



Midpeninsula Regional
Open Space District

R-11-57
Meeting 11-15
June 8, 2011

AGENDA ITEM 7

AGENDA ITEM

Approval of the Agreement with Santa Clara County Communications for Design and Installation of a Simulcast Radio Communications System

GENERAL MANAGER'S RECOMMENDATION

Authorize the General Manager to approve the attached Agreement for Professional Services between Midpeninsula Regional Open Space District and County of Santa Clara for the design and installation of a simulcast radio communications system.

SUMMARY

The number of District staff using the District's radio system has increased as District staffing levels have grown. The radio improvement project is designed to address the following issues:

1. Communications between staff members in different geographical areas of the District can be unreliable due to geographical limitations of the current system.
2. Maintenance staff and Rangers share a common frequency, which has led to interference between users for both regular radio traffic and during emergency incidents.
3. Portable radios experience poor coverage in many areas due to geographical coverage limitations with the current radio system.

The contract with Santa Clara County Communications, and related work outlined below, will address these issues. The Agreement for Professional Services with Santa Clara County Communications focuses on the first issue of providing communication ability for staff throughout the District.

DISCUSSION

Improvement of the District's radio system has been a long-standing request from field staff. In 2006, a "Needs Assessment" study was conducted and identified three critical needs for

improvement: 1) wide area coverage to enable District staff to communicate reliably with each other anywhere within the District; 2) the reduction of “dead spots”, which are areas where portable radios receive or transmit little or no signal; and 3) the addition of a second radio frequency to reduce conflicts resulting from the growing number of system users.

Other improvements identified included: the need to meet Federal Communications Commission (FCC) legal requirements for radio frequency “narrow banding” (narrowing the bandwidth of a radio frequency to more efficiently use the radio frequency spectrum), and to assess and improve existing antenna systems as needed at current facilities.

The installation of “vehicle repeaters,” which allow for greater range of the handheld radio units by using a vehicle radio to rebroadcast the radio signal from a handheld radio, was also recommended to reduce areas of poor coverage for portable radios.

In January 2007, the Board accepted a consultant’s report for a “Proposed Two Way Radio System Five Year Plan for Improvement” (see report R-07-10) and directed staff to develop further cost estimates and incorporate the project into the FY2007-08 budget. In March 2007, the Board approved a funding plan (see report R-07-40) and directed staff to complete the project in a three to five year time frame. The Board expressed its strong support for this project given the potential enhancements to employee and public safety and operational effectiveness. In April 2007, the Board approved a contract with Macro Corporation for project management services for the implementation of the Radio Improvement Project (see report R-07-54).

Over the next three years, staff worked with Macro Corporation to develop and implement a test program using vehicle mobile repeaters to enhance and extend radio signal coverage. The vehicle mobile repeaters successfully provided additional coverage for portable radios in many radio dead spots. Since then, vehicle repeaters have been installed in all patrol vehicles.

Various options were explored for obtaining a second radio frequency. Given the high use of radios in the San Francisco Bay Area it was difficult to find an available frequency. Eventually, staff was able to locate an available radio frequency and in March 2010, the Board approved the purchase of the use of the frequency from the owner, Fresno Mobile Radio (see report R-10-25).

Simulcast Radio System

A key factor in the project, and the focus of the contract with Santa Clara County Communications, is the Simulcast System. This system will require the use of microwave infrastructure to link the repeater sites so a radio transmission made at one end of the District will simultaneously be transmitted over all of the radio repeaters in the District’s radio system. Such a system allows a person at any location in the District to communicate with others anywhere else in the District.

Staff worked with Macro Corporation to develop specifications and technical standards for the system. In September 2009, Macro Corporation submitted a recommendation to the District that Santa Clara County Communications (SCCC), who had expressed interest in the project, be selected to install and maintain the Simulcast Radio System. SCCC was recommended based on

their: unique status as a government agency-provider already operating similar systems, proximity to the District's facilities, unique ability to integrate the District's new system into their facilities, industry knowledge, and familiarity with District operations.

SCCC already has similar systems which they have installed and maintain, and have facilities located at the primary hub of the proposed District system, which will reduce costs to the District. The County also has good technical knowledge and operational experience with specific vendors of microwave systems and radio repeaters, and can provide equipment at reduced costs, based upon their negotiated contracts with radio equipment providers.

District staff has worked with SCCC, utilizing the technical expertise of Macro Corporation, to ensure that the system will meet District needs, and that the services to be provided by the County are cost-effective. These provisions are reflected in the attached proposed Agreement.

An agreement was also made with the National Park Service/Golden Gate National Recreation Area to allow them to install a tower within the antenna lease area on Black Mountain, which included a provision for District radio equipment including three microwave dishes (see report R-09-86). Negotiations were also conducted with San Mateo County for access to repeater sites for installation of microwave facilities.

