BATT DDM85-27 3WX8H STACK
1	DS502666	100 AMP CIRCUIT BREAKER
1	TRN7343	SEVEN AND A HALF FOOT RACK
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LINE GBE (1000MBPS) R56 COMPLIANT



QTY	NOMENCLATURE	DESCRIPTION
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TSJ AND WPH SERIES DATA SPDS
1	DS43783I01C48	CONTROL MONITORING UNIT, 796-824MHZ,DUAL DIVERSITY,ETHERNET,48VDC
1	DS43783I01T	TTA, 796-824MHZ, SINGLE / DUAL NETWORK, TEST PORT
1	DSTRAK91061	FOUR PORT DDM
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE
1	DLN6781	FRU: POWER SUPPLY
1	DLN6846	FRU: GTR ESS INTEGRATION KIT FOR EXT GGM 8000 GATEWAY
1	DLN6895	FRU: PA 7/800 MHZ
1	DLN6885	FRU: XCVR 7/800 MHZ V2
1	DLN6898	FRU: FAN MODULE
1	DLN6634	FRU: 700/800 MHZ SITE LNA
1	DLN1306	FRU: 700/800 MHZ CABINET RMC MODULE
1	DLN6677	FRU: G-SERIES XHUB
1	DSSC412HF2LDFE5765	COLLINEAR OMNI, 11.5DBD HD NULL FILL, PIP RATED LOW PIM 746-869 MHZ
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
350	L3599	AVA6-50 CABLE: 1-1/4" AVA6-50, COAX CORRUG COPPER, BLACK PE JACKET
2	DS114EZDF	114EZ DIN FEMALE CONNECTOR
7	DSSG11412B2U	SG114-12B2U 1-1/4" SUREGROUND GROUNDING KIT
2	DSL6SGRIP	L6SGRIP 1-1/4" SUPPORT HOIST GRIP
12	TDN7519	42396A-1 1-1/4" CABLE HANGER KIT STAINLESS
1	DSTSXD FMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE



QTY	NOMENCLATURE	DESCRIPTION
1	DSSC412HF2LDFE5765	COLLINEAR OMNI, 11.5DBD HD NULL FILL, PIP RATED LOW PIM 746-869 MHZ
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
350	L3599	AVA6-50 CABLE: 1-1/4" AVA6-50, COAX CORRUG COPPER, BLACK PE JACKET
2	DS114EZDF	114EZ DIN FEMALE CONNECTOR
7	DSSG11412B2U	SG114-12B2U 1-1/4" SUREGROUND GROUNDING KIT
2	DSL6SGRIP	L6SGRIP 1-1/4" SUPPORT HOIST GRIP
12	TDN7519	42396A-1 1-1/4" CABLE HANGER KIT STAINLESS
1	DSTSXD FMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
1	DSSC412HF2LDFE5608	COLLINEAR OMNI ANTENNA, 11.5 DBD GAIN, 746-869 MHZ, 20% NULL FILL
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
350	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER, 7/8 IN, BLACK PE JACKET
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
7	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
2	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
350	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE



QTY	NOMENCLATURE	DESCRIPTION
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
7	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
2	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
12	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180/EW220/EW-HANGER KIT STAINLESS-10PK
12	MDN6817	42396A-5 7/8" CABLE HANGER STAINLESS, 10 PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
2	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	DSSC412HF2LDFE5608	COLLINEAR OMNI ANTENNA, 11.5 DBD GAIN, 746-869 MHZ, 20% NULL FILL
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
4	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
350	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER, 7/8 IN, BLACK PE JACKET
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
7	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
2	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
12	MDN6817	42396A-5 7/8" CABLE HANGER STAINLESS, 10 PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	SQM01SUM0205	GGM 8000 GATEWAY



QTY	NOMENCLATURE	DESCRIPTION
1	CA01619AA	ADD: DC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO REL
1	VA00905	ADD:24/48 VDC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	F2463	RTU_PER_DEVICE_SW_LICENSES
1	DSTRAK91009EDC	REMOTE SITE REDUNDANT MODULAR FREQUENCY TIMING SYSTEM DC
1	DSTRAK91071	FOUR PORT IRIG B TIME CODE FDM
2	DSTRAK91061	FOUR PORT DDM
50	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
4	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00855AA	ADD: 700/800 MHZ
4	CA01842AA	ADD: P25 TDMA SOFTWARE
4	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
4	CA01193AA	IP BASED MULTISITE BASE RADIO SOFTWARE
1	CA01943AA	ADD:2ND BRANCH DIVERSITY
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILITY OF 7-24 BRS
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00883AA	ADD: 800 MHZ TX FILTER W/PMU
2	CA00884AA	ADD: QTY (1) XHUB
1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00855AA	ADD: 700/800 MHZ
3	CA01842AA	ADD: P25 TDMA SOFTWARE



QTY	NOMENCLATURE	DESCRIPTION
3	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
4	CA01193AA	IP BASED MULTISITE BASE RADIO SOFTWARE
1	CA01943AA	ADD:2ND BRANCH DIVERSITY
1	CA00877AA	ADD: CABINET RMC FOR EXPANSION RACK
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00883AA	ADD: 800 MHZ TX FILTER W/PMU
2	CA00884AA	ADD: QTY (1) XHUB
1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
1	DS320477SYS1	DC POWER SYSTEM, FP2-48/600- 2BD450A SPW/WEB
6	DS241115105	RECTIFIER, FLATPACK 2 48/2000 HE
10	DS236408	BLIND PANEL FP2 HE BLACK G1
1	DS206039	BATTERY, 48V1105AH BATT DDM85-27 3WX8H STACK
1	DS502666	100 AMP CIRCUIT BREAKER
1	TRN7343	SEVEN AND A HALF FOOT RACK
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LINE GBE (1000MBPS) R56 COMPLIANT
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TSJ AND WPH SERIES DATA SPDS
1	DS43783I01C48	CONTROL MONITORING UNIT, 796-824MHZ,DUAL DIVERSITY,ETHERNET,48VDC
1	DS43783I01T	TTA, 796-824MHZ, SINGLE / DUAL NETWORK, TEST PORT
1	DSTRAK91061	FOUR PORT DDM
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE
1	DLN6781	FRU: POWER SUPPLY
1	DLN6846	FRU: GTR ESS INTEGRATION KIT FOR EXT GGM 8000 GATEWAY
1	DLN6895	FRU: PA 7/800 MHZ
1	DLN6885	FRU: XCVR 7/800 MHZ V2
1	DLN6898	FRU: FAN MODULE
1	DLN6634	FRU: 700/800 MHZ SITE LNA



QTY	NOMENCLATURE	DESCRIPTION
1	DLN1306	FRU: 700/800 MHZ CABINET RMC MODULE
1	DLN6677	FRU: G-SERIES XHUB
1	DSSC412HF2LDFE5765	COLLINEAR OMNI, 11.5DBD HD NULL FILL, PIP RATED LOW PIM 746-869 MHZ
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
350	L3599	AVA6-50 CABLE: 1-1/4" AVA6-50, COAX CORRUG COPPER, BLACK PE JACKET
2	DS114EZDF	114EZ DIN FEMALE CONNECTOR
7	DSSG11412B2U	SG114-12B2U 1-1/4" SUREGROUND GROUNDING KIT
2	DSL6SGRIP	L6SGRIP 1-1/4" SUPPORT HOIST GRIP
12	TDN7519	42396A-1 1-1/4" CABLE HANGER KIT STAINLESS
1	DSTSXD FMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
1	DSSC412HF2LDFE5765	COLLINEAR OMNI, 11.5DBD HD NULL FILL, PIP RATED LOW PIM 746-869 MHZ
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
350	L3599	AVA6-50 CABLE: 1-1/4" AVA6-50, COAX CORRUG COPPER, BLACK PE JACKET
2	DS114EZDF	114EZ DIN FEMALE CONNECTOR
7	DSSG11412B2U	SG114-12B2U 1-1/4" SUREGROUND GROUNDING KIT
2	DSL6SGRIP	L6SGRIP 1-1/4" SUPPORT HOIST GRIP
12	TDN7519	42396A-1 1-1/4" CABLE HANGER KIT STAINLESS
1	DSTSXD FMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET



QTY	NOMENCLATURE	DESCRIPTION
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
1	DSSC412HF2LDFE5608	COLLINEAR OMNI ANTENNA, 11.5 DBD GAIN, 746-869 MHZ, 20% NULL FILL
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
350	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER, 7/8 IN, BLACK PE JACKET
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
7	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
2	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
350	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
7	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
2	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
12	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180/EW220/EW-HANGER KIT STAINLESS-10PK
12	MDN6817	42396A-5 7/8" CABLE HANGER STAINLESS, 10 PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
2	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT



QTY	NOMENCLATURE	DESCRIPTION
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	DSSC412HF2LDFE5608	COLLINEAR OMNI ANTENNA, 11.5 DBD GAIN, 746-869 MHZ, 20% NULL FILL
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
4	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
350	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER, 7/8 IN, BLACK PE JACKET
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
7	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
2	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
12	MDN6817	42396A-5 7/8" CABLE HANGER STAINLESS, 10 PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01619AA	ADD: DC POWER
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO REL
1	VA00905	ADD:24/48 VDC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	F2463	RTU_PER_DEVICE_SW_LICENSES
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00855AA	ADD: 700/800 MHZ
4	CA01842AA	ADD: P25 TDMA SOFTWARE



QTY	NOMENCLATURE	DESCRIPTION
4	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
4	CA01193AA	IP BASED MULTISITE BASE RADIO SOFTWARE
1	CA01943AA	ADD:2ND BRANCH DIVERSITY
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILITY OF 7-24 BRS
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00883AA	ADD: 800 MHZ TX FILTER W/PMU
2	CA00884AA	ADD: QTY (1) XHUB
1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00855AA	ADD: 700/800 MHZ
3	CA01842AA	ADD: P25 TDMA SOFTWARE
3	CA01902AA	ADD: P25 DYNAMIC CHANNEL SOFTWARE
1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
4	CA01193AA	IP BASED MULTISITE BASE RADIO SOFTWARE
1	CA01943AA	ADD:2ND BRANCH DIVERSITY
1	CA00877AA	ADD: CABINET RMC FOR EXPANSION RACK
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00883AA	ADD: 800 MHZ TX FILTER W/PMU
2	CA00884AA	ADD: QTY (1) XHUB
1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
1	DSGXTR0900N007	UPS, GXT RACKMOUNT 1000VA/900W, 7 MIN RUNTIME 120V SOFTWIRED
1	DS320477SYS1	DC POWER SYSTEM, FP2-48/600- 2BD450A SPW/WEB
6	DS241115105	RECTIFIER, FLATPACK 2 48/2000 HE
10	DS236408	BLIND PANEL FP2 HE BLACK G1
1	DS206039	BATTERY, 48V1105AH BATT DDM85-27 3WX8H STACK
1	DS502666	100 AMP CIRCUIT BREAKER



QTY	NOMENCLATURE	DESCRIPTION
1	DS43783I01C48	CONTROL MONITORING UNIT, 796-824MHZ,DUAL DIVERSITY,ETHERNET,48VDC
1	DS43783I01T	TTA, 796-824MHZ, SINGLE / DUAL NETWORK, TEST PORT
1	DSTRAK91061	FOUR PORT DDM
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE
1	DLN6781	FRU: POWER SUPPLY
1	DLN6846	FRU: GTR ESS INTEGRATION KIT FOR EXT GGM 8000 GATEWAY
1	DLN6895	FRU: PA 7/800 MHZ
1	DLN6885	FRU: XCVR 7/800 MHZ V2
1	DLN6898	FRU: FAN MODULE
1	DLN6634	FRU: 700/800 MHZ SITE LNA
1	DLN1306	FRU: 700/800 MHZ CABINET RMC MODULE
1	DLN6677	FRU: G-SERIES XHUB
1	DSSC412HF2LDFE5765	COLLINEAR OMNI, 11.5DBD HD NULL FILL, PIP RATED LOW PIM 746-869 MHZ
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
430	L3599	AVA6-50 CABLE: 1-1/4" AVA6-50, COAX CORRUG COPPER, BLACK PE JACKET
2	DS114EZDF	114EZ DIN FEMALE CONNECTOR
7	DSSG11412B2U	SG114-12B2U 1-1/4" SUREGROUND GROUNDING KIT
2	DSL6SGRIP	L6SGRIP 1-1/4" SUPPORT HOIST GRIP
12	TDN7519	42396A-1 1-1/4" CABLE HANGER KIT STAINLESS
1	DSTSXFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE



QTY	NOMENCLATURE	DESCRIPTION
1	DSSC412HF2LDFE5765	COLLINEAR OMNI, 11.5DBD HD NULL FILL, PIP RATED LOW PIM 746-869 MHZ
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
350	L3599	AVA6-50 CABLE: 1-1/4" AVA6-50, COAX CORRUG COPPER, BLACK PE JACKET
2	DS114EZDF	114EZ DIN FEMALE CONNECTOR
7	DSSG11412B2U	SG114-12B2U 1-1/4" SUREGROUND GROUNDING KIT
2	DSL6SGRIP	L6SGRIP 1-1/4" SUPPORT HOIST GRIP
12	TDN7519	42396A-1 1-1/4" CABLE HANGER KIT STAINLESS
1	DSTSXD FMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
1	DSSC412HF2LDFE5608	COLLINEAR OMNI ANTENNA, 11.5 DBD GAIN, 746-869 MHZ, 20% NULL FILL
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
450	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER, 7/8 IN, BLACK PE JACKET
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
450	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE



QTY	NOMENCLATURE	DESCRIPTION
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
5	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
1	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180/EW220/EW-HANGER KIT STAINLESS-10PK
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLESS, 10 PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
2	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	DSSC412HF2LDFE5608	COLLINEAR OMNI ANTENNA, 11.5 DBD GAIN, 746-869 MHZ, 20% NULL FILL
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
4	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
450	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED COPPER, 7/8 IN, BLACK PE JACKET
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
8	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT FOR 7/8 IN COAXIAL CABLE
3	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
15	MDN6817	42396A-5 7/8" CABLE HANGER STAINLESS, 10 PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VDC PASS NM ANT, NF EQUIP PIP, ASIG
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
8	DSMW3HE06791AA	SAR-8 SHELF V2

QTY	NOMENCLATURE	DESCRIPTION
8	DSMW3HE02784JA	SAR RELEASE 7.0 BASIC OS LICENSE
16	DSMW3HE02774AB	CONTROL SWITCH MODULE V2 (CSMV2) 48V
8	DSMW3HE06792EA	FAN MODULE (SAR-8 SHELF V2) EXT TEMP -48VDC
18	DSMW3HE02776AB	8 PORT GE/FE ETHERNET CARD V2 48V
30	DSMW3HE00062CB	SFP - GIGE BASE-T RJ45 R6/6 DDM -40/85C
16	DSMW3HE05838AA	250W 120/240V AC POWER CONVERTER
16	DSMW3HE05837BA	7705 AC POWER CONVERTER PIGTAIL - O-RING
5	DQBRA01010419001	CABLE GROUNDING KITS FOR 1/4 INCH AND 3/8 INCH CABLE
6	DS07009304001	HOISTING GRIP FOR CNT-400 CABLE
5	DS30010194001	50 OHM BRAIDED COAXIAL CABLE - 75 METER
6	DSC000082M002A	PTP 820G, SINGLE MODEM, ETH + 16 E1/T1
6	DSN000081L006	TNC MALE RIGHT ANGLE FOR CNT-400 BR
2	DSN000082L083A	PTP 820G ACT.KEY - CAPACITY 500M WITH ACM ENABLED, PER TX CHAN
4	DSN000082L132A	PTP 820G ACT.KEY - CAPACITY 300M WITH ACM ENABLED, PER TX CHAN
2	DSN110082D073A	PTP 820 3FT ANT,SP,11GHZ,RFU-C TYPE&STD UBR100 - ANDREW
4	DSN110082D098A	PTP 820 3FT ANT ,SP, 11GHZ, RFU-C TYPE & UBR100 - RADIOWAVE
6	DSWB3657A	LPU END KIT PTP800 (1 KIT REQUIRED PER COAXIAL CABLE)
6	DSWB3616A	COAXIAL CABLE INSTALLATION ASSEMBLY KITS (W/O SURGE ARRESTOR)
1	DQ THERMO16126181012	MSB, 12'X10' 1-RM BLDG. INCLS KOHLER 40KW LP GEN & NO UPS
12	GMDNN000082S096A	PTP 820G IDU END ONLY EXTENDED WARRANTY 2 ADDITIONAL YR
12	GMDNN000082S103A	PTP 820G RFU-C END ONLY EXTENDED WARRANTY 2 ADDITIONAL YR

Table 1-23: Lee's Summit Police Dispatch

QTY	NOMENCLATURE	DESCRIPTION
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
8	B1933	MOTOROLA VOICE PROCESSOR MODULE
8	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
8	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION
8	CA01643AA	ADD: MCC 7500 / MCC 7100 TRUNKING OPERATION

QTY	NOMENCLATURE	DESCRIPTION
8	CA00147AF	ADD: MCC 7500 SECURE OPERATION
8	CA00182AB	ADD: AES ALGORITHM
8	CA00245AA	ADD: ADP ALGORITHM
8	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
8	DSEV221	TECH GLOBAL EVOLUTION SERIES 22INCH WITH TOUCH
8	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
8	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
24	B1912	MCC SERIES DESKTOP SPEAKER
8	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
16	B1913	MCC SERIES HEADSET JACK
16	RLN6098	HDST MODULE BASE W/PTT, 15' CBL
16	RMN5077B	SUPRAPLUS SINGLE MUFF HEADSET
8	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
8	T7885	MCAFFEE WINDOWS AV CLIENT
8	DSBLN6200B	AC POWER STRIP, 6 OUTLET
2	CLN1856	2620-24 ETHERNET SWITCH
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	F4543	SITE MANAGER BASIC
1	VA00874	ADD: AUX I-O SERV FW CURR ASTRO REL
1	V266	ADD: 90VAC TO 260VAC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	F2463	RTU_PER_DEVICE_SW_LICENSES
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
1	X153AW	ADD: RACK MOUNT HARDWARE



QTY	NOMENCLATURE	DESCRIPTION
1	CA01136AA	MCC 7500 CONVEN SITE OPER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
1	B1933	MOTOROLA VOICE PROCESSOR MODULE
1	CA00288AB	ADD: MCC 7500 ARCHIVING INTERFACE SERVER SOFTWARE LICENSE
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
1	T7885	MCAFFEE WINDOWS AV CLIENT
1	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
2	DDN9748	19 INCH BLACK SHELF
1	DDN2092	17 IN LCD DRAWER WITH KEYBOARD AND MOUSE, KVM 16 PORTS, CABLES
1	T8126	FORTINET FIREWALL APPLIANCE
1	CLN1856	2620-24 ETHERNET SWITCH
8	DSGXTT1350N006	UPS, GXT TOWER 1500VA/1350W, 120V, 6 MINUTE RUNTIME,120/120V, SOFTWARE
1	DSA4200070512	UPS, APS 20KVA/18KW 208/240V, EXT MBB, ISO XFMR, 7 MIN RUN AT FULL
1	TRN7343	SEVEN AND A HALF FOOT RACK
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LINE GBE (1000MBPS) R56 COMPLIANT



QTY	NOMENCLATURE	DESCRIPTION
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TSJ AND WPH SERIES DATA SPDS
8	L30URS9PW1 N	APX CONSOLETTTE 7/800
8	CA01598	ADD: AC LINE CORD US
8	G361	ADD: P25 TRUNKING SOFTWARE
8	G996	ENH: OVER THE AIR PROVISIONING
8	G51	ENH: SMARTZONE OPERATION APX
8	G806	ADD: ASTRO DIGITAL CAI OPERATION
8	G851	ADD: AES/DES-XL/DES-OFB ENCRYPTION
8	L999	ADD: FULL FP W/05/KEYPAD/CLOCK/VU
8	QA01648	ADD: ADVANCED SYSTEM KEY - HARDWARE KEY
8	G298	ENH: ASTRO 25 OTAR W/ MULTIKEY
8	W947	ADD: ASTRO 25 INTEGRATED VOICE & DATA
8	GA00580	ADD: TDMA OPERATION
8	GA00255AD	ENH: SFS COMPREHENSIVE 5 YR
1	HKN6184C	CABLE CH, PROGRAMMING,USB
8	HKN6233C	APX CONSOLETTTE RACK MOUNT KIT
1	DSCS0496080531	CONTROL STATION COMBINER, STANDARD, 746-869 MHZ, 8 CHANNEL
2	DSMFBW7463	WIDEBAND FIBERGLASS OMNI ANTENNA 746-869 NFM BULKHEAD
16	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
80	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
150	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
4	DSF4PNMV2	F4PNMV2 1/2" TYPE N MALE CONNECTOR IN FSJ4-50B CABLE
1	DSISB50LNC2	RF SPD, 10-1000MHZ DC BLOCK BROADBAND BULKHEAD MT, NF ANT, NF EQUIP
3	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
3	0784469Y02	BRKT, CBL SUPPORT
8	F2380	MCD 5000 DESKSET
8	B1943	MCD 5000 LICENSING
8	FVN5847	MCD 5000 DESKSET SYSTEM CONFIG TOOL - SYSTEM W/OUT OMC



QTY	NOMENCLATURE	DESCRIPTION
8	FKN8695	ETHERNET CABLE 10' WITH RED & BLACK LABELS
8	FHN7469	MCD 5000 DESKSET / RGU POWER SUPPLY WITH USA POWER CORD
8	FVN5959	MCD 5000 WINDOWS SUPPLEMENTAL TRANSPARENT
2	FVN5847	MCD 5000 DESKSET SYSTEM CONFIG TOOL - SYSTEM W/OUT OMC
1	DDN2022	SPARE PARTS KIT - 5000 SERIES MAX-PRO QUADCORE FOR VOIP AND TLR
1	B1912	MCC SERIES DESKTOP SPEAKER
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
1	B1913	MCC SERIES HEADSET JACK
1	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
1	B1934	MCC 7500 VOICE PROCESSOR MODULE FRU
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
1	CLN1856	2620-24 ETHERNET SWITCH
1	DLN6966	FRU: GCP 8000/GCM 8000/GPB 8000
1	DLN6781	FRU: POWER SUPPLY
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	CA01616AA	ADD: AC POWER
8	FHN7470	MCD 5000 DESKSET HEADSET JACK BOX & CABLE
1	SQM01SUM0205	GGM 8000 GATEWAY

1.5.1 Subscribers Parts List

Table 1-24: APX 6000 Model 2.5—Portable Radio
Radio #1—Police Department

Qty	Model Number	APX6000 Model 2.5 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Carry Holder, IP68 Rated (2 M/2 HRS)	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
167	H98UCF9P W6BN	APX 6000 7/800 MHZ MODEL 2.5 PORTABLE	\$3,026.00	27%	\$2,208.98	\$368,899.66
167	Q806	CAI	\$515.00	27%	\$375.95	\$62,783.65
167	H38	SMARTZONE	\$1,200.00	27%	\$876.00	\$146,292.00



Qty	Model Number	APX6000 Model 2.5 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Carry Holder, IP68 Rated (2 M/2 HRS)	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
167	Q361	P25	\$300.00	27%	\$219.00	\$36,573.00
167	H885BK	ENH: 3 YR. WARRANTY (FROM START)	\$90.00	0%	\$90.00	\$15,030.00
167	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
167	INCLUDED	BLUE TOOTH CAPABILITY	NC	0%	NC	NC
167	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
167	QA01833	EXTREME NOISE CANCELLING OPTION	\$25.00	27%	\$18.25	\$3,047.75
167	QA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$54,859.50
167	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$18,286.50
167	QA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$18,286.50
167	QA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$18,286.50
167	QA09001	WI-FI CAPABILITY	\$300.00	27%	\$219.00	\$36,573.00
167	QA09007	OUT OF THE BOX WI-FI PROVISIONING (REQUIRED FOR QA09001)	\$-	27%	\$0.00	\$0.00
167	QA09006	ADAPTIVE NOISE SUPPRESSION	\$150.00	27%	\$109.50	\$18,286.50
(NOTE: Delete QA01833 if this option is chosen)						
167	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$12,191.00
167	Q15	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$583.27	\$97,406.09
167	Q498	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$540.20	\$90,213.40
Sub Total (JO CO STD Package)			\$8,145.00		\$5,970.15	\$997,015.05
Accessories:						
0	NAF5085	SPARE ANTENNA; 7-800 MHZ GPS	\$45.00	27%	\$32.85	\$0.00
165	NMN6274	IMPRES RSM W/DUAL MIC NOISE SUPPRESSION, 3.5MM THREADED JACK, VOLUME CONTROL, 1 PROGRAMMINABLE BUTTON AND ORANGE BUTTON (IP55)	\$368.50	27%	\$269.01	\$44,385.83

Qty	Model Number	APX6000 Model 2.5 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Carry Holder, IP68 Rated (2 M/2 HRS)	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
167	PMNN4486	SPARE IMPRES 2, LIION 3400 MAH BATTERY	\$142.00	27%	\$103.66	\$17,311.22
167	NNTN8860 A	SINGLE UNIT IMPRES 2 DESK TOP CHARGER	\$150.00	27%	\$109.50	\$18,286.50
1	NNTN8844 A	MULTI-UNIT (6 POCKET) IMPRES 2 CHARGER	\$1,250.00	27%	\$912.50	\$912.50
167	PMLN5657	LEATHER CASE, 2.75' SWL BL	\$71.50	27%	\$52.20	\$8,716.57
Sub Total - Accessories						\$89,612.61
Optional Accessories:						
0	NNTN7624 B	IMPRES VEHICULAR CHARGER (FULL KIT); HARDWIRED	\$429.00	27%	\$313.17	\$0.00
Note: Accessories are at 27% discount when purchased with radio.						
If purchased separately, only a 19% discount applies.						

Table 1-25: APX 6500 Mobile Radio (Remote Mount with 'O5' Control Head)

Qty	Model Number	APX6500 7/800 MHZ Mid Power Mobile - Remote Mount	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
87	M25URS9 PW1 N	APX6500 7/800 MHZ MID POWER MOBILE	\$2,438.00	27%	\$1,779.74	\$154,837.38
87	G806	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	27%	\$375.95	\$32,707.65
87	G51	ENH: SMARTZONE OPERATION APX6500	\$1,200.00	27%	\$876.00	\$76,212.00
87	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	27%	\$219.00	\$19,053.00
87	G442	ADD: O5 CONTROL HEAD	\$432.00	27%	\$315.36	\$27,436.32
87	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
87	G67	ADD: REMOTE MOUNT	\$297.00	27%	\$216.81	\$18,862.47
87	G174	ADD: ANT 3DB LOW-PROFILE 762-870	\$43.00	27%	\$31.39	\$2,730.93
87	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$4,572.72
87	B18	ADD: AUXILARY SPKR 7.5 WATT	\$60.00	27%	\$43.80	\$3,810.60

Qty	Model Number	APX6500 7/800 MHZ Mid Power Mobile - Remote Mount	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
87	G24	ADD: 3 YEAR SERVICE FROM THE START LITE	\$131.00	0%	\$131.00	\$11,397.00
87	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
87	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
87	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$28,579.50
87	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$9,526.50
87	GA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$9,526.50
87	GA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$9,526.50
87	GA00226	GPS ANTENNA	\$75.00	27%	\$54.75	\$4,763.25
87	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$6,351.00
87	G851	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$583.27	\$50,744.49
87	G298	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$540.20	\$46,997.40
Sub Total			\$8,102.00		\$5,949.83	\$517,635.21

Notes: Other types/styles of control heads are available, such as:

- 02, 03, 07, 09 control heads.
- Multi-control head options.
- Siren/light control heads.



Table 1-26: APX 8500 Mobile Radio (Remote Mount/Motorcycle with '05' Control Head)

Qty	Model Number	APX8500 7/800 MHZ Mid Power Mobile - Remote Mount/Motorcycle	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
4	M37TSS9P W1 N	APX8500 ALL BAND MP MOBILE	\$4,770.00	27%	\$3,482.10	\$13,928.40
4	G806	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	27%	\$375.95	\$1,503.80
4	G51	ENH: SMARTZONE OPERATION	\$1,500.00	27%	\$1,095.00	\$4,380.00
4	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	27%	\$219.00	\$876.00
4	G442	ADD: O5 CONTROL HEAD	\$432.00	27%	\$315.36	\$1,261.44
4	G444	ADD: CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
4	G138	ADD: APX MOTORCYCLE CH SFWR	\$-	27%	\$0.00	\$0.00
4	G67BA	ADD: REMOTE MOUNT/MOTORCYCLE	\$400.00	27%	\$292.00	\$1,168.00
4	G174	ADD: ANT 3DB LOWPRO MCYC 762-870	\$43.00	27%	\$31.39	\$125.56
4	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$210.24
4	B18	ADD: AUXILARY SPKR 7.5 WATT	\$60.00	27%	\$43.80	\$175.20
4	W620	ADD: NO MTRCYCLE ENCL NEEDED APEX	\$-	27%	\$0.00	\$0.00
4	G24	ADD: 3 YEAR SERVICE FROM THE START LITE	\$250.00	0%	\$250.00	\$1,000.00
4	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
4	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
4	GA05508	DEL: DELETE VHF BAND	\$(800.00)	27%	(\$584.00)	(\$2,336.00)
4	GA05509	DEL: DELETE UHF BAND	\$(800.00)	27%	(\$584.00)	(\$2,336.00)
4	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$1,314.00
4	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$438.00
4	GA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$438.00
4	GA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$438.00
4	GA00226	GPS ANTENNA	\$75.00	27%	\$54.75	\$219.00



Qty	Model Number	APX8500 7/800 MHZ Mid Power Mobile - Remote Mount/Motorcycle	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
4	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$292.00
4	G851	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$583.27	\$2,333.08
4	G298	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$540.20	\$2,160.80
Sub Total			\$9,356.00		\$6,897.38	\$27,589.52

Notes: Other types/styles of control heads are available, such as:

- 02, 03, 07, 09 control heads.
- Multi-control head options.
- Siren/light control heads.

