

March 30, 2011

The Board of Commissioners of Franklin County, North Carolina, met for a Recessed Meeting at 7:00 P.M. in the Commissioner's Conference Room located in the County Administration Building with the following Commissioners present: Chair Sidney E. Dunston, Harry L. Foy, Jr., David T. Bunn, Robert L. Swanson and Donald C. Lancaster. Vice-Chairman E. Shane Mitchell arrived at 7:22 P.M. Commissioner Penny McGhee was absent.

The topic of discussion was the County's Radio Project.

1. DISCUSSION: RADIO PROJECT

Emergency Communications Director Christy Shearin provided further information regarding the Radio Project, and estimated additional costs associated with the project. Ricky Guidry, a representative of Custom Towers and Tom Ruck, Project Manager, Harris, Incorporated, were also present. The following presentation was provided.

<p style="text-align: center;">Franklin County Emergency Communications</p> <p style="text-align: right;">Radio Project</p>	<p style="text-align: center;">9-1-1 Fund</p> <p style="text-align: right;">Radio Project</p>
<p>2007 Legislative Changes (SL 2007-383)</p> <ul style="list-style-type: none"> ▶ Prior to this legislation: <ul style="list-style-type: none"> ▶ Two 9-1-1 Accounts: <ul style="list-style-type: none"> ▶ Wireline ▶ Wireless – Audited by the NC 911 Board ▶ Effective January 1, 2008, the Wireless Account became the Emergency Telephone System (9-1-1) Fund. 	<p>Wireline Account (2007 Account)</p> <ul style="list-style-type: none"> ▶ SESSION LAW 2007-383/HOUSE BILL 1755: <ul style="list-style-type: none"> ▶ SECTION 2.(b) Any funds remaining in the Emergency Telephone System Fund or required to be remitted by a service supplier to the local fiscal officer for deposit to the fund, collected pursuant to Article 1 of Chapter 62A of the General Statutes prior to the effective date of this act, are transferred to the General Fund of the local governing entity to be used for any lawful purpose. Any local governing entity is not relieved of any prior obligation incurred for uses authorized by G.S. 62A-8.
<p>2010 Legislative Changes (SL 2010-158)</p> <ul style="list-style-type: none"> ▶ Changes to the NC 911 Board Membership: <ul style="list-style-type: none"> ▶ Equalized Public/Private Members <ul style="list-style-type: none"> ▶ Added a Fire Chief and EMS Chief to the Board ▶ Changes to the Powers and Duties of the Board: <ul style="list-style-type: none"> ▶ Enabled the NC 911 Board to establish standards: <ul style="list-style-type: none"> ▶ To provide the same level of service statewide ▶ Operating/Training Standards are in process now <ul style="list-style-type: none"> ○ "(5) A primary PSAP must comply with the rules, policies, procedures, and operating standards for primary PSAPs adopted by the 911 Board." ▶ Changes to the Funding Model and Distribution ▶ Expansion of eligible expenditures 	<p>Funding Model/Distribution Changes</p> <ul style="list-style-type: none"> ▶ Effective July 1, 2011, new funding model begins. ▶ Distribution amount is based on data from the last five years of approved eligible expenditures. ▶ FY2011 Revenue - \$450,013 ▶ FY2012 Revenue - \$292,224

SL 2010-158

Administration.—The Board must notify PSAPs of the estimated distributions no later than December 31 of each year. The Board must determine actual distributions no later than June 1 of each year. The Board must determine a method for establishing distributions that is equitable and sustainable and that ensures distributions for eligible operating costs and anticipated increases for all funded PSAPs. The Board must establish a formula to determine each PSAP's base amount. The formula must be determined and published to PSAPs in the first quarter of the fiscal year preceding the fiscal year in which the formula is used. The Board may not change the funding formula for the base amount more than once every year.

