

Section 1

Scope of Work

The following project workplan has been developed based upon the following:

- RCC’s 30 years of corporate experience in projects of this nature;
- Input from the County’s Request for Quotation;
- RCC’s recent March 18th meeting with County Purchasing and Sheriff’s Office representatives in McKinney, and,
- Ms. Jennifer Turner’s email dated 4-30-13 requesting additional changes to the listing of agencies to be interviewed.

The scope of work that follows has been updated to reflect the changes requested on 4-30-13.

As part of the Phase I process, RCC will work closely with the County’s staff to review the existing system, and will work with designated County personnel that have an in-depth understanding of County needs and the needs of the outside user agencies that share the 800 MHz radio system. At the County’s request on 4-30-13, we have deleted the proposed interview sessions for County Purchasing, County Engineering, County Parks, and Constables. Purchasing, Engineering, and Parks do not use the 800 MHz radio system. The Constables do use the system, but Major Pam Palmisano will address their needs and requirements since she is very familiar with their operations.

Prior to these most recent changes, at the County’s request, we previously deleted the proposed interview sessions for the following entities with the understanding that Major Palmisano can and will work with RCC to address their radio system needs and requirements:

- Fairview PD PD User on Collin County SO system
- Anna PD and FD User on Collin County SO system
- Princeton PD and FD User on Collin County SO system
- Celina PD and FD User on Collin County SO system
- Melissa PD and VFD User on Collin County SO system
- Farmersville PD and VFD User on Collin County SO system
- Parker PD PD user on Collin County SO System
- Blue Ridge VFD User on Collin County SO system
- Branch VFD User on Collin County SO system
- Josephine VFD User on Collin County SO system
- Lavon PD User on Collin County SO system
- Lowry Crossing FD User on Collin County SO system

- Nevada VFD..... User on Collin County SO system
- Westminster VFD..... User on Collin County SO system, and
- Weston VFD.....User on Collin County SO system.

As in our original proposal, the updated scope of work that follows has been segmented into three logical project phases as outlined below. Each Phase allows for proper discussion, management review and approval prior to beginning the next Phase.

- Phase I Radio System evaluation, needs analysis, development of radio system replacement alternatives, budgetary cost estimates, and preparation of the Phase I Report;
- Phase II Development of system procurement specifications (the RFP), vendor proposal evaluations, vendor selection, and contract negotiation assistance, and
- Phase III Detailed design review, project management of system implementation, system acceptance testing, and cutover.

Phase I –Needs Assessment, Feasibility Analysis, & Conceptual Design

The following updated project tasks are currently included in Phase I of the project.

Task 1—Project Initiation & Orientation

The purpose of Task 1 is to conduct a project kickoff and orientation meeting to meet and discuss the project's scope of work and schedule, and to identify the types of information that RCC will be requested from the various project participants. At the meeting we will establish appropriate lines of communication between representatives of the County and RCC.

RCC staff will attend and participate in the kickoff meeting in McKinney. Prior to the meeting, RCC staff will work with the County's project leader to discuss the specific content of the kick-off meeting, as well as its date, time, and location. RCC has assumed that the County will provide the actual meeting facility. The kickoff meeting will likely take no more than two hours, therefore, following the meeting, RCC staff would like to begin the site visits, starting with the repeater sites first.

Task 2—Conduct Site Visits & Review Existing System Documentation

To update our current understanding of the County's trunked radio system, RCC staff will conduct site visits to each of the County's repeater sites and the primary and backup radio communications centers to review, assess and document the current facilities and conditions. The site visits are necessary to help ensure that RCC personnel are up to date on the latest conditions at the sites, i.e. radio towers, equipment shelters, auxiliary power systems, grounding, surge suppression, microwave and two-way radio equipment, and dispatch console systems. This will allow RCC to address miscellaneous issues that need attention as part of the development of the new system solution. RCC understands that the County already has a current inventory of the radio infrastructure and user radio equipment operating on the system.

RCC staff will review available radio system documentation and existing FCC licenses for potential "issues".

Task 3—Develop and Distribute Radio System Questionnaires

When developing a new radio communications system, it is always wise to gather input from the user agencies to help ensure that the system meets user needs. In this case, the Sheriff's Office controls, manages and operates the 800 MHz trunked radio system. To begin the process of identifying current operational needs and requirements for the new P25 system, RCC will use a two-tier approach that involves the use of a structured radio system questionnaire along with interviews with Sheriff's Office personnel that manage the trunked radio system on a daily basis and have an in-depth understanding of the system and the user agencies.