Table 1-27: APX 6500 Mobile Radio (Dual Head with '05' Control Head)

Qty	Model Number	APX6500 7/800 MHZ Mid Power Mobile - Dual Head	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
1	M25URS9P W1 N	APX6500 7/800 MHZ MID POWER MOBILE	\$2,438.00	27%	\$1,779.74	\$1,779.74
1	G806	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	27%	\$375.95	\$375.95
1	G51	ENH: SMARTZONE OPERATION APX6500	\$1,200.00	27%	\$876.00	\$876.00
1	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	27%	\$219.00	\$219.00
1	G442	ADD: O5 CONTROL HEAD	\$432.00	27%	\$315.36	\$315.36
1	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
1	G67	ADD: REMOTE MOUNT	\$297.00	27%	\$216.81	\$216.81
1	GA00092	ADD: DUAL-CONTRL HD HARDWARE	\$570.00	27%	\$416.10	\$416.10
1	G618	ADD:CBL REMOTE MOUNT 10 FEET	\$10.00	27%	\$7.30	\$7.30
1	G610	ADD: REMOTE MOUNT CBL 30 FEET	\$25.00	27%	\$18.25	\$18.25
1	G174	ADD: ANT 3DB LOW-PROFILE 762-870	\$43.00	27%	\$31.39	\$31.39
2	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$105.12
2	B18	ADD: AUXILARY SPKR 7.5 WATT	\$60.00	27%	\$43.80	\$87.60
1	G24	ADD: 3 YEAR SERVICE FROM THE START LITE	\$131.00	0%	\$131.00	\$131.00



Qty	Model Number	APX6500 7/800 MHZ Mid Power Mobile - Dual Head	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
1	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
1	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
1	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$328.50
1	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$109.50
1	GA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$109.50
1	GA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$109.50
1	GA00226	GPS ANTENNA	\$75.00	27%	\$54.75	\$54.75
1	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$73.00
1	G851	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$583.27	\$583.27
1	G298	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$540.20	\$540.20
Sub Total			\$8,707.00		\$6,391.48	\$6,487.84

Notes: Other types/styles of control heads are available, such as:

- 02, 03, 07, 09 control heads.
- Multi-control head options.
- Siren/light control heads.

Table 1-28: APX 6500 Mobile Radio (Dash Mount with '05' Control Head)

Qty	Model Number	APX6500 7/800 MHZ Mid Power Mobile - Dash Mount	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
3	M25URS9P W1 N	APX6500 7/800 MHZ MID POWER MOBILE	\$2,438.00	27%	\$1,779.74	\$5,339.22
3	G806	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	27%	\$375.95	\$1,127.85
3	G51	ENH: SMARTZONE OPERATION APX6500	\$1,200.00	27%	\$876.00	\$2,628.00
3	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	27%	\$219.00	\$657.00
3	G442	ADD: O5 CONTROL HEAD	\$432.00	27%	\$315.36	\$946.08
3	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
3	G66	ADD: DASH NOUNT	\$125.00	27%	\$91.25	\$273.75



Qty	Model Number	APX6500 7/800 MHZ Mid Power Mobile - Dash Mount	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
3	G174	ADD: ANT 3DB LOW-PROFILE 762-870	\$43.00	27%	\$31.39	\$94.17
3	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$157.68
3	B18	ADD: AUXILARY SPKR 7.5 WATT	\$60.00	27%	\$43.80	\$131.40
3	G24	ADD: 3 YEAR SERVICE FROM THE START LITE	\$131.00	0%	\$131.00	\$393.00
3	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
3	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
3	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$985.50
3	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$328.50
3	GA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$328.50
3	GA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$328.50
3	GA00226	GPS ANTENNA	\$75.00	27%	\$54.75	\$164.25
3	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$219.00
3	G851	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$583.27	\$1,749.81
3	G298	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$540.20	\$1,620.60
Sub Total			\$7,930.00		\$5,824.27	\$17,472.81

Notes: Other types/styles of control heads are available, such as:

- 02, 03, 07, 09 control heads.
- Multi-control head options.
- Siren/light control heads.

**Table 1-29: APX 8000XE Model 2.5—Portable Radio (Dual Band)
Radio #1—Fire Department**

Qty	Model Number	APX8000XE Model 2.5 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Carry Holder, IP68 Rated (2 M/4 HRS)	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
94	H91TGD9P W6BN	APX 8000 7/800 MHZ MODEL 2.5 PORTABLE (ALL BAND)	\$5,983.00	27%	\$4,367.59	\$410,553.46
94	QA02006	ENH: APX8000XE RUGGED RADIO	\$800.00	27%	\$584.00	\$54,896.00
94	Q806	CAI	\$515.00	27%	\$375.95	\$35,339.30



Qty	Model Number	APX8000XE Model 2.5 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Carry Holder, IP68 Rated (2 M/4 HRS)	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
94	H38	SMARTZONE	\$1,500.00	27%	\$1,095.00	\$102,930.00
94	Q361	P25	\$300.00	27%	\$219.00	\$20,586.00
94	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$6,862.00
0	Q15	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$0.00	\$0.00
0	Q498	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$0.00	\$0.00
94	Q58	ENH: 3 YR. WARRANTY (FROM START)	\$110.00	0%	\$110.00	\$10,340.00
94	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
94	INCLUDED	BLUE TOOTH CAPABILITY	NC	0%	NC	NC
94	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
94	QA09006	ADAPTIVE NOISE SUPPRESSION	NC	0%	NC	NC
94	H###	ENH; PUBLIC SAFETY YELLOW OR GREEN HOUSING OPTION	\$25.00	27%	\$18.25	\$1,715.50
94	QA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$30,879.00
94	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$10,293.00
94	QA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$10,293.00
94	QA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$10,293.00
94	QA09001	WI-FI CAPABILITY	\$300.00	27%	\$219.00	\$20,586.00
94	QA09007	OUT OF THE BOX WI-FI PROVISIONING (REQUIRED FOR QA09001)	\$-	27%	\$0.00	\$0.00
94	QA05509	DELETE UHF BAND	\$(800.00)	27%	(\$584.00)	(\$54,896.00)
Sub Total - Radio #1 (Fire Dept)			\$11,272.00		\$7,134.79	\$670,670.26

Qty	Model Number	APX8000XE Model 2.5 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Carry Holder, IP68 Rated (2 M/4 HRS)	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
Accessories						
0	NAR6594	SPARE ANTENNA; VHF/7-800 MHZ GPS	\$75.00	27%	\$54.75	\$0.00
94	PMMN4106 A	XE-500; AUDIO ACCESSORY-AUDIO ADAPTER,NEXT GEN FIRE RSM MODEL 1 (COMES IN GREEN OR BLACK)	\$550.00	27%	\$401.50	\$37,741.00
123	PMNN4486	SPARE IMPRES 2, LIION 3400 MAH BATTERY	\$142.00	27%	\$103.66	\$12,750.18
0	NNTN8860 A	SINGLE UNIT IMPRES 2 DESK TOP CHARGER	\$150.00	27%	\$109.50	\$0.00
9	NNTN8844 A	MULTI-UNIT (6 POCKET) IMPRES 2 CHARGER	\$1,250.00	27%	\$912.50	\$8,212.50
0	PMLN5875	LEATHER CASE, 2.75" SWBL	\$65.00	27%	\$47.45	\$0.00
84	NNTN7624 B	IMPRES VEHICULAR CHARGER (FULL KIT); HARDWIRED	\$429.00	27%	\$313.17	\$26,306.28
Sub Total - Accessories						\$85,009.96
Note: Accessories are at 27% discount when purchased with radio.						
If purchased separately, only a 19% discount applies.						
Net Total (Radio #1 & Accessories) Fire Dept						\$755,680.22

**Table 1-30: APX 4000 Model 2—Portable Radio
(Fire Department—Command Staff—No Encryption)**

Qty	Model Number	APX4000 Model 2/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Belt Clip	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
17	H51UCF9P W6 N	APX 4000 7/800 MHZ MODEL 2 PORTABLE	\$1,963.00	27%	\$1,432.99	\$24,360.83
17	QA04865	ADD: TWO KNOB CONFIGURATION	\$-	27%	\$0.00	\$0.00
17	QA02756	ENH: 3600 OR 9600 TRUNKING BAUD	\$1,570.00	27%	\$1,146.10	\$19,483.70
17	H885BK	ENH: 3 YR. WARRANTY (FROM START)	\$90.00	0%	\$90.00	\$1,530.00
17	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
17	INCLUDED	BLUE TOOTH CAPABILITY	NC	0%	NC	NC
17	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC

Qty	Model Number	APX4000 Model 2/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Belt Clip	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
17	QA01833	EXTREME NOISE CANCELLING OPTION	\$25.00	27%	\$18.25	\$310.25
17	QA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$5,584.50
17	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$1,861.50
17	QA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$1,861.50
17	QA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$1,861.50
17	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$1,241.00
Sub Total (JO CO STD Package)			\$4,648.00		\$3,417.34	\$58,094.78
Accessories						
17	NNTN8128 BR	BATT IMP STD LI ION 1900M 2000T	\$102.00	27%	\$74.46	\$1,265.82
17	PMPN4174 A	CHGR DESKTOP SINGLE UNIT IMPRES, US/NA	\$150.00	27%	\$109.50	\$1,861.50
Sub Total - Accessories						\$3,127.32

Radio, Belt Clip, Battery, SUC, Spare Battery

Table 1-31: APX 8500 Mobile Radio (Remote Mount) 7/800 & VHF (with '05' Control Head)

Qty	Model Number	APX8500 7/800 MHZ & VHF Mid Power Mobile - Remote Mount III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
36	M37TSS9P W1N	APX8500 MULTI-BAND MID POWER MOBILE	\$4,770.00	27%	\$3,482.10	\$125,355.60
36	G806	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	27%	\$375.95	\$13,534.20
36	G51	ENH: SMARTZONE OPERATION APX6500	\$1,500.00	27%	\$1,095.00	\$39,420.00
36	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	27%	\$219.00	\$7,884.00
36	G442	ADD: O5 CONTROL HEAD	\$432.00	27%	\$315.36	\$11,352.96
36	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
36	G67	ADD: REMOTE MOUNT	\$297.00	27%	\$216.81	\$7,805.16
36	GA01513	ADD: ALL BAND ANTENNA	\$95.00	27%	\$69.35	\$2,496.60



Qty	Model Number	APX8500 7/800 MHZ & VHF Mid Power Mobile - Remote Mount III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
36	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$1,892.16
36	B18	ADD: AUXILARY SPKR 7.5 WATT	\$60.00	27%	\$43.80	\$1,576.80
36	G78	ADD: 3 YEAR SERVICE FROM THE START LITE	\$250.00	0%	\$250.00	\$9,000.00
36	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
36	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
36	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$11,826.00
36	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$3,942.00
36	GA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$3,942.00
36	GA01202	GEO FENCE MOBILE	\$150.00	27%	\$109.50	\$3,942.00
36	GA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$3,942.00
36	GA09001	WI-FI CAPABILITY	\$300.00	27%	\$219.00	\$7,884.00
36	GA09007	OUT OF THE BOX WI-FI PROVISIONING (REQUIRES GA09001)	\$-	27%	\$0.00	\$0.00
36	GA00226	GPS/WI-FI ANTENNA	\$75.00	27%	\$54.75	\$1,971.00
36	GA05509	DEL: DELETE UHF BAND	\$(800.00)	27%	(\$584.00)	(\$21,024.00)
36	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$2,628.00
0	G851	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$0.00	\$0.00
0	G298	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$0.00	\$0.00
Sub Total			\$10,555.00		\$6,649.18	\$239,370.48
13	FireCom	FireCom APX Interface cable	\$195.00	0%	\$195.00	\$2,535.00

Notes: Other types/styles of control heads are available, such as:

- 02, 03, 07, 09 control heads.
- Multi-control head options.
- Motorcycle radio options.
- Siren/light control heads.

Table 1-32: APX 8500 Mobile Radio (Dash Mount) 7/800 & VHF (with '05' Control Head)

Qty	Model Number	APX8500 7/800 MHZ & VHF Mid Power Mobile - Dash Mount III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
3	M37TSS9P W1N	APX8500 MULTI-BAND MID POWER MOBILE	\$4,770.00	27%	\$3,482.10	\$10,446.30
3	G806	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	27%	\$375.95	\$1,127.85
3	G51	ENH: SMARTZONE OPERATION APX6500	\$1,500.00	27%	\$1,095.00	\$3,285.00
3	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	27%	\$219.00	\$657.00
3	G442	ADD: O5 CONTROL HEAD	\$432.00	27%	\$315.36	\$946.08
3	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
3	G66	ADD: DASH MOUNT	\$125.00	27%	\$91.25	\$273.75
3	GA01513	ADD: ALL BAND ANTENNA	\$95.00	27%	\$69.35	\$208.05
3	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$157.68
3	B18	ADD: AUXILARY SPKR 7.5 WATT	\$60.00	27%	\$43.80	\$131.40
3	G78	ADD: 3 YEAR SERVICE FROM THE START LITE	\$250.00	0%	\$250.00	\$750.00
3	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
3	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
3	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$985.50
3	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$328.50
3	GA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$328.50
3	GA01202	GEO FENCE MOBILE	\$150.00	27%	\$109.50	\$328.50
3	GA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$328.50
3	GA09001	WI-FI CAPABILITY	\$300.00	27%	\$219.00	\$657.00
3	GA09007	OUT OF THE BOX WI-FI PROVISIONING (REQUIRES GA09001)	\$-	27%	\$0.00	\$0.00
3	GA00226	GPS/WI-FI ANTENNA	\$75.00	27%	\$54.75	\$164.25
3	GA05509	DEL: DELETE UHF BAND	\$(800.00)	27%	(\$584.00)	(\$1,752.00)

Qty	Model Number	APX8500 7/800 MHZ & VHF Mid Power Mobile - Dash Mount III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
3	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$219.00
0	G851	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$0.00	\$0.00
0	G298	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$0.00	\$0.00
Sub Total			\$10,383.00		\$6,523.62	\$19,570.86
Note: Pricing DOES NOT include programming or installation services.						

Notes: Other types/styles of control heads are available, such as:

- 02, 03, 07, 09 control heads.
- Multi-control head options.
- Motorcycle radio options.
- Siren/light control heads.

Table 1-33: APX 8500 Mobile Radio (Dual Control Head) 7/800 & VHF (with '05' Control Head)

Qty	Model Number	APX8500 7/800 MHZ & VHF Mid Power Mobile - Dual Control Head	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
8	M37TSS9P W1N	APX8500 MULTI-BAND MID POWER MOBILE	\$4,770.00	27%	\$3,482.10	\$27,856.80
8	G806	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	27%	\$375.95	\$3,007.60
8	G51	ENH: SMARTZONE OPERATION APX6500	\$1,500.00	27%	\$1,095.00	\$8,760.00
8	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	27%	\$219.00	\$1,752.00
8	G442	ADD: O5 CONTROL HEAD	\$432.00	27%	\$315.36	\$2,522.88
8	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
8	G67	ADD: REMOTE MOUNT	\$297.00	27%	\$216.81	\$1,734.48
8	GA00092	ADD: DUAL-CONTRL HD HARDWARE	\$570.00	27%	\$416.10	\$3,328.80
8	G628	ADD: REMOTE MOUNT CBL 17 FEET	\$15.00	27%	\$10.95	\$87.60
8	G610	ADD: REMOTE MOUNT CBL 30 FEET	\$25.00	27%	\$18.25	\$146.00
8	GA01513	ADD: ALL BAND ANTENNA	\$95.00	27%	\$69.35	\$554.80



Qty	Model Number	APX8500 7/800 MHZ & VHF Mid Power Mobile - Dual Control Head	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
16	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$840.96
16	B18	ADD: AUXILARY SPKR 7.5 WATT	\$60.00	27%	\$43.80	\$700.80
8	G78	ADD: 3 YEAR SERVICE FROM THE START LITE	\$250.00	0%	\$250.00	\$2,000.00
8	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
8	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
8	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$2,628.00
8	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$876.00
8	GA09012	MISSION CRITICAL GEOFENCING	\$150.00	27%	\$109.50	\$876.00
8	GA01202	GEO FENCE MOBILE	\$150.00	27%	\$109.50	\$876.00
8	GA09008	GROUP SERVICES	\$150.00	27%	\$109.50	\$876.00
8	GA09001	WI-FI CAPABILITY	\$300.00	27%	\$219.00	\$1,752.00
8	GA09007	OUT OF THE BOX WI-FI PROVISIONING (REQUIRES GA09001)	\$-	27%	\$0.00	\$0.00
8	GA00226	GPS/WI-FI ANTENNA	\$75.00	27%	\$54.75	\$438.00
8	GA05509	DEL: DELETE UHF BAND	\$(800.00)	27%	(\$584.00)	(\$4,672.00)
8	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$584.00
0	G851	ADD: AES/DES-XL-DES-OFB ENCRYPTION	\$799.00	27%	\$0.00	\$0.00
0	G298	ENH: ASTRO 25 OTAR W/MULTI-KEY	\$740.00	27%	\$0.00	\$0.00
Sub Total			\$11,165.00		\$7,094.48	\$57,526.72

Notes: Other types/styles of control heads are available, such as:

- 02, 03, 07, 09 control heads.
- Multi-control head options.
- Motorcycle radio options.
- Siren/light control heads.



Table 1-34: APX 7500 Mobile Consolette Radio 7/800 & VHF (with '05' Control Head)

Qty	Model Number	APX7500 7/800 MHZ Consolette Radios (1 For Each Station) III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
6	L30URS9P W1 N	APX CONSOLETTTE 7/800	\$4,554.00	27%	\$3,324.42	\$19,946.52
6	G806	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	27%	\$375.95	\$2,255.70
6	G51	ENH: SMARTZONE OPERATION APX6500	\$1,500.00	27%	\$1,095.00	\$6,570.00
6	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	27%	\$219.00	\$1,314.00
6	W947	ADD: ASTRO 25 INTEGRATED VOICE & DATA	\$250.00	27%	\$182.50	\$1,095.00
6	GA00580	ADD: TDMA OPERATION	\$450.00	27%	\$328.50	\$1,971.00
6	L999	ADD: FULL FP W/05/KEYPAD/CLOCK/VU	\$789.00	27%	\$575.97	\$3,455.82
6	G90	ADD: NO MICROPHONE NEEDED	\$0.00	27%	\$0.00	\$0.00
6	CA01598	ADD: AC LINE CORD US	\$0.00	27%	\$0.00	\$0.00
6	G78	ADD: 3 YEAR SERVICE FROM THE START LITE	\$168.00	27%	\$122.64	\$735.84
6	HKN6243A	APX CONSOLETTTE WALL MOUNT BRACKET KIT	\$60.00	27%	\$43.80	\$262.80
6	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$438.00
Sub Total			\$8,686.00		\$6,340.78	\$38,044.68

Notes: Other types/styles of control heads are available, such as:

- 02, 03, 07, 09 control heads.
- Multi-control head options.
- Motorcycle radio options.
- Siren/light control heads.



**Table 1-35: APX 900 Model xx—Portable Radio
Public Works**

Qty	Model Number	APX900 Model XX, 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Belt Clip	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
17	H92UCF9P W6 N	APX 900 7/800 MHZ MODEL 2 PORTABLE	\$1,597.00	27%	\$1,165.81	\$19,818.77
17	QA02756	ENH: 3600 OR 9600 TRUNKING BAUD SIN	\$1,570.00	27%	\$1,146.10	\$19,483.70
17	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
17	INCLUDED	MISSION CRITICAL BLUETOOTH	NC	0%	NC	NC
17	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
17	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$1,241.00
17	H885BK	ADD: 3 YEAR SERVICE FROM THE START LITE	\$90.00	0%	\$90.00	\$1,530.00
17	QA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$5,584.50
Sub Total (JO CO STD Package)			\$3,807.00		\$2,803.41	\$47,657.97
Accessories						
4	NNTN8128	IMPRES LIION BATTERY; 1900 MAH	\$102.00	27%	\$74.46	\$297.84
7	PMPN4174 A	SINGLE UNIT IMPRES DESK TOP CHARGER	\$69.25	27%	\$50.55	\$353.87
2	WPLN4219	MULTI-UNIT CHARGER W/6 DISPLAYS	\$715.00	27%	\$521.95	\$1,043.90
Sub Total - Accessories					\$646.96	\$1,695.61
Note: Accessories are at 27% discount when purchased with radio.						
If purchased separately, only a 19% discount applies.						

**Table 1-36: APX 1500 Mobile Radio (Dash Mount)
Public Works**

Qty	Model Number	APX1500 7/800 MHZ Mid Power Mobile - Dash Mount III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
39	M36URS9P W1N	APX1500 7/800	\$1,564.00	27%	\$1,141.72	\$44,527.08
39	GA01339	ADD: SW P25 TRUNKING	\$1,070.00	27%	\$781.10	\$30,462.90
39	GA00804	ADD: APX O2 CONTROL HEAD (Grey)	\$492.00	27%	\$359.16	\$14,007.24

Qty	Model Number	APX1500 7/800 MHZ Mid Power Mobile - Dash Mount III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
39	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
39	G66	ADD: DASH MOUNT	\$125.00	27%	\$91.25	\$3,558.75
39	G174	ADD: ANT 3DB LOW-PROFILE 762-870	\$43.00	27%	\$31.39	\$1,224.21
39	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$2,049.84
39	G142	ADD: NO SPEAKER NEEDED	\$0.00	27%	\$0.00	\$0.00
39	G24	ADD: 3 YEAR SERVICE FROM THE START LITE	\$131.00	0%	\$131.00	\$5,109.00
39	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
39	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
39	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$2,847.00
39	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$12,811.50
39	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$4,270.50
Sub Total (JO CO STD Package)			\$4,197.00		\$3,099.18	\$120,868.02

Notes:

- This radio is only available as a dash mount radio.
- This radio supports single key ADP encryption.
- This radio "does not" support AES or DES.

**Table 1-37: APX 1500 Mobile Radio (Control Station)
Public Works**

Qty	Model Number	APX1500 7/800 MHZ Mid Power Mobile - Control Station With Power Supply, Desk Tray And Desk Microphone No Antenna Quoted - See Separate Proposal	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
2	M36URS9P W1N	APX1500 7/800	\$1,564.00	27%	\$1,141.72	\$2,283.44
2	GA01339	ADD: SW P25 TRUNKING	\$1,070.00	27%	\$781.10	\$1,562.20
2	GA00804	ADD: APX O2 CONTROL HEAD (Grey)	\$492.00	27%	\$359.16	\$718.32
2	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
2	G66	ADD: DASH MOUNT	\$125.00	27%	\$91.25	\$182.50
2	G89	ADD: NO ANTENNA	\$0.00	27%	\$0.00	\$0.00



Qty	Model Number	APX1500 7/800 MHZ Mid Power Mobile - Control Station With Power Supply, Desk Tray And Desk Microphone No Antenna Quoted - See Separate Proposal	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
2	W382	ADD: DESK MICROPHONE	\$169.00	27%	\$123.37	\$246.74
2	G142	ADD: NO SPEAKER NEEDED	\$0.00	27%	\$0.00	\$0.00
2	G91	ADD: CONTROL STATION POWER SUPPLY	\$269.00	27%	\$196.37	\$392.74
2	W665	ADD: CONTROL STATION OPERATION	\$70.00	27%	\$51.10	\$102.20
2	G24	ADD: 3 YEAR SERVICE FROM THE START LITE	\$131.00	0%	\$131.00	\$262.00
2	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
2	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
2	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$146.00
2	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$657.00
2	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$219.00
Sub Total (JO CO STD Package)			\$4,590.00		\$3,386.07	\$6,772.14
Note: Pricing DOES NOT include programming or installation services.						

**Table 1-38: APX 900 Model xx—Portable Radio
Water Department**

Qty	Model Number	APX900 Model XX, 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Belt Clip	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
11	H92UCF9P W6 N	APX 900 7/800 MHZ MODEL 2 PORTABLE	\$1,597.00	27%	\$1,165.81	\$12,823.91
11	QA02756	ENH: 3600 OR 9600 TRUNKING BAUD SIN	\$1,570.00	27%	\$1,146.10	\$12,607.10
11	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
11	INCLUDED	MISSION CRITICAL BLUETOOTH	NC	0%	NC	NC
11	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
11	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$803.00
11	H885BK	ADD: 3 YEAR SERVICE FROM THE START LITE	\$90.00	0%	\$90.00	\$990.00
11	QA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$3,613.50

Qty	Model Number	APX900 Model XX, 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Belt Clip	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
Sub Total (JO CO STD Package)			\$3,807.00		\$2,803.41	\$30,837.51
Accessories						
4	NNTN8128	IMPRES LIION BATTERY; 1900 MAH	\$102.00	27%	\$74.46	\$297.84
2	WPLN4219	MULTI-UNIT CHARGER W/6 DISPLAYS	\$715.00	27%	\$521.95	\$1,043.90
0	PMPN4174 A	SINGLE UNIT IMPRES DESK TOP CHARGER	\$69.25	27%	\$50.55	\$0.00
Sub Total - Accessories					\$646.96	\$1,341.74
Note: Accessories are at 27% discount when purchased with radio.						
If purchased separately, only a 19% discount applies.						



**Table 1-39: APX 1500 Mobile Radio (Dash Mount)
Water Department**

Qty	Model Number	APX1500 7/800 MHZ Mid Power Mobile - Dash Mount III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
35	M36URS9P W1N	APX1500 7/800	\$1,564.00	27%	\$1,141.72	\$39,960.20
35	GA01339	ADD: SW P25 TRUNKING	\$1,070.00	27%	\$781.10	\$27,338.50
35	GA00804	ADD: APX O2 CONTROL HEAD (Grey)	\$492.00	27%	\$359.16	\$12,570.60
35	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
35	G66	ADD: DASH MOUNT	\$125.00	27%	\$91.25	\$3,193.75
35	G174	ADD: ANT 3DB LOW-PROFILE 762-870	\$43.00	27%	\$31.39	\$1,098.65
35	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$1,839.60
35	G142	ADD: NO SPEAKER NEEDED	\$0.00	27%	\$0.00	\$0.00
35	G24	ADD: 3 YEAR SERVICE FROM THE START LITE	\$131.00	0%	\$131.00	\$4,585.00
35	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
35	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
35	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$2,555.00
35	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$11,497.50
35	QA03399	ENHANCED DATA	\$150.00	27%	\$109.50	\$3,832.50
Sub Total (JO CO STD Package)			\$4,197.00		\$3,099.18	\$108,471.30

Notes:

- This radio is only available as a dash mount radio.
- This radio supports single key ADP encryption.
- This radio "does not" support AES or DES.



**Table 1-40: APX 7500 Console Radio & Desksets
City of Lee's Summit Water Department**

Qty	Model Number	APX7500 Console Radio (Dual Band 7-800/UHF) with Desksets	DNUP	Extended DNUP	DIS C	JO KS Contract Price	Extended JO KS Contract Price
1	L30TSS9P W1AN	APX CONSOLETTA DUAL BAND	\$4,554.00	\$4,554.00	27%	\$3,324.42	\$3,324.42
1	GA00244A A	ADD: 7/800 MHZ PRIMARY BAND	\$-	\$-	27%	\$0.00	\$0.00
1	GA00346A A	ADD: UHF R2 MP SECONDARY BAND	\$400.00	\$400.00	27%	\$292.00	\$292.00
1	GA00579A A	ADD: ENABLE DUAL BAND OPERATION	\$600.00	\$600.00	27%	\$438.00	\$438.00
1	G806BE	ADD: ASTRO DIGITAL CAI OPERATION	\$515.00	\$515.00	27%	\$375.95	\$375.95
1	G51AT	ENH: SMARTZONE OPERATION APX	\$1,500.00	\$1,500.00	27%	\$1,095.00	\$1,095.00
1	G361AH	ADD: P25 TRUNKING SOFTWARE	\$300.00	\$300.00	27%	\$219.00	\$219.00
1	G996AS	ENH: OVER THE AIR PROVISIONING	\$100.00	\$100.00	27%	\$73.00	\$73.00
1	GA00580A A	ADD: TDMA OPERATION	\$450.00	\$450.00	27%	\$328.50	\$328.50
1	L999AB	ADD: FULL FP W/05KEYPAD/CLOCK/VU	\$789.00	\$789.00	27%	\$575.97	\$575.97
1	CA01598A B	ADD: AC LINE CORD US	\$0.00	\$-	27%	\$0.00	\$0.00
1	G78	ADD: 3 YEAR SERVICE FROM THE START LITE	\$168.00	\$168.00	0%	\$168.00	\$168.00
Sub Total - Console				\$9,376.00		\$6,889.84	\$6,889.84
Deskset(s); Total of Three (3)							
3	F2380A	MCD 5000 DESKSET	\$1,500.00	\$4,500.00	15%	\$1,275.00	\$3,825.00
1	F7979A	MCD 5000 DESKSET RADIO GATEWAY UNIT (RGU)	\$1,500.00	\$1,500.00	15%	\$1,275.00	\$1,275.00
1	B1943	MCD 5000 LICENSING	\$-	\$-	15%	\$0.00	\$0.00

Qty	Model Number	APX7500 Consolette Radio (Dual Band 7-800/UHF) with Desksets	DNUP	Extended DNUP	DIS C	JO KS Contract Price	Extended JO KS Contract Price
1	FVN5847A	MCD 5000 DESKSET SYSTEM CONFIG TOOL	\$250.00	\$250.00	15%	\$212.50	\$212.50
1	FKN8690A	CABLE - MCD 5000 RGU TO ASTRO CONSOLETT W9 DIRECT CONNECT	\$100.00	\$100.00	15%	\$85.00	\$85.00
4	FHN7469A	MCD 5000 DESKSET/RGU, POWER SUPPLY WITH USA POWER CORD	\$100.00	\$400.00	15%	\$85.00	\$340.00
Sub Total - Desk Sets				\$6,750.00			\$5,737.50
Net Total - Consolette & Desksets				\$16,126.00			\$12,627.34
Option: Add One (1) Additional Desk Set							
1	F2380A	MCD 5000 DESKSET	\$1,500.00	\$1,500.00	15%	\$1,275.00	\$1,275.00
1	FHN7469A	MCD 5000 DESKSET/RGU, POWER SUPPLY WITH USA POWER CORD	\$100.00	\$100.00	15%	\$85.00	\$85.00
Option Total - Add One (1) Deskset:				\$1,600.00			\$1,360.00

**Table 1-41: APX 900 Model xx—Portable Radio
Airport**

Qty	Model Number	APX900 Model XX, 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Belt Clip	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
10	H92UCF9P W6 N	APX 900 7/800 MHZ MODEL 2 PORTABLE	\$1,597.00	27%	\$1,165.81	\$11,658.10
10	QA02756	ENH: 3600 OR 9600 TRUNKING BAUD SIN	\$1,570.00	27%	\$1,146.10	\$11,461.00
10	INCLUDED	INTERNAL GPS ACTIVATION	NC	0%	NC	NC
10	INCLUDED	MISSION CRITICAL BLUETOOTH	NC	0%	NC	NC
10	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
10	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$730.00
10	H885BK	ADD: 3 YEAR SERVICE FROM THE START LITE	\$90.00	0%	\$90.00	\$900.00
10	QA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$3,285.00
Sub Total (JO CO STD Package)			\$3,807.00		\$2,803.41	\$28,034.10

Qty	Model Number	APX900 Model XX, 7/800 MHZ - Portable Radio Includes: Radio, Antenna, Battery, Belt Clip	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
Accessories						
3	NNTN8128	IMPRES LIION BATTERY; 1900 MAH	\$102.00	27%	\$74.46	\$223.38
1	WPLN4219	MULTI-UNIT CHARGER W/6 DISPLAYS	\$715.00	27%	\$521.95	\$521.95
0	PMPN4174 A	SINGLE UNIT IMPRES DESK TOP CHARGER	\$69.25	27%	\$50.55	\$0.00
Sub Total - Accessories					\$646.96	\$745.33
Note: Accessories are at 27% discount when purchased with radio.						
- If purchased separately, only a 19% discount applies.						
- Pricing DOES NOT include programming services.						

