

## City of Tallahassee/Leon County RFP No 0091-07-KR-RC 700/800MHz Digital Trunked Radio Network Proposal Evaluation Report

### 1 0 Introduction

The City of Tallahassee (Florida) and Leon County jointly utilize an 800MHz Motorola Smartnet II analog trunked radio communications system serving the communication needs for both public safety and governmental operations. This system has been operational since 1998 and is generally reliable yet key components of the system are no longer manufactured and maintenance support will likely become problematic in the future.

Smartnet II is also a proprietary trunked radio protocol. As such, it does not lend itself to seamless interoperability whereby radio users could roam into nearby 800MHz trunked systems using other proprietary schemes such as the State of Florida's Law Enforcement Radio System (SLERS). Fortunately, much progress has been made by the Association of Public Safety Communications Officials (APCO) and the federal government in spearheading efforts to develop digital trunked radio standards that allow seamless interoperability, user roaming, and facilitate a competitive procurement environment.

The culmination of these planning efforts is the APCO Project-25 suite of digital radio standards. Correspondingly, those RFP 0091-07-KR-RC Specifications released by the City of Tallahassee and its partner Leon County encompass a turnkey approach structured to provide both with a shared digital simulcast trunked radio resource capable of meeting current and future communication needs, both reliably and functionally.

The City/County's public safety communications management is governed by a combined Public Safety Communications Board (PSCB) which includes agency and administrative representatives from both stakeholders. A key desire of PSCB is to transition away from proprietary radio solutions and to embrace new emerging radio technology that is in full compliance with Industry recognized open standards. A second critically important aspect of this communications procurement involved infrastructure reliability and hardening in response to heightened terrorism activities worldwide and to regional natural and environmental hazards such as hurricanes and tornadoes.

In response to these Specifications, the Industry's two leaders in public safety communications networks, Motorola and Tyco Electronics (M/A-COM) have undertaken the challenge and have both furnished proposals based on Project 25 technology. Additionally, and at the City/County's request, Tyco has provided a second proposal response that encompasses an expansion of the existing SLERS and has described that System's envisioned future migration path toward full Project 25 compliance.

Finally, Motorola has submitted two additional proposals of its own for City/County consideration. One is a split Smartnet II/Project-25 radio network that essentially embodies all of the coverage and reliability aspects of its base Project 25 proposal but is geared only toward public safety operations (non-public safety operations would remain on analog). The second proposal is simply a technology refresh to those specific infrastructure elements of the existing Smartnet II analog configuration that are approaching functional obsolescence.

In essence, the competing vendors have proposed the following:

- Wholly owned new digital configurations based on Project 25 technology

- A partnership and expansion of the existing SLERS configuration
- A combined Project 25 digital/proprietary analog network that leverages the remaining useful life of the current Smartnet II configuration
- A technology refresh to the existing Smartnet II infrastructure

This Report describes in a general sense the technology and approach offered by each vendor as gleaned from their proposed solutions. Later the underlying principals of the evaluation process are discussed. Next consultant scored evaluation worksheets for vendor submittals are introduced with summary comments provided. Finally a recommendation of the order of proposal suitability is provided as well as our technical recommendation of the best solution.

## 2.0 Evaluation Process

The process used by Tusa Consulting Services in the evaluation of this procurement's proposal responses follows that described by our previously published paper *A Structured Approach for the Procurement of Radio Communication Systems* which is contained in Appendix A. Each proposal was carefully read multiple times to gain a comprehensive understanding of the technology proposed, its configuration attributes, and the response's compliance to stated RFP minimally acceptable as well as mandatory requirements.

