Towns of Boxborough and Littleton, Massachusetts

Feasibility Study for a Regional Emergency Communications Center (RECC)

Executive Summary

June 13, 2013
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Executive Summary

Boxborough and Littleton together present a nearly ideal environment for implementation of a Regional Emergency Communications Center (RECC).

- A record of success in cooperating in other, significant functions including but not limited to the Littleton Electric Light and Water Department as well as the 495 Regional Technology Center Economic Target Area.
- Strong working relationships among both Towns’ Town Administrators, Police Chiefs and Fire Chiefs. In fact, the Police and Fire Chiefs in Boxborough began their respective careers in Littleton.
- Established operational policies and procedures where both Towns support each other. As one example, each Town currently responds to all calls for fire services in the other town.
- The use of the same vendor’s software system for Computer-assisted Dispatching (CAD) and Records Management Systems (RMS) in both Towns’ Police and Fire Departments.
- The availability of the established dispatching facility at the Littleton Police Department’s new building with ample capacity to provide the two positions needed for staffing the dispatch function in the RECC.
- The capability of the Littleton Electric Light and Water Department to support the networking and communications infrastructure required between the two Towns.
- Contiguous borders.
- Similarity in their demographic characteristics.

This Feasibility Study arose from the Towns’ recognizing both (1) the presence of these positive elements and (2) the significant, shared benefit to public safety that both thought might be realized.

Boxborough, on behalf of itself and Littleton, applied for financial assistance from the Commonwealth of Massachusetts State 911 Department’s Regional Public Safety Answering Point and Regional Secondary Public Safety Answering Point (PSAP) and Regional Emergency Communications Center (RECC) Development Grant program in March, 2012 and received notice of award of a grant of $28,400 on June 28, 2012. This financial assistance funded 100 per cent of the cost of this Feasibility Study. Webb Consulting Services, LLC of Canton, Massachusetts then was awarded the contract for this Feasibility Study.

This Feasibility Study also examines the possible addition to the RECC of one town in the same population range as Boxborough and Littleton, recognizing the economies of scale and fiscal benefit that might accrue to all three of the participating towns.
The Towns’ scope of work for this Feasibility Study focused on seven areas:

1. Identify existing conditions - communications equipment, infrastructure, personnel and space.
2. Evaluate impact of regional approach to 911 dispatch services.
3. Define potential impact in services provided to Police, Fire, and EMS.
4. Summarize potential additional costs and or cost savings.
5. Define a plan to create a regional dispatch system to serve the participating communities as well as future expansion potentials (communities and equipment).
6. Recommend technology plan.
7. Define operational plan for Regional Emergency Communications Center.

It is important to make certain observations about the organization and scope of this Feasibility Study.

- It recognizes the interdependence of the topics with which it is concerned. The major issues of site, staffing, technology and financing are all closely interrelated: all share the same origin in scale.

- It recognizes the nature of the RECC as a start-up enterprise, needing either (1) a new intermunicipal agreement (IMA) between Boxborough and Littleton pursuant to Massachusetts General Laws Chapter 40, Section 4A or (2) new enabling legislation amending the Massachusetts General Laws to become a successful reality.

- It appreciates the critical nature of emergency communications and the professionalism of those dedicated to this service.

- It applies wherever possible the widely recognized principle of best practice. This looks at how various aspects of the RECC, from training of its personnel and implementation of standard operating procedures to its deployment of communications and information technology, compares with the state of the art among comparable agencies in the United States. This insight draws upon the combined experience of the consulting team in more than 180 public agencies in Massachusetts and across the United States.

- It applies the concept of strategic positioning. This means that the RECC, through its Board of Directors, should be taking actions now in such areas as policy-making and procurement which establish the foundation for the RECC to function both in the short and long terms as a high-performance organization. Strategic positioning for the RECC also considers changes which may occur in its environment such as the impact of growth in its membership, changes in technology, or other statutory, regulatory or judicial factors. Strategic positioning is often characterized as “buying smart, not cheap.”

