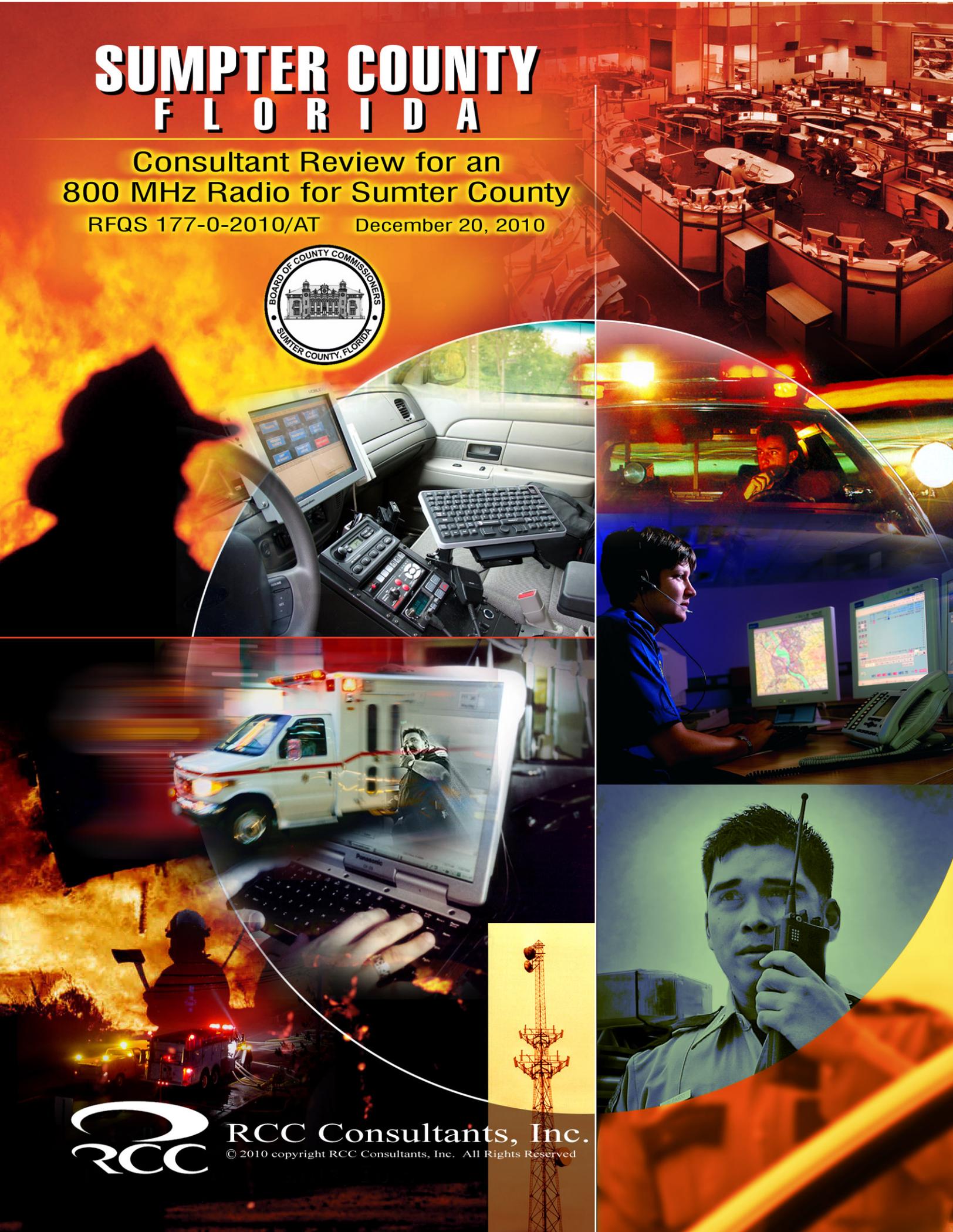


SUMPTER COUNTY FLORIDA

Consultant Review for an 800 MHz Radio for Sumter County

RFQS 177-0-2010/AT December 20, 2010



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Consultant Review for an 800 MHz Radio for Sumter County

Presented to:

Sumter County, FL

December 20, 2010



RCC Consultants, Inc.

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Proposal Contact: Kevin Lombardo

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Southeast Region
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December 16, 2010

Amanda Taylor
Procurement Coordinator
7375 Powell Road
Wildwood, FL 34785
Email: Amanda.taylor@sumtercountyfl.gov
Fax: 352-689-4401

RE: Request for Statement of Qualifications – Consultant Review for an 800 MHz Radio for Sumter County

Dear Ms. Taylor:

RCC Consultants, Inc. (RCC) is submitting the enclosed Statement of Qualifications to provide radio system consulting and communications systems engineering services to support Sumter County's review for an 800 MHz radio system. As the enclosed statement shows, RCC brings demonstrable skills and experience in public safety communications and operations, with more than 26 years helping clients develop mission critical communications systems. We are confident that RCC is uniquely qualified to serve Sumter County based on the following strengths detailed in our Statement of Qualifications:

- **Public Safety Voice and Data Communications System Expertise** - RCC is highly regarded and respected as one of the best public safety communications system consulting and engineering firms in the United States. Our team is intimately familiar with the technologies currently in use throughout the State of Florida. We are also under contract across the country to support our clients with the newest of technologies, such as 700/800 MHz P25 trunked radio systems, which are undergoing deployment throughout the nation. Our project teams have supported the planning, design, procurement, and implementation of more than 200 advanced interoperable 700/800 MHz trunked radio systems. RCC has extensive technical expertise in supporting the planning, deployment and operations of technology such as microwave and fiber optic systems, radio consoles, IP-networking, and related applications such as mobile and broadband data. RCC is highly regarded and respected as one of the best public safety communications system consulting and engineering firms in the United States.
- **Expertise with VHF/UHF and 700/800 MHz Frequency Bands** – For the past 26 years, RCC has performed work in all available public safety/public service land mobile frequency bands, from VHF Low-Band to 800 MHz. RCC has designed systems operating in these bands throughout the nation, from conventional single site systems, to multicast and simulcast countywide systems, to statewide systems. RCC has a field-tested and proven coverage prediction tool, ComSiteDesign™ that allows us to model the differences in coverage between each of the bands, as well as the effects of narrowbanding on the VHF and UHF bands.

RCC Consultants, Inc.

100Woodbridge Center Drive, Suite 201 · Woodbridge, New Jersey 07095 · tel: 732-404-2400· fax:732-404-2556



- **Real-world Interoperability Experience, Operational Knowledge, and Certification** - RCC's Southeast team members bring subject matter expertise in every aspect of interoperability including technology, operations, and governance. Our team brings Department of Homeland Security (DHS) and Federal Emergency Management Agency (FEMA) certifications in the Incident Command System (ICS), National Incident Management System (NIMS), Communications Unit Leader (COML), and the Homeland Security Exercise and Evaluation Program (HSEEP). Our technical expertise is enhanced by operational knowledge through our hands-on experience as public safety practitioners. These qualifications translate into practical solutions for first responders, interoperable continuity with federal, state, and neighboring local entities, and compliance with DHS, state, and grant requirements.
- **Independence** - RCC is not affiliated with, nor do we have any financial interest in, any communications equipment manufacturer, distributor, or supplier. We do not receive or accept remuneration of any type from any manufacturer, distributor, or supplier for recommending any of their products. Our unbiased independent position provides our clients a capable partner in meeting their project requirements without the potential for conflicts of interest.
- **Familiarity with the Area** -RCC recently assisted Orange County, Florida in which we completed a detailed system analysis and recommendation report for the upgrade of their 800 MHz 10 site 28 channel simulcast Motorola SmartZone System. RCC is currently assisting St. Johns County with their transition from conventional VHF to an 800 MHz P25 radio system.
- **Local Presence, Local Knowledge** - RCC's Executive Sponsor for the project is based in Naples, FL and the Southeast Regional headquarters is located in Tallahassee, FL less than a 4-hour drive from Sumter County. RCC has 14 employees operating from the Tallahassee location to support this important project and can draw on more than 130 employees throughout the nation. Having worked in the area on projects very similar to yours, we understand the local environment and stakeholder community.
- **Project Management Oriented Company** - RCC takes great pride in elevating our project management performance for our clients in a way that is unmatched in our industry. This is demonstrated by our ongoing, companywide training program that meets and exceeds the Project Management Institute (PMI) standard. This approach ensures that your project is professionally managed to meet objectives, schedules, and budgets.
- **Grant Management Office** - RCC has dedicated full time resources available to assist our clients in all aspects of grant identification, application, and management. Grant assistance also involves researching federal, state and foundation grants for RCC clients. RCC provides services such as inquiry letters, proposal development, budget development, multi-agency projects, grants management assistance, compliance with Office of Management and Budget (OMB) Uniform Administrative Requirements, Cost Principles and Audit requirements.
- **Cost Savings** - RCC helps clients save money through the entire lifecycle of a project, from planning through implementation. Our vast experience with clients located in all areas of the United States gives us the technical and financial databases to draw on when negotiating



contracts with vendors. A few examples of some of the largest savings we have provided to our clients are:

Client	Vendor Proposal	Negotiated Savings*	Percent Savings
Jefferson Parish, LA	\$8.1M	\$2.5M	31%
Genesee County, MI	\$8.0M	\$2.5M	31%
Raleigh / Wake County NC	\$3.6M	\$1.2M	33%
Allegan County, MI	\$13.4M	\$4.4M	33%

**These contract price savings were accomplished without compromising system functionality or contract terms and conditions.*

RCC has particular strength in working collaboratively with project team members and stakeholders through a consensus-building approach that helps ensure a successful project outcome. We look forward to the opportunity to present our team and qualifications, and are available to participate in interviews at your request. If there are questions regarding our Statement of Qualifications, or if you would like to schedule an oral presentation, please contact me at (312) 287-7788 or by e-mail at klombardo@rcc.com.

Respectfully,

A handwritten signature in black ink, appearing to be 'KL'.