In those instances where a Proposer's response was unclear or was seen to lack information that had been indicated as having been included, we would issue questions designed to gain better understanding or to retrieve missing documents. In one case we traveled to a Proposer's headquarters to observe newly designed infrastructure equipment that had been proposed for this specific

procurement Included in Appendix B C and D of this Report are the specific questions Tusa submitted to each Proposer as well as that Proposer s response

Next Tusa scored each Proposal Submittal using the 700/800MHz Radio Network Evaluation Worksheet as approved by the Technical Services Committee The scoring system used allowed for exceeds credit points whereby those specific areas where a response clearly exceeded the RFP s minimum specification which rewarded Proposers for providing and enhanced service and/or capability That being the case for those proposals having many areas where key requirements were exceeded it was possible to earn scores above the nominal value indicated for each category

### 3 0 Motorola P 25 Proposal

The Evaluation Worksheet Document contained in Attachment I embodies the results of our investigation and evaluation of the Motorola proposal encompassing APCO Project 25 technology In essence Motorola s response includes a digital renovation of all existing Smartnet II sites and includes two new sites to improve radio coverage in areas identified by the RFP as being coverage-deficient

A radio traffic study was undertaken by Motorola using RFP data supplied from the existing radio system to determine the number of radio channels necessary to support existing and future needs In the end Motorola determined that a total of eighteen channels were minimally required but to provide a higher level of capacity during extraordinary circumstances decided to configure their proposed new radio system to use the total 22 channels available

All sites in the proposed radio system are simulcast in full compliance with the RFP s objectives and specifications That is every site has the ability to support

the same level of radio traffic and all conversations conducted throughout the system are broadcast throughout the entire coverage area. Furthermore, Motorola has agreed to provide and guarantee the audio quality levels required by the RFP. Motorola took very few exceptions to the stated requirements and fully accepted the RFP's penalties for response time failures.

The Motorola proposal guarantees radio coverage performance within the RFP's stated 101 critical buildings. Furthermore, they have identified where only a small subset of the city/county's critical buildings (approximately 10%) would not likely experience coverage deficiencies below that level by their coverage prediction and would require in-building amplification systems. These building amplifier systems have been provided in their design, and thus Motorola was credited as being fully coverage compliant to the RFP specifications.

All equipment offered in the Motorola proposal is in current production and is FCC type accepted for operation on the frequencies licensed to the city/county. The project's implementation time proposed is fifteen months, three months less than the RFP's not-to-exceed eighteen-month time period.

The proposed network configuration includes renovation of the Myers Park facility and a new greenfield site on Easterwood Drive. Since the existing Myers Park site already contains a 325 ft self-supporting tower, no FAA or zoning delays for its construction are anticipated. The new Easterwood site does require FAA and zoning approval. A preliminary FAA determination completed by Motorola shows no obvious conflicts with nearby airport facilities. The cost to construct both sites, inclusive of towers, has been provided.

An unusual twist to the Motorola proposal, and one that we believe will become more probable as Project 25 radio systems and equipment become more commonplace, is the suggested use of M/A COM radios for those operations requiring both direct interoperability with the SLERS ProVoice technology and

primary operability on the proposed City/County Project-25 radio system. By so doing, users requiring that level of communications effectiveness could do so without the need for carrying/installing two different radio devices. This approach eliminates the need for costly duplication of communications equipment and simplifies maintenance. Furthermore, this concept of multiple user equipment sources is a key benefit of Project 25 technology and can be embraced by the City of Tallahassee/Leon County, no matter which vendor's infrastructure technology is ultimately implemented.

Motorola has proposed a comprehensive set of manager, dispatcher, and user training for this project, inclusive of 100% public safety user training for newly provided radio equipment (mobile, portable, and related accessories).

#### **4.0 Motorola Alternative Proposal**

A set of two alternative proposals was presented also by Motorola. The first alternative embodied the concept of a split analog/Project 25 radio network. A second alternative considered only the modernization of those elements of the existing Smartnet-II analog system that were technically obsolete or whose ability to be expeditiously maintained was questionable.

The idea of a split analog/Project 25 radio network was born of the potential need to minimize initial implementation costs through maintenance of existing governmental, non-public safety users on a ten-channel subset of the existing analog system. The remaining twelve channels would be dedicated to public safety operations and converted to full Project 25 functionality.