Retention of the Current Radio System

Elements of the current radio system will be maintained to increase the overall capacity of the system, and to provide a back up in the event of a failure of any element of the new microwave system. District maintenance and administrative staff will primarily use the existing system, while patrol staff will mainly use the new simulcast system. However, any trained staff member will have access to elements of the radio system to use as necessary for District business. Upgrade of the current system is necessary to meet FCC requirements.

Interoperability with Other Radio Systems

The new radio system is compatible with systems in use by other emergency response agencies. Agencies which have written agreements with the District will be able to use the new simulcast radio system, and radios purchased for District staff will have the ability to operate on the frequencies used by other local fire and emergency response agencies.

FISCAL IMPACT

The adopted FY2011-12 budget for this project totals \$1,170,000 and includes \$976,750 for equipment and installation of the new simulcast radio system. Remaining funds will be used for upgrade of the existing radio system, FCC licensing, and project management.

It is anticipated that the new system will be installed by December, 2011. Maintenance costs for the new system for the balance of FY2011-12 are estimated to be less than \$10,000 and can be covered by the existing budget.

In future years, annual costs for maintenance of the new system are anticipated to be \$25,000, in addition to annual maintenance costs of \$8,000 for the existing radio system. The additional costs are due to the complexity of maintaining a microwave and simulcast radio system.

As noted in prior Board presentations expenses for site leases for the new radio system, in future years, are estimated to increase from \$15,000 to \$40,000 per year.

PUBLIC NOTICE

Notice was provided pursuant to the Brown Act. No additional notice is necessary.

CEQA COMPLIANCE

Board approval of the Agreement with Santa Clara County Communications for Design and Installation is not a project under the California Environmental Quality Act (CEQA) and no environmental review is required.

NEXT STEPS

If approved by the Board, the contract will be implemented with the purchase of equipment and installation of the new simulcast radio system.

Attachment:

1. Agreement for Professional Services Between Midpeninsula Regional Open Space District and County of Santa Clara

Prepared by:

David Topley, Support Services Supervisor
Gordon Baillie, Management Analyst

Contact person:

David Topley, Support Services Supervisor

Agreement for Professional Services Between
Midpeninsula Regional Open Space District
and County of Santa Clara

This Agreement, dated this ____ day of _____, 2011, is by and between Midpeninsula Regional Open Space District, a public special district of the State of California (hereafter, "DISTRICT") and County of Santa Clara, California (hereafter, "COUNTY").

Recitals

WHEREAS, the DISTRICT desires to engage the COUNTY to provide Communications Department services for the DISTRICT as more particularly set forth herein; and

WHEREAS, the COUNTY is specially trained, experienced and competent to perform the special services required by this Agreement; and

WHEREAS, the COUNTY is willing to render such professional services, hereinafter defined, on the following terms and conditions; and

NOW, THEREFORE, DISTRICT and the COUNTY agree as follows:

Agreement

1. Scope and Schedule of Service

Subject to the terms and conditions set forth in this Agreement, the COUNTY shall provide DISTRICT with the services described in Exhibit A, attached hereto and incorporated herein by this reference.

2. Compensation

For work performed by COUNTY in accordance with this Agreement, DISTRICT shall compensate the COUNTY in accordance with the payment terms, conditions and rates set forth in Exhibit B.

3. Project Managers

COUNTY designates the Communications Director as Project Manager for the purpose of performing the services under this Agreement. DISTRICT designates the Support Services Supervisor as the DISTRICT's Project Manager for the purpose of managing the services performed under this Agreement.

4. Effective Date

The effective date of this Agreement is upon execution by the DISTRICT.

5. Term of Agreement

This Agreement is effective from Month Day, 2010, to and including Month Day, 2015, unless terminated earlier in accordance with Articles 6 and 7.

6. Termination without Cause

Either party may terminate this Agreement without cause, provided written notice is served to the other party at least 12 months preceding the termination date.

7. Termination for Cause

Either party may terminate this Agreement for cause upon 90 days' advance written notice to the other party. For purposes of this Agreement, cause includes, but is not limited to, any of the following: (a) material breach of this Agreement by either party, (b) violation by either party of any applicable laws or regulations, (c) assignment by COUNTY of this Agreement without the written consent of the DISTRICT, (d) failure by the COUNTY to provide services in a satisfactory manner, (e) failure by DISTRICT to provide payment in a timely manner or (f) assignment by the DISTRICT of this Agreement without the written consent of the COUNTY. Such notice shall specify the reason for termination and shall indicate the effective date of such termination should remediation of the cause not occur within thirty (30) days provided that the nature of the cause can be remediated within thirty (30) days. If remediation will take longer than thirty days, an extension period may be granted to remediate the problem once agreed to and approved by both parties in writing.