This Feasibility Study followed a careful, systematic approach in addressing the full scope of work of this engagement. Key tasks here included:
• Conducting a Project Organizational Conference on the morning of Monday, January 7, 2013 at the Littleton Police Department with a group of about 10 key personnel from Boxborough and Littleton. This meeting was held to establish a common understanding of the specifics of the project plan and assure that all parties had clear agreement on the conduct of the project.

• Reviewing various documents such as: (1) the previous reports related to the feasibility of a RECC by Municipal Resources Inc. and L. R. Kimball; (2) collective-bargaining agreements and job descriptions related to dispatching; (3) the National Fire Protection Association’s (NFPA) 1221, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems, 2013 Edition; (4) the Association of Public-Safety Communications Officials-International, Inc.’s (APCO) Project 33, Revised Minimum Training Standards for Public Safety Telecommunicators; and (5) APCO Project 40, Responsive Efforts To Address Integral Needs in Staffing (RETAINS).

• Working with the Towns to organize two Subcommittees: (1) Governance, Organization, Staffing and Finance; and (2) Information Technology. The Subcommittees met for the purpose of airing a wide range of ideas regarding the Feasibility Study. These sessions resulted in full and frank discussion which was very helpful in the execution of this engagement. The consensus among the staff of the Towns reached in these meetings and the information elicited were both fundamentally important to the formulation of key findings and recommendations of this Feasibility Study. About 20 individuals participated in meetings of the Subcommittees.

• Interviewing a total of 14 personnel from Boxborough and Littleton, mostly in their respective offices (see Appendix A, List of Interviewees by Town). These interviews were critical to providing the particular perspective of these individuals and agencies which formed a significant part of the informational foundation for this Feasibility Study. Many subsequent visits and conversations took place to address various aspects of this Feasibility Study in greater detail. The consulting team also reached out to current and prospective contractors, often at the suggestion of the Towns’ officials, in order to obtain critical information in such areas as radio and communications infrastructure as well as information technology.

• Meeting with key officials of Boxborough and Littleton on April 4, 2013 to review the draft of the Feasibility Study, discuss its findings and recommendations, and enable the Towns’ personnel to provide input and comment for incorporation into the final product. In addition, the draft-review meeting elicited feedback from the attendees regarding the completeness and veracity of the information presented by Webb Consulting Services plus comments on how to enhance the quality and value of the Feasibility Study.

• Revising the Feasibility Study as a result of the draft-review meeting and preparing it for final presentation.
This process resulted in full and frank discussion. All aspects of this Feasibility Study have been reviewed and discussed thoroughly with the participants. As well, each of these tasks contributed significantly to the development of the Feasibility Study.

Recommendations for funds are presented on the basis of a five-year lifecycle. This has the advantage of combining all costs into a single framework, based on the Commonwealth of Massachusetts Uniform Massachusetts Accounting System (UMAS) and producing an average annual cost over five years. In this way, the Towns will be able to make well informed decisions regarding the fiscal impact of membership. In addition, these financial requirements are then used to build the billing model included in this Feasibility Study. This billing model, based on percentage distribution of population between Boxborough and Littleton, has been reached by consensus among key staff of both Towns as part of the work of the Governance, Organization, Staffing and Finance Subcommittee.

This Feasibility Study makes specific recommendations for funding. At the same time, one is obliged to be conservative in expectations regarding the availability of funds from the U.S. Government, the Commonwealth or other sources. The Towns and the RECC should make every possible effort to secure intergovernmental and extra-governmental funding while recognizing the well-known fiscal constraints facing the State and Federal governments.

Three main issues face Boxborough and Littleton in the transition to the new RECC.

1. In the absence of enabling legislation, no governmental entity currently exists which can receive or expend funds for this purpose. Concurrent with this Feasibility Study, enabling legislation to authorize RECC’s State-wide was in its final stages of consideration by the General Court.