**Table 1-42: APX 4500 Mobile Radio (Remote Mount)
Airport**

Qty	Model Number	APX4500 7/800 MHZ Mid Power Mobile - Remote III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
4	M22URS9 PW1 N	APX4500 7/800	\$1,564.00	27%	\$1,141.72	\$4,566.88
4	QA02756	ADD: 3600 OR 9600 TRUNKING BAUD SINGLE SYSTEM	\$1,570.00	27%	\$1,146.10	\$4,584.40
4	GA00804	ADD: APX O2 CONTROL HEAD (Grey)	\$492.00	27%	\$359.16	\$1,436.64
4	G444	ADD: APX CONTROL HEAD SOFTWARE	\$-	27%	\$0.00	\$0.00
4	G67	ADD: REMOTE MOUNT	\$29.00	27%	\$216.81	\$867.24
4	G174	ADD: ANT 3DB LOW-PROFILE 762-870	\$43.00	27%	\$31.39	\$125.56
4	W22	ADD: PALM MICROPHONE	\$72.00	27%	\$52.56	\$210.24
4	G142	ADD: NO SPEAKER NEEDED	\$0.00	27%	\$0.00	\$0.00
4	G24	ADD: 3 YEAR SERVICE FROM THE START LITE	\$131.00	0%	\$131.00	\$524.00
4	INCLUDE D	INTERNAL GPS ACTIVATION	NC	0%	NC	NC



Qty	Model Number	APX4500 7/800 MHZ Mid Power Mobile - Remote III	DNUP	DISC	JO KS Contract Price	Extended JO KS Contract Price
4	INCLUDED	IV&D PACKET DATA	NC	0%	NC	NC
4	G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	27%	\$73.00	\$292.00
4	GA00580	TDMA OPERATION	\$450.00	27%	\$328.50	\$1,314.00
4	QA03399	ENHANCED DATA		\$150.00	27%	\$109.50
Sub Total (JO CO STD Package)			\$4,869.00		\$3,589.74	\$14,358.96
Note: Pricing DOES NOT include programming or installation services.						

Notes:

- This radio is only available as a dash mount radio.
- This radio supports single key ADP encryption.
- This radio "does not" support AES or DES.



Exhibit C-3
Statement of Work

1.6 STATEMENT OF WORK

Motorola Solutions is proposing to Lee's Summit, Missouri the installation and configuration of the following equipment at the specified locations.

Table 1-43: Lee's Summit Equipment Installation/Configuration

Site Name	Major Equipment
RF Equipment	One 8 channel Simulcast Sub System with 4 RF subsites. With Microwave backhaul connectivity.
Dispatch	Police Department 8 MCC7500 console positions Fire Department 6 MCC7500 console position

The document delineates the general responsibilities between Motorola Solutions and Lee's Summit as agreed to by contract.

1.6.1 Overview

This Statement of Work (SOW) describes the deliverables to be furnished to Lee's Summit. The tasks described herein will be performed to implement the solution described in the System Description. It describes the actual work involved in installation, identifies the installation standards to be followed, and clarifies the responsibilities for both Motorola Solutions and Customer during the project implementation.

This SOW was developed to meet Lee's Summit need for P25 radio system solution, which is further described in the System Description. This SOW provides the understanding of the work required by both parties to ensure a successful project implementation. In particular, Motorola Solutions has made assumptions regarding the project. Should any of the information change, a revision to the SOW and associated pricing will be required. It is understood that this SOW is a working document, and that it will be revised as needed to incorporate any changes associated with contract negotiations, Detailed Design Review (DDR), and any other change orders that may occur during the execution of the project.

1.6.2 Assumptions

Assumptions have been listed below for review. Should our assumptions be deemed incorrect or not agreeable to Lee's Summit, a revised proposal with the necessary changes and adjusted costs may be required:

- The existing Microwave equipment at 68th and Booth and Lee's Summit PD will be used for the connection into the MARRS radio system.
- There is bandwidth available for the Lee's Summit RF simulcast, PD Dispatch, and FD Dispatch back to North Patrol via 68th and Booth, and Woods Chapel MARRS Tower.
- There is an agreement for connectivity to thru the microwave system between Lee's Summit and KCMO, Independence and/or MARC for connection into the North Patrol system core.
- If, for any reason, any of the proposed sites cannot be utilized due to reasons beyond Motorola Solutions' control, the costs associated with site changes or delays including, but not limited to, re-engineering, frequency re-licensing, site zoning, site permitting, schedule delays, site abnormalities, re-mobilization, etc., will be paid for by the Customer and documented through the change order process.
- All work is to be performed during normal work hours, Monday through Friday.

1.6.3 Motorola Solutions Responsibilities

Motorola Solutions' general responsibilities include the following:

- Conduct project kickoff meeting with Lee's Summit to review project design and finalize requirements.
- Motorola Solutions will provide FCC coordination for microwave and RF based on 800MHz available spectrum to include coordination fees.
- Provide a Project Program Manager that is mutually agreed upon.
- Review the System Design, Statement of Work, Project Schedule, and Acceptance Test Plans, and update the contract documents accordingly.
- Create and discuss the proposed Cutover Plan and methods to document a detailed procedure.
 - Plan shall cover proposed cutover timeline.
 - Plan shall cover procedures, user group migration, and fall back plan.
 - The new equipment will be installed in parallel with the existing system.
- Schedule the implementation in agreement with Lee's Summit.
- Inventory the Motorola Solutions supplied equipment described in the system description and the equipment list.
- Perform the installation and programming of the Motorola Solutions supplied equipment described in the system description and the equipment list.
- Perform the installation of the Eventide Logging Equipment.
- Perform the installation of the microwave link backhaul connectivity. Verify microwave backhaul performance and reliability meet design specifications.
- Provide and test required system interconnections including the network connections from the operator positions to the equipment room.
- Connect the equipment to the Lee's Summit-supplied, previously identified circuits.
- Connect the appropriate equipment to Lee's Summit-supplied ground system in accordance with Motorola Solutions' R56 Site Installation Standards.

- Perform the console programming, based on the console templates jointly developed by Lee's Summit and Motorola Solutions.
- Perform subscriber programming and installation.
- Work with Lee's Summit and MARRS to develop the fleetmap for the Lee's Summit subscribers.
- Coordinate the activities of all Motorola Solutions subcontractors under this contract.
- Administer safe work procedures for installation.
- Define electrical requirements for equipment to be installed in the Customer-provided facilities.
- Define heat load for equipment to be installed in the Customer-provided facilities.
- Provide Lee's Summit with the appropriate system interconnect specifications.
- Test features and functionality to ensure they are in accordance with manufacturers' specifications.
- Integration into MARRS (Metropolitan Area Regional Radio System).
- Optimization and testing with customer to confirm operation using existing configurations.
- Provide a dedicated delivery point, such as a warehouse, for receipt, inventory and storage of equipment prior to delivery to the site(s).
- Motorola Solutions has included the necessary site improvements to follow the R56 guidelines.
- Site/location upgrades or modifications are included in this project to follow R56 guidelines and for the installation of the equipment listed in the System Description.
- Approved Local, State, or Federal permits as may be required for the installation and operation of the proposed equipment are the responsibility of the Customer.
- Motorola Solutions has included licensing and permit fees required for project implementation.
- Motorola Solutions has included UPS/backup power for console, associated equipment and backhaul connectivity equipment.
- Motorola Solutions has included the necessary HVAC, grounding, lighting, cable routing, and surge protection (also, among existing and Motorola Solutions-provided equipment) based upon Motorola Solutions' "Standards and Guidelines for Communication Sites" (R56). Ceiling (minimum 9 feet) and cable tray heights [minimum eight feet] in the equipment rooms in order to accommodate the equipment racks.
- Motorola Solutions has included the necessary upgrades to the existing sites grounding systems to meet Motorola Solutions' "Standards and Guidelines for Communication Sites" (R56) and supply a single point system ground, of five ohms or less, to be used on all FNE supplied under the Contract. Supply grounding tie point within 10 feet from the Motorola Solutions-supplied equipment.
- If any major task as contractually described fails, repeat that particular task after Motorola Solutions determines that corrective action has been taken.
- Document all issues that arise during testing.
- Document the results of the acceptance tests and present to Lee's Summit for review.
- Resolve any punchlist items before project completion.



1.6.4 Lee's Summit Responsibilities

Lee's Summit will assume responsibility for the installation and performance of all other equipment and work necessary for completion of this project that is not provided by Motorola Solutions. Lee's Summit's general responsibilities include the following:

- Assign a Project Manager, approved by the City as the single point of contact responsible for Customer signed approvals.
- Assign other resources necessary to ensure completion of project tasks for which the Customer is responsible. Coordinate the activities of all Lee's Summit's vendors or other contractors.
- Attend and participate in project meetings and reviews.
- Provide ongoing communication, as applicable, with users regarding the project and schedule.
- Work with Motorola Solutions to develop and review the console template.
- Unit ID's for the operator positions.
- Provide desk space and console furniture, as needed for the console operator equipment at the Lee's Summit–provided facilities and the backroom equipment.
- Provide required documentation and information required for programming of the logging recorders prior to installation. This data will be captured in a standard electronic format using a template provided by Motorola Solutions. This will be used to define the specific logging track requirements and operational preferences.
- Any required system interconnections not specifically outlined here will be provided by the Customer. These may include dedicated phone circuits or other types of connectivity.
- Provide free and open access to all owned or leased sites of work. This includes but is not limited to, the following:
 - Provide escort at no charge, if escorts are required at any particular site. The availability of such escort shall not be unreasonably withheld.
 - Arrange site permission; provide keys to all the locks at sites and/or temporary identification cards should be issued to Motorola Solutions personnel if required for access to the sites.
 - Provide site access to all sites for Motorola Solutions personnel and Motorola Solutions' subcontractors for the purpose of installing, and optimizing Motorola Solutions provided equipment, and for testing of the equipment and system operation.
 - Provide any required parking permits to Motorola Solutions personnel for restricted access entry and/or parking.

1.6.5 Civil Work Statement of Work

1.6.5.1 Site Development at Woods Chapel Site

Woods Chapel WT–Install four new Welded tripod Mounts on the Water tower to support RF and MW loading. We will perform Interior modifications for RF and MW cabling.



Site Scope Summary

- Engineering services for site drawings and regulatory approvals–Included.
- Site acquisition services–Not included.
- Zoning Services–Not included.
- Existing tower to be used for antennas–205 ' Water Tank.

Motorola Solutions Responsibilities

Site Engineering

- Prepare site construction drawings, showing the layout of various new and existing site components.
- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Prepare record drawings of the site showing the as–built information.
- Perform National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work. Perform a cultural resource study, as needed to identify sensitive historical and archaeological monuments that might be impacted by propose construction.
- Provide a structural engineering analysis for antenna support structure, if necessary, to support the proposed the proposed equipment loads.
- Design multi antenna support platform to support proposed antennas and dishes.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.

Site Preparation

Provide one–time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola Solutions Solution’s control will result in additional costs.

Antenna and Transmission Line Installation

- Install four antennas for the RF system
- Supply and install four 6–foot side arms for antenna mounts
- Install two GPS antennas
- Install one tower top amplifier
- Install one 3–foot microwave dish
- Supply one 3–foot dish mount
- Install up to 200 linear feet of 3/8–inch transmission line
- Install up to 250 linear feet of 1/2–inch transmission line
- Install up to 500 linear feet of 7/8–inch transmission line
- Install up to 500 linear feet of 1–1/4–inch transmission line



- Perform sweep tests on transmission lines
- Perform alignment of microwave paths to ensure that the microwave dishes are optimally positioned
- Supply and install one ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition

Existing Facility Improvement Work

- Supply and install nine 20-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Supply and install one 40-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Supply and install one wall-mounted 10-pound CO2 fire extinguisher and one wall-mounted 20-pound ABC fire extinguisher.
- Supply and install "No smoking" EME signage at the site.
- Supply and install one eye wash station and one first aid kit.
- Supply one 2-ton air-conditioning unit with low ambient and compressor anti-cycle controls, return and supply grilles, integral 5kW resistance heat strips, and washable dust filters. (Due to the type of room internal to the water tower. A split system similar to a Mitsubishi Mr. Slim will probably be used. This will be determined after the DDR while evaluating the heat loads.)
- Install air-conditioning unit controls and wire to breaker panel located within 50 cable feet of the air-conditioning unit.

Miscellaneous Work

- Uni-strut cabling-3' attachment.
- Tripod mounting of proposed four antennas-Mount to support RF and MW loading Modify cable port on tank for cable run.
- Crane and Man basket-3 days on site.
- Tank top antenna install.
- Tank top doghouse Modification.

1.6.5.2 Site Development at Ranson Road Site

Ranson Road Water Tank-Install new mounts on the Water tower to support RF loading. Interior modifications for cabling and scaffolding to install the cabling.

Site Scope Summary

- Engineering services for site drawings and regulatory approvals-Included.
- Site acquisition services-Not included.
- Zoning Services-Not included.
- Existing tower to be used for antennas-205' Water Tank.

Motorola Solutions Responsibilities

Site Engineering

- Prepare site construction drawings, showing the layout of various new and existing site components.
- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Prepare record drawings of the site showing the as-built information.
- Perform National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility "may have a significant environmental impact" and thus require additional documentation, submittals, or work. Perform a cultural resource study, as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction.
- Provide a structural engineering analysis for antenna support structure, if necessary, to support the proposed the proposed equipment loads.
- Design multi antenna support platform to support proposed antennas and dishes.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.

Site Preparation

- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of our control will result in additional costs.

Antenna and Transmission Line Installation

- Install four antennas for the RF system
- Supply and install four 6-foot side arms for antenna mounts
- Install two GPS antennas
- Install one tower top amplifier
- Install up to 250 linear feet of 1/2-inch transmission line
- Install up to 500 linear feet of 7/8-inch transmission line
- Install up to 500 linear feet of 1-1/4-inch transmission line
- Perform sweep tests on transmission lines
- Perform alignment of each microwave path to ensure that the microwave dishes are optimally positioned
- Supply and install one ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition

Existing Facility Improvement Work

- Supply and install nine 20-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Supply and install one 40-amp breaker in the distribution panel and wire to outlets located on an average within 35 cable feet.



Miscellaneous Work

- Uni-strut cabling–3 ' attachment.
- Certified scaffold plan and scaffold install for in-tank transmission line run.
- Crane and Man basket–3 days on site.
- Tank top antenna install.
- Tank top doghouse Modification.

1.6.5.3 Site Development at Scherer Site

Scherer Water tank–Install new 12x10 BOSS Shelter, similar to a MAB, on second floor internal to water tower. Generator will be installed outside in fence compound. Install new mounts on the Water tower to support RF and MW loading. Motorola Solutions will perform Interior modifications for cabling, and scaffolding to install the cabling.

Site Scope Summary

- Engineering services for site drawings and regulatory approvals–Included.
- Site acquisition services–Not included.
- Zoning Services–Not included. Motorola Solutions will be providing a prefabricated building inside the existing compound fence. No zoning hearings are expected. Motorola Solutions will provide needed support for the city.
- New fenced compound/expansion size approx–20-foot x 34-foot. Fence will be around generator, wood fence will house generator and propane.
- New power run–150 feet, Electrical service type–Underground, 200–amp–120/240–volt, single–phase.
- New shelter size–12-foot x 10-foot BOSS Shelter designed to be assembled on-site
- New fuel tank size–500 gallons–, Type–Propane above–ground.
- New generator size–35 kW, Type–Outdoor.
- Existing tower to be used for antennas–205 ' Water Tank.

Motorola Solutions Responsibilities

Site Engineering

- Prepare site construction drawings, showing the layout of various new and existing site components.
- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Prepare record drawings of the site showing the as-built information.
- Perform National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work. Perform a cultural resource study, as needed to identify sensitive historical and archaeological monuments that might be impacted by propose construction.

- Provide a structural engineering analysis for antenna support structure, if necessary, to support the proposed the proposed equipment loads.
- Design multi antenna support platform to support proposed antennas and dishes.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.

Site Preparation

- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola Solutions Solution's control will result in additional costs.
- Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geo-textile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 1040 square feet).
- Provide silt fence around the compound to control soil erosion (not to exceed 108 linear feet).
- Supply and install wood fence around generator and propane tank.
- Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

Site Components Installation

- Construct one concrete slab for 500 gallon above-ground Liquid Propane (LP) fuel tank at 3000 psi with reinforcing steel necessary for foundations.
- Construct one foundation for the 35 kW generator with reinforcing steel necessary for foundations. Assumes Kohler LP vapor Outdoor unit.
- Supply and install one prefabricated BOSS shelter 12-foot x 10-foot on second floor of water tank.
- Supply and install one 500-gallon Liquid Propane (LP) fuel tank, fill it with fuel and connect it to the generator.
- Supply and install fuel tank monitors on the tanks to monitor low fuel in tanks and run alarm wiring to the building located within 50 feet of the tank.
- Conduct one three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Lee's Summit, MO. Assumes 5 ohms can be achieved, no additional grounding enhancement materials have been proposed.

Antenna and Transmission Line Installation

- Install four antennas for the RF system.
- Supply and install four 6-foot side arms for antenna mounts.
- Install two GPS antennas.
- Install one tower top amplifier.
- Install one 3-foot microwave dish.
- Supply one 3-foot dish mount.
- Install 200 linear feet of 3/8-inch transmission line.
- Install up to 250 linear feet of 1/2-inch transmission line.
- Install up to 500 linear feet of 7/8-inch transmission line.



- Install up to 500 linear feet of 1–1/4–inch transmission line.
- Perform sweep tests on transmission lines.
- Perform alignment of microwave path to ensure that the microwave dishes are optimally positioned.
- Supply and install three ground buss bars at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition.

Miscellaneous Work

- Uni–strut cabling–3' attachment
- Certified scaffold plan and scaffold install for in tank transmission line run
- Crane and Man basket–3 days on site
- Tank top antenna install
- Base of tank penetration and sleeve (three conduits)
- Tank top doghouse modification
- Upgrade fencing to match existing Black plastic coated on site today

1.6.5.4 Site Development at Clearwire Site

New Shelter in the existing American tower compound.

Site Scope Summary

- Engineering services for site drawings and regulatory approvals–Included.
- Site acquisition services–Not included.
- Zoning Services–Not included.
- New power run–50 feet, Electrical service type–Underground, 200–amp–120/240–volt, single–phase.
- New shelter size–12–foot x 10–foot. MSB concrete shelter.
- New fuel tank size–500 gallons–, Type–Propane above–ground.
- New Kohler generator size–40 kW, Type–Outdoor.

Motorola Solutions Responsibilities

Site Preparation

- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
- Provide one–time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of our control will result in additional costs.
- Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geo–textile fabric installation within the fenced in site compound area, and a 3–foot path around it (not to exceed 440 square feet).

Site Components Installation

- Construct one reinforced concrete foundation necessary for a 12–foot x 10–foot shelter.
- Construct one concrete slab for 500 gallon above–ground Liquid Propane (LP) fuel tank at 3000 psi with reinforcing steel necessary for foundations.
- Construct one foundation for the 35 kW generator with reinforcing steel necessary for foundations. Assumes Kohler LP vapor Outdoor unit.
- Supply and install one prefabricated concrete shelter 12–foot x 10–foot.



- Supply and install one 500–gallon Liquid Propane (LP) fuel tank, fill it with fuel and connect it to the generator.
- Supply and install fuel tank monitors on the tanks to monitor low fuel in tanks and run alarm wiring to the building located within 50 feet of the tank.
- Supply and install one 120/240–volt, 200–amp, single–phase meter pedestal and hookup for electrical service by the local utility.
- Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 50 cable feet of the shelter.
- Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola Solutions R56 standards.
- Conduct one three–point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Lee's Summit, MO. Assumes 5 ohms can be achieved, no additional grounding enhancement materials have been proposed.
- Motorola will configure a separate port on the 7705 routers at the Clearwire site and dispatch to route the IP camera traffic from Clearwire to the Lee's Summit camera management system.

Antenna and Transmission Line Installation

- Install four antennas for the RF system
- Install two GPS antennas
- Install one tower top amplifier
- Install two 3–foot microwave dishes
- Install 440 linear feet of 3/8–inch transmission line
- Install up to 450 linear feet of 1/2–inch transmission line
- Install up to 900 linear feet of 7/8–inch transmission line
- Install up to 860 linear feet of 1–1/4–inch transmission line
- Perform sweep tests on transmission lines
- Perform alignment of each of two microwave paths to ensure that the microwave dishes are optimally positioned

Existing Facility Improvement Work

Supply and install one 40–amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.

1.6.5.5 Site Development at Lee's Summit PD Site

Motorola Solutions to provide MW connectivity to the county system.

Site Scope Summary

- Engineering services for site drawings and regulatory approvals–Included.
- Site acquisition services–Not included.
- Zoning Services–Not included.
- Existing tower to be used for antennas–200 ' self supported Tower.



Motorola Solutions Responsibilities

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Prepare record drawings of the site showing the as-built information.
- Perform National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility "may have a significant environmental impact" and thus require additional documentation, submittals, or work.
- Provide a structural engineering analysis for antenna support structure, if necessary, to support the proposed antenna system. If the tower structure fails the analysis, the cost of any site relocation or modifications to the tower required to support the antenna system will be the responsibility of Lee's Summit, MO.

NOTE: This task does not include mapping, structural measurement survey, materials testing, geotechnical investigation, and/or other field investigation to acquire the data. If applicable, these tasks will be noted separately in the SOW.

- Provide tower climbing and tower mapping services for towers up to 350 feet to collect information about structural members and existing equipment.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.

Site Preparation

- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of our control will result in additional costs.

Antenna and Transmission Line Installation

- Install one 3-foot microwave dishes.
- Supply one 3-foot dish mount.
- Install 200 linear feet of 3/8-inch transmission line.
- Perform sweep tests on transmission lines.
- Perform alignment of microwave path to ensure that the microwave dishes are optimally positioned.

Existing Facility Improvement Work

- Supply and install one 40-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Motorola Solutions has included UPS/backup power for console, associated equipment and backhaul connectivity equipment.
- Motorola Solutions has included the necessary, grounding, lighting, cable routing, and surge protection (also, among existing and Motorola Solutions-provided equipment) based upon Motorola Solutions' "Standards and Guidelines for Communication Sites" (R56). Ceiling (minimum 9 feet) and cable tray heights [minimum eight feet] in the equipment rooms in order to accommodate the equipment racks.

1.6.5.6 Site Development at Lee's Summit FD Site

Motorola Solutions to provide MW connectivity to the county system.

Site Scope Summary

- Engineering services for site drawings and regulatory approvals–Included
- Site acquisition services–Not included
- Zoning Services–Not included
- Existing PTP connectivity to be used for dispatch site links to core

Motorola Solutions Responsibilities

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Prepare record drawings of the site showing the as-built information.
- Perform National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work.
- Provide a structural engineering analysis for antenna support structure, if necessary, to support the proposed antenna system. If the tower structure fails the analysis, the cost of any site relocation or modifications to the tower required to support the antenna system will be the responsibility of Lee's Summit, MO.

NOTE: This task does not include mapping, structural measurement survey, materials testing, geotechnical investigation, and/or other field investigation to acquire the data. If applicable, these tasks will be noted separately in the SOW.

- Provide tower climbing and tower mapping services for towers up to 350 feet to collect information about structural members and existing equipment.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.

Site Preparation

- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola Solutions Solution's control will result in additional costs.



Existing Facility Improvement Work

- Supply and install one 40–amp breaker in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Motorola Solutions has included UPS/backup power for console, associated equipment and backhaul connectivity equipment.
- Motorola Solutions has included the necessary grounding, lighting, cable routing, and surge protection (also, among existing and Motorola Solutions–provided equipment) based upon Motorola Solutions’ “Standards and Guidelines for Communication Sites” (R56). Ceiling (minimum 9 feet) and cable tray heights [minimum eight feet] in the equipment rooms in order to accommodate the equipment racks.

1.6.5.7 Customer Responsibilities

- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer’s responsibility.
- Provide upgrade to existing HVAC and space in room for new equipment.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola Solutions or its subcontractor(s). Should a re–submission be required, the Customer shall review and approve the re–submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fueling both during the construction/installation effort and on an on–going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola Solutions.
- Provide property deed or lease agreement, and boundary survey, along with existing as–built drawings of the site and site components to Motorola Solutions for conducting site engineering.
- Provide a right of entry letter from the site owner for Motorola Solutions to conduct field investigations.
- Maintain existing access road in order to provide clear and stable entry to the site for heavy–duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to maneuver under their own power, without assistance from other equipment.
- Arrange for space on the structure for installation of new antennas at the proposed heights on designated existing antenna–mounting structures.
- Provide as–built structural and foundation drawings of the structure and site location(s) along with geotechnical report(s) for Motorola Solutions to conduct a structural analysis for new equipment proposed.
- Provide support facilities and space for the antenna cables (cable ladder, entry ports, waveguide bridge) from the antenna to the equipment room.
- Pay for any upgrade of the antenna support structure necessary to accommodate the new antennas.
- Confirm that the existing generator is sufficient to support the new equipment and ancillary equipment loads. Load study may be required for non new shelter sites.
- If required, provide any physical improvements (walls, roofing, flooring, painting, etc.) necessary to house the equipment in the existing room.

Assumptions

- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel electrical, Telco] will be borne by the Customer or site owner.
- All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site will have adequate electrical service for the new shelter and tower. Utility transformer, transformer upgrades, line, or pole extensions have not been included.
- Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 30 days will be required for obtaining approved building permits from time of submission, and a maximum of 60 days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola Solutions will seek excusable delays rather than risk job site safety.
- Existing facility has a grounding system with a ground resistance of 10 ohms or less.
- Existing antenna support structures are structurally capable of supporting the new antenna, cables and ancillary equipment proposed and will not need to be removed or rebuilt at the existing site. The tower or supporting structure meets all applicable EIA/TIA-222 structural, foundation, ice, wind and twist and sway requirements. Motorola Solutions has not included any cost for structural or foundation upgrades to the antenna support structure.
- Extensive documentation (balloon tests, photo simulations, expert testimony etc.) to support zoning effort for existing structures is not required.
- Alarming at existing sites will be limited to new component installations and will have to be discussed and agreed to on a site-by-site basis Motorola Solutions has included in the project time to plan alarm configuration so that it is consistent among the sites.
- The site will have adequate room for installation of proposed equipment, based on applicable codes and Motorola Solutions Solution's R56 standards.
- A clear obstruction-free access exists from the antenna location to the equipment room.
- The floor can support the proposed new loading. Physical or structural improvements to the existing room will not be required.



1.6.5.8 Civil Work Completion Criteria for All Sites

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola Solutions approved changes) and approved by Lee's Summit, MO:
 - This shall be confirmed by contractor and reviewed with Motorola Solutions construction manager and project manager before inspections occur.
- Motorola Solutions site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola Solutions (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola Solutions inspections.

1.6.6 Project Schedule

A final project schedule will be developed based upon mutual agreement between Motorola Solutions and Lee's Summit at the Design Review. The dates for the installation and activation are highly dependent on the actual completion dates of tasks associated with R56 upgrades, installation, cabling and providing unobstructed cable routes. The specific and detailed scheduled will be determined during the Design Review.