Kevin Lombardo
Managing Director

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EXECUTIVE SUMMARY

RCC understands that Sumter County currently has a communications system operating in the VHF band and desires to implement an 800 MHz Radio communications system. It is anticipated that the County would implement a new APCO Project 25 (P25) compliant communications system that would meet the current and future communication needs of the County's public safety and public services departments, also addressing interoperability with the surrounding agencies.

RCC firmly believes that advancing short-term and long-term interoperability should be a priority when making the investment to implement or upgrade a communications system. With many agencies now deploying communication systems based on the P25 standard, both backward and forward compatibility must be clearly understood and incorporated into the planning process. In many instances it is mandated that radio equipment purchased with Federal grant funds will be P25 compliant.

With these considerations in mind, RCC has prepared a general approach for Sumter County as detailed further in this document.

QUALIFICATIONS

Who We Are

RCC Consultants, Inc. (RCC) is a global telecommunications consulting, engineering and integration firm. A leader in the industry since 1983, RCC specializes in the design and implementation of radio communications systems, microwave and fiber optic systems, broadband, intelligent transportation systems and public safety emergency telephone systems, as well as the design of communications centers, tower sites and monitoring facilities.

The RCC Difference

RCC has a unique and deep understanding of all facets involved in the design, development and operation of telecommunications systems. This comprehensive expertise built over decades of success enables us to offer fully informed and more effective solutions to our clients. We differentiate ourselves through four aspects of our business:

- Experience** For more than 26 years, RCC has been at the forefront of wireless communications and information systems technology. We pioneered the development of comprehensive multiple layer, radio frequency engineering software tools, used by organizations around the world.
- Team** Our full-time staff of more than 130 consultants, engineers and support staff is some of the most respected and sought-after specialists in their fields. Experienced in the design and operation of all major manufacturers' platforms, our team will have a local presence and will utilize the resources of the company to perform the project tasks.
- Approach** We believe in forming strong partnerships with our clients, and our record of repeat business is testimony to our focus on complete client satisfaction. We approach every project with time-proven engineering and project management strategies that help our clients implement the right long-term solutions for their needs.
- Independence** We provide unbiased recommendations to our clients, ensuring they receive thoughtful, independent solutions. We will never accept any form of payment from manufacturers, distributors or suppliers for recommending their products.



Our People

RCC has gained the reputation of being a respected leader in all of the markets we serve because of the depth and breadth of our knowledge and experience. We have a diverse team of more than 130 professionals with a rich variety of experience and qualifications – all who are carefully matched to projects based on our clients’ specific objectives.

We are especially proud of the tenure of our team – more than 90% of our staff has been with RCC for five or more years. This longevity ensures we retain a deep wealth of knowledge, as well as consistent staffing, on our projects.

90%

More than 90% of RCC's staff has been with the company for five or more years.

Our Participation in Industry, Standards and Regulatory Groups



RCC’s consultants and engineers are frequent contributors to nationally recognized industry and standards-setting organizations, such as the Telecommunications Industry Association (TIA), Institute of Electrical and Electronic Engineers (IEEE), Integrated Justice Information Systems (IJIS) and American National Standards Institute (ANSI).



An original signatory to the Terrestrial Trunked Radio Memorandum of Understanding (TETRA MoU) in 1994, RCC staff members have served in leadership roles within the organization since its inception. We chair or serve on technical committees of the IEEE and our experts have helped forge standards that have been adopted by the IEEE. Taking an active leadership role in the industries we serve helps us to provide our clients with clear insight into new and emerging technologies.



Our Company History

RCC has a rich history as a communications pioneer. RCC was originally incorporated as RAM Communications Consultants, Inc. in 1983. During 1986 and 1987, RAM Communications Consultants developed the concept of a shared access wireless data network. This concept evolved into RAM Mobile Data, one of the first national wireless data networks in the United States. RAM Communications Consultants handled all of the procurement, technical negotiations, design, implementation, conformance testing and optimization of this national network of more than 2,000 sites.

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RCC has been a trusted advisor to public safety agencies and governments for more than 26 years.

In 1991, BellSouth Enterprises acquired an interest in RAM through the formation of RAM/BSE Communications, L.P. In 1996, RAM/BSE spun-off what is now RCC Consultants, Inc. as a separate entity. TeleCom Towers, Inc. (TTI), a venture capital firm, acquired RCC. In 1999, RCC was purchased by private equity investors, the principals of TTI, and RCC management and employees through RCC Holdings, Inc. Incorporated in the State of Delaware, RCC maintains our corporate headquarters in Woodbridge, New Jersey.



Relevant Offices

This project will be served by the Tallahassee, FL regional office. RCC maintains four other regional offices across the United States, in Harrisburg, Pennsylvania; Houston, Texas; Richmond, Virginia and San Bernardino, California.

RCC also maintains a strong virtual workforce, providing flexibility to serve our clients and their local needs. We have employees conveniently located near our clients in major metropolitan areas, including Atlanta, Boston, Chicago, Dallas, Los Angeles, Miami, Phoenix and Washington, D.C.

Experience

For more than 1,500 clients around the world, RCC has provided solutions through wireless and wired voice/data communications and information technologies. Our consultants and engineers are experts in strategic planning and direction, business analysis, system design, procurement, implementation, systems integration, monitoring and maintenance.

Our Technical Expertise

Radio Communications Systems

- P25 Radio Networks in all frequency bands
- All frequency bands HF, VHF, UHF, 700 MHz, 800 MHz, 900 MHz and microwave
- Digital and Analog Systems
- Conventional and Trunked Systems
- Simulcast Systems
- Cellular and Other Roaming Technologies
- Coverage Prediction Modeling
- Interference Control and Analysis
- Coverage Measurement and Verification

Microwave and Fiber Optic Transmission Systems

- Point to Point and Point to Multipoint
- Digital – Ethernet Microwave Radio Design
- Analog/Digital Interface and Conversion
- Alarm and Monitoring Systems
- Microwave Propagation Modeling
- System Optimization
- Power Plants

Communications/Dispatch Center Planning, Facilities Design and Cost Estimating

- Consolidation/Co-location Studies
- Floor Plan Layout
- Space Planning
- Ergonomic Recommendations
- Environmental Controls
- Dispatch Console Furniture Design
- Console System Radio and Data Interfaces

Telephony Services

- Voice over IP (VoIP) Network Specification/Deployment
- ACD Administration
- Performance and Capacity Management
- Call Accounting Services

Information Technology And Data Systems

- Computer Aided Dispatch (CAD)
- Records Management Systems (RMS)
- Mobile Computing (MDC)
- Automatic Vehicle Location (AVL)
- Geographic Information Systems (GIS)
- Field Based Reporting (FBR)
- Wireless Data Systems – Public and Private

Data Networks

- Local and Wide Area Networks
- Broadband Wireless (WiMax, WiFi, LTE)
- Voice, Data, Video Structured Cabling Systems
- Supervisory Control and Data Acquisition

Communications Site Planning

- Tower Specifications
- Site Development, Planning, Zoning, Acquisition
- Lightning Protection, Grounding, Bonding
- Equipment Shelter and Room Design
- Security and Alarm Systems
- Backup Power and Fuel Systems
- Automatic Fire Suppression Systems
- Surveillance Cameras



- Dispatch Center Staffing and Management Operations Studies

Public Safety Emergency Telephone Systems

- E9-1-1 Emergency Telephone Number Systems
- Wireless 9-1-1 Deployment
- Wireless Location Accuracy Testing
- Automatic Call Distributor Systems

Intelligent Transportation Systems

- Traffic Management Systems
- Highway Advisory Radio Systems

Network Services

- Business Case and Strategic Planning
- Network Planning, Engineering and Construction
- Network Optimization and Management

Market Research

- Technology
- Market Segment Research

Our Client Industries

RCC works with clients around the world in a wide range of industries, including:

- Public Safety Agencies
- National/State/Local Governments
- Transit Authorities and Agencies
- Utilities – Electric, Gas, Water
- Airports and Ports
- Transportation Agencies
- Colleges, Universities and Public School Systems
- Manufacturers
- Retailers
- Oil/Gas Production and Transportation
- Wireless Network Operators
- Real Estate Owners and Managers
- Healthcare Facilities
- Educational Councils
- Special Authorities

Reference Projects

The following recent reference projects illustrate RCC's experience with 800 MHz radio systems. Additional references are available upon request.

Project: 800 MHz P25 System Upgrade Project

Client:	Orange County, FL
Description:	Orange County contracted with RCC to assess the County's existing 800 MHz Motorola trunked radio communications system, and establish the requirements for a new APCO P25 public safety radio network. The intent of the upgrade is to replace aging equipment, upgrade the system to APCO Project 25 to improve interoperability, and improve radio system coverage.
RCC's Role:	<p>RCC performed the following tasks for this project:</p> <ul style="list-style-type: none">• Perform surveys of County's communications sites including equipment shelters and towers, and microwave networks• Perform user interviews to identify communications problems and concerns• Develop technical requirements to fulfill user needs• Assess spectrum and technology options• Assess and make recommendations for improvements to the 6 GHz microwave radio network• Perform radio system coverage testing and assess in-building coverage• Provide a recommendation for a new system design including recommendations to improve radio coverage• Develop budgetary cost estimates• Develop an implementation and migration plan for a smooth transition to the proposed new communications system
Status:	Completed
Contact:	Mr. Rich Steiner Radio Services Supervisor 3511 Parkway Center Court, Orlando, FL 32808 407-836-2810 Richard.Steiner@ocfl.net

Project: P25 System Upgrade

Client:	The Metropolitan Government of Nashville and Davidson County, TN
Description:	The intent of the project was to release a vendor-neutral Request for Proposals (RFP) to allow for a competitive bid of the upgrade of one of the Metro's two radio systems to P-25 capability while still maintaining interoperability with the legacy voice radio system.
RCC's Role:	RCC was contracted to review a draft RFP developed by the Metro and make recommendations for changes that would allow for a competitive procurement. RCC performed this review and provided the Metro with revised the RFP document that was suitable for release. RCC also assisted the Metro during the procurement phase including providing answers and clarifications to vendor questions, evaluating proposals from the vendors, and assisting with the negotiations of the technical terms of the contract. With RCC's assistance, the Metro has met its project goal and has a contract for the upgrade of the system to P-25 capability.
Status:	Complete
Contact:	Jody Clinard Radio Systems Manager P.O. Box 196300 Nashville, TN 37219-6300 (615) 862-8561 jody.clinard@nashville.gov



Project: **Upgrading to a P25 Digital Radio System for Caddo Parish, LA**

Client: Caddo Parish Communications District No. One, Louisiana

Description: The District hired RCC to assist with the upgrade of an existing public safety Motorola 800 MHz SmartNet II, 7-site simulcast, trunked radio system, microwave system and VHF paging system. The primary purpose of the project is to upgrade the existing 800 MHz analog trunked radio system to an APCO Project 25 digital radio system, and narrowband the existing simulcast VHF paging system per the FCC mandate.