RCC will prepare and provide a User Survey questionnaire to the Sheriff's Office for distribution to the agencies that use the County's trunked radio system for their primary communications. These questionnaires are to be filled out by a knowledgeable representative of each of the user agencies and be returned to the Sheriff's Office. The Sheriff's Office will send copies of the questionnaires to RCC for review.

The radio system questionnaires will be intended to collect information regarding operational practices and requirements regarding the use of the new P25 trunked radio system. Typical issues to be addressed include:

- Radio coverage requirements
- Radio talkgroups needed today and for the foreseeable future;
- Radio interoperability with surrounding jurisdictions;
- Radio features and functionality;
- System problems that need to be addressed in the new system;
- Dispatch requirements, and
- User radio equipment needed (quantities mobile and portable radios, accessories, etc.)

RCC requests that the questionnaires be completed and return to RCC within approximately three weeks.

The radio system needs and issues found in the questionnaires will be explored in greater detail during the Task 5 interview process.

Task 4—Analyze Radio System Questionnaires and Catalog Information

RCC will conduct a detailed review of the completed radio system questionnaires to gather information needed for system planning.

Task 5—Conduct Interview Sessions

The user interview process is intended to obtain firsthand radio user information that will drive the planning, configuration, procurement and implementation of the P25 trunked radio system. The interview process will allow RCC staff to discuss and identify the operational needs of the

Sheriff's Office and the various other user agencies as well as problem areas needing attention (coverage improvement, etc.). RCC will also review related background reports, studies, and other pertinent documentation that may be available. As requested, the interview process will include representatives of the Sheriff's Office who have a good firsthand knowledge of the needs of the S.O., Constables, and outside agencies using the system.

Agencies to be discussed during meetings with Major Palmisano

- Collin County Sheriff's Office
- Collin County Constables
- Fairview PD
- Anna PD and FD
- Princeton PD and FD
- Celina PD and FD
- Melissa PD and VFD
- Farmersville PD and VFD
- Parker PD
- Blue Ridge VFD
- Branch VFD
- Josephine VFD
- Lavon PD
- Lowry Crossing FD
- Nevada VFD
- Westminster VFD
- Weston VFD.

Task 6—Develop P25 System Conceptual System Alternatives & Budgetary Cost Estimates

Using the information gathered up to this point, RCC will prepare and evaluate two conceptual radio system configurations (system alternatives) for the new P25 trunked system. The first alternative will address a County-owned system; the second will address a shared system environment involving a neighboring city such as Plano or McKinney. Some of the system characteristics that will be considered include:

- **Required radio coverage** throughout Collin County for mobile radios and portable radios on-street, in buildings, and in special areas needing attention (underground areas, the County's Justice Center, etc.);
- **System capacity** (RF channels in the radio infrastructure);
- **System connectivity** to link repeater sites, dispatch facilities and the system's master control point (microwave, optical fiber, etc.);

- **System reliability and redundancy** to ensure sustained operation under adverse conditions;
- **Long-term useful life** without the need for a “forklift” system replacement;
- **Features and functionality;**
- **Radio interoperability** to maintain communications with neighboring towns, cities, counties and the State;
- **User training,** and
- **Maintainability.**

Reliable radio coverage is a fundamental characteristic of public safety radio communications. Radio coverage is a lot like altitude to a pilot, the more you have, the better, and without enough, you are in trouble. To help develop real-world solutions and system configurations, RCC will utilize its ComSite Design (CSD) wireless system design tools to model and analyze the two conceptual system configurations. During that process, RCC will invite members of the County's project team to RCC's Houston office to participate in a one day system alternatives development and evaluation meeting.

This will be an informative, interactive meeting in which RCC will begin by providing a brief, non-technical "radio coverage tutorial" to help the County team better understand the system design issues involved in successfully obtaining the on-street and in-building radio coverage they need. RCC has conducted many system design meetings with city and county clients in Texas and other states. All of them have found the meetings to be very helpful in understanding the differences between the various system configurations. They have all appreciated the opportunity to contribute valuable feedback to RCC staff regarding the pros and cons of the system alternatives prior to a selection of the “best alternative”.

Following the brief tutorial, RCC will walk the attendees through the two alternative system design configurations that will be modeled and analyzed with RCC's computer based CSD propagation (radio coverage) analysis system. The resulting coverage maps generated for each system configuration will be displayed in color on a 100" projection screen in RCC's conference room so that the pros and cons of each system configuration can be discussed in detail.

Utilizing CSD, RCC staff will generate detailed radio coverage maps for the Collin County area for the trunked system configurations, i.e. the various tower site configurations. This will allow the County staff to provide RCC with good firsthand feedback regarding the configuration of the new radio system. It will allow each person to see how the P25 radio system's radio coverage performance will vary based on different quantities and locations of radio towers within the County. It will also allow for the evaluation of potential new tower locations on existing County properties or in other areas if needed.