1.6.7 Acceptance Test Plan

System Acceptance of the proposed dispatch consoles and associated equipment will occur upon successful completion of a Functional Acceptance Test Plan (FATP), which will test the function of all installed equipment to verify operation. Typical trunking features, such as Talkgroup Call and Patch Call, will be tested, as well as applicable failure scenarios for the dispatch equipment. The detailed FATP will be developed and finalized during the Design Review, as discussed in the Statement of Work.

1.6.8 Training Plan

1.6.8.1 Perform Training

Motorola Solutions Responsibilities

Finalize training schedules with Lee's Summit.

Provide remaining training as defined in the Training Plan.

Console Supervisor Training Plan

Table 1-44: Console Supervisor Training Course

Course Title	Target Audience	Sessions	Duration	Location	Date	Participants
MCC 7500 Console Operator, Admin 4 Training Consoles (Instructor-led)	Dispatch Supervisors	1 session	8 Hours	Lee's Summit Provided Classroom	Prior to cutover	Up to 8
MCC 7500 Operator Course Synopsis This course provides participants with an introduction to the dispatch console, its basic operation and tailored job aids which will be available for assistance in operation. Through facilitation and hands-on activities, the user learns how to perform common tasks associated with the console operation.						
MCC 7500 Admin Course Synopsis This course provides participants with the knowledge and skills to manage and utilize the MCC 7500 console administrator functions. Through facilitation and hands-on activities, the participant learns how to customize the console screens.						

Console Operator Training Plan

Table 1-45: Console Operator Training Courses

Course Title	Target Audience	Sessions	Duration	Location	Date	Participants
MCC 7500 Console Operator 4 Training consoles (Instructor-led)	Dispatch Operators	6 Sessions	4 Hous Per Session	Lee's Summit Provided Classroom	Prior to cutover	Up to 42
Operator Course Synopsis This course provides participants with an introduction to the dispatch console, its basic operation, and tailored job aids that will be available for assistance in operation. Through facilitation and hands-on activities, the user learns how to perform common tasks associated with the console operation. Trainers will also be taught how to use the tailored training aids to train staff.						



Radio User Train-the-Trainer Plan

Table 1-46: Radio User Train-the-Trainer Course

Course Title	Target Audience	Sessions	Duration	Location	Date	Participants
APX Portable and APX Mobile User Training Train-the-Trainer (Instructor-led)	Trainers	1 (8-hour sessions)	1 day	Lee's Summit Provided Classroom	Prior to training users	Up to 15
<p>Course Synopsis</p> <p>This course provides APX radio trainers with an introduction to their radio, its basic operation and tailored job aids available for assistance in operation. The learning experience is a mix of facilitation and hands-on activities to help users perform common tasks associated with their radio operation. Segmentation between user groups (i.e., Police, Fire/EMS, and Public Service) is encouraged to help focus instruction on the specific operational issues of the individual user group. This course is geared for customers who have an experienced dedicated training staff in their organization. It provides identified training personnel with the knowledge and practice applying training techniques that will enable them to successfully train their students. They will become proficient in discussing common tasks associated with the operation of the customer's radios.</p>						

Lee's Summit Responsibilities

- Provide adequately sized training room(s).
- Coordinate required student attendance at the scheduled class and time.

Completion Criteria

- All training classes completed.

1.6.8.2 Training Complete

- All training classes completed.
- Motorola Solutions and Lee's Summit memorialize the event by signing and dating a Training Completion milestone certificate.



Exhibit C-4

Acceptance Test Plan

1.7 COVERAGE ACCEPTANCE TESTING

1.7.1 Coverage Acceptance Test Plan (CATP) Overview

800 MHz P25 TDMA Trunked Simulcast

This Coverage Acceptance Test Plan (CATP) is designed to verify that the 800MHz Project 25 simulcast voice radio system provides 97% talk-in and talk-out Service Area Reliability (SAR) at a Delivered Audio Quality (DAQ) level equal to 3.4 or better to a portable radio equipped as follows:

- Portable radio in a swivel case worn at the HIP for both transmit and receive, $\frac{1}{4}$ wavelength antenna at 1 meter AGL in the city area of Lee's Summit.

Coverage Acceptance shall be dependent on successfully passing the Lee's Summit city limits further defined in Table 1-48.

The Service Area shall be defined as the political boundary of Lee's Summit, MO. The service area is defined for land only.

The CATP defines the coverage testing method and procedure, the coverage acceptance criterion, the test documentation, and the responsibilities of both Motorola Solutions and Lee's Summit, MO.

Coverage Acceptance Testing is based upon a coverage prediction that accurately represents the implemented infrastructure and parameters that are consistent with the contract agreements.

Subsequent sections define the coverage acceptance test configuration and test criteria.

4-Site Solution (Scherer Road Water Tower, Clearwire, Ranson Road Water Tower, and Wood's Chapel Water Tower)

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- Portable radio in a swivel case worn at the HIP for both transmit and receive, $\frac{1}{4}$ wavelength antenna at 1 meter AGL in the city limits of Lee's Summit.

1.7.1.1 CATP Definitions

Several definitions are needed to accurately describe the coverage acceptance test method and criteria. Where cited, these terms or methods are defined in TIA TSB 88.1-D or TSB-88.3-D.

1.7.1.2 Defined Test Area

The defined test area is the geographical area in which communications will be provided that meet or exceed the specified Channel Performance Criterion (CPC) at the specified reliability for the specified equipment configuration. The defined test areas for Lee's Summit will be:

Service Area defined as the political boundary of the city of Lee's Summit.

1. The service area is defined for land only.

For coverage testing, the defined test area will be divided into a grid pattern by Motorola Solutions to produce at least the number of uniformly sized test locations (or tiles) required by the Estimate of Proportions formula. The minimum number of test tiles required varies, from a hundred to many thousands, depending on the size of the defined test area, desired confidence in results, type of coverage test, and the predicted versus required reliability.

For the CATP for Lee's Summit, MO the grid size will be set to 0.10 miles x 0.10 miles. This results in approximately 3819 test tiles within the defined service area to be used.

1.7.1.3 Channel Performance Criterion (CPC)

The CPC is the specified minimum design performance level in a faded channel. For the digital P25 system and analog conventional system, the CPC is a Delivered Audio Quality (DAQ) equal to 3.4. The DAQ definitions are provided in Table 1-47.

Table 1-47: DAQ Definitions

DAQ	Subjective Performance Description
1	Unusable, speech present but unreadable.
2	Understandable with considerable effort. Frequent repetition due to noise/distortion.
3	Speech understandable with slight effort. Occasional repetition required due to noise/distortion.
3.4	Speech understandable with repetition only rarely required. Some noise/distortion.
4	Speech easily understood. Occasional noise/distortion.
4.5	Speech easily understood. Infrequent noise/distortion.
5	Speech easily understood.

The CPC pass/fail criterion is the faded performance threshold, plus any adjustments for antenna performance, external noise, and in-building or in-vehicle losses. {TSB-88.1-D, §5.4.2, Figure 5} The faded performance threshold for the specified CPC is determined using the receiver's static reference sensitivity adjusted by the projected CPC parameters for the applicable Modulation Type and DAQ as listed in the current version of TSB-88.1, Annex A, Table A-1.

1.7.1.4 Reliability

The Service Area reliability is the percentage of locations within the defined test areas that are predicted to meet or exceed the specified CPC. The Motorola Solutions map(s) indicate the Service Area(s) within which each system is predicted to provide at least the reliability of meeting or exceeding the CPC as stated in Table 1-48.

After all accessible tiles in the defined test area have been tested, the Service Area reliability will be determined by dividing the number of tiles tested that meet or exceed the CPC pass/fail criterion by the total number of tiles tested for each system. {TSB-88.3-D, §5.1, equation 1}

1.7.1.5 Direction(s) of Test

Coverage acceptance testing will be performed for both inbound and outbound direction to a test receiver in a vehicle. Talk-out is the path from the fixed equipment outward to the portable radios. Talk-in is the path from the portable radios inward to the fixed equipment. Talk-out and Talk-in will be tested independently, and both are required to pass the test.

1.7.1.6 Equipment Configurations

This section defines the equipment configurations and infrastructure design parameters upon which the coverage guarantee and the coverage acceptance test are based. The subscriber equipment configurations are defined in Table 1-48, and include user equipment, outdoor/in-building definition, defined test area, number of test tiles, reliability, and CPC.

The infrastructure design parameters are defined in Table 1-49 and include site names, site locations, and antenna system parameters. If the implemented system equipment configuration and/or infrastructure design parameters vary from these configurations and/or parameters, a revised coverage map will be used to define the test configuration and potential areas from which test tiles will be included in the revised coverage acceptance test.

Coverage testing will be conducted with equipment installed per the configurations in Table 1-48.

Prior to the start of the CATP, Motorola Solutions shall provide a calibrated service monitor that Lee's Summit and Motorola Solutions will use to establish that the test radio(s) is (are) reporting accurate data regarding the received signal strength of the system for the informational only measurements, and the voice subjective test radios are properly aligned.

Table 1-48: Lee's Summit, MO Coverage Acceptance Test Summary

User Equipment	Outdoor/In-Building	Service Area	Number of Test Tiles	Reliability	CPC	CPC Pass/Fail
800 MHz APX Portable with quarter-wave antenna in Swivel Case with Remote Speaker Microphone for Transmit and Receive	In 20dB Building Loss b/w I470/US50/US291, 16dB remaining areas in service area	City limits of Lee's Summit, Unity Village, MO	~3819 (0.10 x 0.10 mile test tiles)	97%	DAQ-3.4	Subjective DAQ Inbound and Outbound

Table 1-49: Lee's Summit, MO Infrastructure Design Parameters

Site Name	Latitude	Longitude	Transmit Antenna System			Receive Antenna System		
			Mount Height	Antenna Model	TX ERP (dBm)	Mount Height	Antenna Model	Effective Faded Sensitivity (dBm)
Lee's Summit 800MHz P25 Simulcast								
Scherer Road	38-53-27.27 N	94-25-12.5 W	200 ft	Sinclair-SC412-HF2LDF	54.42	200 ft	Sinclair-SC412-HF2LDF	-126.57
Clearwire	38-56-1.2 N	94-25-2.0 W	320 ft	Sinclair-SC412-HF2LDF	56.40	400 ft	Sinclair-SC412-HF2LDF	-126.21
Ranson Road	38-53-43.7 N	94-20-23.7 W	200 ft	Sinclair-SC412-HF2LDF	54.42	200 ft	Sinclair-SC412-HF2LDF	-126.57
Wood's Chapel	38-59-6.36 N	94-21-3.66 W	200 ft	Sinclair-SC412-HF2LDF	54.92	200 ft	Sinclair-SC412-HF2LDF	-126.57

1.7.1.7 CPC Pass/Fail Criterion for a Test Tile

A Pass/Fail determination shall be made and recorded separately for the inbound and outbound call at each test location. In each call direction, the test call shall be deemed to Pass if it meets or exceeds the Lee's Summit requirement for DAQ 3.4 voice quality in the majority opinion of evaluation team, otherwise it shall be deemed to Fail. The test location results shall apply to the entire grid cell in which it is located.

1.7.1.8 Required Number of Test Tiles in the Defined Test Area

The method used to test coverage is a statistical sampling of the defined test area to verify that the CPC is met or exceeded at the required reliability for each of the defined equipment configurations. It is impossible to verify every point within a defined test area, because there are infinite points; therefore, coverage reliability will be verified by sampling a statistically significant number of randomly selected locations, quasi-uniformly distributed throughout the defined test area. There is one test sample per test tile.

Coverage acceptance testing will be performed in the defined test area as indicated on Motorola Solutions-provided maps. To verify that the reliability requirement is met, the defined test area indicated on our maps will be divided into uniformly sized test tiles, with at least the number of test tiles indicated in Table 1-48. The number of test tiles indicated in Table 1-48 is at least the minimum required by the Estimate of Proportions formula.

Per TSB-88 the stated minimum outdoor tile size is 100 by 100 wavelengths; however, the minimum practical test tile size is typically about 400 by 400 meters (about 0.25 by 0.25 miles). The minimum practical tile size for any informational only sampling for a system is determined by the distance traveled at the speed of the test vehicle while sampling, GPS error margin, and availability of road access within very small test tiles. A related consideration is the time, resources, and cost involved in testing very large numbers of very small tiles. For a given defined test area, all test tiles must be of equal size. The maximum test tile size is 2 by 2 km (1.24 by 1.24 miles) {TSB-88}. In some wide-area systems, this constraint on maximum tile size may dictate a greater number of test tiles than the minimum number required by the Estimate of Proportions formula.

For the CATP for Lee's Summit, MO the total number of test grids will be approximately 3819 to be used for 800 MHz voice coverage testing which shall result in each grid being 0.10 mile x 0.10 mile as defined in Table 1-48.

No acceptance testing will be performed in locations outside the defined test area as indicated on the Motorola Solutions-provided maps. Motorola Solutions and Lee's Summit, MO may agree to perform "information only" tests in locations outside the defined test area; however, these "information only" test results will not be used for coverage acceptance. Any "information only" test locations must be defined before starting the test. If the added locations require significant additional time and resources to test, a change order will be required and Motorola Solutions may charge Lee's Summit, MO on a time-and-materials basis.

1.7.1.9 Test Location in Each Tile

The intension for the Subjective testing is to travel to the near center of each grid to perform all Subjective Tests, within reason.

Using Voyager, the actual test location within each test tile will be randomly selected by the test vehicle crossing into the tile at an arbitrary point, with an arbitrary speed and direction. If the selected test location is in a shielded area such as a tunnel or underground parking garage, the data from that test location must be eliminated from the report.

1.7.1.10 CPC Measurements in Each Tile

In each test tile, a 800MHz voice test exchange will be initiated using predetermined text typical of a common voice exchange between the fixed location and the portable location. The person conducting the test at the portable will be moving at a typical speed for the surrounding conditions.

In each test tile after 800MHz subjective test is completed using predetermined text typical of a common voice exchange between the fixed location and the portable location. The person conducting the test at the portable will be moving at a typical speed for the surrounding conditions.

1.7.1.11 Responsibilities and Preparation

This section identifies the responsibilities of Lee's Summit, MO and Motorola Solutions regarding requirements for equipment, personnel, and time during the coverage test.

Lee's Summit, MO will provide the following for the duration of the coverage test:

- Three team(s) each with two or more representatives designated by Lee's Summit, MO per team to evaluate and record the pass/fail result of each subjective audio transmission. Two teams will be in the field, and one team be stationed at the console. The required quantity of test participants shall be available a minimum of eight hours a day.
- Facility with one console for the fixed end subjective audio test.

Motorola Solutions will provide the following for the duration of the coverage test:

- Provide at least eight 800MHz APX radios, all equipped with remote speaker microphones and spare battery and chargers for the subjective tests.
- A minimum of two test vehicle(s) that is representative of the vehicles to be installed with radios, and will provide the driver(s).
- Three team(s) each with one fewer Motorola Solutions representative per team than those designated by Lee's Summit to navigate and to operate Voyager, operate the portable radio, and to evaluate and record the pass/fail result of each subjective audio transmission.
- One or more Motorola Solutions representatives to operate the fixed equipment, and to evaluate and record the pass/fail result of each subjective audio transmission.
- At least two Motorola Solutions Voyager coverage testing kits.

Before starting the test, Lee's Summit, MO and Motorola Solutions will agree upon the time frame for our submission of a report containing the coverage test results.

1.7.1.12 CATP Procedures

Subjective Delivered Audio Quality (DAQ) Testing (800 MHz)

The following procedure for subjective DAQ testing outdoors:

- A subjective listening test will be performed for coverage acceptance testing, to verify talk-out and talk-in DAQ performance of the system.
- Talk-out and talk-in will both be required to pass for a test tile to pass.
- A fixed dispatch location will be established. Prior to testing, Lee's Summit, MO and Motorola Solutions will agree upon a procedure to allow each audio transmission to be evaluated for approximately five seconds.
- The test participants will be divided into teams, each consisting of personnel from both Lee's Summit, MO and Motorola Solutions. Each team will have members that operate a portable radio in the field, and members that are stationed at the fixed dispatch location.
- To perform a statistically valid subjective DAQ test, a large group of people is required to ensure high confidence in the results. However, obtaining a large group of people for a subjective listening test is usually impractical; therefore, several (three to seven) people must be used at both the field and fixed dispatch locations. Since a group this small cannot provide statistically significant results, it is very important that the personnel participating in the subjective test be familiar with the sound of radio conversations. Before subjectively testing, all personnel who will evaluate audio quality must be "calibrated" by listening to examples of audio that pass and fail the subjective DAQ test.
- As the field test team(s) drive through the coverage area, test locations within each tile will be as close to the center of the grid as reasonably possible, the use of Voyager's GPS location indication shall assist in determining the official test location. Voyager will be used to log the talk-in and talk-out pass/fail result as well as any pertinent notes for the location.

- At each test location, a voice test exchange will be initiated using predetermined text typical of a common voice exchange between the fixed location and the portable location. The team conducting the test at the portable location will initiate the test call. Since DAQ-3.4 is defined as "Speech understandable with repetition only rarely required-Some Noise and Distortion"; if the initial test call is unsuccessful, the team will be allowed to move one time within a 5 ft x 5 ft square area to optimize signal performance. Retries shall be no more than 5% of the total test points, and will be annotated on the grading template.
- At each test location, each team member will listen to the audio transmissions, and will record his or her subjective pass/fail evaluation of the DAQ for the tile. Subjective pass/fail evaluation will be based on the DAQ descriptions in Table 1-47.
- The determination of whether each test passes or fails the required DAQ value will be the majority vote of all team members' pass/fail subjective evaluations for that location. An odd number of team members are suggested to avoid ties for the pass/fail majority vote.
- Team members stationed at the control point will evaluate the digital trunked simulcast talk-back audio quality of the transmissions from the test field unit(s) in the corresponding location. At each test location, the talk-out test transmission will be performed at the same location as the talk-back test transmission.

1.7.1.13 Mandatory Buildings DAQ Test

The CATP includes two-way DAQ voice testing in specified mandatory buildings. Voice testing within the buildings will be performed and scored per TIATSB-88-D methods and criteria. The following methodology will be utilized for testing of Mandatory Buildings. DAQ scoring for a given building will be performed by a Dispatch Team and Field Team. Buildings will be tested according to the loss values listed in the critical buildings list in this document. Any buildings measured above the building loss listed for that building will still be scored by the test team for informational and training information, but will be excluded from the test calculation.

Dispatch Team

The Dispatch Team will be located at a dispatch console position.

- Dispatcher: Lee's Summit representative who will perform outbound voice dispatch function and DAQ scoring.
- Motorola Solutions Monitor: Motorola Solutions representative will perform DAQ scoring.
- Lee's Summit Monitor: Lee's Summit representative. Performs DAQ scoring.

Field Team

The Field Team will conduct the in-building portable radio tests using a typical field radio worn at hip level. The field team will be staffed as follows:

- Radio Operator: Lee's Summit representative with radio training. Performs inbound voice test function and DAQ scoring.
- Motorola Solutions Monitor: Motorola Solutions representative. Performs DAQ scoring.
- Lee's Summit Monitor: Lee's Summit representative. Performs DAQ scoring.



Each member of the Dispatch Team will record a DAQ score for each field radio transmission (i.e. test point). The Dispatch Operator will also record a consensus score for the filed transmission based upon majority vote of the team members. Each member of the Field Team will record a DAQ score for each dispatch transmission. The Radio Operator will also record a consensus score for the dispatch transmission based upon majority vote of the team members. The consensus score will be utilized as the official score for that test point.

For all the mandatory buildings listed, the test will include a minimum of five test points on the lowest floor above ground level. Test points will include the four corners and the center of the floor. If all five two-way test points are scored at DAQ 3.4 or higher, the building will be declared as DAQ 3.4 compliant. If one or more of the two-way test points are scored below DAQ 3.4, additional testing will be performed.

Additional test points, if needed, will be evenly distributed throughout the lowest above ground floor, with no more than 100-foot spacing between test points. The additional tests shall include a minimum of 20 evenly-distributed test points. If 95% or more of the two-way test points are scored at DAQ 3.4 or higher, the building will be declared as DAQ 3.4 compliant. If less than 95% of the points are scored at DAQ 3.4 or higher, the tests will be repeated on the second floor above ground level with the same number and spacing of test points. If 95% of the total two-way test points (first and second floors combined) score at DAQ 3.4 or higher, the building shall be declared as DAQ 3.4 compliant. Otherwise, the building shall be declared as non-compliant.

BusinessName	StNo	StDir	StName	StSfx	LocType
Strasbourg Apartments	3	NW	O'Brien	Rd	Apartment
Sage Crossing Apartments	600	NE	Howard	Ave	Apartment
Summit Ridge Apartments	701	NE	Tudor	Rd	Apartment
The Lodge Apartments	600	SE	M-291	Hwy	Apartment
Pheasant Run Apartments	1102	NE	Independence	Ave	Apartment
New Longview Apartments	460	SW	Longview	Blvd	Apartment
The Fairways	3460	NE	Akin	Blvd	Apartment
Summit Point Apartments	504	NW	Chipman	Rd	Apartment
Summit Grove Senior Apartments	750	NE	Tudor	Rd	Apartment
Ashbrooke Apartments	524	SE	2nd	St	Apartment
The Charles Apartments	416	SE	3rd	St	Apartment
Crossroads of Town Centre Apartments	2200	NE	Town Centre	Blvd	Apartment
Summit Oak Apartments	812	SW	Mill	St	Apartment
Somerset Villa Apartments	133	SW	McClendon	Dr	Apartment
John Knox Village	400	NW	Murray	Rd	Apartment
Manor Homes of Arborwalk	1318	SW	Manor Lake	Dr	Apartment
Maple Estates (Formerly Country Meadows)	701	NE	Ridgeview	Dr	Apartment
Park Lane Apartments	817	NW	Park	Ln	Apartment
The Oaks Apartments	1403	SW	3rd	St	Apartment
John Calvin Manor Apartments	310	NW	Murray	Rd	Apartment
Robin Hills Apartments	607	SW	2nd	St	Apartment
Summit East Plaza Apartments	217	NE	Independence	Ave	Apartment
The Residences At New Longview Apartment	3301	SW	Kessler	Dr	Apartment
A. Zerega's Sons, Inc	200	NW	Victoria	Dr	Commercial/Office Building
Buckley Powder Co (Greenwood)	1109		2nd S	Ave	Commercial/Office Building
Family Golf Park	1501	E	US 40	Hwy	Commercial/Office Building
Frontier Justice	800	NE	Jones Industrial	Dr	Commercial/Office Building
Lafarge	600	SW	Jefferson	St	Commercial/Office Building
Mr. LongArm Inc (Greenwood)	400		Walnut	St	Commercial/Office Building
Summit Technology Campus	777	NW	Blue	Prky	Commercial/Office Building
Tingle	2615	NE	Hagan	Rd	Commercial/Office Building
Toys R Us	420	SE	Thompson	Dr	Commercial/Office Building
Space Center	5351	NW	Lees Summit	Rd	Commercial/Office Building
John Knox Pavilion	520	NW	Murray	Rd	Commercial/Office Building
Pavestone	601	NE	Pavestone	Dr	Commercial/Office Building
Polytainers	1400	NE	Douglas	St	Commercial/Office Building
Ralph Powell businesses from Strother to Woods Chapel	X	X	X	X	Commercial/Office Building
Summit Woods Shopping Center	1790	NW	Chipman	Rd	Department/Discount Store
Summit Fair Shopping Center	840	NW	Blue	Prky	Department/Discount Store
Wal-Mart (North)	1000	NE	Sam Walton	Ln	Department/Discount Store
Wal-Mart (South)	3410	SW	Market	St	Department/Discount Store
Home Depot	651	SE	Oldham	Pkwy	Department/Discount Store
Lee's Summit - City Hall	220	SE	Green	St	Government/Public Building
Lee's Summit - Fleet Division	1971	SE	Hamblen	Rd	Government/Public Building
Lee's Summit - Water Dept	1399	SW	Ward	Rd	Government/Public Building
Lee's Summit - Water Utilities	616	NE	Douglas	St	Government/Public Building
Harris Park Community Center	110	SW	Blue	Pkwy	Government/Public Building
Jackson County Parks & Recreation Dept	3310	NE	Rennau	Dr	Government/Public Building
Lee's Summit Airport	2751	NE	Douglas	St	Government/Public Building
Lee's Summit Animal Control	1991	SE	Hamblen	Rd	Government/Public Building
Lee's Summit - Public Works	1809	SE	Hamblen	Rd	Government/Public Building
Lee's Summit Fire Dept - HQ	207	SE	Douglas	St	Government/Public Building
Lee's Summit Fire Station - 2	2000	NE	Rice	Rd	Government/Public Building
Lee's Summit Fire Station - 3	210	SW	Pryor	Rd	Government/Public Building
Lee's Summit Fire Station - 4	404	NE	Woods Chapel	Rd	Government/Public Building
Lee's Summit Fire Station - 5	3650	SW	Windemere	Dr	Government/Public Building
Lee's Summit Fire Station - 6	101	NE	Blackwell	Rd	Government/Public Building
Lee's Summit Fire Station - 7	2150	SW	Scherer	Rd	Government/Public Building
Lee's Summit Police Dept	10	NE	Tudor	Rd	Government/Public Building
Legacy Park Community Center	901	NE	Bluestem	Dr	Government/Public Building
Tudor Road Pump Station	1700	NE	Tudor	Rd	Government/Public Building

Chipotle Meixcan Grill	900	NE	Columbus	St	Grocer/Restaurant
Chipotle Meixcan Grill	1716	NW	Chipman	Rd	Grocer/Restaurant
Pepper Jax Grill	1720	NW	Chipman	Rd	Grocer/Restaurant
Price Chopper - North	937	NE	Woods Chapel	Rd	Grocer/Restaurant
Price Chopper - South	251	SW	Greenwich	Dr	Grocer/Restaurant
Price Chopper - East	1600	SE	Blue	Prky	Grocer/Restaurant
Hy-Vee East	301	NE	Rice	Rd	Grocer/Restaurant
Hy-Vee West	310	SW	Ward	Rd	Grocer/Restaurant
Lee's Summit Family Care - Old LS Hospital	600	NW	Murray	Rd	Hospital
Saint Luke's East	100	NE	St. Luke's	Blvd	Hospital
Lee's Summit Medical Center	2100	SE	Blue	Prky	Hospital
America's Best Value Inn	1020	SE	Blue	Pkwy	Hotel/Motel/Etc.
Best Western Plus	4825	NE	Lakewood	Way	Hotel/Motel/Etc.
Comfort Inn	3701	NE	Ralph Powell	Rd	Hotel/Motel/Etc.
Comfort Inn	963	SE	Oldham	Pkwy	Hotel/Motel/Etc.
Fairfield Inn	1301	NE	Windsor	Dr	Hotel/Motel/Etc.
Hampton Inn	1751	NE	Douglas	St	Hotel/Motel/Etc.
Holiday Inn Express	1201	NW	Innovation	Pkwy	Hotel/Motel/Etc.
Super 8 Motel	607	SE	Oldham	Pkwy	Hotel/Motel/Etc.
Unity Village	1901	NW	Blue	Pkwy	Religious Institution
Abundant Life Church	304	SW	Persels	Rd	Religious Institution
Holy Spirit Parish	1800	SW	M-150	Hwy	Religious Institution
Woods Chapel Methodist	4725	NE	Lakewood	Way	Religious Institution
Hilltop Correctional School	301	NW	Gregory	Blvd	School - Alternative
Miller Park Center	600	SE	Miller	St	School - Alternative
Summit Ridge Academy	2620	SW	Ward	Rd	School - Alternative
Longview Community College	500	SW	Longview	Rd	School - College
Cedar Creek Elementary	2600	SW	3rd	St	School - Elementary
Chapel Lakes Elementary	3701	NE	Independence	Ave	School - Elementary
Highland Park Elementary	400	SE	Millstone	Ave	School - Elementary
Lee's Summit Elementary	110	SE	Green	St	School - Elementary
Longview Farms Elementary	1001	SW	Longview Park	Dr	School - Elementary
Meadow Lane Elementary	1421	NE	Independence	Ave	School - Elementary
Pleasant Lea Elementary	700	SW	Persels	Rd	School - Elementary
Prairie View Elementary	501	SE	Todd George	Pkwy	School - Elementary
Richardson Elementary	800	NE	Blackwell	Rd	School - Elementary
Sunset Valley Elementary	1850	SE	Ranson	Rd	School - Elementary
Underwood Elementary	1125	NE	colbern	Rd	School - Elementary
Voy Spears Elementary	201	NE	Anderson	Dr	School - Elementary
Westview Elementary	200	NW	Ward	Rd	School - Elementary
Greenwood Elementary	805	W	Main	St	School - Elementary
Hawthorne Hill Elementary	2801	SW	Pryor	Rd	School - Elementary
Hazel Grove Elementary	2001	NW	Blue	Pkwy	School - Elementary
Mason Elementary	27600	NE	Colbern	Rd	School - Elementary
Trailridge Elementary School	3651	SW	Windemere	Dr	School - Elementary
Summit Pointe Elementary	13100	E	147th	St	School - Elementary
Woodland Elementary	12709	NE	Smart	Rd	School - Elementary
Lee's Summit North High School	901	NE	Douglas	St	School - High
Lee's Summit West High School	2600	SW	Ward	Rd	School - High
Lee's Summit High School	400	SE	Blue	Prky	School - High
Bernard Campbell Middle School	1201	NE	Colbern	Rd	School - Middle
Delta Woods Middle School	4401	NE	Lakewood	Way	School - Middle
Pleasant Lea Middle School	630	SW	Persels	Rd	School - Middle
Summit Lakes Middle School	3500	SW	Windemere	Dr	School - Middle
Great Beginnings Early Childhood Education	905	NE	Bluestem	Dr	School - PreK
Our Lady of Presentation	100	NW	Murray	Rd	School - Private
St. Michael the Archangel High School	2901	NW	Lee's Summit	Rd	School - Private
Summit Christian Academy	1500	SW	Jefferson	St	School - Private
Libby Lane Academy	601	NW	Libby	Ln	School - Private

Bowlin Rd. & I-470 HWY (Apartment Complex)	X	X	X	X	In Development
I-470 HWY & View High (Paragon Star)	X	X	X	X	In Development
3rd St. & View High (B&B Theaters)	X	X	X	X	In Development
Chipman & Ward (Sam's Club)	X	X	X	X	In Development
Hamblen Rd / 150 Hwy Corridor / Greenwood Bridge	X	X	X	X	Highway

1.7.1.14 CPC Criterion for a Test Tile Informational Only Outbound Measurement

For each equipment configuration for gathering informational only measurements, the CPC criterion for a test tile is stated in Table 1-48. Each equipment configuration will have only one CPC criterion for a test tile.