RCC's Role: RCC was successful in procuring \$5.9 million in grant funds for the District's mobile data computer system, for interoperability, and for system expansion.

RCC is performing the following tasks for this project:

- Analyzing the existing 6 GHz microwave backhaul network to determine its availability/capability to support an upgraded voice system.
- Analyzing the fractional T-1 leased line sites to determine alternatives to leased service.
- Analyzing the existing VHF paging system to develop a narrowbanding plan per the FCC requirements.
- Analyze 700/800 MHz frequency alternatives for the proposed P25 system.
- Developing budgetary cost estimates for radio, microwave and paging alternatives.
- Developing an implementation and migration plan for a smooth transition to the new radio system.
- Developing procurement documents as required.
- Evaluating proposals.
- Assisting with vendor contract negotiations.

Status: In Progress

Contact: Martha Carter
9-1-1 Center Director
1144 Texas Avenue
Shreveport, LA 71101
(318) 675-2222
mcarter@caddo911.com



Project: 800 MHz Digital System Upgrade

Client:	Montgomery Metro Communications Cooperative District
Description:	The intent of the upgrade was to add the City of Montgomery users, improve inter-agency communications interoperability, and improve the reliability, coverage, and clarity of the radio system such that it became suitable for the stringent public safety requirements of the expanded user agencies.
RCC's Role:	<p>In the first phase of the project, the City of Montgomery contracted with RCC to assess the City's communications needs and establish the City's requirements in a joint City/County/State public safety radio communications network. In the project's second phase, the Montgomery Metro Communications Cooperative District was formed to manage and operate the upgraded system. In this phase, RCC acted as "Owner's Agent" to interact with the Contractor and ensure that technical, functional, and operational objectives of the envisioned network expansion were met.</p> <p>Key elements of RCC's service included:</p> <ul style="list-style-type: none">• Definition of radio system coverage and capacity requirements, identification of alternative system designs, development of subscriber unit configurations, and identification of interoperability requirements with neighboring or regional agencies;• Design review of the new integrated simulcast/multisite trunked radio network;• Monitoring of site development and installation oversight of the simulcast/multisite 800 MHz M/A-Com EDACS ProVoice analog/dual voice radio and microwave fixed system infrastructure;• Performance verification of all communications equipment and participation in the digital and analog voice quality acceptance and radio system coverage testing;• Punchlist resolution and recommendations for system acceptance.
Status:	Complete
Contact:	Jerry Dillard Deputy Chief 911 Communications Parkway Montgomery, AL 36104 (334) 240-4107 jdillard@montgomeryal.gov



Project: Houston Citywide Radio Interoperability Project

Client:	City of Houston, Texas
Description:	The City of Houston, Texas, selected RCC Consultants to help improve radio communications between City agencies and with other non-city agencies in the areas surrounding Houston. The City operates more than 15,000 two-way radios in the UHF and 800 MHz frequency bands.
RCC's Role:	<p>RCC conducted a thorough review of the City's existing systems, including tower sites and dispatch centers, and met with key members of each participating agency to identify their current and long-term radio interoperability requirements. RCC also met with Harris County and Houston-Galveston Area Council personnel, who are currently developing a Regional, 13-County 800 MHz trunked radio system in the Houston area, to understand their current system plans and ensure appropriate interoperability planning.</p> <p>RCC assisted the City in the development of two different system approaches, one based on radio infrastructure, and the other based on tactical portable equipment that can be rapidly deployed at an incident scene. The tactical system approach facilitates rapid on-scene radio interoperability through a transportable system that interfaces disparate radio systems together. The City deployed ten sets of the Incident Commander's Radio Interface (ICRI) equipment units equipped with a series of VHF, UHF and 800 MHz portable radios</p> <p>On the infrastructure side, RCC assisted the City in developing system interface capabilities through the dispatch console system located at the City's Houston Emergency Center (HEC), which dispatches all police, fire and EMS calls within the City. The project involves expansion of the existing console system, development of a new radio communication tower facility at the HEC and installation of new radio equipment in the VHF, UHF, and 800 MHz bands to support interoperability.</p>
Status:	Ongoing
Contact:	Ronald Gillory FCC Region 51 Chairman Houston Police Department 61 Reisner Street Communications Annex, 4th Floor Houston, TX 77002-1596 (713) 247-5744 sezron@swbell.net

Project: **Design an Interoperable, Countywide 800 MHz P25 System for St. Johns
County, FL**

Client: St. Johns County, Florida

Description: St. Johns County Fire Rescue originally retained RCC Consultants to analyze their existing VHF and UHF voice radio systems and provide recommendations for improvement. RCC was also tasked with providing alternative designs and budgetary estimates for a complete replacement radio system.

In a follow-on contract, the County hired RCC to develop a final design and procurement specifications for an interoperable, countywide 800 MHz APCO Project 25 trunked simulcast communications system.

RCC's Role: RCC is providing the following assistance during this project:

- Conducting a detailed needs assessment, including communications site and equipment surveys and assessment, network connectivity and identifying user communications needs. As part of the assessment, we are considering emergency response and interoperability with surrounding public safety agencies using various communications technologies.
- Researching and presenting solutions and alternatives, including available VHF and 800 MHz radio spectrum and communication technology alternatives, cost estimates, tower and tower site infrastructure requirements, and an alternative plan to use the State of Florida 800 MHz trunked statewide law enforcement radio system (SLERS) for voice communications.
- Developing detailed technical, functional and performance specifications for the procurement of a new communications system.
- Developing a high-level countywide 800 MHz, P25 communications system design including 6 GHz microwave radio infrastructure.
- Developing technical specifications for the P25 system procurement.

Status: In Progress

Contact: Jeff Prevatt
Deputy Operations Chief
3657 Gaines Road
St. Augustine, Florida 32084
(904) 209-1713
jprevatt@sjcfl.us



PERSONNEL

Introduction of Our Project Team

RCC has an expert project manager and project team that will allow us to best serve the County’s project. Our multi-disciplinary team enables us to match the project’s specific needs with the extraordinary and varied experience of our professionals and their proven ability to deliver quality public safety telecommunications consulting and engineering services on time and within budget. The composition of our team also reflects the importance that the County has placed on having the experience and tools necessary to meet the complexities of this project.

RCC’s project manager will be the County’s primary point of contact and is responsible for the day-to-day management of the project.

Project Team Organization

RCC will address the scope of services with a core team who will remain involved for the entire duration of the project. Other personnel with specific skills and subject matter expertise will support the team as necessary to address project tasks of a shorter duration.

The following project team organizational chart describes the structure of our project team and our proposed personnel.

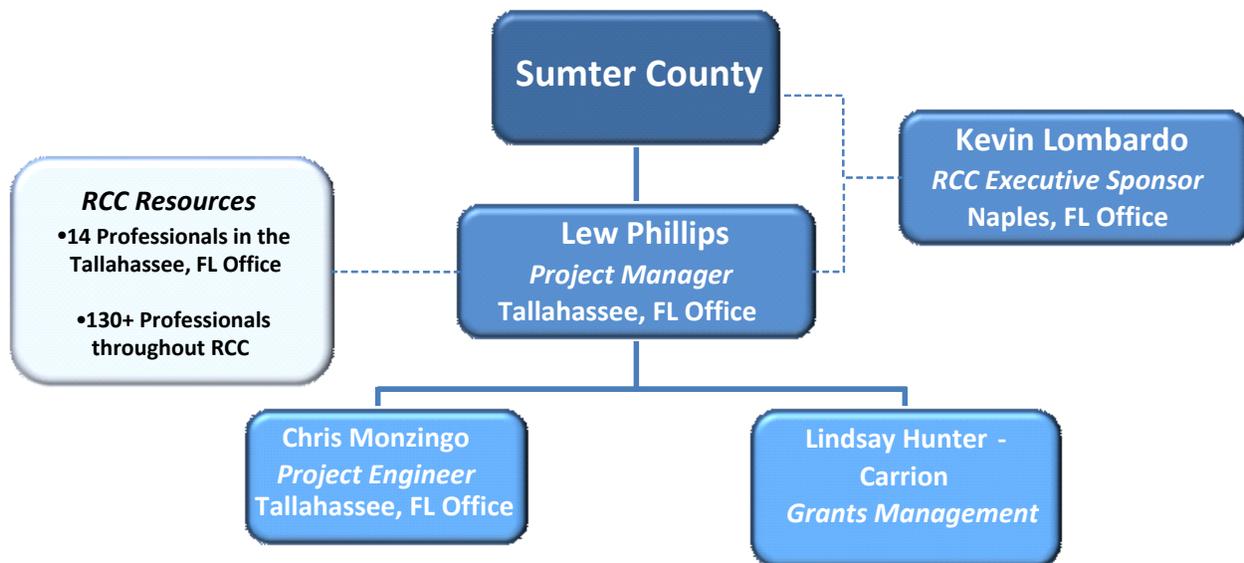


Figure 1. Project Team Organization Chart

RCC has an expert project team to offer the best service for the County’s project. Our multi-disciplinary team enables us to match the County’s specific needs with the extraordinary and varied experience of our professionals and their proven ability to deliver quality public safety telecommunications consulting and engineering services on time and within budget.