8. Ownership of Materials

In the event of termination, all documents, records, data, studies, maps, photographs, reports, electronic files, and other materials prepared by COUNTY for DISTRICT pursuant to the Agreement, shall be provided to and become the property of the DISTRICT.

9. Relationship of Parties; Independent Contractor

COUNTY will perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of DISTRICT. None of the provisions of this Agreement is intended to create, nor will be deemed or construed to create, any relationship between the parties other than that of independent parties contracting with each other for purpose of effecting the provisions of this Agreement.

The parties are not, and will not be construed to be in a relationship of joint venture, partnership or employer-employee. Neither party has the authority to make any statements, representations or commitments of any kind on behalf of the other party or to use the name of the other party in any publications or advertisements, except with the written consent of the other party or as is explicitly provided herein.

10. Assignment and Subcontracting

Neither this Agreement nor any interest herein may be assigned by the COUNTY or the DISTRICT without the prior written approval of the other. COUNTY may not subcontract or assign any portion of this Agreement or the rights and obligations hereunder without the prior written consent of DISTRICT. The parties agree that approval or disapproval of a proposed assignment or subcontract is at the sole discretion of the DISTRICT.

11. Amendments

This Agreement may be amended only by an instrument executed by both parties.

12. Nondiscrimination and Compliance with Law

In the performance of this Agreement, COUNTY the DISTRICT shall comply with all applicable Federal, State, and local laws and regulations.

13. Insurance

Each party of this Agreement must, at its own expense, maintain a program of self-insurance and/or insurance for general liability coverage in the amount of at least one million dollars (\$1,000,000) per occurrence and in the aggregate and statutory California Worker's Compensation coverage. This coverage must remain in force during the entire term of this Agreement. Each party must provide evidence that the required coverage is in place.

14. Mutual Indemnity

In lieu of and notwithstanding the pro rata risk allocation which might otherwise be imposed between the Parties pursuant to Government Code Section 895.6, the Parties agree that all losses or liabilities incurred by a party shall not be shared pro rata but instead COUNTY and DISTRICT agree that pursuant to Government Code Section 895.4, each of the parties hereto shall fully indemnify and hold each of the other parties, their officers, board members, employees and agents, harmless from any claim, expense or cost, damage or liability imposed for injury (as defined by Government Code Section 810.8) occurring by reason of the negligent acts or omissions or willful misconduct of the indemnifying party, its officers, board members, employees or agents, under or in connection with or arising out of any work, authority or jurisdiction delegated to such party under this Agreement. No party, nor any officer, board member, employee or agent thereof shall be responsible for any damage or liability occurring by reason of the negligent acts or omissions or willful misconduct of other parties hereto, their officers, board members, employees or agents, under or in connection with or arising out of any work, authority or jurisdiction delegated to such other parties under this Agreement.

15. Notices

All notices required by this Agreement will be deemed given when in writing and delivered personally or deposited in the United States mail, postage prepaid, return receipt requested, addressed to the other party at the address set forth below or at such other address as the party may designate in writing in accordance with this section:

To DISTRICT: Attn: General Manager
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, California 94022-1404

To COUNTY: Attn: Communications Director
County of Santa Clara
911 Communications Department
2700 Carol Dr.
San Jose, CA 95125

16. Governing Law

This Agreement has been executed and delivered in, and shall be construed and enforced in accordance with, the laws of the State of California. Proper venue for legal action regarding this Agreement shall be in the County of Santa Clara.

17. Severability

If any provision of this Agreement is found by a court of competent jurisdiction to be void, invalid or unenforceable, the same will either be reformed to comply with applicable law or stricken if not so conformable, so as not to affect the validity or enforceability of this Agreement.

18. Waiver

No delay or failure to require performance of any provision of this Agreement shall constitute a waiver of that provision as to that or any other instance. Any waiver granted by a party must be in writing, and shall apply to the specific instance expressly stated.

19. No-Smoking Policy

COUNTY and DISTRICT and their employees, agents and subcontractors shall comply with the County's No-Smoking Policy, as set forth in the Board of Supervisors Policy Manual section 3.47 (as amended from time to time), which prohibits smoking within 30 feet surrounding County-owned buildings and leased buildings where the County is the sole occupant, and in all County vehicles.

20. Entire Agreement

This document represents the entire Agreement between the parties with respect to the subject matter hereof. All prior negotiations and written or oral agreements between the parties with respect to the subject matter of the Agreement are merged into this Agreement.

21. No Third Party Beneficiaries

This Agreement is not intended to create, and does not create, any rights in or benefits for any third party.

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IN WITNESS WHEREOF, COUNTY and DISTRICT have executed this Agreement as of _____.