The test setup is shown in Figure 1-4.

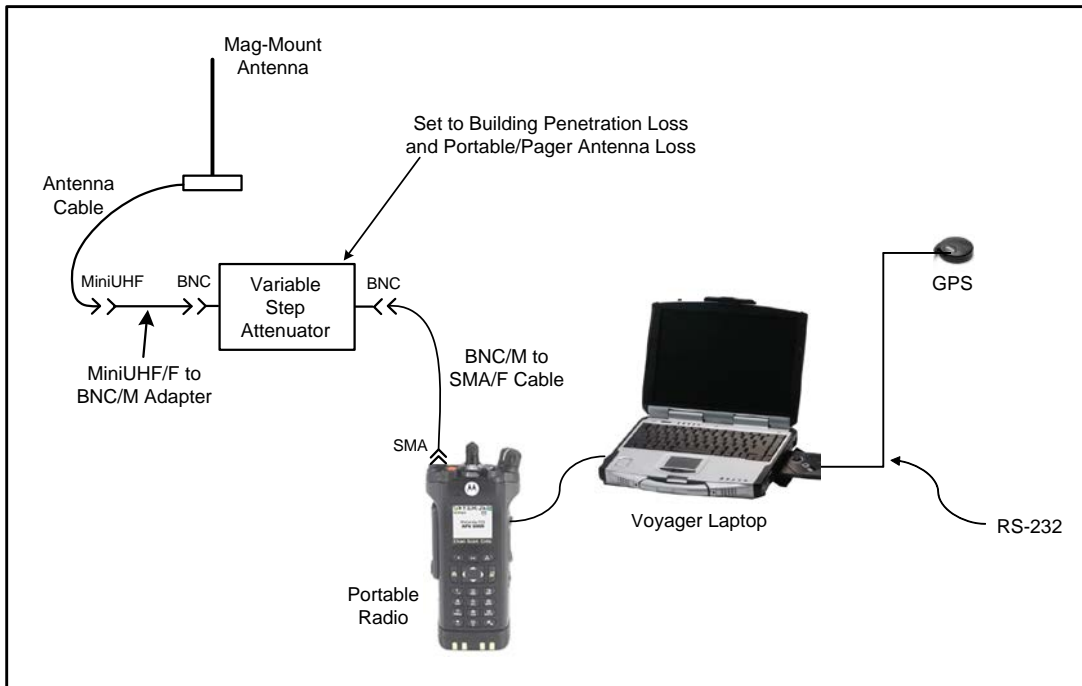


Figure 1-4: Voyager Test Setup

Table 1-50 shows the attenuator values required to evaluate each equipment configuration. The methodology to determine the attenuator value is demonstrated in TSB-88.1-D §5.4.2, Figure 5. The attenuator value includes the proper values for the equipment configuration requirement plus adjustments for the test equipment setup. Should the test equipment setup losses (e.g. cable length) vary, an adjustment to the attenuator value may be required to represent the required equipment configuration accurately.

Table 1-50: Attenuator Values to Evaluate each Equipment Configuration

Attenuator	800MHz Portable, On the Street	800MHz Portable, In Lee's Summit
Talk-out attenuator	-12.6dB (subscriber worn in swivel case on the HIP)	-32.6dB (I470/US50/US291) -28.6dB (remaining areas in Lee's Summit/Unity Village) (subscriber worn in swivel case on the HIP inside 20dB/16dB building)

1.7.1.15 CATP Documentation and Coverage Acceptance

During the coverage acceptance test, Voyager will have records on the subjective test results. A copy of this data will be provided to Lee's Summit, MO at the conclusion of the coverage test. Motorola Solutions will process this data to produce a map detailing the coverage test results, and to determine whether the coverage test was passed for each user equipment configuration.

The overall acceptance criteria for the CATP will be based on the results of the Subjective DAQ tests (Inbound and Outbound) for the city limits of Lee's Summit and Unity Village. These results will be used to determine an overall reliability to be greater than 97% of the Coverage Acceptance Test Plan.

Motorola Solutions reserves the right to review any test tiles that fail. If a coverage test, or a portion thereof, is suspected by Motorola Solutions to have failed due to external interference, those tiles suspected of being affected by an interferer may be re-tested. If the test tiles re-tested are confirmed to have failed due to interference or external noise, those test tiles will be excluded from all acceptance calculations and Motorola Solutions will work with Lee's Summit, MO to identify potential solutions to the interference issues.

Motorola Solutions will conduct this Coverage Acceptance Test only once. If any portion of the test is determined to be affected by proven equipment malfunctions or failures, Motorola Solutions will repeat the portion of the test affected by the equipment malfunction or failure. Lee's Summit, MO will have the option to accept the coverage at any time prior to completion of the coverage test or documentation process.

Motorola Solutions will submit to Lee's Summit, MO a report detailing the coverage test results. This report will include a document, which is to be signed by both Lee's Summit, MO and Motorola Solutions, indicating the test was performed in accordance with this CATP and the results of the test indicate the acceptance or non-acceptance of the coverage portion of the system.

Exhibit C-5
Performance Schedule

1.8 PERFORMANCE SCHEDULE

To be developed.



Exhibit D

SERVICE STATEMENT(S) OF WORK AND SERVICE TERMS AND CONDITIONS

1.9 WARRANTY AND MAINTENANCE

1.9.1 The Motorola Solutions Service Delivery Team

Customer Support Manager

Your Motorola Solutions Customer Support Manager provides coordination of support resources to enhance the quality of service delivery and to ensure your satisfaction. The Customer Support Manager (CSM) is responsible to oversee the execution of the Warranty and Service Agreement and ensure that Motorola Solutions meets its response and restoration cycle time commitments. The CSM will supervise and manage the Motorola Solutions Authorized Servicer's functions.

Motorola Solutions System Technologists

The Motorola Solutions System Technologists (STs) are available to assist our Authorized Servicers when needed for network health and operations.

Motorola Solutions System Support Center

The System Support Center (SSC) is a key component to the overall management and system maintenance. As detailed in this Customer Support Plan, the following services are provided by the System Support Center:

- Network Monitoring.
- Dispatch Service.
- Technical Support.
- Infrastructure Repair with Advanced Replacement.

Motorola Solutions Local Service Provider

Our authorized service centers are staffed with trained and qualified technicians. They provide rapid response, repair, restoration, installations, removals, programming, and scheduled preventive maintenance tasks for site standards compliance and RF operability. Our authorized service centers are assessed annually for technical and administrative competency.

Motorola Solutions places great emphasis on ensuring that communications systems, such as the one proposed for Lee's Summit, meet high standards for design, manufacture, and performance. To enhance the value of the communications system being acquired, Motorola Solutions offers customized warranty and post-warranty services as outlined in this section.

1.10 WARRANTY SERVICES

Motorola Solutions will provide warranty services per our standard warranty terms and conditions as outlined within the Communication Systems Agreement within this proposal. In addition to the Standard Commercial Warranty, Motorola will provide the Custom Warranty Package as provided below. The service products that comprise the Custom Warranty package are listed below along with a brief description.

1.10.1 Dispatch Service

Our Dispatch Service ensures that trained and qualified technicians are dispatched to diagnose and restore your communications network. Following proven response and restoration processes, the local authorized service center in your area is contacted and a qualified technician is sent to your site. An automated escalation and case management process is followed to ensure that technician site arrival and system restoration comply with contracted response and restore times. Once the issue has been resolved, the System Support Center verifies resolution and with your approval, closes the case. Activity records are also available to provide a comprehensive history of site performance, issues, and resolution.

1.10.2 Onsite Infrastructure Response

Motorola Solutions OnSite Infrastructure Response provides local, trained and qualified technicians who arrive at your location to diagnose and restore your communications network. Following proven response and restore processes, Motorola Solutions Dispatch contacts the local authorized service center in your area and dispatches a qualified technician to your site. An automated escalation and case management process ensures that technician site arrival and system restoration comply with contracted response times. The field technician restores the system by performing first level troubleshooting on site. If the technician is unable to resolve the issue, the case is escalated to the System Support Center or product engineering teams as needed.

Once the issue has been resolved, the System Support Center verifies resolution and with your approval, closes the case. Activity records are also available to provide a comprehensive history of site performance, issues, and resolution.

1.10.3 Network Preventative Maintenance

Network Preventative Maintenance provides an operational test and alignment on your infrastructure or fixed network equipment to ensure that it meets original manufacturer's specifications. Trained technicians:

- Physically inspect equipment.
- Remove dust and foreign substances.
- Clean filters.
- Measure, record, align and adjust equipment to meet original manufacturer's specifications.

This service is performed based on a schedule agreed upon between you and Motorola Solutions. Network Preventative Maintenance proactively detects issues that may result in system malfunctions and operational interruptions.



1.10.4 Technical Support Service

Motorola Solutions Technical Support service provides an additional layer of support through centralized, telephone consultation for issues that require a high level of communications network expertise and troubleshooting capabilities. Technical Support is delivered by the System Support Center (SSC). The SSC is staffed with trained, skilled technologists specializing in the diagnosis and swift resolution of network performance issues. These technologists have access to a solutions database as well as in house test labs and development engineers. Technical Support cases are continuously monitored against stringent inbound call management and case management standards to ensure rapid and consistent issue resolution. Technical Support service translates into measurable, customer-specific metrics for assured network performance and system availability.

Technical Support is delivered by the system Support Center (SSC). The SSC is staffed with trained, skilled technologists specializing in the diagnosis and swift resolution of performance issues.

1.10.5 Infrastructure Repair

Infrastructure Repair provides for the repair of the equipment in the proposed solution, whether it is manufactured by Motorola Solutions or by another vendor. All equipment will be sent to Motorola Solutions Solution's Infrastructure Depot Operations Center (IDO), a centralized location, where factory-trained technicians will use ISO9001 and TL9000-certified methodologies to troubleshoot, repair, and test the equipment to bring it to working order. Motorola Solutions will also send third-party equipment to the original equipment manufacturer or third-party vendor for service, coordinating and tracking its repair and return. All components will be repaired or replaced prior to return to Lee's Summit.

1.10.6 Network Monitoring Service

Network Monitoring Service can help keep your network at optimum availability so it is ready to serve mission critical communications needs. By watching over the network continuously, Network Monitoring Service takes action whenever needed, and resolves network problems. We often intervene and correct the problem before you even know a problem exists. Network Monitoring Service provides improved productivity and enhanced network performance, which in turn helps to increase your technology Return-On-Investment.

Using a combination of network monitoring software, automated alerts, and remote diagnostics inquiries, our System Support technologists actively monitor your network to maximize network uptime and overall preparedness...for the expected and unexpected. Upon receiving an alert, our team immediately performs a series of diagnostics to assess the problem. Often the situation can be resolved remotely, but when additional attention is required, local field technicians are dispatched immediately to your site to achieve restoration.

Our Network Monitoring service is a vital component of an intelligent communication support plan that keeps your business operating smoothly, your costs down, and assures maximum preparedness at all times.

Specifically, Network Monitoring Service provides:

- Improved network availability.
- Remote and timely resolution to minimize downtime.
- Cost efficiencies.
- Optimize time at site due to assessment and knowledge transfer before dispatch.
- Minimize unnecessary trips to site.
- Mitigate need for 24x7 operations monitoring center.
- Detailed Reports.

1.10.7 Security Monitoring

Our Security Operations Center (SOC) is a specialized and secured facility that will monitor Lee's Summit equipment for attacks on the system 24x7x365. SOC security analysts use advanced correlation and visualization tools to detect, identify, and respond to any security events. Monthly reporting will keep Lee's Summit informed about network activity, including the number of adverse events and actions taken to mitigate them.

1.10.8 Security Update Service

Security updates appropriate for the commercial environment are often designed without mission-critical systems in-mind. Motorola Solutions will ensure that commercial anti-virus definitions and operating system software patches are compatible with the proposed dispatch consoles. Our expert network security technologists analyze, test, and validate the latest security software updates in a dedicated test lab and will provide Lee's Summit with regular electronic updates of compatible updates.

1.10.9 Post Warranty Services

Post Warranty Services for 1 year have been included in the contract price. As our continuing commitment to supporting your system, warranty services can be extended after the first year to provide maintenance and service support in future years. Any of the services that we identify can be customized in future years, and are available for purchase either in "System Support Services" packages or as individual service offerings. These system support services significantly benefit Lee's Summit because the system can be effectively supported after the warranty period, thereby maximizing the operational capabilities and useful life of the system and protecting your investment in the system.



1.10.10 System Upgrade Agreement II (SUA II)

Motorola Solutions Solution's system upgrade agreement (SUA II) provides up to one system upgrade of Lee's Summit equipment every two contract years. The SUA II is a complete package of hardware, software and implementation services required to update the proposed dispatch consoles to an eligible system release with an equivalent level of functionality. These system updates will ensure the availability of repair services support to OEM components, optimization of system expansion, and may include operational enhancements if included with a system release upgrade. The SUA service includes the professional implementation services necessary to guarantee that the system upgrades cause minimal interruption to system operation, and as little reliance on Lee's Summit resources as possible.

The SUAII upgrades will be completed as part of MARRS requirements and blend with current MARRS plans.

1.10.11 Summary

Whether it's a routine service call, or a disaster situation, Motorola Solutions understands its responsibility and takes pride in its commitment to deliver proven response service to the public safety community. Motorola Solutions has the capability to provide the technical, administrative, consultative, and maintenance repair services needed to support, enhance, and maintain the effectiveness of your communications network. Our goal is to provide Lee's Summit with the qualified resources, to maintain and improve system operation and availability, and to deliver world class service support.

STATEMENT OF WORK

Security Monitoring

Overview: Security Monitoring is a service offering that provides Security Monitoring to identify malicious activity that will or might cause system interference or corruption.

Definitions

Terms that are capitalized but not defined in this Statement of Work shall have the definition given to such terms in the Service Terms and Conditions, the Communications System Agreement or other applicable agreement. The following terms have the following meanings:

Non-Motorola Software: Software whose copyright is owned by a party other than Motorola or its affiliated company, including but not limited to the anti-virus definitions, operating system software patches and signature files that will be pre-tested pursuant to this Statement of Work and the procurement of the Pre-Tested Software Subscription Service.

1.0 Description of Services

ASTRO 25 Security Monitoring includes monitoring and managing the Motorola security equipment present on the Customer's System. Monitoring security equipment requires Customer to purchase a Core Security Management Server with Customer's System. Motorola will monitor Elements of a System for Events, as set forth in the Monitored Elements Table below.

When the Motorola System Support Center (SSC) detects an Event, trained technologists that are experienced with identifying and interpreting security incidents will acknowledge the Event, run remote diagnostic routines, and initiate an appropriate Response. Appropriate responses could include, but are not limited to, continuing to monitor the Event for further development, attempting remote Restoral, or transferring the Event by opening a Case for dispatch of a Servicer. If dispatched, the Servicer will respond at the Customer location based on pre-defined Severity Levels set forth in the Severity Definitions Table and Response times set forth in the On-Site Response Time Table in order to Restore the System.

Motorola will proactively manage the security Elements present on the System as needed to mitigate the risk of vulnerability such as a virus, worm or other intrusive attack on the System. This may include periodically deploying the latest release of pre-tested intrusion detection sensor signature files on the network barrier (ONLY for IDS supplied to Customer by Motorola and if present on the System) as determined by Motorola. Motorola will also modify intrusion sensor settings and update firewall settings as determined by Motorola and will notify Customer of such modifications.

Motorola will provide Case Management as set forth herein. The SSC maintains contact with the on-site Servicer until System Restoral occurs and Case is closed. The SSC will continuously track and manage Case activity from open to close through an automated Case tracking process.

This Case management allows Motorola to provide activity and performance reports as well as ensures timely resolution of issues.

The terms and conditions of this Statement of Work (SOW) are an integral part of Motorola's Service Terms and Conditions or other applicable Agreement(s) to which it is attached and made a part thereof by this reference.

2.0 Motorola has the following responsibilities:

- 2.1 Provide dedicated Connectivity through a private network connection necessary for monitoring ASTRO 25 System. The Connectivity Matrix set forth below further describes the Connectivity options. **NOTICE: If Network Monitoring (a separate Service) is not acquired, an additional fee will be applied to the customer.**
- 2.2 Provide dedicated connectivity necessary for monitoring.
- 2.3 If determined necessary by Motorola, provide Motorola owned equipment for monitoring ASTRO 25 System elements. If Motorola installs or replaces Motorola owned equipment, the type of equipment and location installed is listed in the Motorola Owned & Supplied Equipment Table.
- 2.4 Verify Connectivity and Event monitoring prior to System Acceptance or Start Date.
- 2.5 Coordinate with Customer to maintain Motorola service authentication credentials.
- 2.6 Continuously receive service requests.
- 2.7 Perform Continuous monitoring of System Elements as set forth in the Monitored Elements Table.
- 2.8 Interpret System Events and determine appropriate Response. An appropriate Response could include the following actions: notify customer of activity, continue monitoring the Event for further development, review System log files or transfer the Event information via a Case for dispatch of a Servicier.
- 2.9 Respond in accordance to pre-defined Response times upon receipt from Customer of Customer managed passwords required for proper access to the Customer's System.
- 2.10 Remotely access the Customer's System to perform remote diagnostics as permitted by Customer pursuant to section 3.1.
- 2.11 Attempt remote Restoral, as appropriate. Some System functions may be disrupted as necessary to maintain System integrity until further validation of the Event occurs. This may include shutting down applications, applying security tools, resetting box, or instructing Servicier to reload applications and operating system software as necessary. **This does not include a technician being physically dispatched.**
- 2.12 Create a Case as necessary when service requests are received. Gather information to perform the following:
 - 2.12.1 Characterize the issue
 - 2.12.2 Determine a plan of action
 - 2.12.3 Assign and track the Case to resolution.

- 2.13 Ensure the required personnel have access to Customer information as needed.
- 2.14 Disable and enable System devices, as necessary, for Servicers.
- 2.15 Servicer will perform the following on-site:
 - 2.15.1 Run diagnostics on the Infrastructure or FRU.
 - 2.15.2 Replace defective Infrastructure or FRU, as applicable to security components provided by or approved by Motorola. Customer, Servicer or Motorola may provide Infrastructure or FRU.
 - 2.15.3 Provide materials, tools, documentation, physical planning manuals, diagnostic/test equipment and any Security requirements necessary to perform the Maintenance service.
 - 2.15.4 If a third party Vendor is needed to restore the System, the Servicer may accompany that Vendor onto the Customer's premises.
- 2.16 Verify with Customer that Restoration is complete or System is functional, if required by Customer's repair Verification preference described in the Customer Support Plan required by section 3.6. If Verification by Customer cannot be completed within 20 minutes of Restoration, the Case will be closed and the Servicer will be released.
- 2.17 Escalate the Case to the appropriate party upon expiration of a Response time.
- 2.18 Close the Case upon receiving notification from Customer or Servicer, indicating the Case is resolved.
- 2.19 Notify Customer of Case Status, as described in the Customer Support Plan at the following Case levels:
 - 2.19.1 Open and closed; or
 - 2.19.2 Open, assigned to the Servicer, arrival of the Servicer on site, deferred or delayed, closed.
- 2.20 Obtain intrusion detection sensor (IDS) signatures for Motorola supplied IDS, from Motorola selected commercial suppliers.
- 2.21 Address issues identified during testing to support functionality under the procedures specified in 2.22 above by working with Motorola selected commercial supplier or Motorola product development engineering team.
- 2.22 Maintain annual Customer licenses for intrusion detection sensor signatures for IDS supplied to Customer by Motorola with Motorola selected commercial supplier.
- 2.23 Provide the following reports, as applicable:
 - 2.23.1 Case activity reports to Customer.
 - 2.23.2 Network Security Monitoring Service reports for Customer System(s).
- 2.24 Apply additional support charges above and beyond the contracted service agreements that may apply if it is determined that System faults were caused by the Customer making changes to critical System parameters.

3.0 Customer has the following responsibilities:

- 3.1 Allow Motorola Continuous remote access to obtain System availability, performance and configuration data.
- 3.2 Allow Motorola to access System if firewall has been installed; provide permanent/dedicated access for SNMP traps (outbound) and ZDS polling (inbound).
- 3.3 Provide continuous utility service to any Motorola equipment installed or utilized at Customer's premises to support delivery of the Service.
- 3.4 Maintain and manage any equipment outside of the System.
- 3.5 Provide Motorola with pre-defined Customer information and preferences prior to Start Date necessary to complete Customer Support Plan.
 - 3.5.1 Provide 7/24 security contact and escalation list
 - 3.5.2 Case notification preferences and procedures
 - 3.5.3 Repair Verification preference and procedure
 - 3.5.4 Database and escalation procedure forms.
 - 3.5.5 Submit changes in any information supplied in the Customer Support Plan to the Customer Support Manager.
- 3.6 Provide the following information when initiating a service request:
 - 3.6.1 Assigned System ID number
 - 3.6.2 Problem description and site location
 - 3.6.3 Other pertinent information for Motorola to open a Case.
- 3.7 Provide all Customer managed passwords required to access the Customer's System to Motorola upon request or when opening a Case to request service support or enable Response to a technical issue.
- 3.8 Notify the SSC when Customer performs any activity that impacts the System (Activity that impacts the System may include, installing software or hardware upgrades, performing upgrades to the network, or taking down part of the System to perform maintenance.)
- 3.9 As necessary, upgrade System to Supported System Release as specified in paragraph 2.22.
- 3.10 Allow Servicers access to Equipment (including any Connectivity or security monitoring equipment) if remote service is not possible.
- 3.11 Allow Servicers access to remove Motorola owned server upon cancellation of service as set forth in paragraph 2.2.
- 3.12 Supply Infrastructure or FRU, as applicable, in order for Motorola to Restore the System as set forth in paragraph 2.15.2.
- 3.13 Maintain and store in an easily accessible location System backups and any/all Software needed to restore the System.

- 3.14 Verify with the SSC that Restoration is complete or System is functional, if required by the Repair Verification Preference provided by Customer in accordance with section 3.6.3.
- 3.15 Comply with the terms of the applicable license agreements between Customer and the Non-Motorola Software copyright owners.
- 3.16 Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide the services described in this SOW.

WARRANTIES AND DISCLAIMER:

Motorola warrants that its services will be free of defects in materials and workmanship for a period of ninety (90) days following completion of the service. Your sole remedies are to require Motorola to re-perform the affected service or at Motorola's option to refund, on a pro-rata basis, the service fees paid for the affected service.

During the applicable Warranty Period, Motorola warrants that the tested anti-virus definitions, intrusion detection sensor signatures, and operating system security updates/patches provided if PTSS is procured or provided via ESS, do not degrade or compromise System functionality, and that after incorporation of the tested Software updates, the System Software, when used properly and in accordance with the Documentation, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. 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 this information is provided) are collectively referred to as "Documentation." Whether a defect occurs will be determined solely with reference to the Documentation. Motorola does not warrant that Customer's use of the Software or Products will be uninterrupted or error-free or that the Software or the Products will meet Customer's particular requirements.

Motorola disclaims all other warranties with respect intrusion detection sensor signature files, express or implied, including the implied warranties of merchantability, fitness for a particular purpose, and non-infringement. Further, Motorola disclaims any warranty concerning the non-Motorola software and does not guarantee that customer's system will be error-free or immune to viruses or worms as a result of these services.

Severity Definitions Table

Severity Level	Problem Types
Severity 1	<p>Response is provided Continuously</p> <p>Major System failure</p> <p>33% of System down</p> <p>33% of Site channels down</p> <ul style="list-style-type: none"> This level is meant to represent a major issue that results in an unusable system, sub-system, Product, or critical features from the Customer's perspective. No Work-around or immediate solution is available.
Severity 2	<ul style="list-style-type: none"> Response during Standard Business Day Significant System Impairment not to exceed 33% of system down System problems presently being monitored This level is meant to represent a moderate issue that limits a Customer's normal use of the system, sub-system, product, or major non-critical features from a Customer's perspective
Severity 3	<ul style="list-style-type: none"> Response during Standard Business Day Intermittent system issues Information questions Upgrades/Preventative maintenance This level is meant to represent a minor issue that does not preclude use of the system, sub-system, product, or critical features from a Customer's perspective. It may also represent a cosmetic issue, including documentation errors, general usage questions, recommendations for product enhancements or modifications, and scheduled events such as preventative maintenance or product/system upgrades.

On-Site Response Time Table (Customer's Response Time Classification is designated in the Service Agreement).

Severity Level	Standard Response Time	Premier Response Time	Limited Response Time	Restoral	Off Deferral
Severity 1	<p>Within 4 hours from receipt of Notification</p> <p>Continuously</p>	<p>Within 2 hours from receipt of Notification</p> <p>Continuously</p>	<p>Within 4 hours from receipt of Notification</p> <p>Standard Business Day</p>	8 hours	Time provided by Servicer *
Severity 2	<p>Within 4 hours from receipt of Notification</p> <p>Standard Business</p>	<p>Within 4 hours from receipt of Notification</p> <p>Standard Business</p>	<p>Within 4 hours from receipt of Notification</p> <p>Standard Business</p>	8 hours	Time provided by Servicer *

Severity Level	Standard Response Time	Premier Response Time	Limited Response Time	Restoral	Off Deferral
	Day	Day	Day		
Severity 3	Within 24 hours from receipt of Notification Standard Business Day	Within 24 hours from receipt of Notification Standard Business Day	Within 24 hours from receipt of Notification Standard Business Day	48 hours	Time provided by Servicer *

- Please note these are Standard Commitment times. The commitment times should be based on the Customers Support Plan.
 - Provide update **before** the specific contractual commitments come due.
- * Note: Provide update to System Support Center **before** Deferral time comes due.

Connectivity Matrix

Private Network Connection IP T1 (All Customers)	Public Internet Connection IP T1 (Option Available only to Customers outside of the US)
Standard solution for real-time Connectivity	Non-standard solution for real-time Connectivity
Dedicated bandwidth configuration provided to monitor Customers	No dedicated bandwidth provided to monitor Customers
Protected from unauthorized intrusion	Low risk of unauthorized intrusion
Encryption Available	Encryption Available
Connectivity available through Motorola	Customer provides Connectivity to the internet via an internet service provider selected by Customer

Motorola Owned & Supplied Equipment Table

Equipment Type	Location Installed
Firewall/Router	Master Site
System Support Server	Master Site for each Zone

Monitored Elements Table

(Listed by Technology)

System Type	Equipment
ASTRO 25 (release 7.x)	<p>Packet Routing Network; Zone Controllers; Database Server; FullVision Server; Zone Statistical Server; Air Traffic Router; System Statistics Server; User Configuration Server; Packet Data Gateway Server; PBX; Interconnect Server; Motorola Gold Elite Gateway (MGEG); AEB; CEB; Conventional Channel Gateway (CCGW); Simulcast RF Site (Site Controllers, Comparators, Stations); Intelli Repeater RF Site (Stations); Intelli Site Repeater RF Site (Site Controllers, Stations);</p> <p>Core, Exit, Gateway, Peripheral, Border, and Site routers, HP Switches master, prime, console and repeater sites switches, GGSN; CWR MOSCAD Overlay (TenSr, Station, Channel Banks, TRAK GPS, Site Power, Microwave)</p> <p>DOES NOT INCLUDE MONITORING OF ANY MOSCAD ALARM POINTS THAT DO NOT DIRECTLY IMPACT THE PERFORMANCE OF THE RADIO NETWORK. DOES NOT INCLUDE MONITORING OF ANYTHING OUTSIDE OF THE RADIO NETWORK UNLESS SPECIFICALLY STATED</p>
ASTRO 25 (release 6.3 – 6.9)	<p>Nortel; Packet Routing Network; Zone Controllers; Database Server; FullVision Server; Zone Statistical Server; Air Traffic Router; System Statistics Server; User Configuration Server; Packet Data Gateway Server; PBX; Interconnect Server; Motorola Gold Elite Gateway (MGEG); AEB; CEB; ARCADACS Cross Connect Switch; Simulcast RF Site (Site Controllers, Comparators, Stations); Intelli Repeater RF Site (Stations);Intelli Site Repeater RF Site (Site Controllers, Stations);</p> <p>MOSCAD Overlay (TenSr, Station, Channel Banks, TRAK GPS, Site Power, Microwave)</p> <p>Does not include monitoring of any MOSCAD alarm points that do not directly impact the performance of the radio network. Does not include monitoring of anything outside of the radio network unless specifically stated.</p>
Security Elements (Monitoring and managing Security Elements is dependent on Customer purchasing Core Security Management Server as Equipment with the Customer System)	<p>Core Security Management Server; Firewall; Intrusion Detection Sensors; Anti-virus Management application; Authentication Management application; Centralized Logging Server</p>

ASTRO[®] 25 Technical Support Statement of Work

Version 1.4

September 2013

Technical Support Overview

Motorola's Technical Support service provides telephone consultation for technical issues that require a high level of ASTRO network expertise and troubleshooting capabilities. Remote Technical Support is delivered through the Motorola System Support Center (SSC) by a staff of technical support specialists skilled in diagnosis and swift resolution of infrastructure performance and operational issues. Technical Support provides access to a solutions database, as well as access to in house test labs and additional Motorola technical resources

Motorola applies industry best practices in recording, monitoring, escalating and reporting for Technical Support calls from its contracted customers, reflecting the importance of maintaining mission critical systems.