Project Team Roles and Responsibilities

Our project team is composed of an executive sponsor, project manager and subject matter experts that will address specific areas within the work plan. The following team resume describes the project responsibility and relevant experience of our project team members. Complete resumes for our project team are provided in Appendix A of this proposal.

Executive Sponsor : Kevin Lombardo

Mr. Lombardo will serve as the Executive Sponsor on this project. In this role, he will have ultimate responsibility for project quality and client satisfaction. He has more than 23 years of experience in the public safety, homeland security, healthcare, utility, and commercial industries. Mr. Lombardo is a certified All Hazard Type III Communications Unit Leader, and has DHS certifications in the Incident Command System (ICS), National Incident Management System (NIMS), National Response Framework (NRF), Homeland Security Exercise and Evaluation (HSEEP) Program, and is a state-certified firefighter and EMT. Mr. Lombardo led large-scale emergency restoration operation efforts in Manhattan in the wake of the 9/11 attacks. Managing staff of 1,200 employees, capital budgets of \$1 billion, and operating budgets of \$250 million, he has led large-scale design, deployment and operations of Public Safety radio systems, wide-area broadband networks, information systems, and command and control centers both domestically and internationally.

Professional & Educational Background

- Graduate Studies at Rutgers University and Aspen University
- BS, Rutgers University, Electrical Engineering

Summary of Experience & Qualifications

- Regional Interoperability Program Director, California Statewide Interoperability Executive Committee (CalSIEC) Central Planning Area – Leads the Regional Interoperability Program Management Office, established to direct interoperability for a seven-county region with respect to funding, risk assessment, technology, operations and governance.
- Led interoperability assessment of the Central Valley of California. Responsible for interoperability evaluation and recommendations for existing technology, operations and governance.
- Completed needs analysis, functional designs, coverage analysis, operational analysis for 150 local, county, state and federal Law, Fire, EMS agencies and NGOs. Developed governance structure and charter for the region and operational areas.

Project Manager: Lew Phillips

Lew Phillips will be the Project Manager, responsible for the day-to-day management of the project resources and schedule, and has accountability for the project outcomes. Mr. Phillips will provide coordination with the County stakeholders to ensure timely, comprehensive communication. For over 30 years, Mr. Phillips has had experience in public safety and public service communications systems. He is responsible for assisting RCC public safety clients in the design and implementation of voice and mobile data communications systems. His areas of expertise include needs assessment, communications system assessment and design, FCC licensing, development of system procurement specifications, proposal/bid evaluation, implementation assistance, and acceptance testing. Mr. Phillips has experience with various communications systems technologies and their associated infrastructure including multisite/simulcast, P25, 800 MHz conventional and trunked, analog and digital land mobile radio systems, VHF and UHF conventional radio systems, microwave backhaul systems, mobile data systems, communications facilities planning, transportation communications systems, and antenna site implementation and grounding and bonding. In-depth experience in system maintenance and optimizations foster his understanding of system performance issues from the client's perspective.

Professional & Educational Background

- Allegheny Technical Institute, PA
- Penn State University, PA
- Motorola National Service Training

Summary of Experience & Qualifications

- Over 30 years experience in public safety and public service communications systems
- Extensive experience encompasses various communications systems technologies and their associated infrastructure including simulcast/multisite, P25, 800 MHz conventional and trunked land mobile radio systems, VHF and UHF conventional radio systems, microwave backhaul systems, mobile data systems, communications facilities planning, transportation communications systems, and antenna site implementation and site grounding and bonding.

Lead Project Engineer: Chris Monzingo

Chris Monzingo will analyze the radio system coverage and perform microwave path analysis. Mr. Monzingo is responsible for assisting RCC clients in the design and implementation of wireless communications system. Mr. Monzingo's areas of expertise include project management, needs assessment, RF coverage analysis, proposal/bid evaluation, electrical system design, technical drawing, communication shelter design and the NEC.

**Professional
& Educational
Background**

- MBA, Florida State University
- BSEE, Electrical Engineering, Florida State University
- Registered with the State of Florida Board of Professional Engineers as an Engineering Intern (#1100012394)
- Journeyman Electrician
- ACI Concrete Laboratory Testing Technician Grade II

**Summary of
Experience &
Qualifications**

- System design for an 11 site 800 MHz simulcast P25 radio network and associated 6 GHz Microwave backhaul network for St. John's County, Florida.
- System design for a nine site 800 MHz simulcast P25 radio network and associated 6 GHz Microwave backhaul network for Cherokee County, Georgia.
- Planning, analysis, and design of wireless systems, including VHF/UHF/700/800 MHz conventional and trunking, simulcast and multi-site land/mobile radio systems.

#

Grant Management: Lindsay Hunter Carrion

Ms. Hunter Carrion is responsible for researching and assisting RCC clients with completing and filing federal, state and foundation grants. She provides services such as inquiry letters, proposal development, budget development, multi-agency projects, grants management assistance, compliance with OMB Uniform Administrative Requirements, Cost Principles and Audit requirements.

Ms. Hunter Carrion is a member of the National Grants Management Association and has assisted numerous RCC clients in conducting grant research and preparing applications.

Professional & Educational Background

- MS, University of Boulder, Telecommunications (in progress)
- MA, Monmouth University, Criminal Justice
- BA, Monmouth University, Psychology, minor in Criminal Justice
- Alpha Group Center
- Crime & Intelligence Analyst Certification

Summary of Experience & Qualifications

- **Oklahoma City, OK** – Identified more than \$300k of potential grant and foundation funds for CAD/RMS and communications systems.
- **Caddo Parish, LA** – Successfully led team in soliciting and winning a total of \$3 million in grant funding for a Mobile Data Computer system to provide interoperability among the various law enforcement, fire and rescue, emergency medical and emergency management agencies throughout the Parish.
- **Caddo Parish, LA** – Led Parish team in soliciting \$3 million in grant funding to expand the Mobile Data Computer system into surrounding areas. The grant proposal was the highest scored application awarded in the grant solicitation.

#

APPROACH

The RCC Methodology

Assessing the current and future needs for a communications system involves a complex set of interrelated tasks that account for operability as well as interoperability. RCC’s experience and research has shown that achieving interoperability through proper planning and implementation reaches far beyond technology considerations that enable users from one agency or jurisdiction to communicate with another during an incident. It also requires developing and implementing an effective governance framework for agency coordination, standard operating procedures for multi-jurisdictional, multi-disciplinary communication, regular training and exercises to allow agencies to practice communicating, and the incorporation of interoperability into day-to-day operations on a regular basis. RCC performs all interoperability assessments, planning, and deployment in accordance with the industry standard, the Department of Homeland Security (DHS) SAFECOM Interoperability Continuum. Our methodology incorporates assessments and recommendations along every lane of the SAFECOM Continuum. By using this roadmap, RCC employs a consistent approach to achieve a successful, comprehensive plan that will help ensure that system issues as well as operational issues are fully addressed. In fact, to underscore the importance of using this approach to comply with state and federal requirements, both the State of Tennessee Homeland Security Strategy and the Department of Homeland Security fully endorse this methodology.



Interoperability Continuum

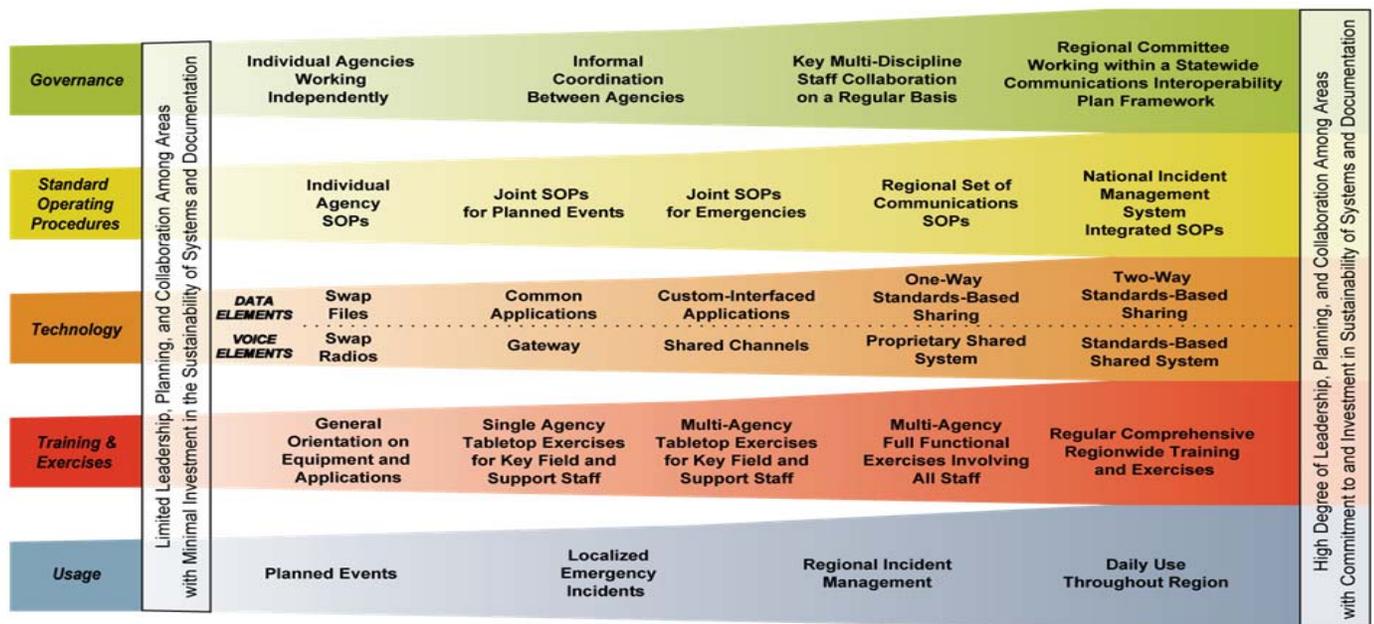


Figure 2. Interoperability Continuum illustrating the complexity in achieving interoperability.

RCC approaches the planning and deployment of operability and interoperability in a holistic and methodical way that is unique, time-tested, and proven. Our approach underscores the importance of operational requirements driving technology solutions. We have developed a project work plan and schedule tailored to meet the objectives of the County, along with a team of management and technical professionals specifically chosen to meet your needs.