Funding Model/Distribution Changes

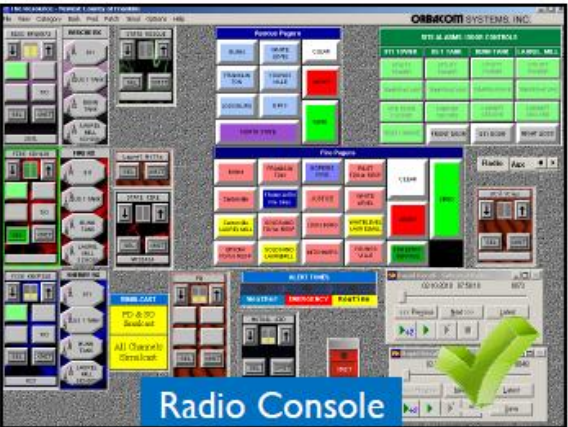
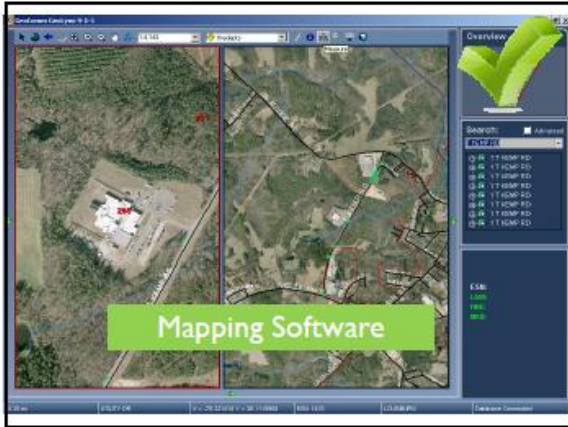
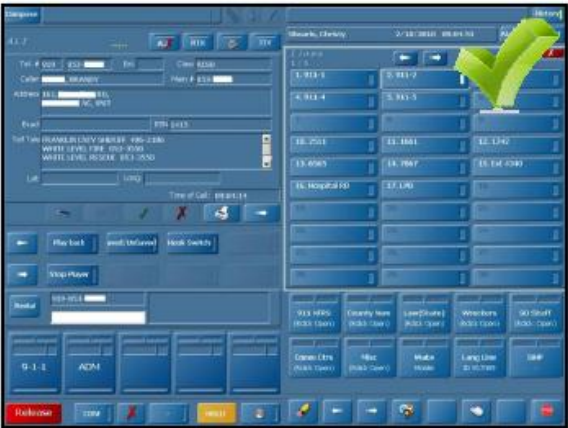
Carryforward.—A PSAP may carry forward distributions for eligible expenditures for capital outlay, capital improvements, or equipment replacement. Amounts carried forward to the next fiscal year from distributions made by the 911 Board may not be used to lower the distributions in subsection (a) of this section unless the amount is greater than twenty percent (20%) of the average yearly amount distributed to the PSAP in the prior two years. The 911 Board may allow a PSAP to carry forward a greater amount without changing the PSAP's distribution."

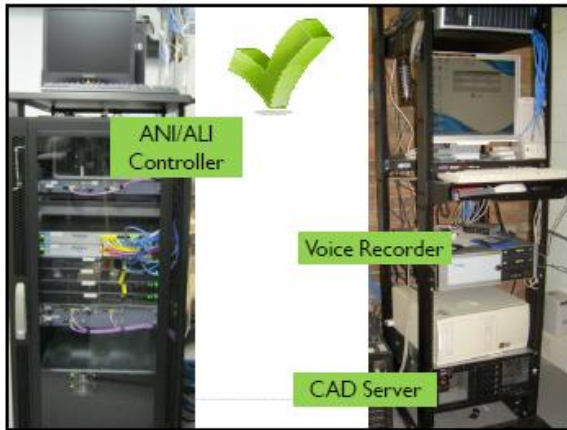
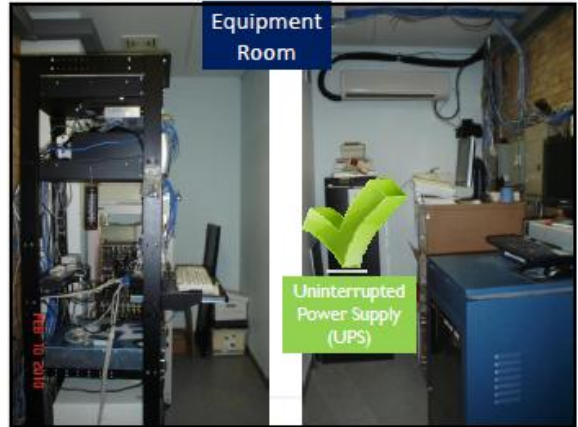
SL 2010-158

SECTION 9. Fifty percent (50%) of funds in the Emergency Telephone System Fund on the effective date of this act may be used by the local government entity to provide for public safety needs, including costs that are not eligible expenses under G.S. 62A-46. The expenditures must be made in fiscal years 2010-2011 and 2011-2012. A local governing entity is not relieved of any prior obligation incurred for uses authorized by G.S. 62A-46. All other funds in the Emergency Telephone System Fund must be used for eligible expenses under Article 3 of Chapter 62A of the General Statutes.