At the end of the day, the County attendees will return home with a much better understanding of what will be needed to address the County's coverage requirements. Following the meeting, the attendees will be much better equipped to answer radio system questions they may be asked by their managers or elected officials. In short, they will be better equipped to make important, informed decisions about the development of the County's new trunked radio system. Lastly, their valuable input will improve the quality of the new P25 trunked radio system by providing interactive on-the-spot feedback to RCC during the conceptual system

configuration process. The County will likely live with the new P25 system for many years. The time spent by those attending and participating in this meeting will be very beneficial.

Once the coverage issues have been addressed, RCC will address the other important system issues such as system infrastructure redundancy and reliability, system capacity today and for the foreseeable future, features and functionality, maintainability, radio interoperability, the potential sharing of key system components with a neighboring city or county, training, etc. RCC will then finalize two different system approaches and will prepare budgetary cost estimates for each one for comparison purposes.

Task 7—Develop Draft Phase I Report and Deliver to Project Team

Following completion of Task 6, RCC will prepare a draft version of the Phase I Report which will typically include the following:

1. Table of Contents;
2. Executive Overview – a synopsis of the entire report for those that wish to read a brief summary of the Project;
3. Project Scope – a discussion of the project and the individual tasks that were undertaken to compile the assessment and the resulting system alternatives and solution;
4. Current System Environment – a brief overview of the County’s current system architecture and current issues that impact operations;
5. Alternative System Solutions and Recommendations – a detailed analysis and comparison of the two system alternatives owned system vs. shared system;
6. First look at co-channel 800 MHz licensees to see if adding new 800 MHz sites to the system might present FCC licensing problems;
7. System Budgetary Pricing – a budgetary pricing analysis will be provided for system solutions and alternatives for planning purposes.
8. Appendix – a glossary of terminology in the report, related technical material, and radio coverage maps developed during Phase I.

The report will be developed in a manner that can be readily understood by non-technical personnel so that important and informed decisions can be made regarding the new P25 trunked radio system.

Task 8—Review Draft Report with County’s Project Team

At the County’s request, RCC will provide the Draft Phase I Report to the County for review and comment in electronic format (Adobe PDF) on CD-R or DVD media. This will facilitate easy transport and review of the report and will allow for easy searching of the document as needed. Printed copies are not needed by the County and have been deleted as requested.

The Project Team members will be provided a reasonable period of time to review and comment on the draft Phase I Report, typically 2 - 3 weeks. Following that review, RCC staff will meet with the County’s project team to discuss the report.

Task 9—Complete Final Phase I Report and Deliver to Project Team

Once RCC has received all of the suggested comments, RCC will prepare and deliver the final version of the Phase I Report to the County. The report will be delivered in Adobe PDF format on CD or DVD media.

The remaining two project Phases (Procurement and Implementation) are discussed in the follow pages.

Phase II – RFP Development, Proposal Evaluations, Contract Negotiations

A preliminary workplan for Phase II is provided below. Phase II involves system procurement, i.e. developing the Request for Proposals (RFP) for the new system, assisting the County in conducting a Proposers Conference, responding to vendor questions, developing proposal evaluation tools, assisting the County in the evaluation of vendor proposals, and assisting the County in negotiation of a mutually acceptable system contract with the selected vendor.

The following project tasks tentatively are part of Phase II.

Task 1—Phase II Initiation & Orientation

The purpose of Task 1 is to reconvene the County's project team to review and discuss the Phase II scope of work and the project schedule. RCC personnel will discuss any additional information that may be required in order to begin development of the respective system procurement documents. RCC will work closely with the County's Purchasing and Legal Departments during development and release of the P25 system RFP to help ensure that appropriate County requirements are properly included.

Task 2—Develop Request for Proposals (RFP)

As part of Task 2, RCC will work with the County's project team to develop a draft Request for Proposals (RFP) for the new radio system. The RFP will be developed utilizing the information and requirements gathered during Phase I of the project. The new system's performance requirements will be discussed finalized. The RFP will be structured to clearly articulate the County's needs and requirements for the new system. The RFP will be the basis upon which each vendor's proposal will be evaluated. Each vendor will be required to respond to all sections of the RFP, and include, where applicable, which features and capabilities are included in the baseline offering and which are optional and at what cost. A detailed proposal evaluation matrix will be developed to allow proposal evaluators to effectively determine which proposals best meet the specified requirements.

