

REGIONAL EMERGENCY COMMUNICATIONS CENTER FEASIBILITY STUDY

**GRAFTON, HOPKINTON, HUDSON,
MARLBOROUGH, NORTHBOROUGH,
SOUTHBOROUGH, & WESTBOROUGH, MA**

**EDWARD J. COLLINS, JR.
CENTER FOR PUBLIC MANAGEMENT**

AUGUST 8, 2022

Edward J. Collins, Jr. Center for Public Management

MCCORMACK GRADUATE SCHOOL OF POLICY AND GLOBAL STUDIES



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Executive Summary

The City of Marlborough and the Towns of Grafton, Hopkinton, Hudson, Northborough, Southborough, and Westborough requested the State 911 Department to conduct a Study of the Feasibility of establishing a Regional Emergency Communications Center (RECC) for all of the communities. The State 911 Department authorized the Edward J. Collins, Jr. Center for Public Management to conduct the Study as part of its inter-governmental services agreement (ISA) to aid the State 911 Department in its PSAP regionalization and RECC Development efforts.

Recommendations

The Study participant's metrics that impact on the demand for emergency call-taking and dispatching services are provided in the following chart.

Municipality	2020 Population	2020 Total 911 calls
Grafton	19,664	3,497
Hopkinton	18,758	2,995
Hudson	20,092	4,380
Marlborough	41,793	11,176
Northborough	15,741	4,375
Southborough	10,450	2,023
Westborough	21,567	8,735
Total	148,065	37,181

Interviews revealed that there is a recognition of the significant benefits of regionalizing the emergency communications call taking and dispatching services. The interviewees identified the following strengths or benefits that Regional Emergency Communications Centers can provide.

<ul style="list-style-type: none"> • New equipment to be standardized and maintained** • Interoperability would be provided with municipalities who they provide mutual aid with • Standardized training and policies** • Standardized response procedures/protocols*** • Ability to manage multiple calls for service (surge capacity)***** • Cost savings to municipality* • Enhanced working relationships with member municipalities • PD not having to deal with dispatch personnel issues • More professionalization (staffing, equipment, and training)** • More personnel/staffing* 	<ul style="list-style-type: none"> • Staffing – struggle with turnover • New equipment, better coverage, and interoperability with other municipalities/mutual aid • Allocation of resources -s more efficient • RECC is the future • Focus on only call taking and dispatching services • Accreditation of RECCs • More professional personnel for dispatch • Continuity of dispatchers/future growth • Standardized/use of the same dispatch protocols • Resources – more dispatch personnel for major events and increased surge of 911 calls
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<ul style="list-style-type: none"> • Enhanced mutual aid • Consistency of services • Improve efficiencies • Depth of personnel (shift coverage) • Dedicated personnel with focus on dispatch services 	<ul style="list-style-type: none"> • Cost Savings, Financial Support – state contributions to center development and recurring costs • Enhanced Mutual Aid • More efficient service to the public within dispatching and emergency response
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Cost Benefit Analysis Summary

The Table below documents the savings that are anticipated from the economy of scale of establishing a RECC, a cost-sharing effort between all six communities, as well as a grant funding effort for recurring costs and a separate effort through Development Grants for capital costs/equipment to establish a RECC and to replace outdated equipment.

Community	Recurring Cost Savings	Non-Recurring Savings	Total Savings
Grafton	\$154,154.09	\$650,000.00	\$804,154.09
Hopkinton	\$589,536.42	\$416,666.67	\$1,006,203.09
Hudson	\$683,040.19	\$100,000.00	\$783,040.19
Marlborough	\$278,853.92	\$351,137.97	\$629,991.89
Northborough	\$456,751.25	\$166,666.67	\$623,417.92
Southborough	\$371,553.94	\$316,666.67	\$688,220.61
Westborough	\$540,405.17	\$100,000.00	\$640,405.17
Total Savings	\$3,074,294.98	\$2,101,137.98	\$5,175,432.96

Recommendations

The Towns of Grafton, Hopkinton, Hudson, Northborough, Southborough, Westborough, and the City of Marlborough are suited quite well to establish or RECC or join the State 911 Department operated Wireless Center and Regional Emergency Communication Center (RECC). Both options provide financial and operational benefits that are recognized by the leadership of the seven communities.

Each community should make their own decision regarding the two options. The specific findings and recommendations are as follows:

- It is feasible to Regionalize Grafton, Hopkinton, Hudson, Northborough, Southborough, Westborough, and the City of Marlborough into the State 911 Department Wireless/RECC that will be established in the region of these seven communities. A significant benefit is financial as the communities would not have to pay for the call taking and dispatching services. The operational benefit is the expertise that the State 911 Operations Division brings to the operations of the center. In the former Essex RECC and now North Shore RECC during the transition to the State 911 Department provided leadership and expertise to the center that has allowed the center to be an Accredited Emergency Communication Center and is providing excellence in call taking and dispatching services. Due to the timing of the development of this RECC and the potential RECC/Dispatch District which both would be approximately twenty-four (24) to thirty (30) months

we would recommend that this should be the Option One as the State 911 department would be responsible to plan and fund the development of the RECC and to staff the site according to State 911 Department standards and operate with the best practices and operational protocols. The purpose of doing such a move would be to provide:

- Standardized/use of the same dispatch protocols
 - Resources – more dispatch personnel for major events and increased surge of 911 calls
 - Cost Savings, Financial Support
 - Enhanced Mutual Aid
 - More effective call taking and dispatching services for the public and emergency response
- It is also feasible to Regionalize Grafton, Hopkinton, Hudson, Northborough, Southborough, Westborough, and the City of Marlborough into one of the three sites that were identified during the feasibility study process. This would be considered Option Two. The funding for such a site would be provided by the competitive State 911 Department Development Grant funds for the conversion of the site to a state-of-the-art RECC. Funding for the recurring costs would be provided by State 911 Department Support and Incentive Grant awards. RECCs operate with excellent dispatch protocols. Operationally the purpose of doing such a move would be to provide:
 - Standardized/use of the same dispatch protocols
 - Resources – more dispatch personnel for major events and increased surge of 911 calls
 - Cost Savings, Financial Support
 - Enhanced Mutual Aid
 - More effective call taking and dispatching services for the public and emergency response
- Prior to making decision regarding joining or developing a RECC, we would recommend each community team (administrator/manger/mayor, Police and Fire Chiefs) to visit one or more RECC, if you have not already done so, that is operating in the state to see the RECC in operation and to ask questions that are important to them and their community.
 - Develop an outreach program to all the communities to inform them of the enhanced capability of the RECC and their rationale for joining or developing a RECC.
 - Develop a plan to assess the administrative and security needs for each of the Police and Fire Departments to ensure that there is no loss of the services provided to the public.
 - Develop a Transition Training Plan to incorporate all elements of required dispatch training as required by State 911, CAD/RMS, Dispatch Protocols, EMD and community knowledge. Ensure that the transition training is provided to the Police and Fire personnel for the changes to the revised/new dispatch protocols.
 - Utilize the insight of the dispatchers and public safety personnel to develop excellence in operational guidelines/practices for the citizens of both communities and their public safety services.
 - Assist the RECC that the town choses to provide the emergency communications services for the

State 911 Development Grant to provide the necessary equipment and services for the appropriate transition.