As this new twelve-channel Project 25 configuration is identically the same as that described by the base Motorola P 25 solution, the evaluation scores for that

base proposal also apply here. The additional advantages of the split system approach are

- Lower initial deployment costs
- Ability to reform existing analog public safety radios for local government uses
- Public safety and local government users would have interoperability through console links or in the case of public safety through selecting a different system on their user radios
- Potential to leverage more of the remaining capability of the old radio system

But the approach also has a set of disadvantages to be considered

- Maintenance costs for the combined technologies would be higher than for a single technology scheme
- The coverage footprint for the two systems would be strikingly different
- The cost to later convert the old channels to Project 25 technology would be higher due to remobilization costs
- Local government users could initiate interoperable communications with public safety counterpart resources only through console patches and not at the user level

So while the desired operational needs of public safety users could be achieved through the split system approach, the current ability of both public safety and non public safety/local government users to seamlessly interoperate on a shared single system would be greatly diminished. That is, while the new Motorola P-25 radios could be programmed to operate on both this new digital and Smartnet II analog systems, the older analog radios used by local government operations could not communicate or initiate calls directly to their P 25 counterparts. Such

communications could be supported only through a third party (dispatcher-initiated patch) or via conventional mutual aid channels

The second alternative proposal structured to replace aged portions of the existing Smartnet II analog radio system offers nothing new from a functionality standpoint. This option was already available to the City/County as part of normal and routine maintenance. While the City/County's implementation of this approach could certainly improve the hardware reliability of the existing Smartnet II analog radio system, it does nothing to improve known coverage deficiencies or cause the elimination of the radio system's existing single points of failure. Finally, it does nothing to support the desired goal of achieving APCO Project 25 digital radio functionality or interoperability.

#### **5.0 M/A COM Project-25 Proposal**

The Evaluation Worksheet Document contained in Attachment II embodies the results of our investigation and evaluation of the M/A-COM proposal encompassing APCO Project 25 technology. In essence, M/A-COM's response includes a digital renovation of all existing Smartnet-II sites and includes three new sites. The focus of their design was to greatly enhance building coverage within the RFP's defined Urban Service Area in a manner that could reduce dependency on building amplifier devices. This core element of the radio network within the Urban Service Area would utilize simulcast infrastructure technology. Two outlying infrastructure sites providing coverage for principally county users would utilize multisite technology, but are each operable on a small subset of radio channels as compared to the simulcast infrastructure serving the Urban Service Area.

A radio traffic study was undertaken by M/A-COM using RFP traffic call data supplied from the existing radio system to determine the number of radio





In short the proposed M/A COM split multisite/simulcast configuration could be managed into a workable solution and potentially could be fielded at lower cost however the risk of having some calls blocked by the limited capacity of the two multisites exists This then becomes a new technical/management challenge for the City/County involving a problem that did not exist with the older analog countywide simulcast configuration

We noted even with the addition of three infrastructure sites where M/A-COM took exception to the RFP requirement to provide and guarantee delivered audio quality to a DAQ 4.0 for mobile radio operations M/A-COM in its proposal response had also taken exception to RFP required performance and maintenance response penalties

The M/A COM proposal only guarantees portable radio coverage performance within the RFP's stated critical buildings provided that an optional cost indicated in their Pricing Proposal is accepted by the City While such a response could be viewed as an exception we have scored the response as compliant provided that the cost for such services is considered by the City/County in the evaluation of proposed project costs That is should the City/County fail to accept such costs the RFP technical evaluation (and resultant scoring) should be modified to show that building coverage compliancy requirement has not been satisfied

While some equipment offered in the M/A COM proposal is in current production the key MASTR-V base station infrastructure component and most user equipment elements offered for sale by this proposal response are in various stages of technical development The MASTR V base station certainly the most critical type of equipment in the proposed radio system's scheme is not scheduled for design completion until Summer 2008 Furthermore FCC type acceptance certification for operation on the 800MHz frequencies licensed to the City/County has not been achieved for the MASTR-V base station the P5400 portable radio the P-25 vehicular repeater and the M7300 mobile radio