COUNTY OF SANTA CLARA

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT



Bert Hildebrand
Communications Director

Stephen E. Abbors
General Manager



Emily Harrison
Deputy County Executive

APPROVED AS TO FORM
AND LEGALITY:



Mike Moreno
Deputy County Counsel

APPROVED AS TO FORM

Sue Schectman
General Counsel

Exhibits to this Agreement:

- Exhibit A – Scope of Work and Services to be provided by County Communications
- Exhibit B – County of Santa Clara Communications Services Cost Recovery Methodology
- Exhibit C - DISTRICT's Proposed Microwave Network and Simulcast Radio Site Plan
- Exhibit D – DISTRICT'S Proposed New Two-Way Radio System & Existing Legacy Radio Communication System Equipment Information by Site

Exhibit A
Scope of Work and Services
Provided by County Communications to
Midpeninsula Regional Open Space District

The Midpeninsula Regional Open Space District (DISTRICT) is in the final planning and design phase of implementing a new two-way radio communications system (hereinafter "Radio System") which is comprised of: a microwave communications network (hereinafter "Microwave Network"), and a simulcast system (hereinafter "Simulcast System") to operate within San Mateo and Santa Clara Counties (see Exhibit C).

The DISTRICT has requested the COUNTY to provide professional engineering and technical support services as required to assist in the design, licensing, procurement, implementation, maintenance, repair and future upgrades to the Radio System, based on the Communications Department's proven performance, experience, specially trained and competent workforce that will perform the special services as required by this Agreement.

Under this Agreement, County Communications shall provide the DISTRICT the following services:

1. Design and Procurement:

COUNTY will assist DISTRICT in completing final design and procurement of a Radio System compatible with other radio systems currently maintained and operated by the COUNTY.

DISTRICT is responsible for the cost of and contracting for system procurement. DISTRICT will use COUNTY's competitively negotiated cooperative purchasing system for procurement. The COUNTY will verify, in writing, those proposals from vendors and suppliers are priced at COUNTY's competitive pricing.

Examples of major components of the Radio System to be purchased under this agreement include but are not limited to:

- a. Digital Microwave Radios
- b. Digital-capable Simulcast VHF Radio Transmitters and Receivers
- c. Antennas, Cables, Racks, and Grounding Equipment
- d. DC Power Supply System

2. Compatibility of Microwave Network:

COUNTY is responsible for ensuring complete compatibility with other local and regional microwave networks including but not limited to E-Comm, BayLoop, and MBAMS. County will ensure complete compatibility with proprietary network monitoring applications.

3. FCC Licensing:

COUNTY will be responsible for obtaining FCC microwave licenses and will assist the DISTRICT with other FCC licensing requirements as required for the completion of this project.

4. Microwave Network Installation, Monitoring and Maintenance:
COUNTY will be responsible for installation, optimization, monitoring and maintenance of the Microwave Network equipment, and potential links to other local and regional microwave networks, if applicable. COUNTY will be responsible for hiring and managing tower crews to install, align, and maintain dishes, as required.
5. Power Supplies:
COUNTY will assist DISTRICT in the design and procurement of 48 volt DC power supply systems for each radio site, except where already present at COUNTY sites. COUNTY will provide access and use of existing 48 volt DC power supply equipment. COUNTY will be responsible for installation, optimization, monitoring and maintenance of 48 volt DC power supplies and battery systems at each site.
6. Installation, Programming and System Optimization:
COUNTY will provide DISTRICT installation, programming and system optimization services necessary to implement the proposed Radio System.

Quotations for design, engineering, initial implementation, and future upgrade services will be presented to the DISTRICT in writing for approval prior to initiation of work. Cost estimates for COUNTY services, including any sub-contractor work if required, will be included in each quotation for DISTRICT approval prior to initiation of work as described in Exhibit B.

7. Maintenance, Repair, Enhancements and Modifications to Radio System:
COUNTY will provide maintenance, repairs, modifications, and enhancements to DISTRICT owned Radio System infrastructure equipment charged on a time and material cost recovery basis as defined in Exhibit B. Radio System modifications and enhancements will be provided by the COUNTY upon written request and quotation approval from the District.
8. Bi-Annual System-wide Maintenance:
COUNTY will perform system-wide performance maintenance (PM) of the DISTRICT'S pre-existing (legacy) radio communication infrastructure system equipment and new Radio System on a biannual (approximate 6 month interval) basis. PM work will include, but not be limited to, alignment of the two-way radio, microwave and power plant infrastructure equipment. Fees for PM Service will be charged on a time and material cost recovery basis as defined in Exhibit B, and shall include a maximum not-to-exceed cost recovery cap of 80 hours annually. Any identified repair work will be additional and billed separately.
9. Technical Support Services:
COUNTY will provide DISTRICT full-time (24 hours a day, 7 days a week) technical support services for emergency repairs charged on a time and material cost recovery basis as defined in Exhibit B.