Benefits of Regionalization

Relying upon interviews that were conducted in forty-two (42) communities in Massachusetts with one hundred ninety-eight (198) Police and Fire Chiefs, their command personnel, town managers, and dispatch personnel, the most cited benefits of regionalization of dispatch services were as follows:

- Standardized/use of the same dispatch protocols
- Resources – more dispatch personnel for major events and increased surge of 911 calls
- Cost Savings, Financial Support – state contributions to center development and recurring costs
- Enhanced Mutual Aid
- More effective call taking and dispatching capability for the public and emergency response

Introduction

The Towns of Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough, and Westborough requested the State 911 Department to conduct a Study of the Feasibility of establishing a Regional Emergency Communications Center (RECC) for all of the communities or to join a future State 911 Wireless Center/RECC. The State 911 Department authorized the Edward J. Collins, Jr. Center for Public Management to conduct the Study as part of its inter-governmental services agreement (ISA) to aid the State 911 Department in its PSAP regionalization and RECC Development efforts.

The study included investigating the technical, operational, and cost requirements to establish a RECC, the potential locations of the RECC including an existing RECC, and the governance options for the communities. This includes, but is not limited to, the cost of set up, technology requirements, identification of a potential site, cost of operation, and adherence to the State and National Standards for Dispatch Centers.

The Collins Center was established in 2008 in the McCormack Graduate School of Policy and Global Studies to further the public service mission of the University of Massachusetts Boston and assist municipalities in implementing best practices, often using data analytics. The Center provides technical assistance to municipalities and state agencies on all aspects of public management.

Methodology

The Collins Center adhered to the following methodology in collecting and analyzing data and information from the existing 911 PSAP services at the Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough, and Westborough to assess the feasibility of developing a RECC and also gathered information on existing RECCs that may have space and capability to add the number of communities in this study.

Methods for collecting information relied on interviews, on-site assessments, and document review. The process was as follows:

- Kick-Off meeting with the principals from all seven communities
- On-site visits which included interviews with the community police and fire chiefs and their designated personnel. If town managers request an interview, that interview will be scheduled
- Collection of relevant data from each site, including
 - Equipment used
 - Staffing levels and training
 - Capacity/ability to accommodate RECC
 - Research/planning
 - Current financial costs for dispatch services
 - Call volume
 - Additional administrative benefits
- Analysis and preparation of the report

- Review of draft report with the Project Team
- Completion of final report
- Review of draft report with the Police and Fire Chiefs, and the Town Administrator/Manager of each municipality

Current Dispatch Environment

Municipal metrics that impact on the demand for emergency call taking and dispatching services for a RECC for the communities in this study are provided in the following chart.

Municipality	2020 Population	2020 Total 911 calls
Grafton	19,664	3,497
Hopkinton	18,758	2,995
Hudson	20,092	4,380
Marlborough	41,793	11,176
Northborough	15,741	4,375
Southborough	10,450	2,023
Westborough	21,567	8,735
Total	148,065	37,181

Town of Grafton, Massachusetts

The Grafton Public Safety Answering Point (PSAP) is located at the Grafton Police Department located at 28 Providence Road, Grafton, MA 01519 and overseen by the Grafton Police Department. The dispatch personnel provide call taking and dispatching for all emergency calls within the Town of Grafton.

The Public Safety Dispatch Center is equipped with two console positions, both are 911 capable.

The Center is staffed by three (3) full time and three (3) part-time civilian dispatchers overseen by the Police Department. There is primarily one dispatcher on duty for each shift. The Grafton Dispatch Center Budget for FY2022 is estimated at \$295,000.00 that includes OPEB. The Grafton metrics that impact their call taking and dispatching services are as follows:

Grafton Metrics (2020)	#
Population	19,664
Total 911 Call Volume	3,497
Total Calls for Service	18,170

Technology data was collected to identify the equipment that was currently being used and its condition by the Grafton Dispatch Center and the Grafton Police and Fire Departments for their radio systems, dispatch consoles, telephone systems, and software used for Computer Aided Dispatch (CAD) and Records Management System (RMS). Below is a chart that depicts the information collected. The technology information collected was used to identify what equipment would need to be replaced or enhanced to achieve interoperability between the RECC and the public safety radio systems. The Fire Department relies on an outdated low band radio system for communications to the mobile units. Dispatch makes first contact with FD via text to cell phone/"I Am Responding" APP for fire/EMS related incidents.

Grafton Technology Elements	Notes/Comments
Radio System	
Manufacturer	MOTOROLA
Frequencies	Police Primary 471.675 PL XA, 71.9 Police Old LB 45.10 PL 6z, 167.9 Fire LB 46.48 PL 6z, 167.9 Fire UHF 482.9875 DPL 662 DPW LB 45.40 PL 6Z, 167.9
Age and Conditions	Main Console installed 2006 Some components replaced in 2016 PD Good condition – yearly maintenance program FD low band system outdated and beyond end of life
Interoperability municipality wide Regional	LPS 7 radio in console. Additional UHF & VHF radios for contiguous communities
System Coverage (Gaps)	South Grafton area gaps as well as North Grafton at Westborough Town line.
Tower Sites	Primary repeater, secondary repeater and three receiver stations.
Fiber	No fiber. All sites on copper lines
Number, age and make of mobiles	PD: 13 - Motorola XPR5550e mobile radios – 1-5 years old. FD: 15 – Kenwood mobile radios – 16 to 20 years old
Number, age and make of portables	PD: 25 - Motorola XPR7550 portable radios – 5 years old FD: 13 – Motorola APEX 4000 portable radios – 4 years old FD: 3 HP 1000 – 20+ years old
Information Technology CAD/RMS	IMC / TriTech RMS Version 6.11
Dispatch Number of positions Number of 911 positions Administrative phone system Town wide fiber	2 2 Mitel Phones – Analog system Yes however, copper lines only to repeater/receiver sites.
Radio system Maintenance Provider	WoRad

Town of Hopkinton, Massachusetts

The Hopkinton Public Safety Answering Point (PSAP) is located at the Hopkinton Police Department Station located at 74 Main Street and is managed by the Town Public Safety Communications Department. The dispatch personnel provide call taking and dispatching for all emergency calls within the Town of Hopkinton.