2. Notwithstanding the absence of enabling legislation, Boxborough and Littleton can proceed to establish the RECC by means of an intermunicipal agreement (IMA), which is a model that has been used to establish RECC’s between other municipalities in Massachusetts. Littleton would be the host community for the IMA.

3. While this Feasibility Study recommends that all dispatchers in both Boxborough and Littleton be retained in order to have two positions fully operational at all times, there will be transitional issues. These regard such things as establishing an appropriate framework for management and supervision as well as the integration of these personnel into two-person teams where they have been accustomed for many years to operating as single dispatchers.

At the same time, several factors facilitate the launch of the RECC in terms of both lead time and cost.

1. The only major, new capital or operating cost is the construction and maintenance of the radio and communications infrastructure.
2. No substantial expenditure is required to prepare the dispatch area at the Littleton Police Department, which is in “move in” condition.
Relatively limited costs are involved in consolidating computer technologies since both Police and Fire in Boxborough and Littleton already use the same computer system from TriTech/Information Management Corporation (IMC) for their Computer-assisted Dispatching (CAD) and Records Management Systems (RMS), including mobile computing.

Dispatchers in both Boxborough and Littleton have been using the IMC CAD application for many years. Thus, the continued deployment of this same system in the new RECC should be able to be accomplished without significant time or cost for training involved.

This Feasibility Study, then, sees the RECC going into operation about six months from the date of organization of the RECC. This is based mainly on the time required to (1) procure and deploy the radio and communications infrastructure and (2) complete the conversion and consolidation of the Towns’ IMC computer systems onto a single RECC system. Not more than a few months should be required for all other tasks related to the launching of the RECC.

Most important, the participating agencies’ key staff have shown exceptional interest in seeing the RECC materialize and succeed. Their dedication will be as critical as any other factor in having the RECC be as successful as possible and making the effort required to implement change.

**KEY FINDINGS AND RECOMMENDATIONS OF THE FEASIBILITY STUDY**

The paragraphs which follow in this Executive Summary present key findings and recommendations of this Feasibility Study.

1. The RECC should bring substantially enhanced emergency services for Boxborough and Littleton. This occurs mainly through:
   - Establishing two-deep coverage of dispatching positions at all times where each Town now only has one dispatcher on duty and has difficulty responding appropriately to such occurrences as simultaneous calls for Police, Fire or EMS services, or major incidents.
   - Having a working RECC Manager with overall, direct responsibility for operations, reporting directly to the RECC’s Board of Directors.
   - Implementing state-of-the-art information and emergency-communications technology, building on the information systems, fiber-optic networks, radio and communications technologies already in place in each Town, respectively.

2. The RECC would be financially feasible for Boxborough and Littleton only if it should receive full funding of its one-time costs, mainly for $1,393,469 in emergency-communications infrastructure and $138,962 in the RECC’s computer technology. Otherwise, the cost of the RECC would be much higher than what each Town now pays.

3. The addition of a third town in the same population range as Boxborough and Littleton is also effectively required for the RECC’s fiscal feasibility, significantly reducing the cost that each of the three towns individually would pay otherwise.
4. The allocation of the RECC’s operating and capital costs between Boxborough and Littleton is based on using percentage of population as recommended by both Towns’ key staff. This can be changed from year to year by the RECC’s Board of Directors.

5. While the RECC’s main purpose is providing emergency-communications services, for Boxborough and Littleton together 76% of all calls now received are non-emergency.

6. The dispatch area of the Littleton Police Headquarters is in “move in” condition with two, well-equipped dispatching consoles, fully able to handle the RECC’s two-deep configuration of dispatchers at all times which this Feasibility Study recommends.

7. Concurrent with the drafting of this RECC Feasibility Study, legislation was pending to amend the Massachusetts General Laws to enable the organization of this kind of regional emergency communications agency on a State-wide basis.

