

AGENDA ITEM 19

81

Consider authorizing advertising and setting date to receive bids for concealable vests for County law enforcement personnel.

Moved: **Judge Doerfler**

Seconded: **Commissioner Boatright**

Motion: To authorize County Auditor advertising 3 o'clock p.m. June 27, 2000, to receive bids for concealable vests for Williamson County law enforcement personnel in the Commissioners Courtroom.

Vote: Motion carried 4 – 0

AGENDA ITEM 20

Discuss and take appropriate action on expansion of the 800mz radio coverage by multi tower simulcast.

Much discussion but no action was taken on this item which will be added to the agenda of June 20, 2000.

< Clerk copy here >



82

3 more payments due incl. this year
336,506²² ea. - this year is budgeted.
payment due 8-1
last payment 8-1-02 #20

May 23, 2000

To : Williamson County Judge John Doerfler
Williamson County Commissioners
Geniva Simpson, Communications Director

From : Dan Scott, Account Manager
Motorola, Inc.

Subject : System Expansion Overview

EXECUTIVE SUMMARY

In 1995, Williamson County, in cooperation with the cities of Georgetown and Round Rock, entered into an agreement with Motorola for the purchase of a Smartnet 800 Mhz trunked system that would provide communications for all Public-Safety and Public-Service agencies. In 1996 the system went on-line consisting of 10 channels shared by all agencies and approximately 1000 radios. The prime site is located on Chandler road at a tower site now owned by Pinnacle Towers. All three entities share the costs associated with the lease of this tower as well as the on going maintenance costs. There is a back up site located east of Georgetown across from the Williamson County maintenance facility. This tower is owned by the county and the equipment consists of 7 channels shared by all entities during maintenance on the prime site.

SITUATION ANALYSIS

Since 1995, Williamson County has experienced a period of unprecedented growth. Recent news releases have identified Williamson County as the fastest growing county in the state of Texas and the eighth fastest growing county in the nation. The area around Liberty Hill, Leander and Cedar Park have seen a phenomenal growth in the number of houses and people. As this has occurred, County services, such as EMS and Sheriff's patrol, have been required more and more to those areas. This growth pattern is also occurring in the Hutto and Taylor area as well as Florence. As EMS and Sheriff's patrol have served in these areas, they have become more and more aware of inadequate portable radio coverage from the current system. While mobile coverage is adequate county wide, your EMS responders and patrol deputies are often away from their vehicles performing their duties. As Williamson County has experienced this explosive growth, it has become necessary to consider expanding the radio system to provide adequate portable radio coverage for all Williamson County agencies.

SOLUTION

Expand the current Motorola Smartnet 800 MHz trunked system from 1 site, 10 channels to 4 sites, 15 channels, simulcast. Simulcast is an industry term that is actually a combination of the words "simultaneous" and "broadcast". What would actually occur is that when a radio is in use it causes all four sites to simultaneously broadcast, the idea being that no matter where a radio user is in the county, he or she will be within range of one of the four sites.

REQUIREMENTS

Motorola –

- install new 15 channel system at prime site with new Smartnet Simulcast Controller
- move current prime site equipment to back-up site to replace current back-up equipment
- install new 15 channel system in the Granger area as the east remote simulcast site
- install new 15 channel system in the Andice area as the northwest remote simulcast site
- install new 15 channel system in Cedar Park as the southwest remote simulcast site
- install new 6 Ghz microwave system between sites
- install new Moscad system for switching to back up site and monitoring alarms
- install complete antenna systems at all sites
- provide towers, buildings and generators
- upgrade and expand the current dispatch console

Williamson County –

- acquire land for proposed tower sites
- perform all civil work necessary at proposed tower sites
- acquire FCC licenses as required
- responsible for fees to APCO for frequency coordination