DISTRICT Radio System will be monitored electronically and will provide automated notifications directly to on-duty and on-call COUNTY technical support staff.

DISTRICT may also request repairs or service during the COUNTY'S normal business hours of 7:00 am to 3:30 pm by calling the COUNTY Technical Services Division at (408) 977-3200. Repair or service requests made after normal business hours, on weekends and on holidays shall be

submitted to the COUNTY Watch Commander in Dispatch Operations by calling (408) 294-4424. Depending on the nature and location of the requested repair or service, COUNTY technical support staff shall acknowledge receipt of the service request within 15 minutes, and initial field response will occur within 30 minutes of notification. Actual arrival times on scene will vary based on the location and required travel time.

Current COUNTY performance standards require that public safety radio systems operate 99% of the time without major system problems and 95% of the time without minor systems problems. This standard shall be applied to the DISTRICT Radio System.

10. Documentation Support:

County shall provide DISTRICT with documentation, upon request, in a mutually agreed format, regarding any necessary repairs to or technical problems with the system, including date, time service technician was dispatched, and time required to repair or resolve the problem.

11. Site Access:

DISTRICT will be responsible for establishing and maintaining all site access and use agreements, including costs associated with leased radio equipment sites. COUNTY will assist DISTRICT in establishing leases and in identifying access needs and technical information and services required for site use, including but not limited to rack mounted radio and 48 volt DC power supply equipment placement, cabling routes, primary and backup power and HVAC requirements, and antenna locations, as required to establish each site lease agreement.

12. Facility and Tower Space:

COUNTY will provide facility and tower space at County Communications' main facility located at 2700 Carol Drive 95125, California, to serve as the central core or hub location for both the Simulcast System and the Microwave Network..

13. Inspection of Work:

County shall provide opportunities for DISTRICT, or DISTRICT designee, to inspect work performed to ensure quality assurance, and quality control, are maintained to District standards and to the COUNTY performance standards set out in this Agreement.

Additional Services

1. Expansion of Services:

Expansion of COUNTY provided services may be added by the DISTRICT through amendment of Exhibit A and Exhibit B as defined in sections **11 – Amendments**, and **15 – Notices**, of this Agreement.

2. Service of DISTRICT-owned Subscriber Units:

Service of DISTRICT-owned subscriber units (hand-held and mobile radios) by the COUNTY are not included in this Agreement, but may be added as an additional service in the future if approved in writing by both parties.

3. Dispatching Services:

Dispatching services for DISTRICT staff by the COUNTY are not included in this agreement, but may be added as an additional service in the future if approved in writing by both parties.

4. Additional FCC Licensing Services

DISTRICT may request COUNTY to procure new licenses and/or complete modifications to and renewal of existing licenses as needed and approved in writing by both parties.

Proposed Radio System and Microwave Network Cost Estimate:

As previously discussed within this Agreement, and more specifically within the Scope of Work defined in Exhibit A, the DISTRICT has requested the COUNTY assist them in completing the final design, procurement, installation and maintenance of a new MROSD Radio System that is to be completely compatible with other local and regional two-way radio communication and microwave systems and proprietary network monitoring applications currently maintained and operated by the COUNTY.

Under this Agreement, the DISTRICT will be responsible for the cost of the system procurement. The COUNTY will verify, in writing, that all proposals from vendors and suppliers are priced equal to or better than the COUNTY's current competitive pricing.

MROSD Radio System equipment will be installed at the following sites:

- Santa Clara County – Communications Hill - Prime/MW Site
- Black Mountain - Prime/MW Site
- Tomita - Prime/MW Site
- Coyote Peak – Radio Site
- Skeggs - Prime/MW Site
- Rolph – MW Site
- Pise Radio Site

As detailed in the following "MROSD Analog Deployment Cost Estimate" table, the COUNTY through the County Communications Department will provide services which include: reimbursable direct Technical Services (labor), will assist MROSD in contracting and managing specialized technical support, as required, to install, activate, integrate, optimize and test specialized two-way radio and microwave communications equipment. This equipment, related hardware and software will include, but not be limited to, several high power VHF P25 capable simulcast radio transmitters; DSM II cards; crystal filters; duplexers; CSCI card and card cage; 8-channel digitac comparator; VHF antennas, 19 inch racks, cables and connectors; 48 volt DC rack mounted power supplies; TRAK synchronization GPS MFTS Rubidium standard for equipment; microwave antenna, cable connectors, hangers; microwave radios, racks, loop switches and other hardware; and multiplexor Zhone-Premisys PSID equipment (see Table below for a detailed breakdown of equipment, labor and cost estimates by site).

The COUNTY will ensure all equipment is properly installed, grounded, and in material compliance with Motorola publication, "Manual R56, Standards and Guidelines for Communications Sites", dated March 1, 2000, that provide for the safe, orderly and reliable use and operation of radio communication sites and related equipment.