RCC is aware of the funding challenges that entities like the County are facing across the nation today. At RCC, we have dedicated professionals whose sole purpose is to keep track of and help our clients obtain federal and state grant funding. These grants are there to help offset the costs of implementing a new radio system and help with covering the ongoing expense of owning and operating such systems. As part of our approach to this project, not only will RCC assist in identifying these grants, but RCC will also assist in developing and filing the grant application.

Our Project and Quality Management Approach

At the foundation of our relationship with every client is a strategic, disciplined approach to providing long-term solutions. During the past 26 years, we have developed comprehensive engineering and project management practices to create our time-tested approach that will ensure success for the County.

According to Standish Group’s *Chaos 2007 REX: A Standish Research Exchange*, a staggering 39% of projects with budgets exceeding \$10 million failed. Failure is defined as either total abandonment or failure to meet one or more of the key project objectives within the budget and time allocated. Proper project management and planning are vital to ensuring a project’s success.

RCC has managed more than 4,000 communications and information systems projects for organizations big and small. To ensure the success of each project, we utilize a companywide project approach based on the Project Management Institute (PMI)’s global best practices.

“If You Fail to Plan, You Plan to Fail”

RCC’s five-step approach to any project starts with project initiation and planning. Through our decades of experience, we have found that proper planning can reduce risk, ensure alignment of objectives, capitalize on efficiencies, and ultimately lead to project success.

Once planning is complete, the project moves into the execution phase. This is often where the bulk of the workplan is executed, and depending on the project, tasks can range from developing specifications to designing radio systems to installing tower sites.

A key step in our project management approach is monitoring and control. This is an iterative process, and only after successful acceptance testing can a project be considered for close out.

Throughout an RCC project’s lifecycle, there is

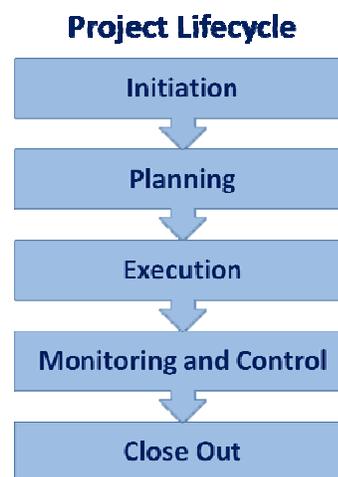


Figure 3. RCC's Project Management Approach
RCC utilizes a companywide, shared model, based on PMI’s global best practices, to ensure the success of each project.

extensive communication among the project team and with our client. By communicating regularly, all stakeholders are kept informed, promoting collaboration and reducing re-work.

A Companywide, Shared Model

All of our project managers, and many of our engineers, have participated in more than 50 hours of project management training. The training teaches the best practices from PMI, as well as the specific, practical application of those practices for telecommunications engineering projects.

RCC ensures efficient delivery of services and support to our clients, for all engagements, through a consistent application of project management methodology.

Quality Assurance Commitment

RCC is built on a solid foundation of quality services and support that meet our client needs and add value to every project. We are committed to maintaining strict quality requirements based on International Organization for Standardization (ISO) and Total Quality Management standards. Our project managers, consultants, and engineers are all trained in adherence to these standards, and for larger projects, we assign an Executive Sponsor who is accountable for the quality assurance and success of a project.

To ensure every project meets our high quality standards, we have developed an internal quality management process based on recognized quality management objectives:

RCC's Quality Management Model

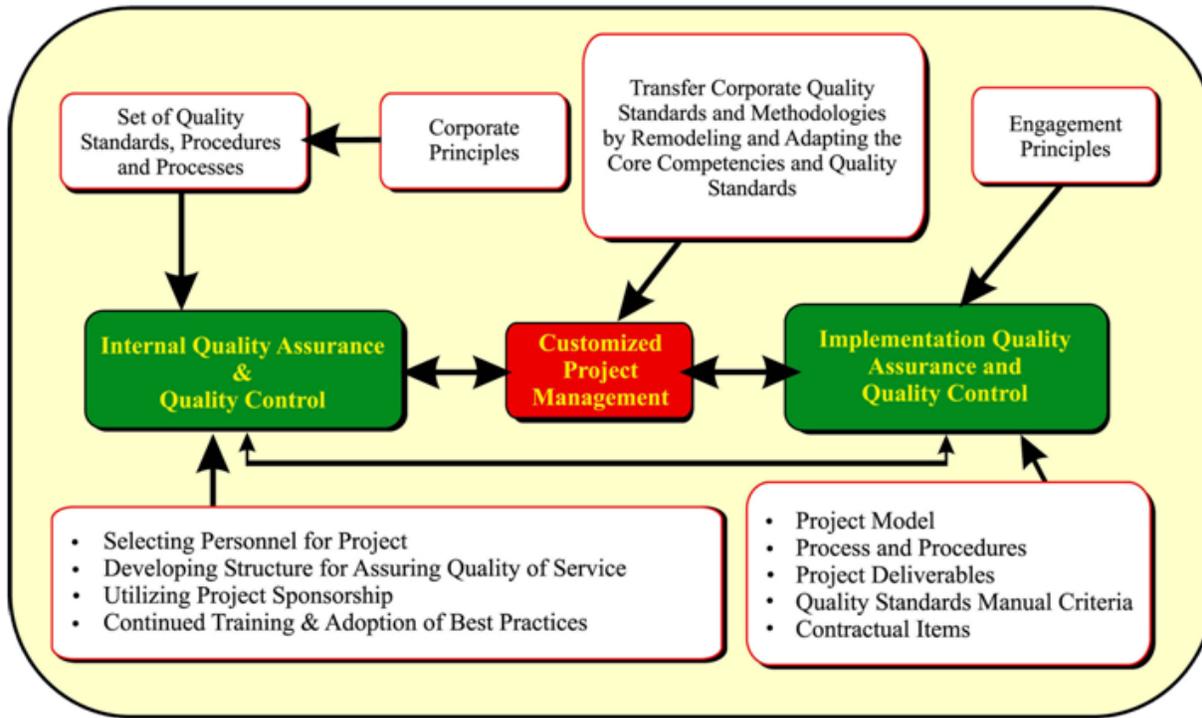


Figure 4. RCC's Quality Management Model

RCC's Quality Management Model supports the unique requirements of each project. Quality management ensures client satisfaction and has equal priority with deliverable execution, schedule management and cost control.

RCC's model includes six quality management concepts that support the unique requirements of each project:

- Quality Policy
- Quality Objectives
- Quality Assurance
- Quality Control
- Quality Audit
- Quality Program Plan

We begin each project by taking the time to fully understand the needs of our clients. We then tailor our quality management oversight to meet those needs. Our project manager has the ultimate responsibility for quality management during the project.

Quality management has equal priority with deliverable execution, schedule management and cost control. Quality management within RCC is an ever-improving system for integrating the processes and procedures necessary to provide cost-effective services that are fully acceptable to our clients.

Typical Scope of Services, Phase I

Project Management and Initiation

Development of Project Plan

The RCC team will create a project management plan that includes the following: Project Charter, Project Scope, Governance Model, Deliverable and Resource Schedule, Risk Identification and Mitigation Plan, and Project and Financial Reporting Plan.

The creation of the project management plan is critical to creating a well-developed schedule, resource, and activity plan and ensuring its mutual understanding and acceptance. This plan will be developed upon receipt of a Notice of Award from the County and in time to be presented and discussed in the project initiation meeting.

The project charter will formally recognize the existence of this Interoperability and Systems Recommendations project. The County will designate one individual to serve as primary point of contact (POC) representing all stakeholders within the County. The County's defined common goal for the outcome of the project will be incorporated into the project charter.

A preliminary project scope; including initial project schedule, schedule of deliverables, and assumptions regarding resources required for this project; shall be developed and included in the project management plan. This Project Scope will also be used to promote a clear understanding of the project and project management components to project stakeholders.

The project governance model shall be developed in the project management plan to establish rules for project communications and reviews, status reporting, program issue escalation, and change control. The governance model will give RCC's project manager and the County's POC the authority to address the escalation and resolution of issues including roles, responsibilities, and the manner in which decisions and any challenges are documented. The project management plan will also incorporate mechanisms to predict, communicate, and manage project issues, risks, and changes.

RCC and the County's POC will complete the development and approval of the project management plan in five (5) days, allowing for a five (5) day review period, with initiation immediately upon the successful completion of a mutually agreeable project contract.

Conduct Project Initiation Meeting and Regular Project Status Meetings

At the end of the first week of the project, RCC and the County will hold a project initiation meeting. The purpose of project initiation meeting is to familiarize the County's team with the contracted scope of work, the project schedule, the types of information that will be requested from the participating agencies, and establish appropriate lines of communication between the participating agencies.

Upon conclusion of the project management plan and for the duration of the project, project status meetings will be conducted on a regular basis per a schedule to be confirmed in the preliminary project scope. These status meetings will occur with the County's POC and will include discussion of the project's overall status, the project schedule, and any known or

anticipated variances, project risks, issues, and action items. Project status reports will document these meetings and they can be distributed to the project stakeholders to ensure they remain involved and informed of the progress of the project. Financial reviews will take place during these status meetings and will provide the opportunity to discuss budgetary variances and timelines regarding project invoices, if necessary.

The project management plan, to be concluded by the end of the third week of the project, is the formal deliverable associated with this task.

Needs Assessment

During the project initiation meeting, RCC will work with the County's team to schedule site visits and interview sessions for each of the participating agencies. This will help to maximize the efficiency of RCC personnel while onsite. The following activities are included in the project initiation:

- Development of survey documents
- Interviews and site surveys

To assess and understand the operability and interoperability needs and requirements, RCC personnel will work with the County's project team to gather the needed information through an interview and questionnaire process. The interview process is intended to review, update, and obtain current information on specific details that will affect the design, procurement, and implementation of the interoperability and communications systems. It will identify the radio coverage, equipment requirements, and other needs of participating agencies through the process of interviewing and gathering background reports, studies, and other pertinent documentation.