The Public Safety Communications Department is equipped with three console positions, all of which are 911 capable.

Eight dispatchers and one Director staff the Department. There are two dispatchers on duty for each shift.

The Hopkinton Public Safety Communication Department's Budget for FY2021 was \$689,008. The State 911 Department through the Support and Incentive Grant provides \$51,409 to offset the total cost of the call taking and dispatch services.

Technology data was collected to identify the equipment that was currently being used and its condition by the Hopkinton Dispatch Center and the Hopkinton Police and Fire Departments for their radio systems, dispatch consoles, telephone systems, and software used for Computer Aided Dispatch (CAD) and Records Management System (RMS). Below is a chart that depicts the information collected. The technology information collected was used to identify what equipment would need to be replaced or enhanced to achieve interoperability between the RECC and the public safety radio systems. Hopkinton provided the following statement to explain that the strength of their Department is their personnel:

"We have built an A+ team that works well together. They provide a high level of services to our residents and those passing through our Town on a daily basis. They can handle a majority of the excess capacity in times of extreme busyness. Since combining police and fire, the dispatchers have fielded an average of 16,450 calls per year. Many of those calls are emergent calls, at times being received simultaneously. Our Communications team has worked five major fires since 2016, three of them being 2nd alarm fires and 2 being 3rd alarm fires. They are also able to handle intense storms that bring damaging rain, wind, and lightning to our community.

"Our dispatchers also receive training above and beyond what is required of their certifications. We have developed a training program for the familiarization with the fire department's operations. We also train the dispatchers in Rapid Intervention Training, which teaches them how to handle a life-or-death emergency a firefighter encounters while fighting a fire. We have also provided them with Mental Health First Aid Training for First Responders as well as training to aid them in helping coworkers that may be struggling with a mental health situation.

"We have many dispatchers that have remained with us for many years. There are two per diem dispatchers that have been here over 20 years each. Our most senior full-time dispatcher has been here almost 13 years in his position now, however he started his tenure here in December of 2004, 20 years ago. Our department maintains a good rate of retention. They all care for this community, several of us grew up in this community and thoroughly enjoy the work we do here."

The Hopkinton metrics that impact their call taking and dispatching services are as follows:

Hopkinton Metrics (2020)	#
Population	18,758
Total 911 Call Volume	2,995
Total Calls for Service	14,215

The Public Safety Communications Department provided the following technology related information that is currently being used at this time:

Hopkinton Technology Elements	Notes/Comments
Radio System	
Manufacturer	3 Motorola Quantar transmitter/receivers, Motorola receivers at receive sites. New Tait device at PD transmitter/receiver
Frequencies	Previously provided
Age and Conditions	Approx. 30 years old, very close to end of life.
Interoperability Town wide Regional	
System Coverage (Gaps)	Dead spot on the southeast side of town. Some points north, due to failing receiver sites.
Tower Sites	88 Hayden Rowe St. – Police and Fire – Transmitter and Receiver 74 Main St – Police Transmitter (back-up) and Receiver 204 Saddle Hill Rd – Police and Fire Receiver 54 Wilson St – Police and Fire Receiver 287 West Main St – Police and Fire Receiver
Fiber	Yes, Verizon (Digital Fiber / Analog Radio
Number, age and make of mobiles	Approx. 49 – Motorola – various ages
Number, age and make of portables	Approx. 96 – Motorola – various ages
Information Technology CAD/RMS	Pro Phoenix
Dispatch Number of positions Number of 911 positions Administrative phone system Town wide fiber	3 Positions, each with a 911 position Admin phone system is Avaya We have town wide fiber
Radio system Maintenance Provider	Various – no specific maintenance agreement / plan with any one provider

Town of Hudson, Massachusetts

The Hudson Public Safety Answering Point (PSAP) is located at the Hudson Police Department located at 911 Municipal Drive, Hudson, MA 01749 and overseen by the Hudson Police Department. The dispatch personnel provide call taking and dispatching for all emergency calls within the Town of Hudson.

The Public Safety Dispatch Center is equipped with three console positions, two of which are 911 capable.

Nine full time dispatchers and one full time supervisor staff the Center. There are a minimum of two dispatchers on duty for each shift. The Hudson Dispatch Center Budget for FY2022 is \$320,804.23.

The Hudson metrics that impact their call taking and dispatching services are as follows:

Hudson Metrics (2020)	#
Population	20,092
Total 911 Call Volume	4,380
Total Calls for Service	18,022

Technology data was collected to identify the equipment that was currently being used and its condition by the Medfield Dispatch Center and the Medfield Police and Fire Departments for their radio systems, dispatch consoles, telephone systems, and software used for Computer Aided Dispatch (CAD) and Records Management System (RMS). Below is a chart that depicts the information collected. The technology information collected was used to identify what equipment would need to be replaced or enhanced to achieve interoperability between the RECC and the public safety radio systems.

Hudson Technology Elements	Notes/Comments
Radio System Manufacturer	Motorola/ ASTRO version of 2020
Frequencies	470.700 Fire PL 411 470.600 Police PL 411
Age and Conditions	2021 System Updated
Interoperability Town wide Regional	Good town wide. Some building related issues Regional District 14
System Coverage (Gaps)	Little if any at street level. Town has continued to improve in build coverage by code enforcement.
Tower Sites	RF Infrastructure: IP based transmitters, receivers and comparators forming a 2-channel UHF (Hudson PD & FD), 3-site ASTRO25 simulcast system. (3) three simulcast Tx-Rx sites and (3) three receive only sites.