Appendix A
MROSD Analog Deployment Cost Estimate
MROSD and SCCo Quotes, Quantities and Pricing Estimates

Products by Category and Type	Price Estimate	Allocated Qty.	SCCo 2700 Prime/MW	Black Mtn Radio/MW	Tomita Radio/MW	Coyote Pk Radio	Skeggs Radio/MW	Rolph MW	Pise Radio	Spares	Total Qty.	Total \$
Motorola and Related products - SCCo discount												
Quantars (High Power, VHF, Spectratrac Option, P25 capable)	15,000			1	1	1	1		1	1	6	90,000
DSM Cards	10,000		2	1	1	1	1		1	1	8	80,000
Crystal Filters	700			1	1	1	1		1		5	3,500
Duplexers	1,200			1	1	1	1		1		5	6,000
CSG Card and Card Cage	2,000		1								1	2,000
8 Channel Digitrac Comparator	15,000		1								1	15,000
VHF Antennas - (cost estimate)												
VHF Antennas, Rack, Cables and Connectors	2,500			1	1	1	1		1		5	12,500
Power Supply Equipment - American Power - (from quote)												
48 vdc Rack Mounted Power System - from quote	10,000		1	1	1	1	1		1		6	60,000
Trak Equipment - Synchronization - (from quote)												
Model 9100DC Modular Frequency Time System	18,000		1	1	1	1	1		1		6	108,000
Microwave - Harris - (from quote)												
Antenna (dish), Cable Connectors, Hangers (average cost)	6,500		2	3	1		1	1			8	52,000
Microwave Radios, Racks, Loop Switches, Misc.	38,000		2	3	1		1	1			8	304,000
Multiplexer - Zhong/Premisys PSID - (from quote)												
IMACS 600 Chassis 891630 with two (2) Power Supplies	1,500		1	1	1	1	1		1		6	9,000
CPU Card 880370/CPU Firmware 60603 (2 per chassis)	2,400		2	2	2	2	2		2		12	28,800
Interface Card 892260/ 8 T1/E1 Ports	1,450		1	1	1	1	1		1	1	7	10,150
SRU Card 822060 10 port RS232c V.24	1,200		1	1	1	1	1		1		6	7,200
WAN Card 801070, Dual T1/E1	1,200		3	1	1	1	1		1	1	9	10,800
WAN Card 801470, Dual T1/E1 w/ relay	1,300		1	1	1	1	1		1		6	7,800
Total Infrastructure Material Cost Estimate												806,750
Infrastructure Labor Costs												0
<i>Includes SCCo design, installation, activation & test - estimates</i>			25,500	40,500	21,000	15,000	21,000	12,000	15,000			150,000
Additional Considerations (budgetary estimates)												
Tower Structural Analysis	2,500				1		1		1		3	7,500
Site Electrical Improvements	2,500			1	1	1	1		1		5	12,500
Total Labor, Material and Misc Cost Estimate												976,750
<i>Does not include site lease and maintenance costs</i>												
<i>Rack requirements (quantity depends on microwave model)</i>			2 Racks	2 Racks	2 Racks	1-2 Racks	2 Racks	1-2 Racks	1-2 Racks	NA	NA	

Exhibit B
County Communications
Cost Recovery

The DISTRICT shall compensate the COUNTY for goods and services provided in accordance with the payment terms, conditions and rates set forth in this Exhibit (B).

County Communications' Technical services are billed on a time and materials basis as follows:

1. Quotations and Approval:

COUNTY shall prepare quotations and shall only perform major system installation work, such as the proposed Radio System, and any future system enhancements following DISTRICT's written approval. Quotations will be based on a not-to-exceed amount, with final charges being billed at actual costs, whichever is the lesser amount, barring any unforeseen issues that must be addressed to complete the project. Any increase to the original not-to-exceed amount, caused by unforeseen issues, must be agreed to in writing by both parties. Annual preventive maintenance and repair costs are estimated to not exceed \$25,000.

2. System-wide Maintenance:

COUNTY will perform system-wide performance maintenance (PM) of the DISTRICT's pre-existing (legacy) radio communication infrastructure system equipment and new Simulcast System and Microwave Network on a biannual (approximate 6 month interval) basis. PM work will include, but not be limited to, alignment of the Simulcast (two-way radio) System, Microwave Network, and 48 volt DC power plant infrastructure equipment. Fees for PM Service will be charged on a time and material cost recovery basis with a maximum not-to-exceed cost recovery cap of 80 hours annually. Any repair work identified during the PM will be additional and billed separately.