No such law exists today, leaving the Towns with no statutory basis to provide the two critical elements of its governance: the institutional platform and the organization and functioning of the governing body.

Discussions with key officials of Boxborough and Littleton during the course of this RECC Feasibility Study made clear that, even with the enactment of the new State-wide legislation, the two Towns here would prefer to proceed under an intermunicipal agreement (IMA) to establish the RECC and have it hosted by and function as a department of the Town of Littleton. While Boxborough and Littleton could enter into an IMA for the RECC now, there is an outstanding question regarding whether the Towns could enter into an IMA after enactment of the RECC legislation.

8. The “Go Live” date for the new RECC would be about six months from the execution of the IMA by the Towns. This is a function mainly of the time needed to:

   • Procure and implement the networking, radio and communications infrastructure, which is expected to take about six months;
   • Consolidate the computer systems now used by both Towns. While Boxborough and Littleton both use TriTech/IMC as their vendor for Police and Fire Computer-aided Dispatching (CAD) and Records Management Systems (RMS) as well as mobile computing, various tasks are expected to take six months to complete. Conversion alone will take four months with a fifth month for testing and training.

9. Capital costs which this RECC Feasibility Study identifies amount to $1,532,431. Of this amount, $1,393,469 is for networking, radio and communications infrastructure and $138,962 is for consolidation and enhancement of computer systems. The RECC’s Board of Directors
and the Town of Littleton together will need to decide how best to finance these capital costs, also looking to their financial advisor and legal counsel for input in the context of both the new State-wide RECC legislation and the respective terms in years authorized currently for various purposes by the Massachusetts General Laws.

10. The RECC will need to decide on a minimum required term of membership, if any. There are two main reasons for this minimum term.

- To assure that the capital obligations of the RECC are met.
- To emphasize the commitment that the towns have to making the RECC work for the longer term.

11. The RECC needs to decide how to address the financial obligations of any additional municipalities which may wish to join the RECC after its initial organization. This would apply to such things as how the new municipality’s assessment would incorporate a fair share of capital costs which may already have been paid by the original members.

12. The RECC’s Board of Directors ought to be representative of its major stakeholders, including three voting members from each Town:

- The Town Administrator.
- The Police Chief.
- The Fire Chief.

No designee should be allowed for any member: the presence of the member themselves should be required for a quorum and all votes.

13. The RECC should have as a goal from the outset its achieving and maintaining high performance measured in such ways as accreditation from the Commission on Accreditation for Law Enforcement Agencies (CALEA) or other professional organizations.

14. The RECC should fund membership for itself, its Board of Directors and all staff in the Association of Public-Safety Communications Officials-International, Inc. (APCO), the National Emergency Number Association (NENA) and other professional organizations of specific value to the RECC. Achieving and sustaining high performance requires that the RECC, its leadership and all employees have access to state-of-the-art knowledge about various aspects of emergency communications and other disciplines related to the RECC’s policy-making, management and operations.

15. Staffing for the RECC has several key characteristics:

- The nine current dispatchers’ positions, five in Littleton and four in Boxborough, will be maintained with compensation for all using Littleton’s existing collective-bargaining agreement.
Because all of the dispatchers from Boxborough and Littleton already use the IMC computer system for CAD and RMS, no extensive training in this system or transition is required.

The RECC will establish two-deep coverage of dispatching positions at all times where each Town now only has one dispatcher on duty. This higher level of staffing will greatly enhance the ability of both Towns to respond appropriately to such occurrences as simultaneous calls for service or major incidents.

A new position of working RECC Manager is recommended. This individual will have overall, direct responsibility for operations, reporting directly to the RECC’s Board of Directors. This individual will supervise the daytime tour.

The current position of Communications Supervisor will be maintained and supervise the early-night tour.