Hudson Technology Elements	Notes/Comments
Fiber	Coverage to all Radio Sites – as well as building access
Number, age and make of mobiles	Mobiles are mix of CDM1250 and APX 6500 varying in age from 16 years to less than one year.
Number, age and make of portables	(12) APX 8000 and (30) APX 4000 less than one year. 2021
Information Technology CAD/RMS	IMC with data push from IMC to Station Smarts NFIRS reporting system
Dispatch Number of positions Number of 911 positions Administrative phone system Town wide fiber	3 MCC7500 operator positions at Hudson Police HQ & added a 4th MCC7500e Console in the Hudson Fire Dispatch Area. Town phone system is TPX with interconnect between town systems
Radio system Maintenance Provider	Motorola Post Warranty Maintenance Years 2-5: \$186,331 (amounts billed annually): \$41,265, year 2 \$42,504, year 3 \$43,778, year 4 \$58,784, year 5. Then local service provider: CyberComm, Inc.

City of Marlborough, Massachusetts

The City of Marlborough Public Safety Answering Point (PSAP) is located at the Marlborough Police Department located at 355 Bolton Street, Marlborough, MA 01752 and overseen by the Marlborough Police Department. The dispatch personnel provide call taking and dispatching for all emergency calls within the City of Marlborough.

The Public Safety Dispatch Center is equipped with three (3) console positions, all of which are 911 capable.

Nine (9) full time dispatchers staff the Center. There are two dispatchers on duty for each shift. The Marlborough Dispatch Center Budget for FY2022 is \$615, 700.17 including OPEB. The Marlborough metrics that impact their call taking and dispatching services are as follows:

Marlborough Metrics (2020)	#
Population	41,793
Total 911 Call Volume	11,176
Total Calls for Service	29,344

Technology data was collected to identify the equipment that was currently being used and its condition by the Marlborough Public Safety Dispatch Center and the Marlborough Police and Fire Departments for their radio systems, dispatch consoles, telephone systems, and software used for Computer Aided Dispatch (CAD) and Records Management System (RMS). Below is a chart that depicts the information collected. The technology information was collected to identify what equipment would need to be replaced or enhanced to achieve interoperability between the RECC and the public safety radio systems.

Marlborough Technology Elements	Notes/Comments
Radio System	
Manufacturer	Motorola
Frequencies	Police- 856.4625 MHz Fire- 858.4625 MHz
Age and Conditions	Entire public safety system will soon need upgrades as the system will be unsupported in 2028. Some of the equipment is currently well past end of life.
Interoperability Municipality wide Regional	LPS 7 Can communicate w Hudson PD Substantial interoperability to area communities and state assets through state operated radio systems
System Coverage (Gaps)	We do have several coverage gaps.
Tower Sites	Seven sites on commercial buildings, PD, and water treatment facility
Fiber	Limited fiber to tower sites. Microwave connects a number of

Marlborough Technology Elements	Notes/Comments
	tower sites
Number, age and make of mobiles	PD: 32 Motorola mobile units, 10+ years(no parts, unable to be repaired) FD: 19 Motorola radios – outdated in need of replacement
Number, age and make of portables	PD: 75 Motorola portable units, over 10 years. (no parts, unable to repair) FD: 89 Motorola portable radios in need of replacement
Information Technology CAD/RMS	IMC/ Tri-Tech
Dispatch Number of positions Number of 911 positions Administrative phone system Town wide fiber	Three (3) dispatch positions, all of which are 911 positions Three (3) phone administrative phone lines Verizon carrier No town wide fiber
Radio system Maintenance Provider	CyberComm.

Town of Northborough, Massachusetts

The Northborough Public Safety Answering Point (PSAP) is located at the Northborough Police Department located at 212 Main Street and overseen by the Northborough Police Department. The dispatch personnel provide call taking and dispatching for all emergency calls within the Town of Northborough.

The Public Safety Dispatch Center is equipped with two console positions, both are 911 capable.

One full-time supervisor and seven full time dispatchers staff the Center. There are two dispatchers on duty for each shift. The Northborough Dispatch Center Budget for FY2022 is \$591,315.12 including OPEB. The Northborough metrics that impact their call taking and dispatching services are as follows:

Northborough Metrics (2020)	#
Population	15,741
Total 911 Call Volume	4,375
Total Calls for Service	19,249

Technology data was collected to identify the equipment that was currently being used and its condition by the Northborough Dispatch Center and the Northborough Police and Fire Departments for their radio systems, dispatch consoles, telephone systems, and software used for Computer Aided Dispatch (CAD) and Records Management System (RMS). Below is a chart that depicts the information collected. The technology information collected was used to identify what equipment would need to be replaced or enhanced to achieve interoperability between the RECC and the public safety radio systems.

Northborough Technology Elements	Notes/Comments
Radio System	Motorola MCC500
Manufacturer	Motorola
Frequencies	155.970, 154.445, 155.100, 155.790, 153.785, 154.755, 154.600, 152.405, 157.665, 150.775
Age and Conditions	Installed 6 years ago. Good condition.
Interoperability	
Town wide	Yes
Regional	Yes
System Coverage (Gaps)	We do have some coverage gaps and some equipment is still supported while some are well past end of life
Tower Sites	211 Main St. (PD) (TX & RX site, main) 79 Bartlett St. (Algonquin HS) (RX site) 119 Bearfoot Rd. (Cell tower) (RX site) 9000 Shops Way (RX site) 348 Church St. (Cell tower) (TX & RX site, backup)
Fiber	No fiber currently but the town is in the process of switching over

Northborough Technology Elements	Notes/Comments
Number, age and make of mobiles	VHF: 20 Motorola XPR5550, 6-7 years old UHF: 20 Motorola CDM1250, > 10 years old 800: 20 Motorola APX6500, 1-2 years old
Number, age and make of portables	VHF: 25 Motorola XPR7550, 6-7 years old UHF: 6 Motorola HT1000, > 10 years old 800: 6 Motorola MTS2000, >10 years old
Information Technology CAD/RMS	NexGen
Dispatch Number of positions Number of 911 positions Administrative phone system Town wide fiber	2 2 Ring Central No fiber currently but the town is in the process of switching over
Radio system Maintenance Provider	WORAD

Town of Southborough, Massachusetts

The Southborough Public Safety Answering Point (PSAP) is located at and overseen by the Southborough Police Department at 32 Cordaville Road, Southborough. The dispatch personnel provide call taking and dispatching for all emergency calls within the Town of Southborough.

The Public Safety Dispatch Center is equipped with two console positions in a room that is not capable of expansion to add sufficient consoles needed for a RECC that would accommodate all seven communities.