The County may want to consider requiring the vendors to submit their cost information separately to enable the County's Evaluation Committee to evaluate the technical responsiveness apart from proposed costs.

The RFP will address specific operational, technical and procedural areas, as well as support areas such as training and system maintenance. Typical items to be included in the RFP will include:

- The County's RFP response procedures and purchasing requirements, i.e. the "terms and conditions";
- System functional & operational requirements;
- System performance requirements typically including but not limited to the following:
 - Radio coverage performance requirements throughout the County's defined service area, including specified mobile, portable on-street, and portable in-building coverage;
 - A radio interoperability talkgroup/channel plan for radio interoperability within the County's system and with entities outside of the County's system, such as agencies in the adjacent jurisdictions, as well as state and federal agencies;
 - Radio system connectivity utilizing microwave or other suitable broadband technology including future expansion requirements.
 - Potential backup options for site connectivity;
 - System redundancy for sustained operation;
 - Where appropriate, support of existing reusable infrastructure (towers, equipment shelters, auxiliary power systems etc.)
 - Radio dispatch console layouts, talkgroups / channels, and functionality;
 - Potential reuse of existing P25 capable 800 MHz user radio equipment including an assessment of all user radio hardware and/or software modifications that may be needed to convert reusable radio equipment to P25 operation;
 - Radio user equipment (mobile and portable radios as well as control stations which are desktop radios used in the office environment) and radio accessories (batteries, single unit and multi-unit chargers, carrying cases, speaker microphones, etc.) by user agency;
 - System reliability and redundancy requirements to maintain operations under adverse conditions;
 - System expansion and upgradeability to support the County for many years without a major "forklift upgrade";
 - System maintenance requirements and technical training for County staff;
 - Radio user training to help ensure proper use of the new system once completed;
- Optional capabilities & equipment;
- Maintenance requirements, options & local system support
- System/vendor information & qualifications
- System installation & acceptance testing requirements
- Training requirements
- System pricing, purchasing and pricing incentives, trade-ins, etc., and
- System cutover requirements for transition to the new system without loss of service.

Upon completion of the initial draft RFP, RCC will submit the document to the County team and to the County's Purchasing Department for review. RCC will then meet with the County team to

discuss the RFP and its contents. Once all feedback and comments have been received, a single cycle of feedback and suggestions from the County team will be incorporated into the final RFP document.

RCC will finalize the RFP and provide the completed document in electronic format to the County's Purchasing Department for issuance to the vendor community. RCC will provide a list of qualified vendors that can potentially respond to the RFP.

Task 3—Assist the County Team in the Pre-Proposal Conference

Within a reasonable time frame (typically two to three weeks) after the solicitation for proposals (RFP) has been released, RCC will assist the County in conducting a pre-proposal conference to allow proposers to ask questions to better understand the program and RFP specifications. RCC will work with the County to coordinate the scheduling of the pre-proposal conference and will attend the meeting to assist County representatives in answering vendor questions. In addition, RCC will assist in the preparation of responses to vendor questions and the issuance of RFP addenda, if needed, following the Proposers' Conference.

Task 4 – Conduct Initial Evaluation of Vendor Proposals

Task 4 includes two parts, 1.) developing the evaluation methodology and tools for the proposal evaluations and 2.) the actual review and evaluation of the vendor proposals. RCC recommends that the County assemble an internal Proposal Evaluation Committee (the Evaluation Committee) with appropriate departmental representation that will participate in the review of the vendor proposals so that they have firsthand knowledge and an understanding of each vendor's offering.

RCC recommends that the County members of the Evaluation Committee serve as the voting members of the Committee. RCC's roll in the evaluation process will be to serve as the County's technical advisor to the Evaluation Committee. RCC will assist the County staff in fully understanding each vendor's offering and will serve as a non-voting member of the Evaluation Committee.

RCC will assist the County team in the development of a detailed proposal Evaluation Matrix that will be used in the evaluation of the vendor proposals. The Evaluation Matrix will include relative weighting and response scoring for the various system elements. RCC will work with the County team on the development of the matrix to help ensure that the weighting of evaluation items corresponds with the levels of importance identified by the County team. The Evaluation Matrix will be constructed to score and rank responses to the RFP document(s) and will be designed to indicate the degree of conformance or nonconformance of each proposer's submittal. The development of the Evaluation Matrix should be fully completed and approved by the County team prior to the proposal due date.

When the proposals are received, RCC recommends that the County's Purchasing Department make a first pass review, looking for gross errors such as missing forms, the required proposal bond, signatures, or other important information. Following that, the Evaluation Committee (including RCC) will review and evaluate the proposals that have successfully passed through the Purchasing Department's first pass review. The Evaluation Committee will utilize the approved Evaluation Matrix for scoring purposes.