The FCC requires that specification literature for newly designed equipment that has not been FCC type accepted/certified must be marked as follows

*This device has not been authorized as required by the rules of the Federal Communications Commission This device is not and may not be offered for sale or lease or sold or leased until authorization is obtained (See Appendix E for the complete text of the relevant FCC Rule Title 47 Part 2 803 Marketing of Radio Frequency Devices Prior to Equipment Authorization)*

Curiously we found where M/A COM s specification sheets for equipment which had not been so certified contained only the following language

*This device is not and may not be offered for sale or lease or sold or leased until authorization is obtained*

Our initial review of FCC Rules and Regulations covering the certification of intentional radio frequency radiators as detailed by Title 47 Part 2 803 clearly defined a restricted specific set of circumstances whereby radio equipment could be sold prior to FCC certification However none of the limited areas of exception (principally involving the display of such equipment at trade shows and field stocking through a network of dealers and agents) appeared to apply to governmental bodies or public safety agencies

Tusa subsequently retained the telecommunications law firm of Shulman Rogers Gandal Pordy & Ecker et al to contact the Federal Communications Commission to gain further insight and meaning of the Commission s position relative to equipment certification The work of investigating this matter was assigned to Laura Smith Esq who in turn contacted Mr Jules Knapp head of the FCC s Office of Engineering and Technology

Mr Knapp advised Mrs Smith where a vendor's inclusion of non certified equipment in a proposal to furnish and install goods and services and the award of such a project by an Owner/Licensee (coupled with a customary and normal project execution payment) would constitute a sale. This action of sale is forbidden by FCC Rules (see Appendix D). Mr Knapp researched the Commission's past determinations on questions involving type acceptance/certification and found in no instance had rules and requirements for equipment certification been relaxed for a governmental body or agency. Furthermore Mr Knapp strongly recommended that we advise clients not to purchase non certified equipment.

The reason for the FCC's certification process is to protect currently licensed radio system owners from the receipt of spurious emissions that in themselves have potential to cause harmful interference. Additionally the prohibition of use of non certified equipment eliminates a potential source of self interference to the Licensee/Owners radio network. In short the requirements for equipment certification are necessary to protect and preserve the integrity of radio communication networks and services. The FCC's certification process requires manufacturers to provide hard reproducible evidence where new designs and hardware implementations in themselves cause no harm to existing licensed radio operations and services.

Tusa has been providing public safety consulting services continuously since 1991. This is the first instance where we have seen non certified equipment offered for sale in this manner in any of our contracted public safety engagements. Accordingly we have taken the extraordinary step to gain a current understanding of certification compliancy as envisioned by the Federal Communications Commission itself and those risks associated with the City/County's potential purchase of such equipment. Clearly Mr Knapp's comments considering his leadership position within the Commission are a cause for concern.

M/A-COM's proposed network configuration includes no renovation or replacement of the existing Myers Park tower/shelter facilities. An engineering report completed by Pate Engineering Inc. in 2006 however indicates that the existing Meyers Park tower is already overloaded, has suffered from internal corrosion and must be replaced (See Appendix F). Therefore, City/County consideration of the cost portion of M/A-COM's proposal must also factor the replacement cost of this existing tower to gain a meaningful assessment of the true cost to implement the proposed M/A COM infrastructure configuration.

In our examination of the M/A COM cost proposal we found that costs for a replacement tower at Meyers Park had not been included.

Only one new tower had been proposed by M/A COM for this project's configuration and it is to be located as a replacement for one now operated by Williams Communications. Since the Williams site already contains a communications tower, no significant FAA or zoning delays for its construction are anticipated. In the current analog simulcast configuration, all towers are City/County owned property with no reoccurring revenue requirements other than routine maintenance.

Therefore, when the City/County considers the cost of M/A COM's proposed Project 25 digital system solution, it is important to also factor annual tower access fees, if any, as well as the cost for the necessary replacement of the Myers Parks tower.