The Center is staffed by five full-time civilian dispatchers and two part-time dispatchers that are budgeted. There is a minimum of two dispatchers on duty for the day and evening shifts and one on the midnight shift.

The Southborough Dispatch Budget for FY2022 is \$446,645.38, including OPEB.

The Southborough metrics that impact their call taking and dispatching services are as follows:

Southborough Metrics (2020)	#
Population	10,450
Total 911 Call Volume	2,023
Total Calls for Service	5,286

Technology data was collected to identify the equipment that was currently being used and its condition by the Southborough Dispatch Center and the Southborough Police and Fire Departments for their radio systems, dispatch consoles, telephone systems, and software used for Computer Aided Dispatch (CAD) and Records Management System (RMS). Below is a chart that depicts the information collected. The technology information collected was used to identify what equipment would need to be replaced or enhanced to achieve interoperability between the RECC and the public safety radio systems.

Southborough Technology Elements	Notes/Comments
Radio System	Motorola P25 G Series Equipment Dispatch Motorola MCC7500e
Manufacturer	Motorola
Frequencies	FD: 474..4250 NAC864 Receive 471.4250 NAC684 (digital) PD: 486.350 NAC320 Receive 483,350 NAC320 (digital)
Age and Conditions	2019
Interoperability Town wide Regional	VHF/UHF 700/800 MHZ Consolettes in Dispatch; Surrounding PD and FD; MSP; National Interop VTAC, UTAC, 8TAC

Southborough Technology Elements	Notes/Comments
System Coverage (Gaps)	> 95% Mobile > 90% Portable Gaps far NE, SEC sections of community
Tower Sites	15 Coslin Drive and 41 Overlook Drive
Fiber	Town owned fiber to Tx Site and to remote Rx site
Number, age and make of mobiles	PD: (3) APX8500 2018-21, APX 7500 2014 (6) APX 6500 2014-20 FD: (7) APX6000XE 2018, (1) APX7500 2014 (3) APX8500 2021
Number, age and make of portables	PD: (25) APX6000XE-AN- 2014, (4) APX7000XE 2014 (4) XTS 3000 FD: (27) APX6000XE 2014, (2) APX8000 2021
Information Technology CAD/RMS	IMC- Southborough PD ESO- Southborough Fire
Dispatch Number of positions Number of 911 positions Administrative phone system Town wide fiber	(2) Positions , with 911 Admin phone System IP Based Town owned Fiber to critical Town Buildings
Radio system Maintenance Provider	Cybercomm

Town of Westborough, Massachusetts

The Westborough Public Safety Answering Point (PSAP) is located at the Westborough Fire Department Station located at 42 Milk Street and is managed by the Fire Department. The dispatch personnel provide call taking and dispatching for all emergency calls within the Town of Westborough.

The Public Safety Dispatch Center is equipped with three 911 console positions and one administrative position.

Nine (9) dispatchers staff the Center. There are two dispatchers on duty for each shift.

The Westborough Emergency Communication Center's Budget for FY2021 was \$622,711.32. . The State 911 Department through the Support and Incentive Grant provides \$77,476 to offset the total cost of the call taking and dispatch services.

Technology data was collected to identify the equipment that was currently being used and its condition by the Westborough Dispatch Center and the Police and Fire Departments for their radio systems, dispatch consoles, telephone systems, and software used for Computer Aided Dispatch (CAD) and Records Management System (RMS). Below is a chart that depicts the information collected. The technology information collected was used to identify what equipment would need to be replaced or enhanced to achieve interoperability between the RECC and the public safety radio systems.

Westborough Technology Elements	Notes/Comments
Radio System	Motorola/JPS
Frequencies	482.400
Age and Conditions	18 Years – Fair condition
Interoperability Town wide Regional	Good town wide Regional District 14
System Coverage (Gaps)	Little if any at street level. Town has continued to improve in build coverage by code enforcement
Tower Sites	4 sites (2 TX/RX and 2RX)
Fiber	Coverage to all Radio Sites – as well as building access
Number, age and make of mobiles	2 – APX Triband 1 - APX UHF 1 - APX UVF 2 – APX UHF/VHF 11 – CDM 1550 UHF 7 – CDM 1550 VHF
Number, age and make of portables	34 – APX 8000 8 – APX 7000
Information Technology CAD/RMS	Tritech - IMC
Dispatch	

Westborough Technology Elements	Notes/Comments
Number of positions Number of 911 positions Administrative phone system Town wide fiber	2 Active Positions in PSCC 3 – 911 Positions 1 – Admin. Location Town phone systems is Avaya with interconnect between town systems
Radio system Maintenance Provider	CyberCOMM – Annual support contract

Administrative Duties

The Police Chiefs of Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough, and Westborough were surveyed regarding administrative or ancillary functions that the dispatchers perform for the Police or Fire Departments or other city/town departments. This is quite common with all PSAPs and some RECCs.

In reviewing the tasks, some clearly belong in the RECC and could be assigned there. For those functions that would be transferred to the Police or Fire Departments, consideration should be given to placing those functions in an area that is most effective and efficient for the department and the community. For example, one community that joined a RECC moved the Records Section to the front desk area where the Dispatch area had been, as they identified that the purpose of most of the people who came to the public window was to request a copy of a police report. The community was notified of the hours of operation for the records section. Another community put their burn permit process online to help facilitate a more efficient system that did not take any dispatcher time. It is important to note that decision to keep or to transfer these functions will be the policy for the RECC for the future, including when other communities join the RECC.

Several of the dispatch centers provide only call taking and dispatching services. The other city/towns dispatch centers provide all or a variety of the following functions.

- Logging and filing paperwork for 209A's, 258E's, warrants, no trespass notices
- Assisting with the Booking process
- Filling shifts on callouts and details
- Pistol Permits
- Solicitor Check-ins
- Lost and Found
- Enter officer's citations
- Monitoring town camera system
- Prisoner checks and cell monitoring
- Medicine and Sharps bin maintenance
- Walk-in traffic
- Assist with town directions
- Animal Control communications
- Teaching college interns
- Checking PD training room and assist with scheduling
- Provide keys to meeting rooms at town hall and other town buildings
- Assist with town permit system, forms, and fingerprints

A recommendation for all communities that anticipate joining or developing a RECC is that they assess the list and decide which tasks they will keep at their police or fire departments and which they request that it be undertaken by the RECC.