The terms and conditions of this Statement of Work (SOW) are an integral part of Motorola's Service Agreement or other applicable agreement to which it is attached and made a part thereof by this reference.

1.0 Description of Technical Support Services

Motorola's System Support Center (SSC) will provide technical support to assist the customer's technical resources of the Motorola's currently supported infrastructure. This team of highly skilled professionals is available to the customer as an integrated part of the support and technical issue resolution process. The SSC remotely supports the customer and works with but not limited to fault diagnostics tools, simulation networks and fault database search engines.

The Technical Support Operations is available 24 hours a day; 7 days per week to support technical requests ([see severity level response time commitments](#)). Calls requiring incidents, problems, or service requests will be logged in Motorola's issue management system. This ensures that technical issues are prioritized, updated, tracked and escalated as necessary, until resolution. The Technical Support Operations shall assign the priority level as in accordance with the agreed [Severity Level Definitions](#) stated in this document.

Motorola will track the progress of each case from initial logging to resolution. Motorola will ensure that the customer is advised of the case progress and informed of tasks that require further investigation and assistance from the customer's technical resources

The provision of this service requires that the customer provides a suitably trained technical resource that delivers maintenance and support to the system, and who is familiar with the operation of that system. Motorola provides technical consultants to support the local resource in the timely closure of infrastructure, performance and operational issues.

1.1 Scope

Technical Support service is available 24 hours a day, 7 days a week based on [Severity Level Definitions](#).

1.2 Geographic Availability

Technical Support is available to any customer regardless of their geographic location and timeframes are based on the customer's local time zone.

1.3 Inclusions

Technical Support service will be delivered on Motorola sold infrastructure including integrated 3rd party products.

1.4 Limitations and Exclusions

The following activities are outside the scope of the Technical Support service, but are optional services that are available to remote Technical Support customers at an additional cost:

- 1.4.1 Emergency on-site visits required to resolve technical issues that cannot be resolved by with SSC working remotely with the local customer technical resource.
- 1.4.2 Third party support for equipment not sold by Motorola as part of the original system.
- 1.4.3 System installations, upgrades, and expansions.
- 1.4.4 Customer training.
- 1.4.5 Hardware repair and/or exchange.
- 1.4.6 Network security services.
- 1.4.7 Network transport.
- 1.4.8 Information Assurance.
- 1.4.9 Motorola services not included in this statement of work.
- 1.4.10 Any technical support required as a result of a virus or unwanted intrusion is excluded if the system is not protected against these security threats by Motorola's Pre-tested Security Update Service when applicable.

1.5 Motorola has the following responsibilities:

- 1.5.1 Enable customer access to the Motorola Technical Support Center (800-221-7144), 24 hours a day, 7 days per week, to answer, document and respond to requests for support.
- 1.5.2 Respond to requests for Technical Support in accordance with the response times set forth in the [Severity Level Response Time Commitments](#) section of this document and the severity level defined in the [Severity Level Definitions](#) section of this document.
- 1.5.3 Advise caller of procedure for determining any additional requirements, activities or information relating to issue restoration and/or characterization.
- 1.5.4 Maintain communication with the customer in the field as needed until resolution of the case
- 1.5.5 Coordinate technical resolutions with agreed upon third party vendors, as needed.
- 1.5.6 Escalate and manage support issues, including systemic issues, to additional Motorola technical resources, as applicable.
- 1.5.7 Escalate the case to the appropriate party upon expiration of a response time.

- 1.5.8 Determine, in its sole discretion, when a case requires more than the Technical Support services described in this SOW and notify customer of an alternative course of action.

1.6 The Customer has the following responsibilities:

- 1.6.1 Provide Motorola with pre-defined information prior to contract start date necessary to complete Customer Support Plan (CSP).
- 1.6.2 Submit changes in any information supplied in the Customer Support Plan (CSP) to the Customer Support Manager (CSM).
- 1.6.3 Contact the SSC in order to engage the Technical Support service, providing the necessary information for proper entitlement services. Including but not limited to the name of contact, name of customer, system ID number, site(s) in question, and brief description of the problem including pertinent information for initial issue characterization.
- 1.6.4 Maintain suitable trained technical resources that provide field maintenance and technical maintenance services to the system, and who are familiar with the operation of that system.
- 1.6.5 Provide SSC access via the remote connection that has been established through other sold services (e.g. Network Fault Monitoring)
- 1.6.6 Supply suitably skilled and trained on-site presence when requested by the SSC.
- 1.6.7 Validate issue resolution prior to close of the case in a timely manner.
- 1.6.8 Acknowledge that cases will be handled in accordance with the times and priorities as defined in the [Severity Level Definitions](#) and in the [Severity Level Response Time Commitments](#) section in this document.
- 1.6.9 Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide the Technical Support service.

1.7 Severity Level Definitions

The following severity level definitions will be used to determine the maximum response times:

Severity Level	Severity Definition
Severity 1	<p>This is defined as a failure that causes the system and/or infrastructure a loss of voice functionality and no work-around or immediate solution is available.</p> <p>The following are examples of this kind of failure:</p> <ul style="list-style-type: none"> • 33% of call processing resources impaired • Site Environment alarms: <ul style="list-style-type: none"> ○ Smoke, ○ Unauthorized access ○ Temperature ○ Power failure
Severity 2	<p>This is defined as a fault that causes the system to operate with a continuous reduction in capacity or functionality of core services (core services include, voice, data or network management).</p> <p>The following are examples of this kind of failure:</p> <ul style="list-style-type: none"> • Less than 33% of call processing resources impaired • Failure of a single redundant component
Severity 3	<p>This is defined as a fault which reduces the functionality, efficiency or usability of core services (voice, data and network management) and there is a viable work-around in place.</p> <p>The following are examples of this kind of severity:</p> <ul style="list-style-type: none"> • Intermittent faults that are infrequent and minor impact to core services • Statistical reporting problems
Severity 4	<p>This is defined as a minor issue, which has little or no impact on the functionality, efficiency or usability of core services. The following are examples of this kind of severity:</p> <ul style="list-style-type: none"> • Faults resulting in minor functions or features being unsupported or unreliable in ways that are not noticeable to the user. • Faults that have no impact in how the user perceives the system to work. • Cosmetic issues. • Requests for information. • Preventive Maintenance

2.1 Severity Level Response Time Commitments

The response times are based on the defined severity levels as follows:

Severity Level	Response Time
Severity 1	A Motorola SSC Technician will make contact with the customer technical representative within one hour of the request for support being logged in the issue management system. Continual effort will be maintained to restore the system or provide a workaround resolution. Response provided 24 x 7.
Severity 2	A Motorola SSC Technician will make contact with the customer technical representative within four hours of the request for support being logged at the issue management system. Response provided 8 x 5 on standard business days, which is normally Monday through Friday 8AM to 5PM, excluding US Holidays.
Severity 3	A Motorola SSC Technician will make contact with the customer technical representative within the next business day of the request for support being logged at the issue management system. Response provided 8 x 5 on standard business days, which is normally Monday through Friday 8AM to 5PM, excluding US Holidays.
Severity 4	A Motorola SSC Technician will make contact with the customer technical representative within the next business day of the request for support being logged at the issue management system. Response provided 8 x 5 on standard business days, which is normally Monday through Friday 8AM to 5PM, excluding US Holidays.

Infrastructure Repair Statement of Work

Version 3.0

February 2015

Infrastructure Repair Overview

Motorola provides a hardware repair service for all of the Motorola and select third-party infrastructure equipment supplied by Motorola. The Motorola authorized Repair Depot manages and performs the repair of Motorola supplied equipment as well as coordinating the equipment repair logistics process.

The terms and conditions of this Statement of Work (SOW) are an integral part of Motorola's Service Agreement or other applicable agreement to which it is attached and made a part thereof by this reference.

1.0 Description of Services

Infrastructure components are repaired at a Motorola authorized Infrastructure Depot Operations (IDO). At Motorola's discretion, select third party Infrastructure may be sent to the original equipment manufacturer or third party vendor for repair.

1.1 Scope

Repair Authorizations are obtained by contacting the Solutions Support Center (SSC) which is available 24 hours a day, 7 days a week.

Repair authorizations can also be obtained online via Motorola Online at <https://businessonline.motorolasolutions.com>, under Repair Status/Submit Infrastructure RA.

1.2 Geographic Availability

Infrastructure repair is supported globally; geographic proximity will determine repair location.

1.3 Inclusions

Infrastructure repair is available on Motorola sold communication systems which may include some aspect of third party hardware and software. Motorola will make a "Commercially Reasonable Effort" to repair Motorola manufactured infrastructure products for seven years after product cancellation.

1.4 Exclusions

If infrastructure is no longer supported by Motorola, the original equipment manufacturer or a third party vendor, Motorola may return said equipment to the customer without repair or replacement. The following items are excluded from Infrastructure Repair:

1.4.1 All Motorola infrastructure hardware over seven (7) years from product cancellation date.

1.4.2. All Third party infrastructure hardware over two (2) years from product cancellation date.

1.4.3 All Broadband infrastructure over three (3) years from product cancellation date

1.4.4 Physically damaged infrastructure.

1.4.5 Third party equipment not shipped by Motorola

1.4.6 Consumable items including, but not limited to, batteries, connectors, cables, toner/ink cartridges, tower lighting, laptop computers, monitors, keyboards and mouse.

1.4.7 Video retrieval from Digital In-Car Video equipment.

1.4.8 Infrastructure backhaul including but not limited to, Antennas, Antenna Dehydrator, Microwave¹, Line Boosters, Amplifier, Data Talker Wireless Transmitter, Short haul modems, UPS¹

1.4.9 Test equipment.

1.4.10. Racks, furniture and cabinets.

1.4.11. Firmware and/or software upgrades.

¹ Excluded from service agreements but may be repaired on an above contract, time and material basis. All UPS Systems must be shipped to IDO for repair. Note! Excludes batteries and on-site services

1.5 Motorola has the following responsibilities:

1.5.1 Enable Customer access to the Motorola call Center operational 24 hours a day, 7 days per week, to create requests for repair service.

1.5.2 Provide repair return authorization numbers when requested by Customer.

1.5.3 Receive malfunctioning infrastructure from customer and document its arrival, repair and return.

1.5.4 Perform the following service on Motorola infrastructure:

1.5.4.1 Perform an operational check on the infrastructure to determine the nature of the problem.

1.5.4.2 Replace malfunctioning Field Replacement Units (FRU) or components.

1.5.4.3 Verify that Motorola infrastructure is returned to Motorola manufactured specifications, as applicable.

1.5.4.4 Perform a box unit test on all serviced infrastructure.

1.5.4.5 Perform a system test on select infrastructure.

1.5.5 Provide the following service on select third party infrastructure:

1.5.5.1 Perform pre-diagnostic and repair services to confirm infrastructure malfunction and eliminate sending infrastructure with no trouble found (NTF) to third party vendor for repair, when applicable.

1.5.5.2 Ship malfunctioning infrastructure components to the original equipment manufacturer or third party vendor for repair service, when applicable.

1.5.5.3 Track infrastructure sent to the original equipment manufacturer or third party vendor for service.

1.5.5.4 Perform a post-test after repair by Motorola, original equipment manufacturer, or third party vendor to confirm malfunctioning infrastructure has been repaired and functions properly in a Motorola system configuration, when applicable.

1.5.5.5 Re-program repaired infrastructure to original operating parameters based on software/firmware provided by customer as required by section 1.6.7. If the customer software version/configuration is not provided, shipping times will be delayed. If the Infrastructure repair depot determines that the malfunctioning infrastructure is due to a software defect, the repair depot reserves the right to reload infrastructure with a similar software version.

1.5.5.6 Properly package repaired infrastructure.

1.5.5.7 Ship repaired infrastructure to the customer specified address during normal operating hours of Monday through Friday 7:00am to 7:00pm CST, excluding holidays. FRU will be sent two-day air unless otherwise requested. Motorola will pay for such shipping, unless customer requests shipments outside of the above mentioned standard business hours and/or carrier

programs, such as NFO (next flight out). In such cases, customer will be responsible for payment of shipping and handling charges.

1.6 The Customer has the following responsibilities:

1.6.1 Contact or instruct Servicer to contact the Motorola System Support Center (SSC) and request a return authorization number prior to shipping malfunctioning infrastructure.

1.6.2 Provide model description, model number and serial number, type of system, software and firmware version, symptom of problem and address of site location for FRU or infrastructure.

1.6.3 Indicate if infrastructure or third party infrastructure being sent in for service was subjected to physical damage or lightning damage.

1.6.4 Follow Motorola instructions regarding inclusion or removal of firmware and software applications from infrastructure being sent in for service.

1.6.5 Provide customer purchase order number to secure payment for any costs described herein.

1.6.6 Properly package and ship the malfunctioning FRU, at customer's expense. Customer is responsible for properly packaging the malfunctioning infrastructure FRU to ensure that the shipped infrastructure arrives undamaged and in repairable condition.

1.6.6.1 Clearly print the return authorization number on the outside of the packaging.

1.6.7 Maintain versions and configurations for software/applications and firmware to install repaired equipment.

1.6.8 Provide Motorola with proper software/firmware information to reprogram equipment after repair unless current software has caused this malfunction.

1.6.9 Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide the infrastructure repair services to customer.

Network Monitoring Statement of Work

Version 1.12

November 2015

Network Monitoring Overview

Motorola's Network Monitoring Operations (NMO) within the Motorola Solutions Support Center (SSC) provides real-time fault monitoring for radio communications networks on a continuous basis. NMO utilizes sophisticated tools for remote monitoring and event characterization of your communications networks. When an event is detected, NMO technologists acknowledge and assess the situation, and initiate a defined response.

The terms and conditions of this Statement of Work (SOW) are an integral part of Motorola's Service Agreement or other applicable agreement to which it is attached and made a part thereof by this reference.

1.0 Description of Network Monitoring Services

Network Monitoring is a service designed to electronically monitor elements of a communication system for events, as set forth in the [Monitored Elements Table](#). When the SSC detects an event, (based on the severity of the event) trained technologists acknowledge and remotely diagnose the event, and initiate an appropriate response in accordance with the customer handling procedure. Appropriate responses could include, but are not limited to, continuing to monitor the event for further development, attempting remote remediation via engagement of Technical Support resources, or initiating dispatch¹ of a Field Servicer for onsite remediation.

1.1 Availability

Network Monitoring service is available 24 hours a day, 7 days a week. Network Monitoring availability is based on the level of contracted service and defined in the Customer Support Plan (CSP).

1.2 Geographic Availability

Network Monitoring is a globally provided service unless limited by data export control regulations. Timeframes are based on the customer's local time zone.

1.3 Inclusions

Network monitoring service can be delivered on Motorola sold infrastructure as stated in [Monitored Elements Table](#).

1.4 Limitations and Exclusions

- 1.4.1 Does not include monitoring of anything outside of the radio network or monitoring of infrastructure provided by a third party, unless specifically stated. Monitored elements must be within the radio network and capable of sending traps to the Unified Event Manager (UEM).
- 1.4.2 Additional support charges above and beyond the contracted service agreements may apply if it is determined that system faults were caused by the customer making changes to critical system parameters.
- 1.4.3 The following activities are outside the scope of the Network Monitoring service, but are optional services that are available to remote Network Monitoring customers at an additional cost:

- 1.4.3.1 Emergency on-site visits required to resolve technical issues that cannot be resolved by with SSC working remotely with the local customer technical resource.
- 1.4.3.2 System installations, upgrades, and expansions.
- 1.4.3.3 Customer training.
- 1.4.3.4 Hardware repair and/or exchange.
- 1.4.3.5 Network security services.
- 1.4.3.6 Network transport.
- 1.4.3.7 Information Assurance.
- 1.4.3.8 Any services not expressly included in this statement of work.
- 1.4.4 Reference the event catalogue to confirm monitored equipment.

¹ Dispatch service with OnSite Response is a separate service that is required with Network Monitoring.

1.5 Motorola has the following responsibilities:

- 1.5.1. Provide dedicated connectivity through a network connection necessary for monitoring communication networks. The [Connectivity Matrix](#) further describes the connectivity options.
- 1.5.2 If determined necessary by Motorola, provide Motorola owned equipment for monitoring system elements. If Motorola installs or replaces Motorola owned equipment, the type of equipment and location installed is listed in the [Motorola Owned & Supplied Equipment Table](#).
- 1.5.3 Verify connectivity and event monitoring prior to system acceptance or start date.
- 1.5.4 Monitor system continuously during hours designated in the CSP in accordance with the pre-defined times specified in section 1.6.2 below.
- 1.5.5 Remotely access the customer's system to perform remote diagnosis as permitted by customer pursuant to section 1.6.4.
- 1.5.6 Create a case, as necessary. Gather information to perform the following:
 - 1.5.6.1 Characterize the issue
 - 1.5.6.2 Determine a plan of action
 - 1.5.6.3 Assign and track the case to resolution.
- 1.5.7 Cooperate with customer to coordinate transition of monitoring responsibilities between Motorola and customer as specified in section 1.6.13 and 1.6.13.1.
- 1.5.8 Maintain communication with the customer in the field as needed until resolution of the case

1.6 The Customer has the following responsibilities:

- 1.6.2 Allow Motorola continuous remote access to enable the monitoring service.
- 1.6.3 Provide continuous utility service to any Motorola equipment installed or utilized at customer's premises to support delivery of the service.
- 1.6.4 Provide Motorola with pre-defined customer information and preferences prior to Start Date necessary to complete the CSP, including, but not limited to:
 - 1.6.4.1 Case notification preferences and procedure

- 1.6.4.2 Repair Verification Preference and procedure
- 1.6.4.3 Database and escalation procedure forms.
- 1.6.4.4 Submit changes in any information supplied to Motorola and included in the CSP to the CSM.
- 1.6.5 Provide the following information when initiating a service request:
 - 1.6.5.1 Assigned system ID number
 - 1.6.5.2 Problem description and site location
 - 1.6.5.3 Other pertinent information requested by Motorola to open a Case.
- 1.6.6 Notify the SSC when customer performs any activity that impacts the system. (Activity that impacts the system may include, but is not limited to, installing software or hardware upgrades, performing upgrades to the network, or taking down part of the system to perform maintenance.)
- 1.6.7 Allow Servicicers access to equipment (including any connectivity or monitoring equipment) if remote service is not possible.
- 1.6.8 Allow Servicicers access to remove Motorola owned monitoring equipment upon cancellation of service.
- 1.6.9 Provide all customer managed passwords required to access the customer's system to Motorola upon request or when opening a case to request service support or enable response to a technical issue.
- 1.6.10 Pay additional support charges above and beyond the contracted service agreements that may apply if it is determined that system faults were caused by the customer making changes to critical system parameters
- 1.6.11 Obtain all third party consents or licenses required to enable Motorola to provide the monitoring service.
- 1.6.12 Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide the services described in this SOW.
- 1.6.13 Contact Motorola to coordinate transition of monitoring when monitoring responsibility is to be transferred to or from Motorola. (I.e. normal business hours to after-hours monitoring) as set forth in pre-defined information provided by customer CSP.
 - 1.6.13.1 Upon contact, customer must provide customer name, site id, status on any open cases, severity level, and brief description of case and action plan to Motorola.
- 1.6.14 Acknowledge that cases will be handled in accordance with the times and priorities as defined in the [Event Definition table- Appendix A](#) .
- 1.6.15 Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide the Network Monitoring service.

The event types are based on the defined levels as follows:

Appendix A

Engagement Matrix

Severity Level	Severity Definition	Engagement Times
1	<p>This is defined as a critical/major incident that causes the system and/or infrastructure to experience a loss of call processing functionality and no work-around or immediate solution is available.</p> <p>The following are examples of this kind of failure:</p> <ul style="list-style-type: none"> ○ 33% of call processing resources impaired ○ Remote Site/sub-system severed ○ Site Environment alarms: <ul style="list-style-type: none"> ○ Smoke ○ Unauthorized access ○ Temperature ○ Power failure 	Response provided 24 hours, 7 days a week, including US Holidays.
2	<p>This is defined as a moderate/minor incident that causes the system to operate with a continuous reduction in capacity or functionality of core services (core services include, voice, data or network management).</p> <p>The following are examples of this kind of failure:</p> <ul style="list-style-type: none"> ○ Less than 33% of call processing resources impaired ○ Failure of a single redundant component 	Response provided 8 x 5 on standard business days, which is normally Monday through Friday 8AM to 5PM, excluding US Holidays.
3	<p>This is defined as a minor issue, which has little or no impact on the functionality, efficiency or usability of core services. The following are examples of this kind of severity:</p>	Response provided 8 x 5 on standard business days, which is normally Monday through Friday 8AM to 5PM, excluding US Holidays.

	<ul style="list-style-type: none"> ○ Faults that have no impact in how the user perceives the system to work ○ Intermittent issues ○ Requests for information ○ Preventive Maintenance or upgrade related work 	
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Connectivity Matrix

Request connectivity 8 weeks in advance of service start date

System Type	Connectivity	Set up and Maintenance
ASTRO® 25	Internet VPN	Motorola
ASTRO® 25	T1	Motorola

Motorola Owned & Supplied Equipment Table

Equipment Type	Location Installed
Firewall/Router	Master Site
Service Delivery Management Server	Master Site for each Zone

Monitored Elements Table

Master Site Infrastructure	RF Site Equipment	Dispatch Site Equipment
Servers & Back up Servers	Channels	Consoles
MOSCAD (digital inputs & RS232 serial alarms)	MOSCAD (digital inputs & RS232 serial alarms)	AIS Servers
TRAK	RF Site Communication Path	Operator Position (OP)
Core LAN Switch	Switch	Motorola Gold Elite Gateway (MGEG)
Packet Data Gateway (PDG)	Site Controller	Call Processor
Radio Network Gateway (RNG)	Router	Logging Replay Station (only within the RNI)
Zone Database Server (ZDS)	Site	Ambassador (AMB)
Gateway Router	Gateway Router	Client Station
Controller – Zone & Domain	Network Time Protocol (NTP)	Voice Processing Module (VPM)
Firewall Manager Servers	Firewall	MCC 7500 IP Logging Recorders
Air Traffic Router (ATR)	SmartX Site Converter (only the converter, not the legacy sites)	MCC 7100 (only within the RNI)
Unified Event Manager (UEM)		
Zone Statistical Server (ZSS)		
Install Server		

**Some or all of the above equipment may be monitored depending on system configuration and need. Other equipment (not listed) may be monitored as an option, consult with your Customer Support Manager for details.*

ASTRO[®] 25 OnSite Infrastructure Response & Dispatch Service Statement of Work

Version 1.6

September 2013

OnSite Infrastructure Response and Dispatch Service Overview

Motorola's OnSite Infrastructure Response & Dispatch service provides case management and escalation for onsite technical service requests. The service is delivered by the Motorola's Solutions Support Center (SSC) in conjunction with a local service provider. The SSC is responsible for opening a case for onsite support and monitoring the status of that case to ensure strict compliance to committed response times.

The terms and conditions of this Statement of Work (SOW) are an integral part of Motorola's Service Agreement or other applicable agreement to which it is attached and made a part thereof by this reference.

1.0 Description of Services

The Motorola SSC will receive customer request for OnSite service provider and dispatch a servicer. The servicer will respond to the customer location based on pre-defined Severity Levels set forth in Section 4.0 - Severity Level Definitions and Response times set forth in Section 5.0 – Severity Level Response Time Commitments table in order to restore the system.

Motorola will provide case management as set forth herein. The SSC will maintain contact with the on-site Motorola Service Shop until system restoral and case closure. The SSC will continuously track and manage cases from creation to close through an automated case tracking process.

1.1 Scope

OnSite Infrastructure Response & Dispatch service is available 24 hours a day, 7 days a week in accordance with [Severity Level Definitions](#) and [Severity Level Response Time Commitments](#) listed in sections 4.0 and 5.0 of this document.

1.2 Geographic Availability

OnSite Infrastructure Response and Dispatch is available to customers worldwide where Motorola servicers are present. Response times are based on the customer's local time zone.

1.3 Inclusions

Onsite Infrastructure Response and Dispatch Service can be delivered on Motorola-sold infrastructure.

2.0 Motorola has the following responsibilities:

- 2.1. Receive service requests.
- 2.2. Create a case as necessary when service requests are received. Gather information to perform the following:
 - 2.2.1. Characterize the issue.
 - 2.2.2. Determine a plan of action.
 - 2.2.3. Assign and track the case to resolution.
- 2.3. Dispatch a servicer as required by Motorola standard procedures and provide necessary case information collected in 2.2.
- 2.4. Ensure the required personnel have access to customer information as needed.
- 2.5. Servicer will perform the following on-site:
 - 2.5.1. Run diagnostics on the Infrastructure or Field Replacement Units (FRU).
 - 2.5.2. Replace defective Infrastructure or FRU, as supplied by customer¹.

- 2.5.3. Provide materials, tools, documentation, physical planning manuals, diagnostic/test equipment and any other requirements necessary to perform the maintenance service.
- 2.5.4. If a third party vendor is needed to restore the system, the Servicer may accompany that vendor onto the customer's premises.
- 2.6. Verify with customer that restoration is complete or system is functional, if required by customer's repair verification in the Customer Support Plan required by section 3.2. If verification by customer cannot be completed within 20 minutes of restoration, the case will be closed and the Servicer will be released.
- 2.7. Escalate the case to the appropriate party upon expiration of a response time.
- 2.8. Close the case upon receiving notification from customer or servicer, indicating the case is resolved.
- 2.9. Notify customer of case status as defined by the Customer Support Plan:
 - 2.9.1. Open and closed; or
 - 2.9.2. Open, assigned to the servicer, arrival of the servicer on-site, deferred or delayed, closed.
- 2.10. Provide Case activity reports to customer if requested.

3.0 Customer has the following responsibilities:

- 3.1. Contact Motorola, as necessary, to request service.
- 3.2. Provide Motorola with the following pre-defined customer information and preferences prior to start date necessary to complete Customer Support Plan (CSP):
 - 3.2.1. Case notification preferences and procedure.
 - 3.2.2. Repair verification preference and procedure.
 - 3.2.3. Database and escalation procedure forms.
 - 3.2.4. Submit changes in any information supplied in the CSP to the Customer Support Manager (CSM).
- 3.3. Provide the following information when initiating a service request:
 - 3.3.1. Assigned system ID number.
 - 3.3.2. Problem description and site location.
 - 3.3.3. Other pertinent information requested by Motorola to open a case.
- 3.4. Allow Servicers access to equipment.
- 3.5. Supply infrastructure or FRU, as applicable, in order for Motorola to restore the system as set forth in paragraph 2.5.2.
- 3.6. Maintain and store in an easily accessible location any and all software needed to restore the system.
- 3.7. Maintain and store in an easily accessible location proper system backups.
- 3.8. For E911 systems, test the secondary/backup Public Safety Answering Point (PSAP) connection to be prepared in the event of a catastrophic failure of a system. Train appropriate personnel on the procedures to perform the function of switching to the backup PSAP.
- 3.9. Verify with the SSC that restoration is complete or system is functional, if required by repair verification preference provided by customer in accordance with section 3.2.
- 3.10. Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide these services.

¹Infrastructure Repair with Advanced Replacement (IRAR) is a service offering that provides repair and replacement of infrastructure equipment. IRAR enhances Onsite and Dispatch Service by enabling a faster response and repair times.

4.0 Severity Level Definitions

The following severity level definitions will be used to determine the maximum response times:

Severity Level	Severity Definition
Severity 1	<p>This is defined as a failure that causes the system and/or infrastructure a loss of voice functionality and no work-around or immediate solution is available.</p> <p>The following are examples of this kind of severity:</p> <ul style="list-style-type: none"> • 33% of call processing resources impaired • Site Environment alarms: <ul style="list-style-type: none"> ○ Smoke ○ Unauthorized access ○ Temperature ○ Power failure
Severity 2	<p>This is defined as a fault that causes the system to operate with a continuous reduction in capacity or functionality of core services (core services include, voice, data or network management).</p> <p>The following are examples of this kind of severity:</p> <ul style="list-style-type: none"> • Less than 33% of call processing resources impaired • Failure of a single redundant component
Severity 3	<p>This is defined as a fault which reduces the functionality, efficiency or usability of core services (voice, data and network management) and there is a viable work-around in place.</p> <p>The following are examples of this kind of severity:</p> <ul style="list-style-type: none"> • Intermittent faults that are infrequent and minor impact to core services • Statistical reporting problems
Severity 4	<p>This is defined as a minor issue, which has little or no impact on the functionality, efficiency or usability of core services. The following are examples of this kind of severity:</p> <ul style="list-style-type: none"> • Faults resulting in minor functions or features being unsupported or unreliable in ways that are not noticeable to the user. • Faults that have no impact in how the user perceives the system to work. • Cosmetic issues. • Requests for information. • Preventive Maintenance

5.0 Severity Level Response Time Commitments

(Customer's Response Time Classification is designated in the Customer Support Plan.)

Severity Level	Standard Response Time
Severity 1*	Within 4 hours from receipt of notification continuously
Severity 2	Within 4 hours from receipt of notification Standard Business Day
Severity 3	Within 8 hours from receipt of notification Standard Business Day
Severity 4	Within 12 hours from receipt of notification Standard Business Day

*Premier Response is an option that provides a 2-hour response time for severity 1 issues.

**PREVENTIVE MAINTENANCE
LEVEL 1
ASTRO 25 7.9 & ABOVE
STATEMENT OF WORK
VERSION 7.0
AUGUST 2017**

Annual Preventive Maintenance Statement of Work

The terms and conditions of this Statement of Work (SOW) are an integral part of Motorola's Service Agreement or other applicable agreement to which it is attached and made a part thereof by this reference.