Motorola has proposed a comprehensive set of manager and dispatcher and training for this project, however, only a train the trainer program for newly provided radio equipment (mobile, portable and related accessories) had been proposed for the City/County's public safety users.

Finally M/A-COM's proposed project implementation period is eighteen months which is in compliance with the RFP's not to exceed eighteen month time period

## **6.0 M/A COM's SLERS Expansion Proposal**

The City of Tallahassee requested M/A COM to additionally supply a proposal that considers the full migration of City/County users onto SLERS but in accordance with RFP requirements for coverage capacity reliability and performance. Additionally M/A COM was required to identify the future migration path envisioned for SLERS that embodies Project-25 digital radio compliance.

M/A COM's enhanced SLERS configuration includes nine sites within Leon County. Five other sites within adjacent counties are part of the system which could be used to enhance interoperability. Actually, since SLERS exists throughout Florida, the ability to seamlessly interoperate is far beyond that required by the RFP. SLERS, however, is not Project 25 compliant. It is built using the older APCO Project 16 objectives that had spawned proprietary technologies such as Smartnet/Smartzone and EDACS/ProVoice.

M/A COM had introduced in their Proposal an envisioned migration plan for SLERS that involved a 700MHz component and notes where some current users are already purchasing dual band radios to support this future migration path. In fact, the proposal describes that the build out of this P 25 700MHz overlay would likely commence in the northern portions of the State within the next two years.

Somewhat surprisingly, however, is that user radio equipment proposed to the City/County for this potential SLERS integration (P7100 M7100 P5100 etc) is capable of only 800MHz operations. These devices have no ready migration path to 700MHz absent of full replacement. We have thoroughly reviewed the

corresponding M/A COM cost proposal for this SLERS integration yet have found no cost information or even a description of optional 700/800MHz capable user equipment

Expansion infrastructure sites to existing SLERS configuration within Leon County include the City/County's existing 800MHz Panther Creek Crooked Road and the Spray Field sites. Each of these sites would be configured for four trunked channels (as compared to the current 22 channel analog/simulcast configuration). The existing SLERS simulcast sites located within the Urban Service Area would be configured with ten additional trunked channels to support City/County operations (nine existing SLERS simulcast channels plus ten City/County channels for a total of nineteen channels)

M/A-COM's guaranteed level of delivered audio quality is DAQ 3.4 for both portable and mobile unit operations (note the RFP required DAQ 4.0 for mobile operations). There is no coverage guarantee given to the RFP's mandatory 101 critical buildings; however, informal test results from the existing SLERS configuration suggests that good to excellent coverage already exists. Yet M/A-COM offers no guarantee of building coverage or no fixed cost to achieve such coverage if formal testing of the scope typical for radio acceptance verification identifies unacceptable coverage deficiencies. The cost for the development and implementation of such optional building coverage enhancements would, according to the Proposal, be at City/County expense.

All 800MHz equipment proposed by M/A-COM as part of the SLERS expansion is FCC type accepted for operations on those 800MHz channels currently licensed to the City/County. However, we are troubled that M/A-COM's proposed user equipment, as provided by the base SLERS expansion proposal, does not support both 700MHz and 800MHz band operations.

A number of notable deficiencies were observed in the proposed infrastructure configuration. The City/County's Project 25 RFP (which also served as the reliability, operability, and functionality standard for alternatively proposed solutions) required that all infrastructure sites be supported by battery backup systems sized for a minimum of eight hours of operation in lieu of commercial power. The proposed uninterruptible power systems as operated by SLERS are sized for only thirty minutes of power support. Generally speaking, radio sites that have such limited backup power capacity are highly reliant on the security and reliability of standby generator subsystems.