It is essential that each vendor's proposal information be secured and be kept in strict confidence, in accordance with the County's purchasing guidelines and RFP procedures. This will help protect the County and will help avoid eroding the competitive process. RCC will work with the Evaluation Committee to discuss and address these important procedural issues prior to the opening of the vendor proposals.

After completing an initial review of the proposals, RCC will meet with the County team to discuss and review the initial proposal findings and initial scoring of the proposers' responses. A list of relevant questions will be developed in preparation for the vendor oral presentations. During this meeting, RCC will discuss strategy and procedures that should be considered prior to engaging the vendors in oral presentations.

Typically, approximately six to eight weeks of time will be needed for RCC and the County team to complete the preliminary review of the vendor proposals. RCC is tentatively planning for the evaluation of a maximum of two (2) radio system proposals. In the event that more than two proposals need evaluation, RCC will provide a cost quotation to add additional proposal evaluations to the project.

Following the initial proposal reviews, a preliminary draft of the populated Evaluation Matrix will be developed. The matrix may include questions for the vendors, a preliminary ranking of each evaluated vendor's proposal and a tentative set of findings that will be refined as the evaluation process proceeds.

Task 5 – Attend Vendor Oral Presentations

RCC recommends that the County have each shortlisted vendor make an oral presentation to the County's Proposal Evaluation Committee to discuss their offering and answer any questions the City and RCC may have. In a project of this size, a full-day presentation from each company attending the orals will likely be needed to cover all topics. If the County decides to develop a shared system with a city or county, an additional half-day may be needed for each vendor oral presentation.

RCC personnel will attend the vendor oral presentations to assist the County in asking questions as needed and to assist the Evaluation Committee in developing a better understanding each proposers' offering. Each proposer will be required to respond to the County / RCC questions in writing after the presentations are complete. RCC will assist the Evaluation Committee in reviewing the proposers' responses to questions.

Typically, in projects of this nature, each proposer will setup a working demonstration system with samples of working dispatch consoles, one or more demo repeater sites, and user radio equipment. This usually requires that each proposer have a week or so of preparation and setup time within Collin County prior to the presentation. In most cases, proposers rent large conference rooms at area hotels to have the preparation time and space needed for their presentation.

Following the presentations, the County may elect to make site visits to a select number of proposer project sites at which they have installed systems of a nature and size comparable to the system proposed for the County. Since it is unknown at this time whether the County will undertake such site visits, RCC has not currently included a project task for these trips. In the event that the County decides to conduct site visits and would like RCC personnel to travel with

the County team to those locations, RCC will add a project task for the visits and will provide a cost quotation once the destination cities or counties are known. Project time and expenses would be billed accordingly.

Task 6 – Develop Term Sheets, Request & Evaluate Best & Final Offers

At the completion of the oral presentations, RCC will update its proposal evaluation scoring and will assist the County in developing "Term Sheet" documents that will outline potential issues that if not agreed to by the vendor may degrade the County's position in a purchasing agreement (the system contract). Such issues might include the provision of strict radio coverage performance guarantees, stringent system acceptance testing criteria, specific response times for system maintenance or repairs under warranty, warranty program and terms, and long-term pricing guarantees, etc. These issues will be addressed as part of the evaluation process. Term Sheets will be presented to the prospective vendors for their review and discussion. The purpose of the Term Sheets is to obtain agreement on the "sticky issues" prior to engaging in contract negotiations.

RCC will assist the County in developing a Request for Best and Final Offers (BAFOs). A separate BAFO request will be likely developed for each short-listed proposer that made an oral presentation. RCC will assist the County in evaluating the resulting BAFOs. The County may request any number of BAFOs in the process to obtain the lowest cost and most responsive final system configurations. Prior to providing a cost proposal for Phase II, RCC and the County will discuss and agree upon the number of BAFOs to include in the scope of work.

Task 7 – Finalize Vendor Selection

Upon conclusion of the BAFO process, RCC will incorporate the new information and will prepare its final evaluation scoring. RCC will schedule a meeting with the County staff on the Evaluation Committee to discuss the latest information and finalize the evaluation scoring.

RCC will assist the County in selecting the vendor that provides the best system solution in terms of features, functionality, costs and a number of other predetermined evaluation criteria selected by the County team. Note: RCC always strives to avoid vendor protests in the procurement cycle, and has an excellent record in this regard. That said, a vendor can file a protest at any time for any reason. RCC has not included any time or expenses in this preliminary scope of work to respond to protests. If a protest occurs, RCC can assist the County in responding to it on a time and materials basis.