Questionnaire & Survey Document Refinement

RCC's standard survey forms and questionnaires will be refined as necessary to meet the specific needs of the County and participating agencies. Approximately two weeks prior to the Project Initiation Meeting, RCC will send a set of data collection documents and a checklist of items of documentation that the participating departments and agencies should have on hand in order to effectively participate in the survey and interview process. Agency-specific survey documents will be provided at this time for each agency to complete.

Staff Interviews – Determine Needs & Requirement

The purpose of the interview process is to identify the current and long-term user needs and requirements for the interoperability and communications systems. Additionally, RCC personnel will verify the total subscriber count and the equipment configuration and accessories required by each interviewed agency. RCC will work closely with the County to schedule the interview sessions so that they may be conducted thoroughly and efficiently. The sessions will be conducted at mutually agreeable locations within the County. Our staff generally prefers to interview agencies within their own surroundings to allow our personnel to observe each department's operation on a first-hand basis.

The interview schedule and time will be discussed and reviewed with the County's team prior to the arrival of RCC personnel. Each interview will typically require less than two hours and some agencies may be interviewed simultaneously to maximize the efficiency of RCC's onsite time.

The interview sessions will provide an opportunity for all participating agencies to provide input on their needs and expectations of the new communications system, and enable RCC personnel to provide an overview of the technology and capabilities that are available from the system vendors. In addition, due to our nationwide experience, RCC personnel will be able to provide insight into the ways that other agencies are solving some of their communications problems.

RCC will perform an assessment of interoperability gaps during the interview process. RCC will determine the extent to which governance, standard operating procedures, technology, training, and exercises exist within the County and where the County falls within each lane of the SAFECOMM Interoperability Continuum using our interoperability measurement tool matrix.

During the interview process, one of the most critical items discussed will be the need for reliable radio coverage throughout the County's service area. The amount or level of radio coverage provided by a radio communications system will have the greatest impact on user satisfaction and possibly the total cost of the system as well. Accordingly, RCC personnel will work carefully with each agency to specifically define its need for radio coverage throughout the defined service area.

RCC personnel will work with each agency to discuss the way their personnel utilize their mobile and handheld radio devices. This is critically important since the way in which a portable radio is used will have a direct impact on the radio coverage provided by the system infrastructure. Put simply, this means that for a given infrastructure design, the radio system will provide different levels of radio coverage for a handheld radio operated at head level than it will for the same radio operated on the user's belt with a remote speaker microphone.

Requirements for in-building radio coverage will also be discussed at length since under-specifying coverage requirements will result in unacceptable system performance, and over-specifying coverage requirements will unnecessarily increase the cost of the system infrastructure.

RCC will utilize its wireless design toolset, ComSiteDesign, to perform coverage analysis of the County's existing communications systems. During the interview process, RCC will ask each participating agency to graphically draw their specific coverage requirements on a map of the area. In addition, RCC will ask each agency to graphically draw areas of known coverage issues on the map. This will be compared with the coverage analysis performed using ComSiteDesign and will assist RCC in defining the overall coverage requirement for the proposed system.

Site Visits

The purpose of the site visit process is to allow RCC personnel to visit the County's communications sites and dispatch facility to view the facilities firsthand and review the physical and technological factors at each facility. While at each facility, RCC staff will photograph and document the site layout, conditions, and facilities in place at each location. Specifically, RCC will examine the site location, security, tower, grounding systems, surge suppression systems,

equipment shelter, primary and auxiliary power systems, fuel supply, radio communications equipment, and site connectivity equipment.

The deliverable for the Needs Assessment task will be a Needs Assessment Report. The report will be comprehensive and address the functionality, capability, and needs of all current infrastructure users and will include information obtained from current infrastructure users.

Alternative Designs and Presentation

Develop System Solutions

RCC will develop conceptual system solutions to resolve the identified deficiencies in the interoperability and communications systems and to meet the needs expressed by the users during the Needs Assessment phase of the project. Beyond technology improvements, RCC will also make recommendations on improvements to the four other lanes of the Interoperability Continuum: governance, standard operating procedures, training and exercises, and usage.

Technology solutions might include alternatives for replacement of aging systems, or reconfiguration and upgrading of the current systems, depending upon what RCC finds during the needs assessment.

When configuring system alternatives, RCC will utilize its wireless design toolset, ComSiteDesign to help analyze various system alternatives and configurations. ComSiteDesign will help determine the number and location of base station or repeater sites needed to meet the County's current & long-term requirements. The number of site facilities needed has an impact on the budgetary cost estimates developed as part of the project.

RCC will begin the system alternatives development process by loading all of the County's existing tower sites into the coverage analysis system. Once all of the sites and system parameters such as tower height, antenna type, repeater transmitter power, and field user equipment specifications have been loaded into the system, RCC will conduct a series of radio coverage analyses for the purposes of configuring the system alternatives.

For this project, coverage analyses will be prepared for mobile radio, portable on-street, and portable in-building coverage scenarios. Once the system parameters such as site and equipment have been loaded into the system, it is relatively easy to run a number of "what if" scenarios to explore a variety of system configurations.

One of the more challenging aspects of deploying wireless communications systems is finding suitable facilities to support the radio equipment. Towers and communications shelters are a significant factor in both the time and costs to construct a system. RCC will work with the County to identify potential existing sites, where possible, to minimize time and costs.

Once the coverage analysis process is completed, the resulting coverage maps can be configured in a number of popular GIS formats. If the County can provide RCC with GIS Shape files from its GIS Department, a wide range of local landmarks and points of interest for the County can be incorporated into the coverage maps. Alternatively, ComSiteDesign can export the coverage maps to Google Earth™ for overlay on top of satellite imagery.

Once the radio coverage issues have been addressed, RCC will address console systems, system connectivity issues utilizing broadband point-to-point connectivity solutions suitable for such applications. RCC will also consider and incorporate redundant equipment into the system configuration at key locations to help develop a robust communications infrastructure suitable for mission-critical Public Safety applications. RCC will work closely with the County's project team on the consideration of appropriate locations for system control points and network management centers.

RCC will utilize the requirements outlined in the needs analysis for the development of appropriate system alternatives. RCC will also factor in FCC regulatory issues that will be driving the future of radio communications systems. RCC maintains a staff of Regulatory Specialists that track relevant regulatory proceedings that may affect our clients.

Once the system alternatives have been developed, RCC will prepare budgetary cost estimates for each system.

Develop Draft Report

Once the alternative system solutions, cost estimates, and recommendations for improvement have been developed, RCC will prepare a draft version of the Alternative Designs Report. The report will include an overview of the work completed to date, a high-level description of the County's various systems currently in place, a breakdown of current and long-term needs and requirements, an assessment of physical and strategic deficiencies, and recommendations for resolving the deficiencies. Coverage analyses, and budgetary cost estimates for implementation of the system alternatives and recommendations will be included.

The report will also include analysis of relevant topics such as:

- Frequency range of operation and include an analysis of available spectrum
- Effects of operating at narrowband emissions versus wideband emissions and its impact on coverage and existing equipment
- P25, analog, and proprietary digital communications technologies
- Encryption standards, options, and capabilities
- Conventional, trunked, or mixed operating protocols
- Intercommunications and interoperability options for day-to-day and events for local, regional, State and Federal agencies
- Paging and Fire and EMS station alerting options
- Upgrades to communications infrastructure including mobile/emergency communications center
- Lightning protection and grounding improvement recommendations

The draft Report will be submitted to the County's project team for review. RCC will meet with the County's team to review and discuss the report. Once all of the County's comments and feedback have been received, RCC will incorporate a single cycle of changes into the report. At

that point, RCC will finalize the document and provide a final version to the County's POC. The Report can be provided in both printed and electronic formats.

The deliverables for this task are the Draft Alternative Designs Report and Final Alternative Designs Report.

Presentation of Final Alternative Designs Report

RCC will prepare a presentation for the Board to narrow the alternatives down to one recommended solution. As with the Alternative Designs Report, RCC will prepare a draft presentation that will be submitted to the County's project team for review. RCC will meet with the County's team to review and discuss the presentation. Once all of the County's comments and feedback have been received, RCC will incorporate a single cycle of changes into the presentation. At that point, the presentation will be scheduled and provided to the Board.

The deliverables for this task are the Draft Alternative Designs Presentation and Final Alternative Designs Presentation.

Conduct Phase I Project Closeout Meeting

After delivery of the Alternative Designs Presentation, RCC will meet with the County's team to closeout any remaining Phase I project issues.

Grant Support

RCC will assist the County in identifying available grants that may provide funding for this project. RCC is unique in that we have dedicated full time resources available to assist our clients in all aspects of grant identification, application and management. Grant assistance also involves researching federal, state and foundation grants for RCC clients. RCC provides services such as inquiry letters, proposal development, budget development, multi-agency projects, grants management assistance, compliance with Office of Management and Budget (OMB) Uniform Administrative Requirements, Cost Principles and Audit requirements.

RCC will work with the County to prioritize the available grants and will assist the County in completing and submitting the highest priority grant application. Because the grant process is highly competitive, RCC cannot guarantee success; however, RCC has a very successful record:

- \$7 Million in Santa Clara County, CA
- \$5.9 Million in Caddo Parish, LA
- \$1.2 Million for State of KY
- \$750K in Kalispell, MT
- \$579K in New Fairfield, CT
- \$300K in Oklahoma City, OK
- \$150K in Hillsborough, NJ

Typical Scope of Services, Phase II

Detailed Design and Procurement Support

Building off the selected alternative, RCC will develop a detailed design that includes cost estimates. Included will be the estimated system procurement costs for hardware and software as well as annual cost estimates for hardware, software, and maintenance of the system. These estimates will establish the budget for a new interoperability and communications system.

The detailed design will also include an implementation plan that details the timeline for the project's completion as well as how the County will transition from the existing system to a new or upgraded system. It is understood that the County does not want to suffer outages or loss of functionality during the transition to new interoperability and communications systems.

The deliverable for this task is a Detailed Design Report consisting of the selected alternative, detailed cost estimate, and implementation plan.