Annual Preventative Maintenance will provide annual operational tests on the customer's infrastructure equipment (Infrastructure or Fixed Network Equipment or "FNE") to monitor the Infrastructure's conformance to specifications, as set forth in the applicable attached Exhibit(s), all of which are hereby incorporated by this reference.

1.1 Scope

Annual Preventive Maintenance will be performed during standard business hours (unless otherwise agreed to in writing). If the system or Customer requirements dictate this service must occur outside of standard business hours, an additional quotation will be provided. Customer is responsible for any charges associated with unusual access requirements or expenses.

1.2 Inclusions

Annual Preventive Maintenance service will be delivered on Motorola sold infrastructure including integrated 3rd party products per the level of service as defined in Table 1.

1.3 Limitations and Exclusions

Unless specifically called out in Table 1, the following activities are outside the scope of the Annual Preventive Maintenance service, however, can be included as optional services that are available to Annual Preventive Maintenance customers at an additional cost:

- 1.3.1. Emergency on-site visits required to resolve technical issues.
- 1.3.2. Third party support for equipment not sold by Motorola as part of the original system.
- 1.3.3. System installations, upgrades, and expansions.
- 1.3.4. Customer training.
- 1.3.5. Hardware repair and/or exchange.
- 1.3.6. Network security services.
- 1.3.7. Network transport.
- 1.3.8. Information Assurance.
- 1.3.9. Motorola services not included in this statement of work.
- 1.3.10. Any maintenance required as a result of a virus or unwanted intrusion is excluded if the system is not protected against these security threats by Motorola's Pre-tested Security Update Service when applicable.
- 1.3.11. Tower climbs, tower mapping analysis or tower structure analysis

1.4 Motorola has the following responsibilities:

- 1.4.1 Notify the customer of any planned system downtime needed to perform this Service.
- 1.4.2 Advise customer of issues that may require attention.

- 1.4.3 Maintain communication with the customer as needed until completion of the Annual Preventive Maintenance.
 - 1.4.4 Determine, in its sole discretion, when a case requires more than the Annual Preventive Maintenance services described in this SOW and notify customer of an alternative course of action.
 - 1.4.5 Provide customer with a report documenting system performance against expected parameters along with recommended actions. Time allotment for report completion TBD.
 - 1.4.6 Provide trained and qualified personnel with proper security clearance required to complete Annual Preventive Maintenance service.
- 1.5 The Customer has the following responsibilities:
- 1.5.1 Provide preferred schedule for Annual Preventative Maintenance to Motorola.
 - 1.5.2 Authorize and acknowledge any scheduled system downtime.
 - 1.5.3 Maintain periodic backup of databases, software applications, and firmware.
 - 1.5.4 Establish and maintain a suitable environment (heat, light, and power) for the equipment location and provide Motorola full, free, and safe access to the equipment so that Motorola may provide services. All sites shall be accessible by standard service vehicles.
 - 1.5.5 Submit changes in any information supplied in the Customer Support Plan (CSP) to the Customer Support Manager (CSM).
 - 1.5.6 Provide site escorts in a timely manner if required.
 - 1.5.7 Provide Motorola with requirements necessary for access to secure facilities.
 - 1.5.8 Obtain at Customer's cost all third party consents or licenses required to enable Motorola to provide the Service.
- 1.6 The Servicer has the following responsibilities:
- 1.6.1 Perform the Preventive Maintenance tasks as set forth in Table 1 at the level of service the customer has purchased.
 - 1.6.2 Perform the Site Performance Verification Procedures in Table 2 for each site type on the system.
 - 1.6.3 Provide required diagnostic/test equipment necessary to perform the Preventive Maintenance service.
 - 1.6.4 As applicable, use the Method of Procedure (MOPs) as defined for each task.

Table 1
Preventive Maintenance Tasks

MASTER SITE CHECKLIST - LEVEL 1	
SERVERS	
Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Capture Diags	Perform recommended diagnostic tests based on server type. Capture available diagnostic logs.
NM Client Applications	Review UEM events and transport medium types, (microwave/leased line/telco, etc). Event log review for persistent types. Verify all NM client applications are operating correctly.
Verify System SW CD's	Perform audit of software media on site. Versions, KC numbers, types, etc.
Complete Backup	Verify backups have been done or scheduled. SZ database (BAR), Centracom CDM/ADM database, etc.
Network Time Protocol (NTP)	Verify operation and syncing all devices.
Data Collection Devices (DCD) check (if present)	Verify data collection
Anti-Virus	Verify anti-virus is enabled and that definition files are up to date (within two weeks of current date) on CSMS
ROUTERS	
Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Capture Diags	Perform recommended diagnostic tests based on router type. Capture available diagnostic logs.
Verify Redundant Routers	Test redundancy in CWR devices. Core router switchover (coordinate with customer).
SWITCHES	
Equipment Alarms	Check LED and/or other status indicators for fault conditions.

Capture Diags	Perform recommended diagnostic tests based on switch type. Capture available diagnostic logs.
Verify Redundant Switches	Test redundancy in CWR devices. Core router switchover (coordinate with customer).
DOMAIN CONTROLLERS (non-CSA)	
Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Capture Diags	Perform recommended diagnostic tests based on server type. Capture available diagnostic logs.
Verify System SW CD's	Perform audit of software media on site. Versions, KC numbers, types, etc.
FIREWALLS	
Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Capture Diags	Perform recommended diagnostic tests based on server type. Capture available diagnostic logs.
LOGGING EQUIPMENT	
Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Capture Diags	Perform recommended diagnostic tests based on server type. Capture available diagnostic logs.
Server CPU Health	i.e. memory, HDD, CPU, disk space/utilization.

PRIME SITE CHECKLIST - LEVEL 1

SOFTWARE

Verify System SW CD's	Perform audit of software media on site. Versions, KC numbers, types, etc.
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SWITCHES

Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Capture Diags	Perform recommended diagnostic tests based on switch type. Capture available diagnostic logs.
Clean Fans and Equipment	Use antistatic vacuum to clean cooling pathways

ROUTERS	
Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Capture Diags	Perform recommended diagnostic tests based on router type. Capture available diagnostic logs.
Clean Fans and Equipment	Use antistatic vacuum to clean cooling pathways
MISCELLANEOUS EQUIPMENT	
Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Capture Diags	Perform recommended diagnostic tests based on server type. Capture available diagnostic logs.
Site Frequency Standard Check (TRAK)	Check lights and indicators for A/B receivers.
SITE CONTROLLERS	
Capture Diags	Perform recommended diagnostic tests based on server type. Capture available diagnostic logs.
Equipment Alarms	Check LED and/or other status indicators for fault conditions.
Clean Fans and Equipment	Use antistatic vacuum to clean cooling pathways
COMPARATORS	
Equipment Alarms	Verify no warning/alarm indicators.
Capture Diags	Perform recommended diagnostic tests based on server type. Capture available diagnostic logs.
Clean Fans and Equipment	Use antistatic vacuum to clean cooling pathways

DISPATCH SITE CHECKLIST - LEVEL 1	
GENERAL	
Inspect all Cables	Inspect all cables/connections to external interfaces are secure
Mouse and Keyboard	Verify operation of mouse and keyboard

Configuration File	Verify each operator position has access to required configuration files
Console Op Time	Verify console op time is consistent across all ops
Screensaver	Verify screensaver set as customer prefers
Screen Performance	Verify screen operational/performance
Touchscreen	Verify touchscreen operation (if applicable)
Cabling/Lights/Fans	Visual inspection of all equipment - cabling/ lights/ fans
Filters/Fans/Dust	Clean any filters/ fans/ dust- all equipment
Monitor and Hard Drive	Confirm monitor and hard drive do not "sleep"
DVD/CD	Verify / clean DVD or CD drive
Time Synchronization	Verify console time is synchronized with NTP server
Anti-Virus	Verify anti-virus is enabled and that definition files are up to date (within two weeks of current date)
HEADSET UNPLUGGED TESTING	
Speakers	Test all speakers - audio quality, volume, static, drop-outs, excess hiss when turned up.
Channel Audio in Speaker	Verify selected channel audio in select speaker only.
Footswitch Pedals	Verify both footswitch pedals operational
Radio On-Air Light	Verify radio on air light comes on with TX (if applicable)
HEADSET PLUGGED IN TESTING	
Radio TX and RX	Verify radio TX/RX from both headset jacks. Verify levels OK. Check volume controls for noise/static or drop-outs.
Speaker Mute	Verify select speaker muted.
Telephone Operation	Verify telephone operational through both headset jacks. Check volume controls for noise/static or drop-outs.
Audio Switches	Verify select audio switches to speaker when phone off-hook. (if interfaced to phones)
Radio Takeover in Headset	Verify radio-takeover in headset mic when phone off-hook (mic switches to radio during PTT and mutes to phone).
OTHER TESTS	
Phone Status Light	Verify phone status light comes on when phone off-hook (if applicable)
Desk Microphone Operation	Confirm desk mic operation (if applicable)
Radio IRR Operation	Verify radio IRR operational (if applicable) on MOT dispatch

Telephone IRR Operation	Verify telephone [if on radio computer] IRR operational (if applicable) on MOT dispatch
Recording	Verify operator position being recorded on long term logging recorder (if applicable) if included in service agreement
COMPUTER PERFORMANCE TESTING	
Computer Reboot	Reboot op position computer
Computer Operational	Confirm client computer is fully operational (if applicable)
AUDIO TESTING	
Conventional Resources	Confirm all conventional resources are functional with adequate audio levels and quality
Secure Mode	Confirm any secure talkgroups are operational in secure mode
Trunked Resources	Confirm all trunked resources on screen are functioning by placing a call in both directions (at the customer's discretion) and at a single op position
Backup Resources	Confirm backup resources are operational
EQUIPMENT ROOM TESTS	
Recording - AIS Test	Verify audio logging of trunked calls
Recording	Test op position logging on analog recorder (with customer assistance)
System Alarms	Review alarm system on all equipment for errors
Capture Diags	Perform recommended diagnostic tests based on equipment. Capture available diagnostic logs.
Verify System SW CD's	Perform audit of software media on site. Versions, KC numbers, types, etc.
PLAYBACK STATION (Motorola Provided)	
Capture Diags	Perform recommended diagnostic tests based on equipment. Capture available diagnostic logs.
Recall Audio	Verify that radio/telephone audio can be recalled

RF SITE CHECKLIST - LEVEL 1

RF PM CHECKLIST

Equipment Alarms	Verify no warning/alarm indicators.
Clean Fans and Equipment	Use antistatic vacuum to clean cooling pathways
Site Frequency Standard Check	Check lights and indicators for A/B receivers.
Basic Voice Call Check	Voice test each voice path, radio to radio.
Control Channel Redundancy (trunking)	Roll control channel, test, and roll back.
Site Controller Redundancy (trunking) - ASR only	Roll site controllers with no dropped audio.
PM Optimization Workbook (See Table 2 for GTR tests)	Complete Base Station Verification tests - Frequency Error, Modulation Fidelity, Forward at Set Power, Reverse at Set Power, Gen Level Desense no Tx

MOSCAD CHECKLIST - LEVEL 1

MOSCAD SERVER

Equipment Alarms	Verify no warning/alarm indicators.
Check Alarm/Event History	Review MOSCAD alarm and events to find if there are chronic issues.
Windows Event Logs	Review Windows event logs. Save and clear if full.
Password Verification	Site devices to verify passwords. Document changes if any found.
Verify System SW CD's	Perform audit of software media on site. Versions, KC numbers, types, etc.

MOSCAD CLIENT

Equipment Alarms	Verify no warning/alarm indicators.
Check Alarm / Event History	Review MOSCAD alarm and events to find if there are chronic issues.
Windows Event Logs	Review Windows event logs. Save and clear if full.
Password Verification	Site devices to verify passwords. Document changes if any found.
Verify System SW CD's	Perform audit of software media on site. Versions, KC numbers, types, etc.

MOSCAD RTU's	
Equipment Alarms	Verify no warning/alarm indicators.
Verify Connectivity	Verify Connectivity
Password Verification	Site devices to verify passwords. Document changes if any found.
Check Alarm/Event History	Review MOSCAD alarms and events to find if there are chronic issues.
Verify System SW CD's	Perform audit of software media on site. Versions, KC numbers, types, etc.

FACILITIES CHECKLIST - LEVEL 1	
VISUAL INSPECTION EXTERIOR	
ASR Sign	Verify that the ASR sign is posted.
Warning Sign - Tower	Verify warning sign is posted on the tower.
Warning Sign - Gate	Verify that a warning sign is posted at the compound gate entrance.
10 Rule Sign	Verify that a 10 rules sign is posted on the inside of the shelter door.
Outdoor Lighting	Verify operation of outdoor lighting/photocell.
Exterior of Building	Check exterior of building for damage/disrepair.
Fences / Gates	Check fences/gates for damage/disrepair.
Landscape / Access Road	Check landscape/access road for accessibility.
VISUAL INSPECTION INTERIOR	
Electrical Surge Protectors	Check electrical surge protectors for alarms.
Emergency Lighting	Verify emergency lighting operation.
Indoor Lighting	Verify indoor lighting.
Equipment Inspection	Visually inspect that all hardware (equipment, cables, panels, batteries, racks, etc.) are in acceptable physical condition for normal operation.
Regulatory Compliance (License, ERP, Frequency, Deviation)	Check station for regulatory compliance. Update station logs.
Clean Fans and Equipment	Use antistatic vacuum to clean cooling pathways

UPS	
Visual inspection (condition, cabling)	Verify corrosion, physical connections, dirt/dust, etc.
GENERATOR	
Visual Inspection	Verify, check panel housing, cracks, rust and weathering. Physical connections, corrosion, dirt/dust, etc.
Fuel	Verify fuel levels in backup generators, document date of last fuel delivered from fuel service provider.
Oil	Check the oil dipstick for proper level. Note condition of oil.
Verify operation (no switchover)	Check, verify running of generator, ease of start or difficult. Is generator "throttling" or running smooth? Any loud unusual noise? Etc.
Motorized Dampers	Check operation
HVAC	
Air Filter	Check air filter and recommend replacement if required.
Coils	Check coils for dirt and straightness
Outdoor Unit	Check that outdoor unit is unobstructed
Wiring	Wiring (insect/rodent damage)
Cooling / Heating	Check each HVAC unit for cooling/heating
Motorized Dampers	Check operation

MICROWAVE CHECKLIST - LEVEL 1

GENERAL	
Transport Connectivity	Confirm transport performance by viewing UEM for site link warnings or errors.
RADIO	
Alarms	Check alarm / event history
Software	Verify version of application
TX Frequency	Verify transmit frequency
TX Power	Verify transmit power
RX Frequency	Verify receive frequency
RX Signal Level	Verify receive signal level and compare with install baseline documentation
Save configuration	Save current configuration for off site storage

Backhaul Performance	Monitor UEM status (alarms, logs, etc.) for all links. If UEM not used to monitor microwave, then use provided microwave alarm mgmt server.
WAVEGUIDE	
Visual Inspection	Inspect for wear or dents (from ground using binoculars).
Connection Verification	Verify all connections are secured with proper hardware (from ground using binoculars).
DEHYDRATOR	
Visual Inspection	Inspect moisture window for proper color
Pressure Verification	Verify pressure of all lines
Re-Pressurization	Bleed lines temporarily to verify the dehydrator re-pressurizes
Run Hours	Record number of hours ran

TOWER CHECKLIST - LEVEL 1

STRUCTURE CONDITION

Rust	Check structure for rust.
Cross Members	Check for damaged or missing cross members.
Safety Climb	Check safety climb for damage.
Ladder	Verify that ladder system is secured to tower.
Welds	Check for cracks or damaged welds.
Outdoor lighting/photocell	Test outdoor lighting and photocell.
Drainage Holes	Check that drainage holes are clear of debris.
Paint	Check paint condition.

TOWER LIGHTING

Lights/Markers	Verify all lights/markers are operational.
Day/Night Mode	Verify day and night mode operation.
Power Cabling	Verify that power cables are secured to tower.

ANTENNAS AND LINES

Antennas	Visually inspect antennas for physical damage (from ground using binoculars).
Transmission Lines	Verify that all transmission lines are secure on the tower.

GROUNDING

Structure Grounds	Inspect grounding for damage or corrosion
GUY WIRES	
Tower Guys	Check guy wires for fraying and tension.
Guy Wire Hardware	Check hardware for rust.
CONCRETE CONDITION	
Tower Base	Check for chips or cracks.

Table 2
Site Performance Verification Procedures

ASTRO 25 GTR ESS SITE PERFORMANCE
ANTENNAS
Transmit Antenna Data
Receive (Antenna) System Data
Tower Top Amplifier Data
FDMA MODE
Base Radio Transmitter Tests
Base Radio Receiver Tests
Base Radio Transmit RFDS Tests
Receive RFDS Tests with TTA (if applicable)
Receive RFDS Tests without TTA (if applicable)
TDMA MODE
Base Radio TDMA Transmitter Tests
Base Radio TDMA Receiver Tests
TDMA Transmit RFDS Tests
TDMA Receive RFDS Tests with 432 Diversity TTA
TDMA Receive RFDS Tests with 2 Independent TTA's (if applicable)
TDMA Receive RFDS Tests without TTA (if applicable)

Appendix C – Security Update Service (SUS) Statement of Work

Security Update Service Overview

To verify compatibility with your ASTRO system, Motorola Solutions, Inc.'s ("Motorola") Security Update Service (SUS) provides pre-tested 3rd party software (SW) security updates. This service was formerly called Pre-tested Software Subscription (PTSS). Additionally, SUS Platinum has been eliminated. The additional SUS Platinum features have been merged into this one SUS offering.

This Statement of Work ("SOW") is subject to the terms and conditions of Motorola's Professional Services Agreement, Service Agreement or other applicable agreement in effect between the parties ("Agreement"). Motorola and Customer may be referred to herein individually as a "Party or together as "Parties."







1.0 Description of Security Update Services

Motorola shall maintain a dedicated vetting lab for each supported ASTRO release for the purpose of pre-testing security updates. In some cases, when appropriate, Motorola will make the updates available to outside vendors, allow them to test, and then incorporate those results into this offering. Depending on the specific ASTRO release and customer options, these may include updates to antivirus definitions, OEM vendor supported Windows Workstation and Server, Solaris and RedHat Linux (RHEL) operating system patches, VMware ESXi Hypervisor patches, Oracle database patches, PostgreSQL patches, and patches for other 3rd party Windows applications such as Adobe Acrobat and Flash.

Motorola has no control over the schedule of releases. The schedule for the releases of updates is determined by the Original Equipment Manufacturers (OEMs), without consultation with Motorola. Antivirus definitions are released every week. Microsoft patches are released on a monthly basis. Motorola obtains and tests these updates as they are released. Other products have different schedules or are released "as-required." Motorola will obtain and test these updates on a quarterly basis.

SUS (Self- Installed) is the baseline offer. Sections describing the optional delivery methods and reboot support service are only applicable if purchased.

SUS Delivery Methods

Patch Delivery Method	Download Responsibility	Installation Responsibility	Reboot Support
SUS (Self-Installed)	Customer	Customer	*Option 
Remote SUS			*Option 
On-Site Delivery of SUS			Included

Packages for L & M Cores

Packages	SUS (Self Installed)	RSUS	On-Site Delivery of SUS	Reboot Support
Essential / +	✓			Optional
Advanced / +	✓	✓	Optional	Optional
Premier	✓	✓	Optional	Included

SUS

Once tested, Motorola will post the updates to a secured extranet website and send an email notification to the customer. If there are any recommended configuration changes, warnings, or workarounds, Motorola will provide detailed documentation along with the updates on the website. The customer will be responsible for the download and deployment of these updates to their ASTRO System.

Remote Delivery of SUS (RSUS)

Remote Delivery of SUS. Motorola's dedicated staff remotely installs the required security updates and operating system patches onto your radio network. Vulnerabilities from third party software are addressed as soon as the validation of recommended patches is completed. Motorola will also provide reports outlining updates made for your team's review and awareness. Patch transfers are transparent to the end user. After the patches are transferred, a report is sent out to inform our customers which machines they will need to reboot the appropriate devices to enable the new patches and antivirus definitions.

Reboot Support Delivery of SUS/RSUS

This optional enhancement provides support for rebooting impacted servers and workstations after the patches have been downloaded/pushed and installed. Once installation is complete, Motorola will deploy trained technicians to reboot servers and workstations at the customer locations.

ON-SITE Delivery of SUS

For convenience, a trained technician will be contacted to provide the complete patching service. At the customer location, the technician will download patches, perform the required installation services and coordinate the rebooting of servers and dispatch ops.

2.0 Scope

Security Update Service supports the currently shipping Motorola ASTRO System Release (SR) and strives to support 4 releases prior. Motorola reserves the right to adjust which releases are supported as business conditions dictate. Contact your Customer Service Manager for the latest supported releases.

SUS is available for any L or M core system in a supported release.

Systems that have non-standard configurations that have not been certified by Motorola Systems Integration and Testing (SIT) are specifically excluded from this Service unless otherwise agreed in writing by Motorola. Service does not include pre-tested intrusion detection system (IDS) updates for IDS solutions. Certain consoles, MOTOBRIDGE, MARVLIS, Symbol Equipment, AirDefense Equipment, AVL, and Radio Site Security products are also excluded. Motorola will determine, in its sole discretion, the third party software that is supported as a part of this offering.

Antivirus updates - Antivirus updates are released weekly. The target release for these updates is by close of business each Tuesday. While the release often occurs early, this is the time and date committed to by vetting.

Windows - Updates are downloaded on Microsoft Patch Tuesday (2nd Tuesday of the month). Updates are incorporated, tested and vetted in the Windows Motopatch disk over the next few weeks. The target release is by the last day of the month.

Windows 3rd Party updates - for Adobe Reader and Adobe Flash are included on the standard Motopatch for Windows disk and follow the Windows patching schedule.

RHEL - Security updates are downloaded the last week of the first month of the quarter. Updates include any updates that are available at that time. We then prepare, test and vet the RHEL 5, and RHEL 6, Motopatch disks and target to release the disks by the last day of the quarter.

VMware - Security updates are downloaded the last week of the first month of the quarter for ESXi. These updates are downloaded from HP directly. The updates are incorporated into the Motopatch for ESXi disk. We then prepare, test and vet the ESXi Motopatch and target to release the disk by the last day of the quarter.

Solaris 10* - Security updates are downloaded around the 15th of the 1st month of the quarter. This is when updates are released by Oracle. The Solaris 10 patch bundle is downloaded and used to prepare, test and vet the Solaris 10 Motopatch disk. The target release for the disk is by the last day of the quarter. We no longer patch Solaris 10 as this product has gone end of life for MSI. * EOL by MSI - only supported on 7.13 CPH RHEL and Solaris

Oracle 11g* - Security updates are downloaded the last week of the first month of the quarter. Whatever

updates are available at that time are used. The disk is then prepared, tested and vetted. The Motopatch for Oracle 11gR1 and 11gR2 disks target to release by the last day of the quarter. *7.13 and prior releases thru 2017

PostgreSQL* - Security updates are downloaded the last week of the first month of the quarter. Whatever updates that are available at that time are used. The disk is then prepared, tested and vetted. The Motopatch for PostgreSQL disk target release is by the last day of the quarter. *7.14 and later major releases

McAfee Patch Updates - Security patches are downloaded from McAfee the last week of the first month of the quarter. Whatever updates that are available at that time are used. The disk is then prepared, tested and vetted. The Motopatch for McAfee disk target release is by the last day of the quarter.

DOT HILL DAS Firmware disk - Security patches are downloaded from DOT HILL the last week of the first month of the quarter. Whatever updates that are available at that time are used. The disk is then prepared, tested and vetted. The disk target release is by the last day of the quarter.

Backport – CPT provides the latest STIG updates in January of each calendar year. These STIG updates are applied to our test systems and after testing, released to our customers as our IA Backport Disk. Scheduled release dates are typically the end of the first quarter.

3.0 Motorola has the following responsibilities:

3.1 Obtain relevant 3rd party security updates as made available and supported from the OEM's. This includes antivirus definition, OEM vendor available/supported operating systems patches, VMWare patches, database patches, and selected other 3rd party patches covered by SUS. Motorola does not control when these updates are released, but current release schedules are listed for reference:

McAfee Antivirus definitions – Weekly

Microsoft PC and Server OS patches – Monthly

Solaris, RHEL OS, VMware hypervisor patches – Quarterly

Other 3rd party patches - Quarterly

3.2 Each assessment will consist of no less than 36 hours of examination time to evaluate the impact each update has on the system.

3.3 Testing of updates to verify whether they degrade or compromise system functionality on a dedicated ASTRO test system with standard supported configurations.

3.4 Address any issues identified during testing by working with Motorola selected commercial supplier and/or Motorola product development engineering team. If a solution for the identified issues cannot be found, the patch will not be posted on Motorola's site.

3.5 Pre-test STIG recommended remediation when applicable.

3.6 Release all tested updates to Motorola's secure extranet site.

3.7 Include documentation for installation, recommended configuration changes, and

identified issues and remediation for each update release.

- 3.8 Include printable labels for customers who download the updates to CD's.
- 3.9 Notify customer of update releases by email.
- 3.10 A supported SUS ASTRO release matrix will be kept on the extranet site for reference.

4.0 The Customer has the following responsibilities:

- 4.1 Provide Motorola with pre-defined information prior to contract start date necessary to complete a Customer Support Plan (CSP).
- 4.2 Submit changes in any information supplied in the Customer Support Plan (CSP) to the Customer Support Manager (CSM).
- 4.3 Provide means for accessing pre-tested files (Access to the extranet website).
- 4.4 Deploy pre-tested files to the customer system as instructed in the "Read Me" text provided.
- 4.5 Implement recommended remediation(s) on customer system, as determined necessary by customer.
- 4.6 Upgrade system to a supported system release as necessary to continue service.
- 4.7 Adhere closely to the System Support Center (SSC) troubleshooting guidelines provided upon system acquisition. A failure to follow SSC guidelines may cause the customer and Motorola unnecessary or overly burdensome remediation efforts. In such case, Motorola reserves the right to charge an additional service fee for the remediation effort.
- 4.8 Comply with the terms of the applicable license agreement between the customer and the non-Motorola software copyright owner.

5.0 Disclaimer:

Motorola disclaims any and all warranties with respect to pre-tested antivirus definitions, database security updates, hypervisor patches, operating system software patches, intrusion detection sensor signature files, or other 3rd party files, express or implied. Further, Motorola disclaims any warranty concerning the non-Motorola software and does not guarantee that customer's system will be error-free or immune to security breaches as a result of these services.

Appendix D – High-Speed Connectivity Specifications

Connectivity Requirements

- The minimum supported link between the core and the zone is a full T1
- Any link must realize or a sustained transfer rate of 175 kBps / 1.4 Mbps or better, bidirectional



- Interzone links must be fully operational when present
- Link reliability must satisfy these minimum QoS levels:
 - Port availability must meet or exceed 99.9% (three nines)
 - Round trip network delay must be 100 ms or less between the core and satellite (North America) and 400 ms or less for international links
 - Packet loss shall be no greater than 0.3%
 - Network jitter shall be no greater than 2 ms
- The network requirements above are based on the SLA provided for Sprint Dedicated IP Services as of April, 2012. It is possible other vendors may not be able to meet this exact SLA, so these cases must be examined on a case-by-case basis.

SERVICE TERMS AND CONDITIONS

Motorola Solutions, Inc. ("Motorola") and the customer named in the Communications System Agreement ("Customer") hereby agree as follows:

Section 1 APPLICABILITY

These Service Terms and Conditions apply to Maintenance Services provided in accordance with the Statements of Work included in Exhibit D of the Communications System Agreement to which these terms and conditions are attached.

Section 2 DEFINITIONS AND INTERPRETATION

2.1 "Agreement" means these Service Terms and Conditions and the other attachments in Exhibit D of the Communications System Agreement, all of which are incorporated herein by this reference. In interpreting this Agreement and resolving any ambiguities, these Service Terms and Conditions take precedence over the other attachments in Exhibit D.

2.2 "Equipment" means the equipment that is specified in the attachments or is subsequently added to this Agreement.

2.3 "Services" means those installation, maintenance, support, training, and other services described in this Agreement.

Section 3 ACCEPTANCE

Customer accepts these Service Terms and Conditions and agrees to pay the prices set forth in Exhibit B of the Communications System Agreement to which these terms and conditions are attached.

Section 4 SCOPE OF SERVICES

4.1. Motorola will provide the Services described in this Agreement or in a more detailed statement of work or other document attached to this Agreement. At Customer's request, Motorola may also provide additional services at Motorola's then-applicable rates for the services.

4.2. If Motorola is providing Services for Equipment, Motorola parts or parts of equal quality will be used; the Equipment will be serviced at levels set forth in the manufacturer's product manuals; and routine service procedures that are prescribed by Motorola will be followed.

4.3. If Customer purchases from Motorola additional equipment that becomes part of the same system as the initial Equipment, the additional equipment may be added to this Agreement and will be billed at the applicable rates after the warranty for that additional equipment expires.

4.4. All Equipment must be in good working order on the Start Date or when additional equipment is added to the Agreement. Upon reasonable request by Motorola, Customer will provide a complete serial and model number list of the Equipment. Customer must promptly notify Motorola in writing when any Equipment is lost, damaged, stolen or taken out of service. Customer's obligation to pay Service fees for this Equipment will terminate at the end of the month in which Motorola receives the written notice.

4.5. Customer must specifically identify any Equipment that is labeled intrinsically safe for use in hazardous environments.

4.6. If Equipment cannot, in Motorola's reasonable opinion, be properly or economically serviced for any reason, Motorola may modify the scope of Services related to that Equipment; remove that Equipment from the Agreement; or increase the price to Service that Equipment.