Task 8 – Support Contract Negotiations

RCC will assist the County in negotiating a contract with the selected proposer. RCC does not provide legal services therefore the County's Legal Counsel should participate in all negotiations. RCC will however support the County team in the following areas:

- **Negotiation of Statement of Work (SOW)**

Development of a finalized comprehensive Statement of Work (SOW) is an integral part of contract negotiations for acquisition of the system. The SOW defines the responsibilities of both the vendor and the County during system implementation and acceptance testing. In addition, the SOW process will further define a number of system parameters which will

directly affect the final contract price. RCC will assist the County in finalizing the SOW and negotiating the impact on final contract price due to changes sought by the County during the process.

- **Incorporation of Appropriate Acceptance Test Parameters for the system**

RCC will work with the County team to incorporate a stringent acceptance testing program prior to execution of a contract. System providers are more likely to agree to such performance requirements before a contract for the new systems is executed. The negotiation of testing requirements and pass/fail criteria becomes much more difficult after the contract is signed.

- **Pricing Negotiations**

RCC will work with the County team to negotiate the proposed system pricing to help the County minimize project costs. RCC will compare the proposed Collin County pricing with other recent projects of a similar nature in Texas.

It is difficult to accurately forecast the amount of time that will be needed for the contract negotiation process because neither the County nor RCC have any direct of vendor pricing. Numerous external forces come into play when negotiating a contract, such as the level of competition involved, the time of the year when a contract is to be developed, and the proposers need to meet quarterly or annual sales quotas. RCC will work with the County to budget an appropriate amount of consulting support to complete the contract development

Task 9 – Project Close Out for Phase II and Preparation for Phase III

Task 9 allows for the transition from Phase II to Phase III and sets the stage for the implementation phase.

Phase III – Project Management of Implementation and Acceptance Testing

A preliminary workplan for Phase III is presented for review in the following pages. Upon the completion of Phase II, RCC will meet with the County Project Team and discuss and finalize the specifics of the workplan for Phase III.

The purpose of Phase III is to successfully install and acceptance test the new system prior to system cutover in addition to ensuring that the system is operating efficiently through the successful completion of a reliability test period. The following implementation assistance will be provided by RCC. It should be noted, however, that the scope of work for Phase III (and associated costs) can be modified to meet any reasonable level of effort required by the County.

Task 1—Implementation Initiation & Orientation

The purpose of Task 1 will be to formally initiate the implementation of the new radio system. The process will begin with an implementation project kickoff meeting held with the County's Project Team, RCC Consultants, and the selected vendor's representatives. The purpose of the kickoff meeting will be to accomplish the following:

- Determine who will be involved from each of the participating entities throughout project implementation
- Discuss and agree on the scope of work contained in the contract documents
- Review and agree upon the implementation schedule and project milestones to be completed along the way
- Establish project reporting requirements and frequencies (e.g., status reports formats, frequency and method)
- Review and discuss payment terms tied to the vendor's milestone performance

Task 2 – Provide Day-to-Day Project Implementation Support

The purpose of Task 2 is to provide the County's Project Implementation Team with day-to-day project management and implementation support for a range of project issues including:

- FCC licensing issues for the trunked radio system;
- Final site selection and approvals;
- Site development issues and design packages to include:
 - Review and approval of vendor's site development packages for each site;
 - Periodic site inspections of vendor's work, site development, preparation installation of site improvements, equipment shelters, tower, power and grounding systems, and radio equipment;
 - Assistance in resolving site development issues that arise.
- Dispatch console configuration and development;
- System fleet mapping and development of talkgroup planning;
- Development of radio programming templates;
- Microwave system connectivity;
- System redundancy and fallback systems;
- Failure mode review and analysis;
- Attend periodic project meetings to review/discuss and resolve project issues. Some project meetings may be conducted by conference call depending upon the nature of the meeting.

Task 3—Attend & Participate in Detailed Design Review (DDR)

A detailed system design review will be conducted with the selected vendor to thoroughly discuss their proposed system and configuration prior to the ordering and manufacturing of equipment and software. Detailed system design documents identifying all required customization mutually accepted by both the vendor and the County must be prepared by the vendor. RCC will work with the County staff to review the DDR documents and will participate in the DDR project meetings and discussions. The amount of time needed for the DDR will vary depending on whether the County develops a County-owned system or a shared system with one of its neighbors.

At the end of Phase II when a system contract has been executed with a vendor, RCC will be better positioned to estimate the amount of consulting support will be needed for Task 3.