Total Project Cost	\$5,500,000
Equipment (repeaters, controllers, antennas)	\$2,331,707
Towers, Buildings & Generators	1,007,598
Microwave system	730,719
Project Management, Installation	726,859
Maintenance, System Support, Training	433,667
Factory Staging	269,450
Console upgrade and expansion	150,000
Total Equipment and Services	\$5,650,000
Total Project	\$5,650,000

LEASE/PURCHASE OPTIONS

Lease Term:	5 years	7 years	10 years
Payment Frequency	Annual	Annual	Annual
Payment Structure	Arrears	Arrears	Arrears
Lease Rate	5.93%	6.05%	6.13%
Lease Factor	0.236945	0.179453	0.136706
Lease Payment	\$1,338,739.20	\$1,013,909.40	\$772,388.90
Payment Commencement	First payment due one year after contract execution		

Upon authorization to proceed from Williamson County, Motorola will provide a Communication System Agreement, System Description, Statement of Work and detailed equipment list.

FCC licensing will be required, Motorola will assist Williamson County in applying for license, however, licensing is the responsibility of the County, associated fees to APCO are not included in the projected system cost.

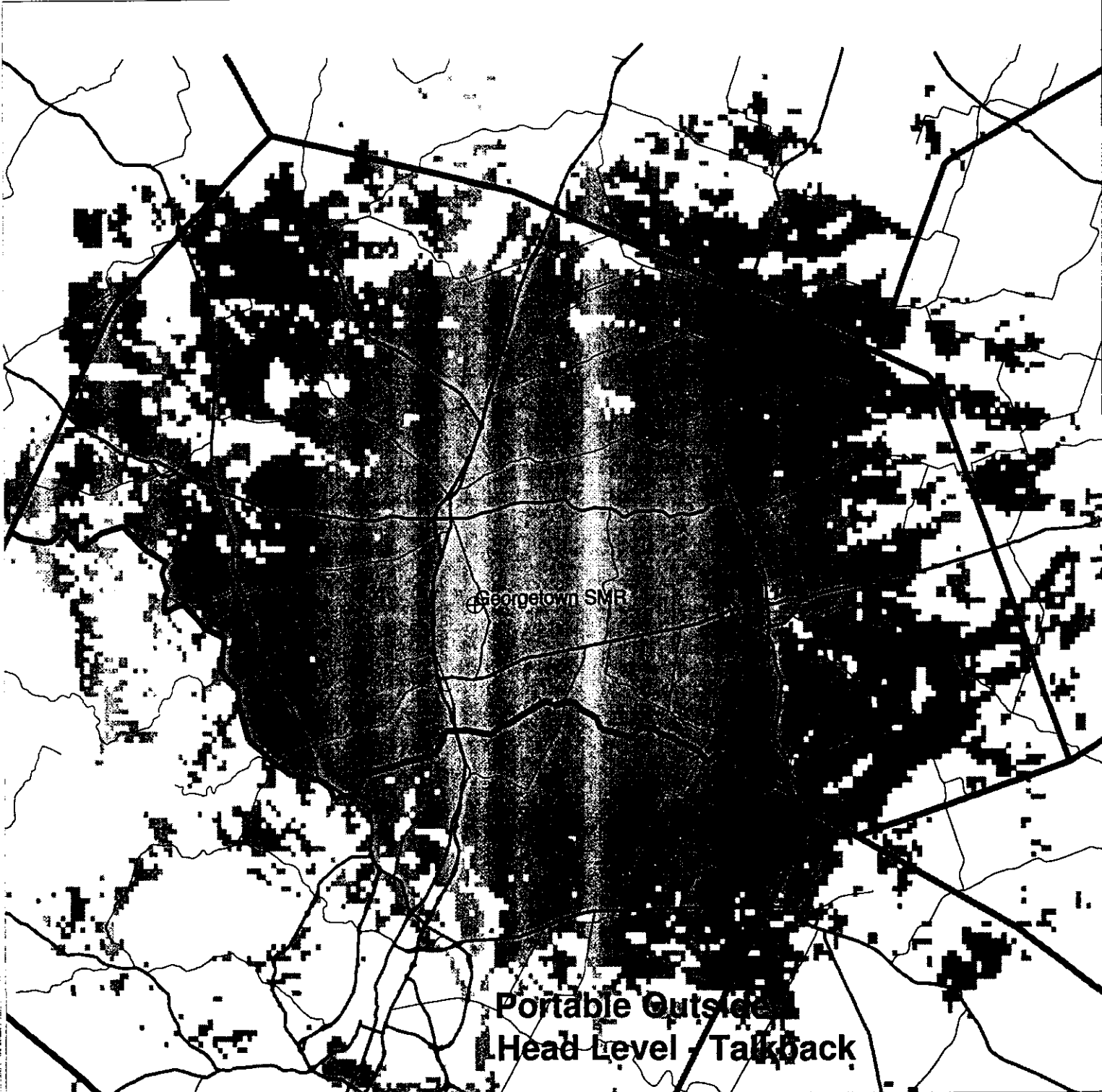
Estimated Time Frame – one year completion from authorization to proceed.