4.7. Customer must promptly notify Motorola of any Equipment failure. Motorola will respond to Customer's notification in a manner consistent with the level of Service purchased as indicated in this Agreement.

Section 5 EXCLUDED SERVICES

5.1 Service excludes the repair or replacement of Equipment that has become defective or damaged from use in other than the normal, customary, intended, and authorized manner; use not in compliance with applicable industry standards; excessive wear and tear; or accident, liquids, power surges, neglect, acts of God or other force majeure events.

5.2 Unless specifically included in this Agreement, Service excludes items that are consumed in the normal operation of the Equipment, such as batteries or magnetic tapes.; upgrading or reprogramming Equipment; accessories, belt clips, battery chargers, custom or special products, modified units, or software; and repair or maintenance of any transmission line, antenna, microwave equipment, tower or tower lighting, duplexer, combiner, or multicoupler. Motorola has no obligations for any transmission medium, such as telephone lines, computer networks, the internet or the worldwide web, or for Equipment malfunction caused by the transmission medium.

Section 6 TIME AND PLACE OF SERVICE

Service will be provided at the location specified in this Agreement. When Motorola performs service at Customer's location, Customer will provide Motorola, at no charge, a non-hazardous work environment with adequate shelter, heat, light, and power and with full and free access to the Equipment. Waivers of liability from Motorola or its subcontractors will not be imposed as a site access requirement. Customer will provide all information pertaining to the hardware and software elements of any system with which the Equipment is interfacing so that Motorola may perform its Services. Unless otherwise stated in this Agreement, the hours of Service will be 8:30 a.m. to 4:30 p.m., local time, excluding weekends and holidays. Unless otherwise stated in this Agreement, the price for the Services exclude any charges or expenses associated with helicopter or other unusual access requirements; if these charges or expenses are reasonably incurred by Motorola in rendering the Services, Customer agrees to reimburse Motorola for those charges and expenses.

Section 7 CUSTOMER Contact

Customer will provide Motorola with designated points of contact (list of names and phone numbers) that will be available twenty-four (24) hours per day, seven (7) days per week, and an escalation procedure to enable Customer's personnel to maintain contact, as needed, with Motorola.

Section 8 PAYMENT

Motorola will invoice Customer annually in advance of each year of Services. All other charges will be billed monthly, and Customer must pay each invoice in U.S. dollars within twenty (20) days of the invoice date. Customer will reimburse Motorola for all property taxes, sales and use taxes, excise taxes, and other taxes or assessments that are levied as a result of Services rendered under this Agreement (except income, profit, and franchise taxes of Motorola) by any governmental entity.

Section 9 WARRANTY

Motorola warrants that its Services under this Agreement will be free of defects in materials and workmanship for a period of ninety (90) days from the date the performance of the Services are completed. In the event of a breach of this warranty, Customer's sole remedy is to require Motorola to re-perform the non-conforming Service or to refund, on a pro-rata basis, the fees paid for the non-conforming Service. **MOTOROLA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

Section 10 DEFAULT/TERMINATION

10.1. If either party defaults in the performance of this Agreement, the other party will give to the non-performing party a written and detailed notice of the default. The non-performing party will have thirty (30) days thereafter to provide a written plan to cure the default that is acceptable to the other party and begin implementing the cure plan immediately after plan approval. If the non-performing party fails to provide or implement the cure plan, then the injured party, in addition to any other rights available to it under law, may immediately terminate this Agreement effective upon giving a written notice of termination to the defaulting party.

10.2. Any termination of this Agreement will not relieve either party of obligations previously incurred pursuant to this Agreement, including payments which may be due and owing at the time of termination. All sums owed by Customer to Motorola will become due and payable immediately upon termination of this Agreement. Upon the effective date of termination, Motorola will have no further obligation to provide Services.

10.3. Customer may terminate this Agreement (in whole or part) at any time. To exercise this right, Customer must provide to Motorola formal written notice at least thirty (30) days in advance of the effective date of the termination. The notice must explicitly state the effective date of the termination and whether the contract termination is in whole or in part, and if in part, which part is being terminated. If Customer exercises this right to terminate for convenience, it will be liable to pay Motorola for (1) the portion of the Contract Price attributable to the Services performed, on or before the effective date of the termination; and (2) costs and expenses that Motorola incurs as a result of the termination of the Agreement, including but not limited to costs and expenses associated with cancellation of subcontracts, restocking fees, removal of installation or test equipment, etc. If the portion of the Contract Price and/or the recoverable costs and expenses attributable to the termination of the Agreement are not readily ascertainable, Customer will be liable to pay Motorola for the reasonable value of such Services, costs and expenses. Notwithstanding the above, Customer shall have no right to terminate this Agreement if Motorola has given Customer a notice of default and such default has not been cured.

10.4. If the Customer terminates this Agreement before the end of the Term, for any reason other than Motorola default, then the Customer will pay to Motorola an early termination fee equal to the discount applied to the last three (3) years of Service payments for the original Term. Annual discounts for the Term can be found on the Pricing exhibit.

Section 11 LIMITATION OF LIABILITY

Except for personal injury or death, Motorola's total liability, whether for breach of contract, warranty, negligence, strict liability in tort, or otherwise, will be limited to the direct damages recoverable under law, but not to exceed the Contract Price. **ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT MOTOROLA WILL NOT be liable for any commercial loss; inconvenience; loss of use, Time, DATA, GOOD WILL, REVENUES, profits or savings; or other SPECIAL, incidental, INDIRECT, OR consequential damages IN ANY WAY RELATED TO OR ARISING FROM THIS AGREEMENT OR THE PERFORMANCE OF SERVICES BY MOTOROLA PURSUANT TO THIS AGREEMENT.** This limitation of liability will survive the expiration or termination of this Agreement and applies notwithstanding any contrary provision.

Section 12 EXCLUSIVE TERMS AND CONDITIONS

12.1. This Agreement supersedes all prior and concurrent agreements and understandings between the parties, whether written or oral, related to the Services, and there are no agreements or representations concerning the subject matter of this Agreement except for those expressed herein. The Agreement may not be amended or modified except by a written agreement signed by authorized representatives of both parties.

12.2. Customer agrees to reference this Agreement on any purchase order issued in furtherance of this Agreement, however, an omission of the reference to this Agreement will not affect its applicability. In no event will either party be bound by any terms contained in a Customer purchase order, acknowledgement, or other writings unless: the purchase order, acknowledgement, or other writing specifically refers to this Agreement; clearly indicate the intention of both parties to override and modify this Agreement; and the purchase order, acknowledgement, or other writing is signed by authorized representatives of both parties.



Section 13 PROPRIETARY INFORMATION; CONFIDENTIALITY; INTELLECTUAL PROPERTY RIGHTS

13.1. Any information or data in the form of specifications, drawings, reprints, technical information or otherwise furnished to Customer under this Agreement will remain Motorola's property, will be deemed proprietary, will be kept confidential, and will be promptly returned at Motorola's request. Customer may not disclose, without Motorola's written permission or as required by law, any confidential information or data to any person, or use confidential information or data for any purpose other than performing its obligations under this Agreement. The obligations set forth in this Section survive the expiration or termination of this Agreement.

13.2. Unless otherwise agreed in writing, no commercial or technical information disclosed in any manner or at any time by Customer to Motorola will be deemed secret or confidential. Motorola will have no obligation to provide Customer with access to its confidential and proprietary information, including cost and pricing data.

13.3. This Agreement does not grant directly or by implication, estoppel, or otherwise, any ownership right or license under any Motorola patent, copyright, trade secret, or other intellectual property, including any intellectual property created as a result of or related to the Equipment sold or Services performed under this Agreement.

Section 14 FCC LICENSES AND OTHER AUTHORIZATIONS

Customer is solely responsible for obtaining licenses or other authorizations required by the Federal Communications Commission or any other federal, state, or local government agency and for complying with all rules and regulations required by governmental agencies. Neither Motorola nor any of its employees is an agent or representative of Customer in any governmental matters.

Section 15 COVENANT NOT TO EMPLOY

During the term of this Agreement and continuing for a period of two (2) years thereafter, Customer will not hire, engage on contract, solicit the employment of, or recommend employment to any third party of any employee of Motorola or its subcontractors without the prior written authorization of Motorola. This provision applies only to those employees of Motorola or its subcontractors who are responsible for rendering services under this Agreement. If this provision is found to be overly broad under applicable law, it will be modified as necessary to conform to applicable law.

Section 16 MATERIALS, TOOLS AND EQUIPMENT

All tools, equipment, dies, gauges, models, drawings or other materials paid for or furnished by Motorola for the purpose of this Agreement will be and remain the sole property of Motorola. Customer will safeguard all such property while it is in Customer's custody or control, be liable for any loss or damage to this property, and return it to Motorola upon request. This property will be held by Customer for Motorola's use without charge and may be removed from Customer's premises by Motorola at any time without restriction.

Section 17 GENERAL TERMS

17.1. If any court renders any portion of this Agreement unenforceable, the remaining terms will continue in full force and effect.

17.2. This Agreement and the rights and duties of the parties will be interpreted in accordance with the laws of the State in which the Services are performed.

17.3. Failure to exercise any right will not operate as a waiver of that right, power, or privilege.

17.4. Neither party is liable for delays or lack of performance resulting from any causes that are beyond that party's reasonable control, such as strikes, material shortages, or acts of God.

17.5. Motorola may subcontract any of the work, but subcontracting will not relieve Motorola of its duties under this Agreement.

17.6. Except as provided herein, neither Party may assign this Agreement or any of its rights or obligations hereunder without the prior written consent of the other Party, which consent will not be unreasonably withheld. Any attempted assignment, delegation, or transfer without the necessary consent will be void. Notwithstanding the foregoing, Motorola may assign this Agreement to any of its affiliates or its right to receive payment without the prior consent of Customer. In addition, in the event Motorola separates one or more of its businesses (each a "Separated Business"), whether by way of a sale, establishment of a joint venture, spin-off or otherwise (each a "Separation Event"), Motorola may, without the prior written consent of the other Party and at no additional cost to Motorola, assign this Agreement such that it will continue to benefit the Separated Business and its affiliates (and Motorola and its affiliates, to the extent applicable) following the Separation Event.

17.7. Motorola has priced the Agreement based on the initial System configuration and Service plans. A change in Software or Equipment quantities, or Services, may affect the overall Contract Price, including discounts if applicable. Further, at the end of the first year of the Agreement and each year thereafter, a CPI percentage change calculation shall be performed. Should the annual inflation rate increase greater than 5% during the previous year, Motorola shall have the right to increase all future maintenance prices by the CPI increase amount exceeding 5%. The Midwest Region Consumer Price Index (<http://www.bls.gov/ro5/cpimid.htm>), All items, Not seasonally adjusted shall be used as the measure of CPI for this price adjustment. Measurement will take place once the annual average for the new year has been posted by the Bureau of Labor Statistics.

17.8. If Motorola provides Services after the termination or expiration of this Agreement, the terms and conditions in effect at the time of the termination or expiration will apply to those Services and Customer agrees to pay for those services on a time and materials basis at Motorola's then effective hourly rates.

18. **INSURANCE.** Motorola shall secure and maintain, throughout the duration of this agreement, insurance of such types and in at least the amounts that are required herein. Motorola shall provide certificate(s) of insurance confirming the required protection on an ACORD 25 (or equivalent form). The Customer shall be notified by receipt of written notice from Motorola thirty (30) days prior to material modification or cancellation of any policy listed on the certificate(s). The Customer reserves the right to require PDF copies of any Additional Insured endorsement.

SUB-CONTRACTOR'S INSURANCE: If any part of the contract is to be sublet, Motorola shall:

Require each sub-contractor to secure insurance in amounts required of Motorola per their scope and work and submit such certificates to the City as outlined herein.

PUBLIC LIABILITY: Public liability insurance protection must be carried by Motorola, for the duration of the contract, in the minimum amount of \$1,000,000 including errors and/or omissions per U.S. DOT requirements as set forth under 49 Code of Federal Regulations, section 172.101.

COMMERCIAL GENERAL LIABILITY POLICY:

Limits:	Each occurrence	\$2,000,000
	Personal & Advertising Injury	\$2,000,000
	Products/Completed Operations Aggregate	\$2,000,000
	General Aggregate	\$2,000,000

Policy must include the following conditions:
Bodily Injury and Property Damage
Insured Contract's Contractual Liability
Explosion, Collapse & Underground (if risk is present)
Additional Insured: City of Lee's Summit, Missouri

AUTOMOBILE LIABILITY: Policy shall protect Motorola against claims for bodily injury and/or property damage arising out of the ownership or use of any owned, hired and/or non-owned vehicle and must include protection for either:

Any Auto OR All Owned Autos; Hired Autos; and Non-Owned Autos

Limits:

Each Accident, Combined Single Limits,

Bodily Injury and Property Damage:

\$500,000

City of Lee's Summit, Missouri does NOT need to be named as additional insured on Automobile Liability

19. **NON-DISCRIMINATION IN EMPLOYMENT.** In connection with the furnishing of supplies or performance of work under this contract, the Contractor agrees to comply with the Fair Labor Standard Act, Fair Employment Practices, Equal Opportunity Employment Act, and all other applicable Federal and State Laws, and further agrees to insert the foregoing provision in all subcontracts awarded hereunder.



Exhibit E

SYSTEM UPGRADE AGREEMENT STATEMENT OF WORK



STATEMENT OF WORK

ASTRO 25 SYSTEM UPGRADE AGREEMENT II (SUA II)

1.0 Description of Service and Obligations

- 1.1 As system releases become available, Motorola agrees to provide the Customer with the software, hardware and implementation services required to execute up to one system infrastructure upgrade in a two-year period for their ASTRO 25 system. At the time of the system release upgrade, Motorola will provide applicable patches and service pack updates when and if available. Currently, Motorola's service includes 3rd party SW such as Microsoft Windows and Server OS, Red Hat Linux, Sun Solaris and any Motorola software service packs that may be available. Motorola will only provide patch releases that have been analyzed, pre-tested, and certified in a dedicated ASTRO 25 test lab to ensure that they are compatible and do not interfere with the ASTRO 25 network functionality. Additionally, if purchased, the Security Update Service (SUS) coverage is defined in Appendix C.
- 1.2 The Customer will have, at its option, the choice of upgrading in either Year 1 or Year 2 of the coverage period. To be eligible for the ASTRO 25 SUA II, the ASTRO 25 system must be at system release 7.7 or later.
- 1.3 ASTRO 25 system releases are intended to improve the system functionality and operation from previous releases and may include some minor feature enhancements. At Motorola's option, system releases may also include significant new feature enhancements that Motorola may offer for purchase. System release software and hardware shall be pre-tested and certified in Motorola's Systems Integration Test lab.
- 1.4 The price quoted for the SUAII requires the Customer to choose a certified system upgrade path from the list of System Release Upgrade Paths available to the Customer as per the system release upgrade chart referenced and incorporated in Appendix A. Should the Customer elect an upgrade path other than one listed in Appendix A, the Customer agrees that additional costs may be incurred to complete the implementation of the certified system upgrade. In this case, Motorola agrees to provide a price quotation for any additional materials and services necessary.
- 1.5 ASTRO 25 SUA II entitles a Customer to past software versions for the purpose of downgrading product software to a compatible release version.
- 1.6 The following ASTRO 25 certified system release software for the following products are covered under this ASTRO 25 SUA II: base stations, site controllers, comparators, routers, LAN switches, servers, dispatch consoles, logging equipment, network management terminals, Network Fault Management ("NFM") products, network security devices such as firewalls and intrusion detection sensors, and associated peripheral infrastructure software.
- 1.7 Product programming software such as Radio Service Software ("RSS"), Configuration Service Software ("CSS"), and Customer Programming Software ("CPS") are also covered under this SUA II.

- 1.8 ASTRO 25 SUA II makes available the subscriber radio software releases that are shipping from the factory during the SUA II coverage period. New subscriber radio options and features not previously purchased by the Customer are excluded from ASTRO 25 SUA II coverage. Additionally, subscriber software installation and reprogramming are excluded from the ASTRO 25 SUA II coverage.
- 1.9 Motorola will provide certified hardware version updates and/or replacements necessary to upgrade the system with an equivalent level of functionality up to once in a two-year period. Hardware will be upgraded and/or replaced if required to maintain the existing feature and functionality. Any updates to hardware versions and/or replacement hardware required to support new features or those not specifically required to maintain existing functionality are not included. Unless otherwise stated, platform migrations such as, but not limited to, stations, consoles, backhaul, civil, network changes and additions, and managed services are not included.
- 1.10 The following hardware components, if originally provided by Motorola, are eligible for full product replacement when necessary per the system release upgrade :
 - 1.10.1 Servers
 - 1.10.2 PC Workstations
 - 1.10.3 Routers
 - 1.10.4 LAN Switches
- 1.11 The following hardware components, if originally provided by Motorola, are eligible for board-level replacement when necessary per the system release upgrade. A “board-level replacement” is defined as any Field Replaceable Unit (“FRU”) for the products listed below:
 - 1.11.1 GTR 8000 Base Stations
 - 1.11.2 GCP 8000 Site Controllers
 - 1.11.3 GCM 8000 Comparators
 - 1.11.4 MCC 7500 Console Operator Positions
 - 1.11.5 STR 3000 Base Stations
 - 1.11.6 Quantar Base Stations
 - 1.11.7 Centracom Gold Elite Console Operator Interface Electronics
 - 1.11.8 Centracom Gold Elite Central Electronics Banks
 - 1.11.9 Ambassador Electronics Banks
 - 1.11.10 Motorola Gold Elite Gateways
 - 1.11.11 ASTROTAC Comparators
 - 1.11.12 PSC 9600 Site Controllers
 - 1.11.13 PBX Switches for Telephone Interconnect
 - 1.11.14 NFM/NFM XC/MOSCAD RTU
- 1.12 The ASTRO 25 SUA II does not cover all products. Refer to section 3.0 for exclusions and limitations.
- 1.13 Motorola will provide implementation services necessary to upgrade the system to a future system release with an equivalent level of functionality up to once in a two-year period. Any implementation services that are not directly required to support the certified system upgrade are not included. Unless otherwise stated, implementation services necessary for system expansions, platform migrations, and/or new features or functionality that are implemented concurrent with the certified system upgrade are not included.

- 1.14 As system releases become available, Motorola will provide up to once in a two-year period the following software design and technical resources necessary to complete system release upgrades:
 - 1.14.1 Review infrastructure system audit data as needed.
 - 1.14.2 Identify additional system equipment needed to implement a system release, if applicable.
 - 1.14.3 Complete a proposal defining the system release, equipment requirements, installation plan, and impact to system users.
 - 1.14.4 Advise Customer of probable impact to system users during the actual field upgrade implementation.
 - 1.14.5 Program management support required to perform the certified system upgrade.
 - 1.14.6 Field installation labor required to perform the certified system upgrade.
 - 1.14.7 Upgrade operations engineering labor required to perform the certified system upgrade.
- 1.15 ASTRO 25 SUA II pricing is based on the system configuration outlined in Appendix B. This configuration is to be reviewed annually from the contract effective date. Any change in system configuration may require an ASTRO 25 SUA II price adjustment.
- 1.16 The ASTRO 25 SUA II applies only to system release upgrades within the ASTRO 25 7.x platform.
- 1.17 Motorola will issue Software Maintenance Agreement (“SMA”) bulletins on an annual basis and post them in soft copy on a designated extranet site for Customer access. Standard and optional features for a given ASTRO 25 system release are listed in the SMA bulletin.

2.0 Upgrade Elements and Corresponding Party Responsibilities

- 2.1 Upgrade Planning and Preparation: All items listed in this section are to be completed at least 6 months prior to a scheduled upgrade.
 - 2.1.1 Motorola responsibilities
 - 2.1.1.1 Obtain and review infrastructure system audit data as needed.
 - 2.1.1.2 Identify additional system equipment needed to implement a system release, if applicable.
 - 2.1.1.3 Complete a proposal defining the system release, equipment requirements, installation plan, and impact to system users.
 - 2.1.1.4 Advise Customer of probable impact to system users during the actual field upgrade implementation.
 - 2.1.1.5 Inform Customer of high speed internet connection requirements.
 - 2.1.1.6 Assign program management support required to perform the certified system upgrade.
 - 2.1.1.7 Assign field installation labor required to perform the certified system upgrade.
 - 2.1.1.8 Assign upgrade operations engineering labor required to perform the certified system upgrade.
 - 2.1.1.9 Deliver release impact and change management training to the primary zone core owners, outlining the changes to their system as a result of the upgrade path elected. This training needs to be completed at least 12 weeks prior to the scheduled upgrade. This training will not be provided separately for user agencies who reside on a zone core owned by another entity. Unless

specifically stated in this document, Motorola will provide this training only once per system.

2.1.2 Customer responsibilities

- 2.1.2.1 Contact Motorola to schedule and engage the appropriate Motorola resources for a system release upgrade.
- 2.1.2.2 Provide high-speed internet connectivity at the zone core site(s) for use by Motorola to perform remote upgrades and diagnostics. Specifications for the high-speed connection are provided in Appendix D. High-speed internet connectivity must be provided at least 12 weeks prior to the scheduled upgrade. In the event access to a high-speed connection is unavailable, Customer may be billed additional costs to execute the system release upgrade.
- 2.1.2.3 Assist in site walks of the system during the system audit when necessary.
- 2.1.2.4 Provide a list of any FRUs and/or spare hardware to be included in the system release upgrade when applicable.
- 2.1.2.5 Purchase any additional software and hardware necessary to implement optional system release features or system expansions.
- 2.1.2.6 Provide or purchase labor to implement optional system release features or system expansions.
- 2.1.2.7 Participate in release impact training at least 12 weeks prior to the scheduled upgrade. This applies only to primary zone core owners. It is the zone core owner's responsibility to contact and include any user agencies that need to be trained or to act as a training agency for those users not included.

2.2 System Readiness Checkpoint: All items listed in this section must be completed at least 30 days prior to a scheduled upgrade.

2.2.1 Motorola responsibilities

- 2.2.1.1 Perform appropriate system backups.
- 2.2.1.2 Work with the Customer to validate that all system maintenance is current.
- 2.2.1.3 Work with the Customer to validate that all available patches and antivirus updates have been updated on the customer's system.

2.2.2 Customer responsibilities

- 2.2.2.1 Validate system maintenance is current.
- 2.2.2.2 Validate that all available patches and antivirus updates to their system have been completed.

2.3 System Upgrade

2.3.1 Motorola responsibilities

- 2.3.1.1 Perform system infrastructure upgrade in accordance with the system elements outlined in this SOW.

2.3.2 Customer responsibilities

- 2.3.2.1 Inform system users of software upgrade plans and scheduled system downtime.

- 2.3.2.2 Cooperate with Motorola and perform all acts that are reasonable or necessary to enable Motorola to provide software upgrade services.

2.4 Upgrade Completion

2.4.1 Motorola responsibilities

- 2.4.1.1 Validate all certified system upgrade deliverables are complete as contractually required.
- 2.4.1.2 Deliver post upgrade implementation training to the customer as needed, up to once per system.
- 2.4.1.3 Obtain upgrade completion sign off from the customer.

2.4.2 Customer Responsibilities

- 2.4.2.1 Cooperate with Motorola in efforts to complete any post upgrade punch list items as needed.
- 2.4.2.2 Cooperate with Motorola to provide relevant post upgrade implementation training as needed. This applies only to primary zone core owners. It is the zone core owner's responsibility to contact and include any user agencies that need to be trained or to act as a training agency for those users not included.
- 2.4.2.3 Provide Motorola with upgrade completion sign off.

3.0 Exclusions and Limitations

- 3.1 The parties agree that Systems that have non-standard configurations that have not been certified by Motorola Systems Integration Testing are specifically excluded from the ASTRO 25 SUA II unless otherwise agreed in writing by Motorola and included in this SOW.
- 3.2 The parties acknowledge and agree that the ASTRO 25 SUA II does not cover the following products:
 - MCC5500 Dispatch Consoles
 - MIP5000 Dispatch Consoles
 - Plant/E911 Systems
 - MOTOBRIDGE Solutions
 - ARC 4000 Systems
 - Motorola Public Sector Applications Software ("PSA")
 - Custom SW, CAD, Records Management Software
 - Data Radio Devices
 - Mobile computing devices such as Laptops
 - Non-Motorola two-way radio subscriber products
 - Genesis Products
 - Point-to-point products such as microwave terminals and association multiplex equipment
- 3.3 ASTRO 25 SUA II does not cover any hardware or software supplied to the Customer when purchased directly from a third party, unless specifically included in this SOW.
- 3.4 ASTRO 25 SUA II does not cover software support for virus attacks or other applications that are not part of the ASTRO 25 system, or unauthorized modifications or other misuse of the covered software. Motorola is not responsible for management of anti-virus or other security applications

(such as Norton).

- 3.5 Upgrades for equipment add-ons or expansions during the term of this ASTRO 25 SUA II are not included in the coverage of this SOW unless otherwise agreed to in writing by Motorola.

4.0 Special provisions

- 4.1 Customer acknowledges that if its System has a Special Product Feature, additional engineering may be required to prevent an installed system release from overwriting the Special Product Feature. Upon request, Motorola will determine whether a Special Product Feature can be incorporated into a system release and whether additional engineering effort is required. If additional engineering is required Motorola will issue a change order for the change in scope and associated increase in the price for the ASTRO 25 SUA II.
- 4.2 Customer will only use the software (including any System Releases) in accordance with the applicable Software License Agreement.
- 4.3 ASTRO 25 SUA II services do not include repair or replacement of hardware or software that is necessary due to defects that are not corrected by the system release, nor does it include repair or replacement of defects resulting from any nonstandard, improper use or conditions; or from unauthorized installation of software.
- 4.4 ASTRO 25 SUA II coverage and the parties' responsibilities described in this Statement of Work will automatically terminate if Motorola no longer supports the ASTRO 25 7.x software version in the Customer's system or discontinues the ASTRO 25 SUA II program; in either case, Motorola will refund to Customer any prepaid fees for ASTRO 25 SUA II services applicable to the terminated period.
- 4.5 If Customer cancels a scheduled upgrade within less than 12 weeks of the scheduled on site date, Motorola reserves the right to charge the Customer a cancellation fee equivalent to the cost of the pre-planning efforts completed by the Motorola Solutions Upgrade Operations Team.
- 4.6 The SUA II annualized price is based on the fulfillment of the two year term. If Customer terminates, except if Motorola is the defaulting party, Customer will be required to pay for the balance of payments owed if a system release upgrade has been taken prior to the point of termination.

Appendix A – ASTRO 25 System Release Upgrade Paths

Platform Release	Certified Upgrade Paths	
Pre-7.7	Upgrade to Current Release	
7.7		
7.8		
7.9		
7.11	NA	7.14
7.13	7.14	7.15
7.14	7.15	7.16
7.15	7.16	7.17
7.16	7.17	7.18 (Planned)
7.17	7.18 (Planned)	7.19 (Planned)

- The information contained herein is provided for information purposes only and is intended only to outline Motorola’s presently anticipated general technology direction. The information in the roadmap is not a commitment or an obligation to deliver any product, product feature or software functionality and Motorola reserves the right to make changes to the content and timing of any product, product feature or software release.
- The most current system release upgrade paths can be found in the most recent SMA bulletin.

Appendix B - System Pricing Configuration

This configuration is to be reviewed annually from the contract effective date.. Any change in system configuration may require an ASTRO 25 SUA II price adjustment.

Core	
Master Site Configuration	0
Zones in Operation (Including DSR and Dark Master Sites)	0
Zone Features: IV&D, TDMA, Telephone Interconnect, CNI, HPD, CSMS, IA, POP25, Text Messaging, Outdoor Location, ISSI 8000, InfoVista, KMF/OTAR	0
RF System	
Voice RF Sites & RF Simulcast Sites (including Prime Sites)	6
Repeaters/Stations (FDMA)	0
Repeaters/Stations (TDMA)	32
HPD RF Sites	0
HPD Stations	0
Dispatch Console System	
Dispatch Sites	2
Gold Elite Operator Positions	0
MCC 7500 Operator Positions (GPIOM)	0
MCC 7500 Operator Positions (VPM)	16
Conventional Channel Gateways (CCGW)	12
Conventional Site Controllers (GCP 8000 Controller)	0
Logging System	
Number of AIS Servers	1
Number of Voice Logging Recorder	0
Number of Logging Replay Clients	0
Network Management and MOSCAD NFM	
Network Management Clients	0
MOSCAD NFM Systems	0
MOSCAD NFM RTUs	6
MOSCAD NFM Clients	0
Fire Station Alerting (FSA)	
FSA Systems	0
FSA RTUs	0
FSA Clients	0
Fire Station Alerting (FSA)	
Voice Subscribers non-APX	0
Voice Subscribers APX	0
HPD Subscribers	0
Computing and Networking Hardware (for SUA / SUA II, actual replacement qty may be less than shown)	
Workstations - High Performance	14
Workstations - Mid Performance	0
Servers - High Performance	0
Servers - Mid Performance	0
LAN Switch - High Performance	18
LAN Switch - Mid Performance	0
Routers	18

Exhibit F
SYSTEM ACCEPTANCE CERTIFICATE

Customer Name: _____

Project Name: _____

This System Acceptance Certificate memorializes the occurrence of System Acceptance. Motorola and Customer acknowledge that:

1. The Acceptance Tests set forth in the Acceptance Test Plan have been successfully completed.
2. The System is accepted.

Customer Representative:

Motorola Representative:

Signature: _____

Signature: _____

Print Name: _____

Print Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

FINAL PROJECT ACCEPTANCE:

Motorola has provided and Customer has received all deliverables, and Motorola has performed all other work required for Final Project Acceptance.

Customer Representative:

Motorola Representative:

Signature: _____

Signature: _____

Print Name: _____

Print Name: _____

Title: _____

Title: _____

Date: _____

Date: _____