Procurement Support

Develop Vendor-Neutral Request for Proposal

RCC will work with the County's team to develop a vendor-neutral Request for Proposals for the upgrade or replacement of the County's radio system.

Performance requirements for each system will be established and the RFP will be structured to enable multiple vendors to submit proposals. 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 optional and at what cost. A detailed compliance matrix will be included in the RFP to allow reviewers to quickly determine which proposals meet the specified requirements.

The RFP will address specific technical and procedural areas, as well as support areas such as training and maintenance. These areas will include:

- RFP response procedures
- System functional and operational requirements
- System performance requirements
- System reliability and redundancy requirements
- Expandability of the proposed systems to accommodate future growth
- Optional capabilities and equipment
- Maintenance options and local support
- System/vendor information and qualifications
- System installation and acceptance testing requirements
- Training requirements

Upon completion of the initial draft RFP, RCC will submit the document to the County's team for review and discussions. A single cycle of feedback and suggestions from the County's team will be incorporated into the final document. RCC will then finalize the RFP and provide them to the County for issuance to the vendor community. RCC will identify a list of qualified vendors that could potentially respond to the RFP.

Within a reasonable period (typically three to four weeks) after the solicitation for proposals has been released, a pre-proposal conference shall be conducted to ensure that potential proposers understand and can respond to the RFP specifications. RCC will coordinate the scheduling of the pre-proposal conference and assist the County's team in answering vendor questions about the project. In addition, RCC will assist in the response to vendor questions and issuance of amendments following the proposers' conference.

The deliverable for this phase of the project is a vendor-neutral Request for Proposal for the procurement of new interoperability and communications systems.

Evaluation of Proposals and Contract Negotiations

RCC will assist the County's team in analyzing and evaluating proposals received by the County in response to the RFP. The proposal evaluation and contract negotiation process typically can be divided into six (6) milestones:

- Minimum Response Criteria and Evaluation Matrix
- County's Review of Proposals
- RCC Proposal Evaluation and Recommendations
- Vendor Oral Presentations
- Prepare & Present Evaluation Report
- Assist in Contract Negotiations

Minimum Response Criteria and Evaluation Matrix

In order to ensure that the proposals that best meet the County's requirements are selected, and in order to minimize potential protests by unsuccessful vendors, a structured approach must be employed for evaluating proposals received by the County. RCC will facilitate a structured evaluation process by developing a set of minimum response criteria and a detailed evaluation matrix that will be used to evaluate each vendor's proposal. The two matrixes will permit the County and RCC reviewers to evaluate the proposals on an objective basis.

The deliverables for this phase of the project are a minimum response criteria and a detailed evaluation matrix.

County Review of Proposals

When the proposals are received, the County's Purchasing Department will make a first pass review, looking for gross errors such as missing forms and missing bid bonds. Then, the County's project/proposal review committee will evaluate all of the proposals using the minimum response criteria Matrix previously developed by RCC. A short list of three proposals will result from this evaluation, and a list of questions will be developed in preparation for

vendor oral presentations. The County will provide RCC with the short listed proposals for detailed evaluation.

RCC Proposal Evaluation and Recommendations

Typically, it requires between three to four weeks for RCC to evaluate their subset of proposals. The methodology employed by RCC for the final evaluation of proposals will be the utilization of the formal proposal evaluation matrix constructed from the RFP document(s) and designed to indicate the degree of conformance or nonconformance of each proposer's submittal.

The result of the evaluations is a Recommendation Report that may include questions for the vendors, a ranking of each evaluated vendor's proposal and a tentative set of recommendations, with justifications, that will be refined as the evaluation process proceeds. A draft will be followed up by a final, which will be the primary source of questions and discussion points for the oral presentations.

The deliverable for this phase of the project is a Recommendation Report.

Attend Vendor Oral Presentations

RCC personnel will attend the vendor oral presentations to assist the County's team in understanding each vendor's offering. RCC will also prepare a list of questions as may be required to clarify certain issues not fully explained in the proposals.

The County may elect to make site visits to a selected number of vendor project sites at which they have installed systems of comparable nature and size.

Prepare & Present Evaluation Report

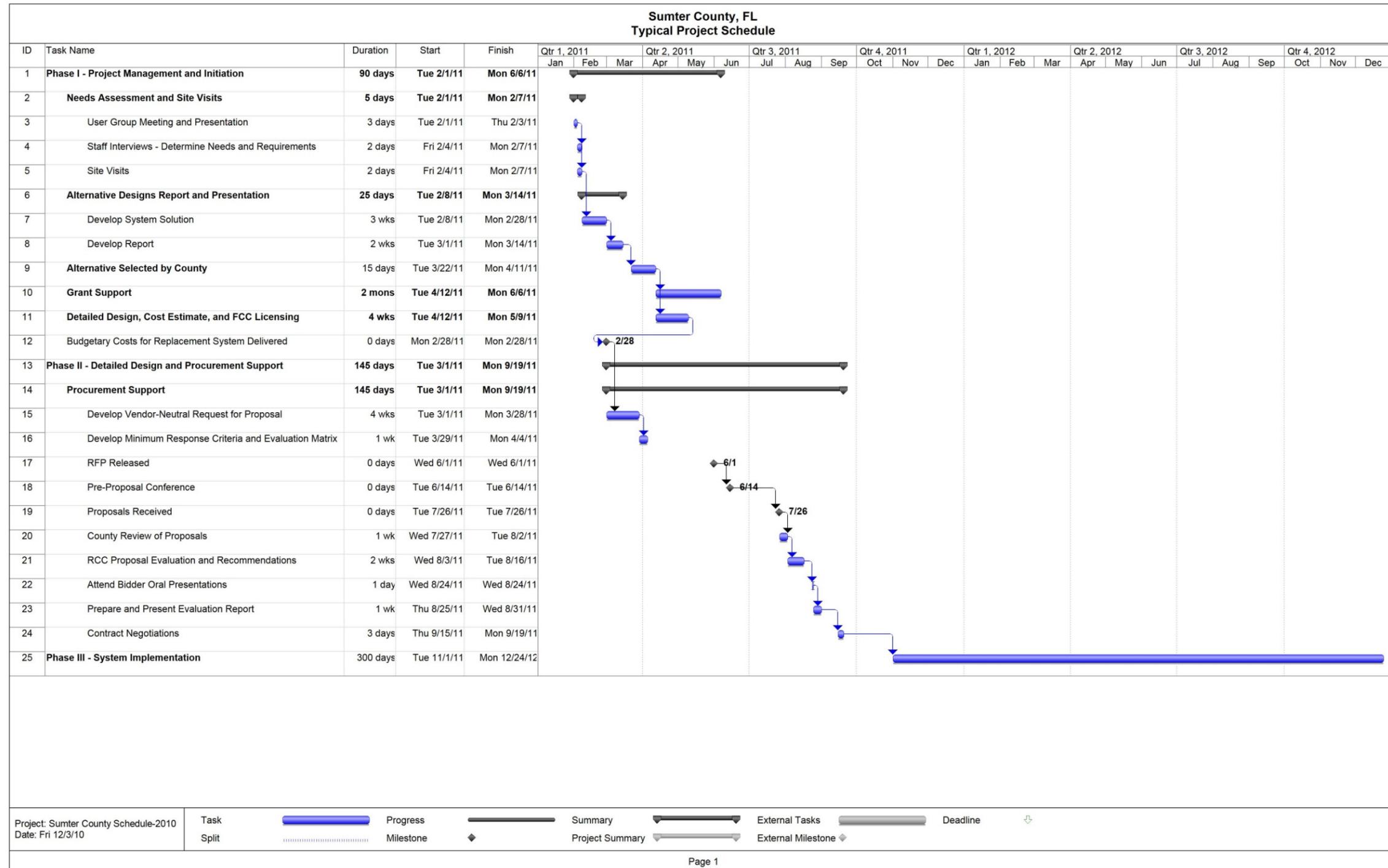
RCC will prepare the final evaluation results including findings and recommendations. The results will be forwarded to the County's team. RCC personnel will schedule a meeting with the County's team to discuss the findings recommendations.

The deliverable for this phase of the project is an Evaluation Report

Contract Negotiations

RCC will help ensure that the County receives favorable price consideration for the procured systems and will assist the County in direct contract negotiations with the selected vendor(s). A negotiating team composed of the project team and other officials designated by the County will work with RCC during negotiations. RCC does not provide legal representation, therefore, the County's attorney should also review proposed contract documents. RCC has a successful track record in saving its clients money during contract negotiations, with cost savings that often exceed the entire cost of RCC's services.

TYPICAL PROJECT SCHEDULE



STATEMENT OF OBJECTIVITY

RCC is not affiliated with, nor do we have any financial interest in, any communications equipment manufacturer, distributor, or supplier. We do not receive or accept remuneration of any type from any manufacturer, distributor, or supplier for recommending any of their products. Our unbiased independent position provides our clients a capable partner in meeting their project requirements without the potential for conflicts of interest.

Tools

RCC has developed a suite of comprehensive radio frequency software tools called ComSite®. The suite consists of five products that can be used in combination or independently:

COMSITEDESIGN

Wireless Network Planning & Design

This high-speed software tool set supports wireless system analysis and planning, design and optimization of wireless networks in one scalable PC platform small enough for field technicians to use.

COMSITEPRO

Wireless Site Engineering

This powerful site interference analysis tool is the only tool on the market specifically designed to help identify, analyze, locate and resolve radio frequency interference (RFI).

COMSITEMANAGER

Wireless Site Management

This site management application will save you hours of work, whether you are responsible for a single wireless communications site or a nationwide communications network containing thousands of sites.

COMSITEMPE

Wireless Site Compliance

This powerful tool evaluates non-ionizing radio frequency (RF) emissions and predicts the Maximum Permissible Exposure (MPE) potential to humans at or near wireless communications sites.

COMSITEE9-1-1e

Wireless Location Accuracy

This easy-to-use tool helps you determine the location data accuracy of wireless E9-1-1 calls delivered to your Public Safety Answering Point (PSAP), based on standard and repeatable statistical methods.

For more information on the ComSite suite of products, visit the RCC website at www.rcc.com.