When initially installed, generators are reasonably reliable; however, with the passage of time and accumulation of run hours, reliability often degrades. (These generators rely on gas-powered automotive engines. As is the case for automobiles, the accumulations of miles in this case, run hours, results in normal wear and a gradual loss of reliability.) That is, the likelihood of a generator over crank or failure to start occurrence becomes more probable with the passage of time. Thus, the importance of allowing a sufficient UPS/battery plant run cycle to allow for field service of failed generators without losing a site/sites ability to sustain communications effectiveness cannot be over stated. It was for this reason that the City/County RFP Specifications called for an eight-hour battery run-cycle for its radio infrastructure sites. A thirty-minute UPS run time is an unreasonably short maintenance response period, and so the loss of a tower site should both commercial and standby generator power fail is more likely.

The control point for the SLERS-Leon County radio infrastructure configuration is co-located at the Florida Highway Patrol Headquarters tower site. A number of SLERS simulcast sites serving the Urban Service Area are interconnected by a ribbon microwave system. Loss of the first microwave link (FHP to Bainbridge) would disable simulcast operations and result in single site bypass functionality with a large corresponding loss of coverage reliability. Should the City/County

determine a SLERS migration has cost and functional advantages beyond that considered by this evaluation strong consideration should be given to reconfigure the Urban Service Area s microwave component into a protected loop configuration By so doing a critical single point failure mode affecting the Urban Service Area could be eliminated

The City/County s P 25 RFP Specifications called for an optional simulcast network control point The alternative proposal provided by M/A COM for an expanded SLERS implementation does not consider or provide this desired redundancy Should the City/County determine a SLERS migration has cost and functional advantages M/A COM should be requested to provide the cost and likely configuration hardware/software and interconnectivity of a redundant control point site

In its invitation to M/A COM to provide a proposal encompassing SLERS M/A-COM was instructed to craft a response to satisfy the reliability functionality coverage quality and operability requirements described in that RFP s Project 25 configuration The only requirement relaxed in this request was the immediate use of Project-25 technology That is the RFP s requirements were to be met using Project 16 solutions now but with a near term migration to Project 25 described and supported by the proposed technology

Unfortunately the submitted SLERS proposal did not follow the City/County s instruction and the resultant M/A-COM proposal response is absent of many desired aspects of the City/County RFP as has been described above

## **7 0 Consultant's Recommendation**

The City of Tallahassee and its partner Leon County have received multiple proposals for a next generation digital trunked radio technology from the

Industry's two principal vendors Motorola and M/A-COM. While both vendors are capable of supplying public safety radio networks and have a strong demonstrated history of product support, this evaluation of proposal submittals hinges on the concept of how well each proposed solution parallels or exceeds this client's desired minimum objectives (i.e. RFP 0091-07 KR RC Specifications)

TCS utilized a point based evaluation process that assesses vendor submittals relative to actual RFP requirements. Subjective consideration of vendor proposals has been avoided by targeting realities versus requirements. For example, in the case of coverage, if a coverage area or delivered audio quality objective was found to meet or exceed a proposal requirement, the result was either an acceptable credit or exceeds-credit score. Correspondingly, proposals that failed to achieve RFP required coverage performance, as indicated by a vendor's stated exception to requirements, received lower evaluation points for those excepted or otherwise deficient categories.

In the end, that proposal having the highest number of scored points was viewed as being most compliant and most advantageous.

In this instance, considering the two received primary Project 25 digital radio system proposals, Motorola's proposed solution was clearly the most technically advantageous. Their proposal took a minimum of RFP Specification exceptions. The critical coverage, audio quality, capacity, and reliability aspects of their Proposal met or exceeded the RFP's requirements in numerous areas. By contrast, M/A-COM's Project-25 proposal response took exception to RFP completion/maintenance failure penalties, did not guarantee delivered audio quality to the extent desired by the City/County, utilized a non-approved mixture of multisite and simulcast technology design, provided only a train-the-trainer process for public safety departments, and offered for sale infrastructure and user



equipment components that have not achieved FCC required type acceptance certification

A total of three alternative proposals were also received of which Motorola offered both a split analog/Project-25 solution as well as infrastructure refreshment options for the City/County's Smartnet II trunked configuration. M/A-COM provided a City/County requested SLERS solution based on its proprietary ProVoice trunked radio architecture for consideration.