Interviews

Twenty-one (21) interviews were conducted with the Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough and Westborough Police and Fire Departments including Chiefs, certain members of their staff and Dispatch Supervisors. The interviews provided detailed information regarding their insight of their communication center, as well as the issues that may be encountered from a regional dispatch center in general. The interviewees also provided recommendations for an effective transition process, should the communities choose to join or develop a regional emergency communications center. All the police and fire chiefs exhibited a strong focus on the communities that they serve on providing high-quality emergency communication services to the residents of their respective municipalities, and on their public safety personnel. All were knowledgeable of the needs of their communities. All the chiefs expressed a strong desire to ensure a smooth transition into a RECC should Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough, and Westborough make the decision to develop a RECC. A summary of the information gathered from the interviews is as follows.

* Identifies the number of responses that an answer was provided beyond the original statement.

The **strengths or potential benefits** of regionalization of emergency call-taking and dispatching services include:

<ul style="list-style-type: none"> • New equipment to be standardized and maintained** • Interoperability would be provided with municipalities who they provide mutual aid with • Standardized training and policies** • Standardized response procedures/protocols*** • Ability to manage multiple calls for service (surge capacity)***** • Cost savings to municipality* • Enhanced working relationships with member municipalities • PD not having to deal with dispatch personnel issues • More professionalization (staffing, equipment, and training)** • More personnel/staffing* • Enhanced mutual aid • Consistency of services • Improve efficiencies • Depth of personnel (shift coverage) • Dedicated personnel with focus on dispatch services 	<ul style="list-style-type: none"> • Staffing – struggle with turnover • New equipment, better coverage, and interoperability with other municipalities/mutual aid • Allocation of resources -s more efficient • RECC is the future • Focus on only call taking and dispatching services • Accreditation of RECCs • More professional personnel for dispatch • Continuity of dispatchers/future growth • Standardized/use of the same dispatch protocols • Resources – more dispatch personnel for major events and increased surge of 911 calls • Cost Savings, Financial Support – state contributions to center development and recurring costs • Enhanced Mutual Aid • More efficient service to the public within dispatching and emergency response
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The **weaknesses or concerns** of regionalization include:

<ul style="list-style-type: none"> • None seen • Lack of understanding of RECC • Going dark, walk-ins and prisoner watch – unmanned on certain shifts**** • Lack of administrative duties previously performed by dispatch personnel** • Making it happen with personnel • Having sufficient staff • Lack of control • Change • FD dispatching differences • Standardization/implementation with communities • Loss of and accuracy of data control • No radio interoperability with neighbor communities 	<ul style="list-style-type: none"> • Lack of local knowledge***** • Loss of dispatcher jobs • Loss of personal touch • Current dispatchers losing their positions* • None if organized properly with proper oversight • Labor issues – seniority • Keep out the dynamics of politics • Not having anyone at the PD window or to monitor prisoners • Loss of local knowledge, i.e., landmarks and etc. • Need updated dispatch protocols
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Interviewees identified certain areas and made **recommendations important for successful integration** of PSAPs into a regional center. They are:

<ul style="list-style-type: none"> • EMD Training* • Cross training* • Interoperability for mutual aid • Need for transparency moving forward**** • Open lines of communications with municipal leaders and staff***** • Requires FD input* • Provide for the ability to manage call surge for multiple disciplines • Provide a willingness to modify and streamline • Be open and listen • Standardization of technology • Replace administrative functions • Equal partners with RECC member • Needs to be done properly • Transition training: <ul style="list-style-type: none"> ○ Dispatch protocols (P&Ps and radio codes) ○ Local knowledge-landmarks, repeat callers and responder nuances 	<ul style="list-style-type: none"> • Stronger RECC if developed as regional emergency communication district • Fairness and equality between communities • Plan for retention of personnel during the transition • Training dispatchers across disciplines • Connectivity to adjoining RECC to ensure compatibility with dispatch protocols, communications, and training • Development of dispatch protocols requires input from chiefs • Standardized alerting systems for response personnel • Identify future RECC Director early on • Admin. Board/oversight for early direction • Communicate with personnel and the community <ul style="list-style-type: none"> ○ Transition Planning* • Need open communications/transparency • Work out labor / union issues
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<ul style="list-style-type: none"> ○ Management coordination meetings ○ Ride along with public safety personnel from new community 	<ul style="list-style-type: none"> ● Provide a greater level of training opportunities ● Requires a clear Implementation Plan
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Leadership

Leadership is a critical factor in the successful consolidation or outsourcing of any services important to the mission of public safety agencies. This requires the skills to work with their staff and the community to manage the change process. During the interviews, the project team found the Police and Fire Chiefs in Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough, and Westborough have the necessary leadership skills and a willingness to successfully undertake this transition. They have recognized the benefits of such a transition and have offered recommendations to improve the prospects of the transition process. Their key focus was always on the mission of their departments and the needs of the community.

Staffing Analysis

Staffing Requirements

Three key documents were utilized for guidance in developing staffing recommendations for the development of a RECC for the Towns of Grafton, Hopkinton, Hudson, Northborough, Southborough, and Westborough, and the City of Marlborough. A Summary of each of the relevant documents that were utilized to develop the staffing recommendations for the Regional Emergency Communications Center are as follows:

APCO Project RETAINS Research Report, August 2005, University of Denver Research Institute, Denver, Colorado.

The APCO study was conceived and conducted in response to concerns that were brought forth to the Association of Public Safety Communications Officials, International (APCO). Communications center manager and staff expressed concerns about the appropriate number of staff needed to serve the public’s needs and expectations for emergency services and they wanted information about practices they could use to increase employee retention. Although such centers are often equated with 9-1-1 emergency call request and services, 9-1-1 emergency calls are often only a portion of the workload. This study looked at all aspects of staffing and retention in public safety communications centers, not just the 9-1-1 service aspects in those centers. This study was completed in two phases (Study I and Study II).

Question: What factors do centers use to determine appropriate staffing levels?

The data indicate the processes public safety communications center have used for determining staffing levels have been primarily reactive rather than proactive. There was no process for determining appropriate staffing levels in public safety communications centers that was widely used or accepted.

The data also indicate staffing decisions are often based on considerations other than needs, as defined by the safety or personnel that are dispatched, or specific measures related to coverage, workload, or

service quality indicators. Two-thirds of the managers in Study I indicated staffing allocations were based on budget and 44% indicated the number of consoles in the center determined their staffing levels. When the questions were reframed in Study II to ask managers specifically about formulas they used, 81% indicated they used a formula but only 38 percent of them indicated they made an adjustment for employee availability. Although Erlang calculations are often referred to as the most useful formula for determining appropriate staffing levels, only 15 percent of the large centers reported using it.