Task 4 – Attend & Participate in System Staging

Once the selected vendor has manufactured the radio system infrastructure the system will be assembled and staged at one of the vendor's facilities. Staging involves assembling and installing the radio system infrastructure at the staging area for testing and County review purposes. RCC recommends that designated members of the County's project team attend the factory staging event. Being very familiar with the system technology and system architecture, RCC's presence at the staging event will provide benefit to the County. RCC will assist the County in the initial testing of the new system while it is in staging. The testing is done to help identify system problems that should be resolved prior to shipping the system to the County. Accordingly RCC will attend system staging with the County participants. Based on other projects of similar size and complexity, we have assumed that the staging event will require the County participants and one RCC person for two days at the vendor's staging facility.

Task 5 – FCC Licensing Assistance

Note: The County's RFQ placed the FCC licensing effort in Phase II of the project. We recommend that this portion of the project be moved to Phase III because FCC licensing requires specific detailed technical information including the specific locations of all repeater sites, antenna heights, antenna types and orientation, the type of system operation, i.e. P25 Phase 1 FDMA or P25 Phase 2 TDMA, microwave system and equipment details, etc. which will not yet be known until the Detailed Design Review has been completed and approved. All frequency coordination and licensing fees are to be paid by the County.

It is important to note that when adding repeater sites to an existing system to improve coverage, relicensing the County's existing radio channels at different or additional locations can in some cases present problems. Radio channels are licensed on a shared basis with co-channel licensees (other users) licensed to use the same channels as the County at locations beyond 70 miles from the County's current sites. Depending on the location of the new sites, the new sites may encroach on the FCC's required 70 mile separation of the co-channel users which can be a problem.

As soon as the conceptual system design has been completed in Phase I, RCC and the County should identify the locations of the County's co-channel users to determine whether or not the County can expect licensing difficulties. In some cases, such difficulties can be addressed by the use of special transmit antenna systems or other measures.

The County will likely have the opportunity to acquire some new 700 MHz channels to expand the system. This may help mitigate some of the 800 MHz co-channel concern if it occurs. For budgeting purposes, RCC typically proposes an 80 hour block of time for FCC licensing support. In the event that problems do arise and the County needs additional support beyond the 80 hours, RCC can provide such support at the hourly rates outlined in Section 5 Professional Fees.

Because microwave licenses are equipment specific, RCC will not be responsible for microwave frequency coordination or licensing. RCC will however verify that the FCC microwave licensing is applied for in a timely manner by the microwave system vendor. The microwave system vendor will

be responsible for the microwave system FCC licensing work and that the County is granted the proper microwave license(s).

Task 6—Monitor Vendor Progress, Issues & Prepare Project Status Reports

RCC will assist the County in monitoring the work performance of the selected vendor(s) and will prepare monthly project status reports reflecting the progress and issues that have arisen during the past month. Recommendations for problem resolution will be provided on a case-by-case basis. RCC will work with the County and selected vendor to monitor, track, and help resolve problems that may arise during system implementation.

RCC will also review the vendor's invoices submitted upon completion of the specified project milestones and recommend action, i.e. whether to pay or reject the invoice.

RCC will review the vendor's proposed training program and recommend changes as required.

RCC will work with the County and vendor personnel to discuss and review the system cutover plan and recommend changes as needed.

Note: Reviewing the vendor's warranty program and making comments will occur in Phase II Task 6 prior to execution of a contract with the vendor. Making warranty changes after the contract has been executed is either very costly or very difficult.

Task 7 – Assist the County in Acceptance Testing of the New System

RCC personnel will work closely with the County's Project Implementation Team to help ensure that the new system and equipment are appropriately tested prior to final system acceptance. The detailed acceptance test requirements that were developed in Phase II of the project will serve as the foundation for the acceptance testing process. RCC will assist the Project Implementation Team in conducting the system testing procedures outlined in the test plan.

Such testing and inspection will involve site development, equipment installation, two-way radio and microwave radio equipment testing, required functionality, system reliability and failure modes, microwave performance testing, radio coverage testing, dispatch console testing, system optimization, and user radio equipment verification and proof of performance testing.

Two-way radio system coverage performance is particularly important and will be field tested to determine whether or not the radio coverage required by the County has actually been delivered. RCC has extensive hands-on experience in this area, and has conducted coverage testing in hundreds of projects many of which have been in Texas and the Dallas / Fort Worth area. For coverage testing purposes, the County's two-way radios should to be tested in the same strict manner in which the radios are used in everyday operations.

Final As-Built system documentation will be required in the system RFP and as part of final acceptance, RCC will review the vendor's As-Built Documentation deliverable to determine whether or not it is acceptable.