3. Engineering and Technical Support:

COUNTY shall provide DISTRICT engineering and technician support as required to maintain and repair DISTRICT owned equipment as identified through this Agreement based on fiscal year published rates. Regular hours are Monday-Friday from 7:00 a.m. through 3:30 p.m. Non-business overtime for after-hour emergency call-out repair services shall be assessed from 3:31 p.m. to 6:59 a.m. on weekdays, and all day on weekends and holidays. All non-regular business hour work will be billed at overtime (1.5 x regular hours) rates with a 4-hour minimum charge for Technician support, if not contiguous with normal business hours. If contiguous with normal business hours (i.e., work begins less than four hours prior to normal business hours or work is initiated before close of normal business hours), then the 4-hour minimum charge does not apply and only actual hours worked (regular/overtime) will be billed to the DISTRICT based on when the work is performed.

4. Communications Technical Services Rates:

Effective July 1, 2010, rates for Communications Technical Services for Fiscal Year 2011 will be set as follows:

	<u>Regular Hours</u>	<u>After-hours Rate</u>
o Technician Rate	\$117.00	\$175.50
o Engineering Services	\$136.00	\$204.00

5. Billing for Services

The DISTRICT will be billed by the COUNTY on a monthly basis. All billings will be submitted to:

The DISTRICT: Attn: General Manager
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, California 94022-1404

Unless otherwise agreed to by both parties, all payments will be made to the COUNTY within 30 calendar days of date invoiced to:

The COUNTY: Attn: Accounts Payable
County of Santa Clara
911 Communications Department
2700 Carol Dr.
San Jose, CA 95125

Monthly billings will include the total amount billed for the month and year-to-date total, and as documentation will provide all invoices for work requested and performed during the billing period, including at minimum an itemized description of services provided by the COUNTY (e.g., breakdown of all services rendered, hours worked and travel time by service location, labor type, and a breakdown of all goods provided/billed by the County).

The COUNTY shall maintain documentation of all services requested by the DISTRICT and work performed by the COUNTY under this Agreement as detailed in "Exhibit A - Scope of Work and Services Provided by County Communications to Midpeninsula Regional Open Space District." Documentation will include, but not be limited to, Radio System related engineering designs, quotations, FCC licensing, installation, preventative maintenance, and repair services.

The COUNTY shall also maintain, and provide the DISTRICT with a copy of, current as-built drawings for the DISTRICT's new Radio System, including its two major components the Microwave Network and Simulcast System, that operates within San Mateo and Santa Clara Counties (see Exhibit C).

6. The DISTRICT has the right to inspect COUNTY documentation upon request. Billing Questions: Billing questions may be directed to Phyllis Yoneda, Senior Management Analyst, by telephone at (408) 977-3208 or by email at Phyllis.yoneda@911.sccgov.org.