In NFPA 1221: Standard for Installation, Maintenance, Use of Emergency Services Communications Services states in 7.3.2, "Communications centers that provide emergency dispatching protocols shall have at least two telecommunicators on duty at all times."

In addition, NFPA also provides guidance on Emergency Medical Dispatch (EMD) functions that will also be governed by the State 911 Department standards in 2011. Regulation 560 CMR 5.00 establishes certification requirements for Enhanced 911 tele-communicators governing Emergency Medical Dispatch and Establishes 911 Call Handling Procedures.

Staffing by only one dispatcher creates several significant operational concerns in addition to those cited above regarding NFPA 1221 and the new EMD requirements. Those concerns are relative to a single dispatcher's ability to provide pre-arrival instructions and service to responders working in the field and, at the same time, receiving other 911 and other administrative calls during this important period. A multiple dispatcher RECC does provide for a greater capability for handling large-scale critical incidents at the same time provide an economy of scale.

NFPA Standard 1221 Section 6.4.2 specifies that "Ninety-five percent of alarms shall be answered within 15 seconds, and 99 percent of alarms shall be answered within 40 seconds." Section 6.4.3 specifies that, "Ninety-five percent of emergency dispatching shall be completed within 60 seconds." A RECC would have greater capacity to manage critical incident surge as well as the unique requirements of EMD.

Massachusetts Regulations through 560 CMR 5.0 provides the following *Emergency Medical Dispatch Requirements*:

- By 7-1-2012 PSAPs and RECCs were required to provide EMD either through certified EMD dispatchers at the PSAP/RECC or through a certified EMD resource
- The PSAP/RECC or certified EMD resource must use a single EMD Protocol Reference system (EMDPRS) on every request for medical assistance; have policies and procedures for use of EMDPRS and establish a continuous quality assurance (QA) program.
- In order to act as a certified EMD dispatcher for a PSAP/RECC- (the dispatcher) must be a certified E911 telecommunicator, obtain and maintain CPR certification, and obtain and maintain EMD certification.

The regulations also provide direction for:

- Certified EMD resource
- Call Handling Procedures
- Recordkeeping

Staffing Analysis and Recommendations

The Project RETAINS Research Report provided common practices across the country that is useful to consider for the staffing levels for the Towns of Grafton, Hopkinton, Hudson, Northborough, Southborough, and Westborough, and the City of Marlborough Regional Emergency Communications Center (RECC). Below are data from one hundred fifty-three (153) 911 PSAP centers relative to staffing and call volume. This data is then compared to what is proposed in the proposed RECC.

Center Category	Average	Median	Proposed Total Service Area
# of Personnel	18	12	36
# of Agencies	12	6	14
Population (2020)	79,000	35,000	158,065
Call Volume (2021)	238,000	82,000	120,078

The RETAINS Report also provides that seventy-five percent (75%) of the centers surveyed handled fewer than 10,000 call per employee, with an average of 6,500 calls per employee. The Report also provided that as call volume per employee increased so did employee turnover. They further looked at the relationship between annual call volume per employee and the staffing situation reported by manager. On average, employees handled just over 5,200 calls per year in centers where managers indicated their center was fully staffed at this time (all authorized positions were filled). Employees in centers that were described by managers as chronically understaffed handled about twice as many calls at 11,200 per year. The average for this RECC would be based upon 2021 call volume and a full-time staff of seventeen (32) dispatchers and four (4) working supervisors would be 3,335.5 calls per employee. The project team does not recommend changing this ratio, in this decision time for the RECC and the transition, the team recommends the shift staffing of ten (10) dispatchers for the day and midnight shifts and twelve (12) dispatchers for the evening shift to keep a strong level of service to their citizens that all of the communities have expected of these services. The project team also recommends that three working supervisors be assigned to all shifts to provide oversight, guidance, and support for those times and at time of when a surge of calls impacts the center requiring the supervisor to providing dispatching services. One supervisor would be designated to oversee the Quality Assurance Program, coordinate training and to assist the Director with oversight of the RECC technology programs. To support the staffing requirement, it is recommended that an operational policy be developed for a contingency plan for staffing during a major event. The project team recommends a position of Director for the functions of providing organizational leadership, continuation of the development of the RECC and for outreach to the communities and the public safety agencies and an Administrative Assistant. The project team's recommendations consider the historical commitment for dispatch and other ancillary services in each public safety answering point (PSAP) while at the same time recognize the economy of scale that the RECC would provide for the future.

Proposed Total Service Area								
	# of Dispatchers	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Per line							
Day	4	DO	DO	X	X	X	X	DO
Minimum 4	3	X	X	DO	DO	X	X	X
10 dispatchers	3	X	X	X	X	DO	DO	X
	On duty	6	6	7	7	7	7	6
EVE	4	DO	DO	X	X	X	X	DO
Minimum 5	4	X	X	DO	DO	X	X	X
12 dispatchers	4	X	X	X	X	DO	DO	X
	On duty	8	8	8	8	8	8	8
Mid	3	DO	DO	X	X	X	X	DO
Minimum 4	4	X	X	DO	DO	X	X	X
10 dispatchers	3	X	X	X	X	DO	DO	X
	On duty	7	7	6	6	7	7	7
Total dispatchers	32							
Day Supervisor	1	X	X	X	X	DO	DO	X
Eve Supervisor	1	DO	DO	X	X	X	X	DO
Mid Supervisor	1	X	X	DO	DO	X	X	X
QA/TRN/TECH Supervisor.	1	X	X	X	X	X	DO	DO
Director	1	X	X	X	X	X	DO	DO

Site Analysis

Site Visits

Grafton

Consolidated PSAP at the Grafton Police Department with two 911 dispatch positions. There is no room to expand at the site for a seven community RECC. Minimum staffing is one dispatcher on each shift

Hopkinton

The Communications Department operates the town's PSAP and is located at the Hopkinton Police Department. There are three 911 positions in the center. There is a minimum of two dispatchers on duty for each shift. There is no additional space to expand within the Police Department to accommodate a RECC for the seven communities.

Hudson

Consolidated PSAP at the Hudson Police Department with two 911 dispatch positions and one admin. / backup. There is no room to expand at the site for a seven community RECC. Two dispatchers are on duty for all shifts.