$\begin{array}{r} 1338739 \\ 5 \\ \hline 6693695 \end{array}$	$\begin{array}{r} 1,013,909 \\ 7 \\ \hline 7097363 \end{array}$	$772,388.90$
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Freq : 806.0 Mhz
 A/Ht : 450.0 Ft.
 HAAT : 489.4 Ft.

Williamson County
 Georgetown SMR

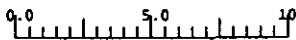
Lat : 30 34 13
 Long : -97 39 24
 Elev : 797.2 Ft.



Reliability 5

95

MOTOROLA, INC.



SCALE : 7.00 MILES PER INCH

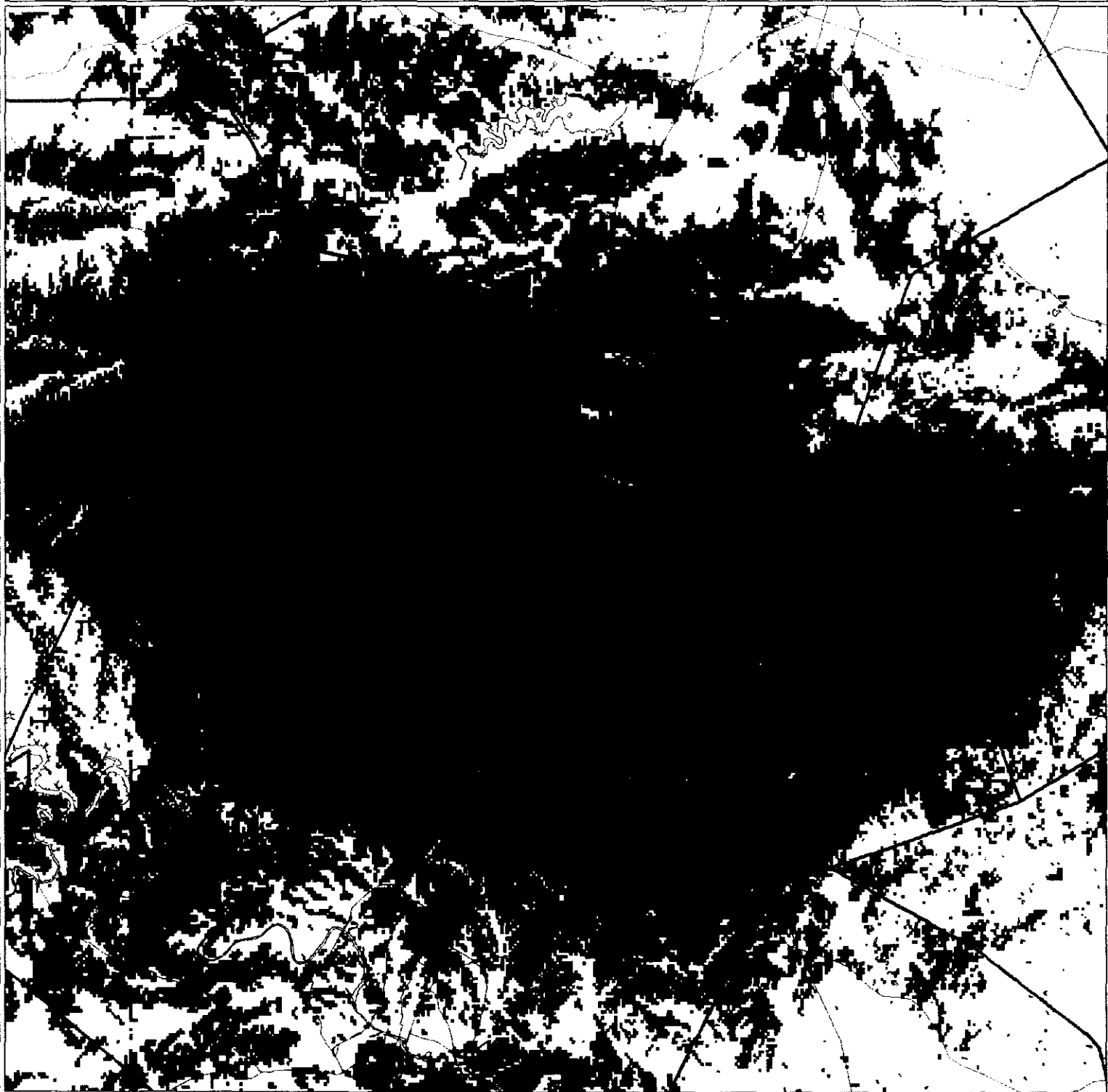
Job # : 118503947
 Engineer : cng20
 Date : 03/22/1999
 Time : 11:58:29