As part of final acceptance, a 60 - 90 day system reliability test will be completed without a major system failure to help ensure that the new system is stable and ready for use by the County and participating cities and towns. Should there be a "major system failure" within the 60 - 90 day

system reliability test, the vendor will be instructed to address the failure, provide a cure for the problem, and once that has been successfully implemented, the system reliability test will start over at day one (unless the County deems otherwise).

The results of the acceptance testing program will be presented to the County's Project Implementation Team for review and approval. The vendor will be provided a list of identified discrepancies that require correction. Upon satisfactory completion of the acceptance test process, RCC will recommend whether or not the County should approve the final system acceptance. In projects of this nature, it is not unusual to have a small punch-list of minor issues that need attention before closeout. Minor issues do not usually hold up final acceptance.

Task 8 – Final System Acceptance

RCC will work with the County's Project Implementation Team and will make a recommendation regarding the acceptance of the system. At final acceptance the County officially takes ownership of the system. Typically, final acceptance also begins the system's one year warranty period.

Task 9 – Monitor System Cutover

Following system acceptance and, RCC staff will be on-site to monitor and support the initial system cutover and the first day of system operation. Since the complete system cutover will involve the County and the many other external entities that share the system, complete system cutover will likely occur over a period of several days. RCC can provide as much or little cutover support as the County needs. At the moment, we are not sure how much cutover support the County will actually need, therefore we have tentatively estimated two days of time on-site in McKinney. We can adjust that as needed by the County.

Section**2****Professional Fees & Expenses**

The scope of work in Section 1 of this document supersedes the scope of work in the proposal RCC provided to the County on April 26th. Following that submittal, RCC made additional changes to the scope of work that were requested by the Sheriff's Office. Those changes along with the earlier changes that were made for the 4/26 version of the scope of work include the following:

- May 8, 2013 - Removal of the remainder of the in-person agency interview sessions with County Purchasing, County Public Works, County Parks, and the Constables. The interviews with the Sheriff's Office are still included. We understand that due to Major Pam Palmisano's extensive day-to-day experience and knowledge of the operations of all of the radio system users on the network, she will be able to meet with and provide RCC the detailed requirements information needed for the other entities that use the trunked radio system.
- May 8, 2013 – Removal of the PowerPoint presentation which was Task 10 in Phase I of the project. RCC will still prepare and deliver the written Phase I Report outlined in Task 9;
- May 8, 2013 - Removal of grant research support to help identify potential grant funding for the project. We understand that the County currently has experienced in-house personnel that can effectively address the need for grant funding;
- May 26, 2013 – Removal of the in-person interviews with the outside agencies that currently use trunked the radio system. Major Palmisano will address those agencies;
- May 26, 2013 - Removal of all printed copies of the draft and final versions of Phase I Report. The report will be provided in Adobe PDF format on CD or DVD media. The County will print any hard copies of the report that may be needed, and
- May 26, 2013 - Removal of all printed copies of the PowerPoint presentation resulting from the Phase I Report. The County will print any hard copies of the presentation that may be needed.

These most recent revisions better align the scope of work with the County's needs and expectations

The scope of work in Section 1 includes a project workplan for all three project phases. The scope of work for Phases II (RFP development and proposal evaluations) and Phase III (system implementation, testing and cutover) are in draft format and will vary somewhat depending on whether the County decides to build its own dedicated system or to build a shared system with one or more other cities in the area. Accordingly, we have quoted professional fees and expenses for Phase I only at this time. At the end of Phase I, when a system direction (owned vs. shared) has been determined for Phases II and III, a cost proposal for those Phases will be prepared.

The cost proposal that follows for Phase I has been based on the assumptions that follow. Professional fees may, by mutual agreement, be adjusted if the scope of work is modified or the project schedule is significantly extended for reasons beyond RCC's control. Current assumptions include the following:

- As in our previous work with the County, invoices will be issued to the County monthly based on the work performed during the previous month.
- Invoices are due within thirty (30) days.
- Out-of-pocket expenses will be included on the monthly invoices and will be billed at actual plus an administrative fee of 10% to cover miscellaneous reimbursable expenses. Out-of-pocket expenses may include travel and per diem. RCC will make every effort to ensure that such expenses are reasonable and necessary. Expenses are expected to be minimal since some of the RCC staff that will be involved in this effort are resident in the Dallas / Fort Worth area.

Any meetings required beyond those specifically addressed in RCC's work plan are subject to further negotiations of the scope of work. The proposed number of trips to Collin County has been included in the work plan.

Additional terms and conditions are subject to RCC Consultant's Services agreement.

Phase I Fees and Expenses

Professional fees and expenses for Phase I will be **\$94,788.16**.