Eligible Expenditures

- Phone System
- Furniture
- Software
- Hardware
- Training
- Supporting Functions





Reoccurring Eligible Expenditures

Monthly:

- ▶ Language Line (Interpretation Services)
 - ▶ Average \$95.00
- ▶ Administrative Lines (1 per position)
 - ▶ 4 lines = \$450.00

Reoccurring Eligible Expenditures

Monthly:

- **911 Telephone Charges = \$8,000**
 - Monthly Service Charges = \$93.05
 - PBX/PBAX trunk - 911 = \$86.55
 - Mileage signal - 2@3.25 = \$6.50
 - Additional Charges = \$6030.00
 - 911 ANI/ALI - 10@176.00 = \$1,760.00
 - 911 ANI/ALI/SR - 16@230.00 = \$3,680.00
 - 911 ANI/ALI/SR (AT&T) - 2@226.00 = \$452.00
 - 911 DBMS Prep/Main: ILEC - 2@69.00 = \$138.00
 - Local Private Line = \$13.00
 - Wireless Charges - \$1840.00
 - E911 Wireless Service - 8@230.00

Reoccurring Eligible Expenditures

Annually:

- **Equipment Maintenance:**
 - Phones/911 - \$50,000
 - Software Maintenance
 - CAD - \$9,000
 - Mapping - \$6,000
 - EMD/EPD/EPD/ProQA - \$11,000
 - Alphanumeric Paging - \$2,000
- **Training: \$8,000**
 - EMD / EPD / EPD initial certification / recertification
 - Telecommunicator Class
 - CPR certification / recertification
 - Supervisor/ Management training




9-1-1 Fund Balance

- ▶ 2007 Fund: \$791,483
- ▶ Current Fund: \$678,150
 - ▶ 2010 50% - \$339,075
- ▶ Total: \$1,619,918

Additional Expenses/Options

Radio Project

Pilot Site



Tower Modifications Needed:

- Structural Analysis / Geotech Analysis and Design / Tower Reinforcement Materials and Labor
- Additional Land Space Needed

Estimated Costs: \$53,000

PRELIMINARY - NOT FOR CONSTRUCTION

Greenfield (Franklinton) Site

- ▶ Costs: \$350,000 - \$400,000 (estimate)
 - ▶ Land Acquisition, Site Development, Inspection, License, Fees, Tower Material and Installation (250' Self Supporting Tower)
- ▶ Next Steps
 - ▶ Harris Coverage Analysis (complete for two Parcels)
 - ▶ FAA study (30-45 days, underway for one Parcel)
 - ▶ Approval for budget to move forward

White Level Site

- ▶ Option 1: Construct New Site
 - ▶ Land Acquisition, Site Development, Inspection, License, Fees, Tower Material and Installation (410' Guyed Tower)
 - ▶ Costs: \$500,000 (estimate)
- ▶ Option 2: Lease space on Existing Tower
 - ▶ Approximately \$1M over 25 years
- ▶ Staff Recommends Option 1
- ▶ Next Steps
 - ▶ Harris Coverage Analysis
 - ▶ FAA Study (30 - 45 days)
 - ▶ Approval for budget to move forward.

911 Site

- ▶ 911 Electrical Upgrade / Generator: \$55,000
 - ▶ Electrical Service Upgrade at 911 (\$24,000)
 - ▶ Generator at 911 (\$31,000)
- ▶ Tower: Structural Analysis indicates tower will be overloaded in proposed final configuration.

911 - Current Situation

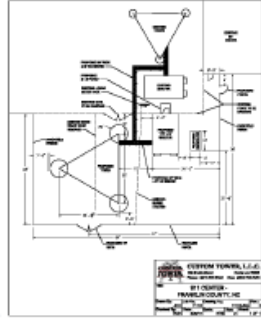
- ▶ Tower structural analysis recently completed for "final" configuration by TEP in Raleigh
 - ▶ 108% loaded for Rev F (75MPH Wind Loading)
 - ▶ 205% loaded for Rev G (95MPH Wind Loading)
- ▶ Structural does not address "interim" configuration, when both legacy and new system need to be up and running at the same time.
- ▶ Options for "interim" configuration include:
 - ▶ 40' temp extension to current tower
 - ▶ Removed from consideration based on recent structural
 - ▶ Relocate legacy equipment to temp tower (lease)
 - ▶ Build a new tower at 911 center

911 - Options

- ▶ Relocate legacy equipment to temp tower (lease)
 - ▶ Cost estimate: \$275 - \$425k
 - ▶ Includes legacy tower reinforcement (Rev F)
 - ▶ Risk: moving legacy equipment
- ▶ Build a new 400' SST Tower at 911 center (Rev G)
 - ▶ Cost estimate: \$490k
 - ▶ Includes required civils changes:
 - ▶ additional fencing / weed barrier / gravel,
 - ▶ ice bridge from legacy shelter to new tower,
 - ▶ coax / connectors / mounding kits and labor to relocate antennas from old to new tower
 - ▶ assumes normal soil for foundation
 - ▶ Allows for growth
 - ▶ STAFF / KIMBALL RECOMMENDATION

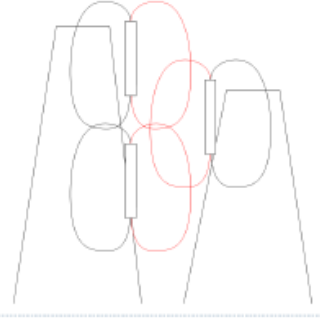
New 400' 911 Tower Proposed Site Location

- ▶ New Tower would be positioned as shown, to take advantage of space and shelter foundation (already poured).
- ▶ New Tower would hold all 911 antennas and microwave dishes, and be built to include loading for future growth.
- ▶ The legacy Tower would hold all other antennas and dishes (e.g., Highway Patrol, AT&T, Town of Louisburg, etc.).