ANALOG PORTABLE to REPEATER W/2 ANT.
 Field Unit On Street

Base ERS : 0.08μv(-128.8dBm)
 Base Ant Az: 0.0°
 H BeamWidth: 360.0°
 Field Unit ERP : 2.1W(33.2dBm)
 Field Unit Ant Ht : 6.0 Ft.
 Field Unit Ant Type :

100

Calculated values are derived using average loss values for surroundings. Some low lying heavily wooded or urban areas may result in lower values than those indicated.



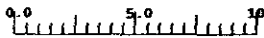
Simulcast Reliability %



95

100

MOTOROLA, INC.



SCALE : 7.89 MILES PER INCH

Job # : 1562453009
Engineer : C15342
Date : 04/19/2000
Time : 17:42:45

Simulcast Base To ANALOG PORTABLE
Field Unit On Street

Field Unit ERS : 0.35Av (-116.1dBm)
Field Unit Ant Ht : 3.3 Ft.
Field Unit Ant Type :

Assumed values are derived using average loss values for surroundings. Some low lying heavily wooded or urban areas may result in lower values than those indicated.

Memo

To: Judge John Doerfler
From: Geniva Simpson
Date: May 17, 2000
Re: Radio Expansion

Listed are possible cost for a four (4) tower expansion, that will not be listed in Motorola's bid.

< License	\$15,000
< Land Lease	\$ 12,000.00 per year
< Ground Prep For Shelters	\$ 68.00 per yard
< Fencing around Shelters	\$10.00 per foot on fence materials; \$204.00 for double six (6) foot gate; 99.00 for single gate.
< Total	Unable to determine until land approval.

AGENDA ITEM 21

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Comments from commissioners.

First Assistant County Attorney Dale Rye reported County Attorney Gene Taylor has returned to work part time after his stroke of a month ago.

COMMISSIONERS COURT ADJOURNED AT 10:25 A.M. ON TUESDAY, JUNE 6, 2000.