EXHIBIT C

DISTRICT's Proposed Radio System Microwave Network and Simulcast Radio Site Plan

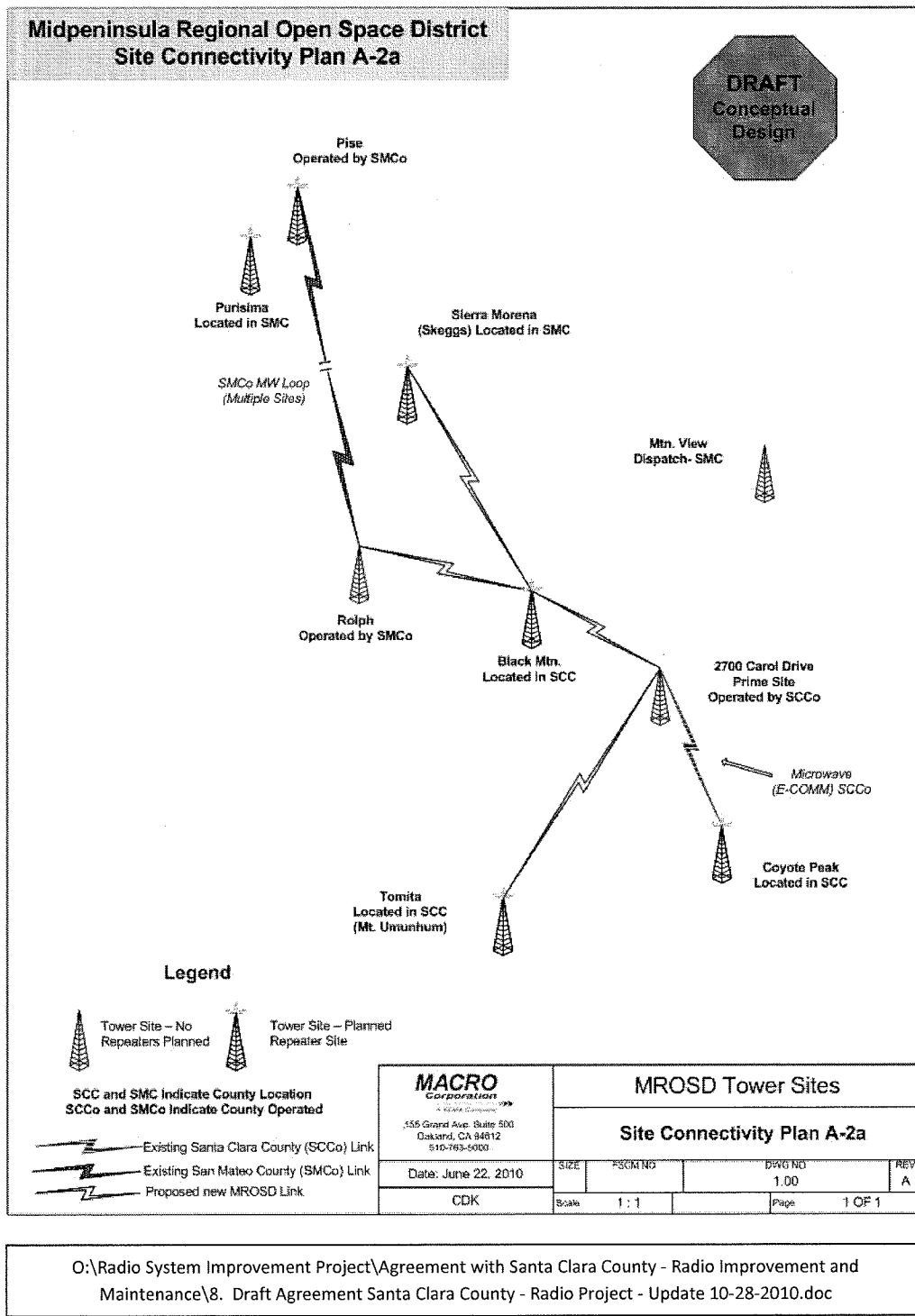


EXHIBIT D

DISTRICT'S Proposed New Two-Way Radio System & Pre-Existing (Legacy) Radio Communication Infrastructure System Equipment Information by Site

Equipment by Category and Type	SCCo 2700	Black Mtn	Tomita	Coyote Pk	Skeggs	Rolph	Pise	Spares	Total
Proposed New Two-Way Radio System Infrastructure	Prime/MW	Radio/MW	Radio/MW	Radio-Only	Radio/MW	MW-Only	Radio-Only		Qty.
Motorola and Related products									
Quantars (High Power, VHF, Spectratrac Option, P25 capable)		1	1	1	1		1	1	6
DSM Cards	2	1	1	1	1		1	1	8
Crystal Filters		1	1	1	1		1		5
Duplexers		1	1	1	1		1		5
CSCI Card and Card Cage	1								1
8 Channel Digitrac Comparator	1								1
VHF Antennas									
VHF Antennas, Rack, Cables and Connectors		1	1	1	1		1		5
Power Supply Equipment									
48 vdc Rack Mounted Power System	1	1	1	1	1		1		6
Trak Equipment - Synchronization									
Model 9100DC Modular Frequency Time System	1	1	1	1	1		1		6
Microwave - Harris									
Antenna (dish), Cable Connectors, Hangers	2	3	1		1	1			8
Microwave Radios, Racks, Loop Switches, Misc.	2	3	1		1	1			8
Multiplexer - Zhone/Premisys PSID									
IMACS 600 Chassis 891630 with two (2) Power Supplies	1	1	1	1	1		1		6
CPU Card 880370/CPU Firmware 60603 (2 per chassis)	2	2	2	2	2		2		12
Interface Card 892260/ 8 T1/E1 Ports	1	1	1	1	1		1	1	7
SRU Card 822060 10 port RS232c V.24	1	1	1	1	1		1		6
WAN Card 801070, Dual T1/E1	3	1	1	1	1		1	1	9
WAN Card 801470, Dual T1/E1 w/ relay	1	1	1	1	1		1		6
Existing VHF Radio Equipment Infrastructure									
WNVC239	NA					NA			
Transmit Frequency 151.235		x	x	x	x		x		
Receive Frequency 159.255		x	x	x	x		x		
VHF Antenna, Cable with Connectors (installed)		1	1	1	1		1		5
Repeater (Installed)									
GE Master II		1	1						2
Kenwood TK-750					1				1
MTR 2000				1			1		2
Rack Mounted Duplexer		1	1	1	1		1		5
Repeater Tone Panel (Typically TP-154)		1	1	1	1		1		5
Cabinet/ Rack									
Existing MROSD Cabinet (Typically 48" high)			1	1	1				3
Facility Provided Rack		1					1		2
New Rack requirements (rack quantity depends on microwave equipment model)	2 Racks	3-4 Racks	2-3 Racks	2 Racks	2-3 Racks	1-2 Racks	2 Racks	NA	TBD