New 400' 911 Tower Why 400'?

- ▶ VHF interference



911 Tower Why 400'?

- ▶ VHF Interference
- ▶ Antennas are overlap of (in line with) each other to take advantage of the nulls in the antenna pattern.
- ▶ Because it's not a 100% null, you need 30 feet of **vertical separation** to get enough isolation (~50 dB) to keep the antennas from interfering with each other.
- ▶ You can also get isolation (and manage interference) through **horizontal separation**. 300' of horizontal distance is needed between antennas with no gain; and a much greater distance is needed for the County's antennas (6dB+ gain).



Antenna Nulls Explanation - RC Car

- ▶ Have you ever pointed your remote control antenna directly at the RC car and watched it stop following remote control inputs? Then you move the antenna tip off the car and it starts moving again.
- ▶ There is a null at the top of the antenna, so by pointing it at the car, you are losing your RF signaling to the car.
- ▶ The antenna nulls we are discussing are the same principal. By stacking antennas over top each other you are using the nulls to your benefit and stopping the RF from affecting the antennas above or below. Even with the nulls, you still need 30' of separation to make sure you get enough isolation.

Interference Explanation – RC Car

- ▶ Have you ever had your RC car near an electric fence? Have you noticed it starts behaving oddly, every time the electric fence is energized? That's because you have interference coming from the fence which causes de-sensing of the RC Car's receiver and blocks the remote control inputs.
- ▶ Same basic principal here, except the de-sensing could be the officer calling back for help and nothing is heard at the 911 center. Or, the officer may not be able to key up on the trunked system, due to interference.

New 400' 911 Tower 911 Tower

- ▶ Next Steps
 - ▶ Harris Coverage Analysis (for final 5-site design)
 - ▶ FAA study (30-45 days)
 - ▶ Approval for budget to move forward

Other Additional Costs

- ▶ Kimball Contracted Services: \$165,000
- ▶ New Recorder: \$ 58,811
 - ▶ Savings approx \$25k
- ▶ Base Stations: \$200,000
 - ▶ Currently conducting needs assessment with departments

Commissioner Lancaster asked County Finance Director Chuck Murray to provide revenue projections from the tower sites (at a later date).

Commissioner Lancaster made a motion to reconsider a previous vote (taken February 21, 2011) to deny the approval of the Mobile CAD system as part of the radio project. The motion was seconded by Commissioner Swanson and carried approval 5 to 1, with Commissioner Bunn voting "NO."

For clarification purposes, the Board voted on an estimated cost, including land costs. Finite costs will not be available until more information is available regarding the purchase of land and successful negotiations. The numbers provided to the Board are worst case scenarios according to Mrs. Shearin.

Commissioner Mitchell made a motion to incorporate the new numbers (additional expenses) with the tower construction, total expected cost not to exceed \$10,702,924 for the 911 communication project. The motion was seconded by Commissioner Lancaster. The motion duly carried with all present voting "AYE." The vote includes approval of the Mobile CAD system.

Need approval of additional expenses which includes CAD.

2. CLOSED SESSION

Commissioner Mitchell made the motion to enter into closed session pursuant to NCGS143-318.11 (a)(5) to establish, or to instruct the public body's staff or negotiating agents concerning the position to be taken by or on behalf of the public body in negotiating the price and other material terms of a contract or proposed contract for the acquisition of real property by purchase, option, exchange, or lease. The motion was seconded by Commissioner Swanson. The motion carried 5 to 1, with Commissioner Foy voting "NO."

At approximately 8:41 P.M., Commissioner Swanson made the motion to enter back into open session, seconded by Commissioner Bunn. The motion duly carried with all present voting "AYE."

It was announced that no action was taken as a result of the closed session.

The Board was then asked to select a date for a joint session with the Town of Franklinton. The following dates will be considered.

- April 11, 2011 at 7pm
- April 20, 2011 at 7pm (preferred)
- April 25, 2011 at 7pm

At approximately 8:50 P.M., Commissioner Mitchell made a motion to adjourn, seconded by Commissioner Bunn. The motion duly carried with all present voting "AYE."

Sidney E. Dunston, Chair

Kristen G. King, Clerk to the Board