As Motorola's split analog/Project 25 solution was simply its primary Project-25 proposal configured with ten fewer channels dedicated solely to public safety, a new evaluation worksheet for this alternative was not considered necessary. Obviously, reliability aspects of the analog portions of the network would remain unchanged, however, Motorola offered a second alternative to replace those components in the analog network that would become difficult to maintain due to obsolescence. Thus, if the City/County desired to migrate toward P 25 technology using a staged approach, this Motorola alternative would support that goal potentially at a lower initial cost. In no instance would Tusa recommend the singular modernization of the current Smartnet II analog radio system unless the City/County has no intention to migrate public safety operations toward Project-25 technology for the foreseeable future.

M/A COM's alternative SLERS proposal has merit if the City/County's desire is to enter into a long term communications partnership with the State of Florida. If such a partnership was deemed necessary or desirous, then this SLERS solution would allow for seamless unit to unit interoperability with users dispersed throughout the State. But the alternative proposal's technical submittal offered by M/A COM included user equipment that is not conducive to SLERS, indicated 700MHz migration path to Project 25 technology. That being the case, a higher tiered segment of portable and mobile radios must be considered, but this segment appears to be beyond the scope of M/A-COM's submitted SLERS.

proposal Furthermore the proposed configuration lacked many of the reliability functionality coverage and reliability aspects of the base Project 25 RFP Specification For these reasons the SLERS alternative received a somewhat lower score ranking and assessment of relative technical desirability

Thus our recommended order of ranking as determined by this proposal evaluation process is as follows

Rank-I Motorola Project 25|Proposal Submittal

Rank II Motorola Project 25/Analog Proposal Submittal

Rank III M/A COM Project 25 Proposal Submittal

Rank IV M/A COM Alternative SLERS Proposal

Rank V Motorola Smartnet-II Analog Modernization

Obviously one might expect where M/A-COM could formally challenge the Federal Communications Commission on the issue of FCC Type Acceptance Certification and what constitutes a sale of equipment Taking into consideration a potential relaxation of this type acceptance requirement by the FCC in their response to a presumed M/A COM formal inquiry in the immediate matter of proposal evaluation scoring Tusa has found where the remaining body of exceptions involving audio quality configuration site modifications training and other RFP requirements within the M/A-COM P-25 proposal are of such scope where the numerical ranking of submittals as described above would not change

In the matter of cost evaluation a comparison of the costs associated with the two Project 25 proposals is straightforward as both vendors proposal responses

were in concert with the City/County RFP Specifications. The Motorola proposal is seen to have a lower initial cost although it encompasses more infrastructure equipment than does the corresponding M/A-COM proposal. Operationally the Motorola configuration is seen to cost somewhat more to maintain over a ten-year period however this is expected since it contains nearly twice the amount of infrastructure base station (transmitter/receiver) equipment.

Motorola's alternative split system cost information is limited as they supplied only a lump sum cost for infrastructure and user equipment absent of maintenance costs. In our evaluation since the proposed split system is in reality simply their P-25 proposal with a smaller subset of channels provided at each infrastructure site we used appropriately scaled adaptations of their proposed P-25 maintenance costs for the purposes identifying a scale of project-anticipated costs.

The costs indicated by M/A COM for the SLERS proposal were more difficult to evaluate since their approach did not fully follow the City/County's alternative proposal invitation guidelines. Specifically their infrastructure cost contains an initial implementation cost for dispatch centers coupled with an annual user fee for a minimum level of subscribers (3,478 radios). The presumed period of SLERS subscription to recover the costs associated with tower site enhancements is at least ten years although the cost proposal is unclear of the minimally required term. An additional uncertainty with M/A COM's cost proposal is the issue involving the need for 700/800MHz radios and what additional contribution if any is required of the City/County to support the SLERS envisioned 700MHz Project 25 expansion.

D F Tusa September 24 2007

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