The dispatchers’ efficiency and effectiveness will be enhanced by the implementation of the state-of-the-art information and emergency-communications technology which this Feasibility Study recommends. This builds on the information systems, fiber-optic networks, radio and communications technologies already in place in each Town, respectively.

The Town of Littleton will provide support services for the RECC including such things as financial management and human-resources administration.

Support for the combined information-technology (IT) infrastructure will be provided by the staff of Boxborough and Littleton who are currently assigned with additional support from the Littleton Electric Light and Water Department (LELWD).

16. Training on an on-going basis will be critical both to the successful launch of the RECC and to its on-going success.

17. All of the RECC’s information and communications systems must meet Commonwealth and U.S. Government standards in such areas as data exchange and interoperability.

18. All frequencies that now appear in each Town’s Police or Fire Department need to be carried over to the new RECC in order for it to have complete capability to communicate with all emergency-services agencies and personnel.

19. All present remote radio sites, towers and poles will need to be reused. This is an essential element of connectivity for the new RECC, helping to assure the same coverage for Boxborough and Littleton as they presently have with no need to renegotiate private sites or build duplicate facilities.

20. A future engineering study will be needed to determine a large level of detail which goes far beyond this Feasibility Study. This engineering study will need to address such issues as:
• Microwave sites in each Town and related costs.
• Line of sight, path and hops.
• Final costs of fiber optic connectivity including such things as location and amount of splices, route build out, electronics and available dark fiber.

21. The Town of Boxborough dispatch should serve as the backup site for the RECC.
• It provides appropriate physical separation from the Littleton Police Department’s site.
• It has two console positions now in use and available as needed with the RECC in the future.
• It can host a mirrored server for the IMC system with regular backup from the identical server in Littleton over the fiber-optic connection between the two Towns.

22. The RECC must be sensitive to the emergency-communications needs of specific populations such as the handicapped, senior citizens and linguistic minorities.

23. The Town of Boxborough will need to make decisions regarding such policies as whether or when it may wish to have its Police building unstaffed. This may involve how to provide such services as responding to walk-in traffic or meeting the provisions of the Commonwealth’s Safe Haven Act for protection of newborn infants. This RECC Feasibility Study includes funds for 7/24 video-camera monitoring of the Boxborough Police building from the RECC in Littleton. The close proximity of the Boxborough Fire Department next to the Police Department could also be part of these considerations.

24. This Feasibility Study presents a complete, line-item budget for five years, including the cost of all anticipated operating and capital expenditures, conforming with the Commonwealth’s Uniform Massachusetts Accounting System (UMAS). It incorporates expected increases in various costs as a result of inflation, recognizing the inherent uncertainty in this effort.

25. The RECC should pursue all available avenues in seeking financial assistance from the Commonwealth and U.S. Government. The Commonwealth’s RECC Development Grant program may be the most promising here.

26. This Feasibility Study presents detailed sets of information on financial management which enable Boxborough and Littleton to evaluate options for services or finances as these may emerge over time. This includes scenarios involving varying levels of grant assistance, the possible participation of a third town and changes in configuration of services.

27. The rollout plan in this Feasibility Study takes a conservative view of the time required for each task in the development and implementation of the RECC. This is appropriate in order to be sure that the launch of the RECC in fully operational status proceeds as well as possible.
Appendix A
List of Interviewees by Town
List of Interviewees by Town

Boxborough:

Town Administrator Selina Shaw
Fire Chief Randolph White
Police Chief Warren Ryder
Town Planner Elizabeth Hughes
Information Systems Specialist Matthew Frost

Littleton:

Town Administrator Keith Bergman
Assistant Town Administrator/Director of Budget and Finance Bonnie Holston
Fire Chief Scott Wodzinski
Deputy Fire Chief Steele McCurdy
Deputy Police Chief Matthew King
Communications Officer Sean Coffey
Electric Light and Water Department General Manager Savas Danos
Electric Light and Water Department Information Systems Manager Alan Brown
Information Systems Manager Nancy Glencross