APPENDIX A

Kevin Lombardo

Managing Director

Technical Expertise

*Interoperability
Incident Command and
Management
Fireground and EMS
Operations
Voice/Data/Information
Systems
RF and Network Engineering
HF – 40 GHz
P25, TSB-88
Interference Analysis and
Resolution
Transport & Switching
System Deployment
Testing, Acceptance,
Maintenance, Operations
and Optimization*

Education

*Graduate Studies at Rutgers
University and Aspen
University
BS, Rutgers University,
Electrical Engineering*

Awards, Affiliations and Certifications

*Incident Command / Incident
Management (ICS-100,
200, 300, 700, 800)
All-Hazards Type III Comm
Unit Leader (COML)
Homeland Security Exercise &
Evaluation Program (HSEEP)
WMD & Terrorism Response
for Emergency Services
Firefighter/EMT
FCC General Class License
Association of Public-Safety
Communication Officials –
International (APCO)*

Mr. Lombardo leads RCC's Southeast Region and assists clients with wireless, telecom, advanced technology, operations and governance projects. He has 23 years of experience in the public safety, homeland security, healthcare, utility and commercial industries.

Managing a many as 1,200 employees, capital budgets of \$1 billion and operating budgets of \$250 million, he has led large-scale design, deployment and operations of Public Safety radio systems, wide-area broadband networks, information systems, and command and control centers both domestically and internationally. He led large-scale emergency restoration operation efforts in New York City in the wake of the 9/11 attacks.

Selected Professional Experience

- **Regional Interoperability Program Director, California Statewide Interoperability Executive Committee (CalSIEC)** – Leads the Central Planning Area Regional Interoperability Program Management Office, established to direct interoperability for a seven-county region with respect to funding, risk assessment, technology, operations and governance. Led interoperability assessment of the Central Valley of California. Responsible for interoperability evaluation and recommendations for existing technology, operations and governance. Completed needs analysis, functional designs, coverage analysis, operational analysis for 150 local, county, state and federal Law, Fire, EMS agencies and NGOs. Developed governance structure and charter for the region and operational areas.
- **Various Clients** – Developed end-to-end incident management, situational awareness and interoperability solutions using broadband radio, satellite, IP and telecommunications equipment to provide rapid field deployment of voice, data, video, imagery, information systems and real-time incident management data and collaboration tools consistent with NIMS and ICS. Developed exercises for Law Enforcement, Fire, EMS, Hazmat operations.
- **Federal Communications Commission** – Led the engineering and implementation management efforts of the Public Safety Team. Supported 1,400 licensees with interoperability coordination to implement the FCC's 800 MHz Reconfiguration Program for the Federal Government, Sprint-Nextel and public safety agencies.

Additional Experience

- **Winstar Communications** – Sr. Vice President, Engineering and Operations.
- **Geotek Communications** – Vice President, Engineering and Operations.
- **RAM Communications Consultants** – Managing Consultant.
- **Motorola Communications and Electronics** – Systems Engineer & Field Tech.

Lewis C. Phillips

Managing Consultant

Technical Expertise

VHF, UHF, 800 & 900 MHz
Conventional and Trunked
Systems
Mobile Data Systems
Infrastructure Equipment and
Sites
Microwave Backhaul Systems
Communications Facilities
Planning
Site Grounding and
Installation Standards

Education

Allegheny Technical Institute
Penn State University
Motorola National Service
Training

Awards, Affiliations and Certifications

FCC General Radiotelephone
License. PG-3-4946

Mr. Phillips has more than 30 years of experience in public safety communication systems and assists RCC clients with the design and implementation of voice and data communications systems. His expertise include needs assessment, communications system design, FCC licensing, development of procurement specifications, proposal/bid evaluation, implementation assistance, and acceptance testing. He has experience with communications technologies and infrastructure including analog and digital, simulcast, Project 25, 700/800/900 MHz conventional and trunked land mobile radio systems, VHF and UHF conventional systems, SCADA systems, microwave backhaul systems, mobile data systems, communications facilities planning, transportation communication systems, and antenna site implementation grounding and bonding. In-depth experience in system maintenance and optimizations foster his understanding of system performance issues from the client's perspective.

Selected Professional Experience

- **Genesee County, MI** – Motorola Trunked 800 MHz Digital P25 Simulcast System - Oversight of testing of all base station repeaters. Performed functional and coverage acceptance testing of P25 system and simulcast VHF Fire Paging system. Assisted the County with the analysis and implementation of an additional site to improve coverage.
- **Montgomery, AL** – M/A-COM Trunked 800 MHz EDACS ProVoice Simulcast System – Project implementation oversight and system functional and coverage acceptance testing of their analog/digital system. Performed acceptance testing of the microwave radio system including RF and Bit Error Rate testing.
- **Orange County, FL** – Motorola 800 MHz Trunked Simulcast System Upgrade – Project tasks include a needs assessment, user interviews, and radio coverage and capacity analysis for the purpose of migration to a P25 digital system. Provide engineering recommendations for coverage improvement and system design.

Previous Public Safety Wireless Communications Experience

- **Motorola C&E** – Service Manager - Responsible for technical service delivery in the Miami and Fort Lauderdale metropolitan areas including commercial, state and local government, Federal Government, and special markets. Major accounts include 800 MHz trunked radio systems for Broward County, the City of Fort Lauderdale, the City of Miami, the City of Miami Beach, and the City of Hialeah.

Chris Monzingo Consultant

Technical Expertise

*Electrical System Design
Technical Drawing
National Electric Code
Communication Shelter
Design
Project Management
Site Grounding Systems
ComSite Product Suite*

Education

*MBA, Florida State University
BSEE, Florida State University*

Awards, Affiliations and Certifications

*Florida EIT #1100012394
Journeyman Electrician
ACI Concrete Laboratory
Testing Technician Grade II*

Mr. Monzingo's areas of expertise include project management, needs assessment, RF coverage analysis, proposal/bid evaluation, electrical system design, technical drawing, communication shelter design and the NEC. He joined RCC in 2005 as a student intern and became a full-time consultant in 2007.

Selected Professional Experience

- **Honolulu, HI** – Preliminary planning, design and RF coverage analysis for a 12-site, 700 MHz mobile data system.
- **Sussex County, NJ** – Conducted system analysis and performance evaluations of VHF radio system for multi-agency fire services. Assisted in developing a plan for improvement of existing system and recommendations for long-term system upgrades. Project also included RF coverage analysis and study of an existing eight-site low band fire paging network for possible PSAP consolidation.
- **Cherokee County, GA** – RF coverage analysis and system design for a 10-channel, nine-site digital simulcast 700/800 MHz trunked radio system and new microwave design.
- **City of Pensacola, FL** – Intermodulation study and analysis of three cellular communication tower sites to aid in the 800 MHz re-banding effort for the City.
- **SR-6 Shelter Replacement** – Prepared a complete set of technical drawings for shelter replacement, and conducted extensive work on project SOW and specifications.
- **South Florida Water Management District** – Assisted in writing scopes of work, RFPs and technology review reports. Assisted on the CERP Remote Office Microwave Link Support Project, which involved licensed and unlicensed microwave installations.

Additional Experience

- **Tarpon Electric** – Operations Manager.
- **Firebond Corporation** – Worked as maintenance electrician then Assistant Manager of Research and Development for world's largest manufacturer of pre-cast communication shelters and modular prisons. Firebond also manufactures modular office space, modular classrooms, freestanding communication towers and guyed towers.

Lindsay Hunter Carrion

Certified Grants Specialist, Public Safety Analyst

Technical Expertise

Grant Writing
Grant Research
Grants Management
Grants Consulting

Education

MS, University of Boulder,
Telecommunications (in
progress)
MA, Monmouth University,
Criminal Justice
BA, Monmouth University,
Psychology, minor in
Criminal Justice
Alpha Group Center
Crime & Intelligence Analyst
Certification

Awards, Affiliations and Certifications

American Society of
Criminology (ASC)
Academy of Criminal Justice
Sciences (ACJS)
International Association of
Crime Analysts (IACA)
National Grants
Management Association
(NGMA)

Grants Management Certificate Programs

Association of Public-Safety
Communications Officials –
International (APCO)
Grantsmanship Center

Ms. Hunter Carrion is responsible for researching federal, state and foundation grants for RCC clients. She provides services such as inquiry letters, proposal development, budget development, multi-agency projects, grants management assistance, compliance with OMB Uniform Administrative Requirements, Cost Principles and Audit requirements.

Ms. Hunter Carrion is a member of the National Grants Management Association and has assisted numerous RCC clients in conducting grant research and application preparation. She has completed the following courses in grant identification, application and management:

Related Course Work

- Grant Research Methods
- Applying for Federal Grants and Cooperative Agreements
- Managing Federal Grants and Cooperative Agreements
- Evaluating Federal Funds Management Capabilities of Recipients and Subrecipients
- Business Management Systems for Recipients
- Audit of Federal Grants and Cooperative Agreements
- Public Policy Compliance Issues for Recipients
- Uniform Administrative Requirements: OMB Circulars A-102 & A-110
- Cost Principles: OMB Circulars A-21, A-122, and A-87

Selected Professional Experience

- **Oklahoma City, OK** – Identified more than \$300k of potential grant and foundation funds for CAD/RMS and communications systems.
- **Caddo Parish, LA** – Successfully led team in soliciting and winning a total of \$2.99MM in grant funding for a Mobile Data Computer system to provide interoperability among the various law enforcement, fire and rescue, emergency medical and emergency management agencies throughout the Parish.
- **Caddo Parish, LA** – Led Parish team in soliciting \$3MM in grant funding to expand the Mobile Data Computer system into surrounding areas. The grant proposal was the highest scored application awarded in the grant solicitation.
- **Kalispell, MT** – Led the County in soliciting and winning \$750K in grant funding for a Computer Aided Dispatch system to be used among the various law enforcement, paid fire, volunteer fire and emergency medical services throughout the region.
- **Hillsborough, NJ** – Obtained \$50k in State Grant Funds for a communications study. Additional funds in excess of \$100k pending for implementation.