Marlborough

Consolidated PSAP at the Marlborough Police Department. There are three 911 positions in the center with a minimum of two dispatchers per shift. There is no room to expand at the site for a seven community RECC.

Northborough

Consolidated PSAP at the Northborough Police Department with two 911 dispatch positions. There are two dispatchers on duty for the day and evening shifts and one on the mid-night shift. There is no room to expand at the site for a seven community RECC.

Southborough

Consolidated PSAP at the Southborough Public Safety Facility and within the Police Department. There are two consoles, with a minimum of one dispatcher per shift. There is no room to expand at the site for a seven community RECC.

Westborough

Consolidated PSAP at Westborough Fire Department with three 911 dispatch positions and one Admin. Position. There are two dispatchers on each shift.

Basic Building Requirements of a RECC:

The architectural design must accommodate the following spaces and equipment:

- Regional Emergency Communication Center - Dispatch Room
- Workstations for five (5) dispatch positions that include four dispatcher radio/911 positions, and one supervisor position
 - ADA compliance to facility/RECC
 - 1998 OSH and ADA console design
 - 1990 ADA ACT, which
 - Governs access
 - Reach Distances
 - Reach Angles
 - 1998 OSHA
 - Minimize workplace injuries
 - Both regulations have resulted in boomerang shaped consoles
- System Equipment Room
 - Power, fiber, 911 lines and system, administrative phones system, security, IT servers and radio systems
- Employee Area
 - Kitchen/Breakroom
 - Locker Rooms (M&F)
 - Bathroom (M&F)
- Office Space – two (2) rooms for the Administrator and Supervisors
- Training/Conference room
- Storage Room

Potential RECC Site Locations

Facility Analysis: Vacant Office Building 100 Locke Ave Marlborough, MA 01752

The City of Marlborough has offered this location as a potential site. The City is considering taking the property by eminent domain as a site for City Government departments and also to locate on the same site a new Marlborough Fire Department Station Three. The property is centrally located to Route 495 and Route 20.

- The total square feet of this brick building exceeds 100,000 and three stories in portions
- Constructed in 1985
- Owned by Erula LLC, (Alfred A. Molinari Jr.)
- Has a full fire alarm system and is also fully sprinklered
- Equipped with modern surveillance and security systems, three (3) elevators and has loading docks and ample parking
- Multiple ADA compliant access and egress points and has three (3) elevators to access upper stories
- Situated on 11+ acres that is zoned commercial/industrial
- The property is already partially vacant and has only one remaining occupant

Facility Analysis: Harvey Building, former school, 20 Philips Street, Westborough, MA 01581

The Harvey Building, currently used by the Town Arts Council, was built in 1883 on 0.6 acres, and has a total of 5,112 square feet on two floors.

Currently has no fire suppression system and was not inspected in the past year.

Key issues:

- Limited parking
- No heating or air conditioning
- Not ADA compliant
- Fire alarm system outdated
- Structurally the building will need a great deal of work
- For a RECC with all seven communities it would be too small
- Town recently informed they have been awarded a grant to bring the building to ADA compliance

Facility Analysis: Hopkinton Center School, 11 Ash Street, Hopkinton, MA

Built in 1928 - Front Building, 1950 - Center Section, 1986 - Addition of Rear Classrooms (6) and Gym
Front Building

Front Building: Two (2) Floors of usable area (5036 each floor) - plus basement

Center Section: Two (2) Floors of usable area (approximately 10,292 each floor)

Rear Section: Two (2) floors & Gym - 6386 gym, (approximately 2840 each floor)

- Owned by Town of Hopkinton
- Sprinkler and AFA systems installed
- ADA compliant

Another Option for Regionalization of Emergency Dispatch Services

During the process of conducting this Feasibility Study the Director of the State 911 Department offered to host a Regional Emergency Communication Center (RECC) at the State 911 Department Wireless Center/POD01 that is currently located at the State Police Headquarters in Framingham. The Center was established as a wireless 911 in 1987. Up until four years ago, the center was operated by the MSP and was then turned over to the State 911 Department. In 2020 the Center received 366,641 emergency 911 calls that were transferred to the appropriate Department for dispatching.

In 2021, the State 911 Department started the procurement process to lease commercial space to move 911 Wireless Center from Framingham to the central region of I-495 between Westborough and Marlborough to provide additional space for the Centers operations. After the initial process did not provide a vendor that did not meet the requirements of the State 911 Department, the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) chose to seek additional proposals in the same general area. Responses to the RFP are due on March 24, 2022. Included in the RFP is a provision for additional space for a Regional Emergency communications Center for multiple communities. The Wireless Center has been in operation since 1994 and has proven operational proficiency. The State 911 Department will look forward to establishing a long-term relationship with municipalities to join the RECC portion of the Center. The municipalities that join this Center do not have to pay a membership fee. A state agency cannot require a municipality to pay for the services provided by the state agency unless it has been authorized by the legislature. Development Grant funds would be used to transition a municipality to the RECC. It is anticipated that the process of establishing a RECC will be initiated in FY2024.

On April 20, 2022, the State 911 Department Director provided the seven-community regional planning team a presentation of the State 911 Wireless Center/RECC plans for the movement of the Wireless Center from Framingham to a site within the region of this planning effort. The presentation included the following:

- Transition from Framingham – DCAMS issued an RFR in February
- DCAMS received eight (8) bids and is in the process of evaluating the bids
- The State 911 Department has a long-term goal of first moving the Wireless Center to the new site and then establishing a RECC owned and operated by the Operations Division of the State 911 Department
- Requirements of the new site include the following
 - Square feet – 20,000
 - Dispatch Center for Wireless Center and RECC
 - Training Room
 - Site needs to be within one half mile of a tower site
 - October/November build out site for RECC
 - No charge to the communities that join the RECC for call taking and dispatching services
- The timeline that the State is planning on
 - Complete the selection process within one to two months
 - Build out the dispatch center in six months
 - Move the Wireless Center to the new location by October/November

Massachusetts operates two centers that are established as Wireless Direct Centers and as a Regional Emergency Communication Center (RECC). The Centers are highly effective emergency communication center with one already an accredited and one in the process of being accredited. Those centers are as follows:

- The State 911 Department operates the North Shore Regional 911 Center, formerly the Essex County Regional 911 Center. The Center receives wireless 911 calls and is also a RECC for five (5) North Shore Municipalities. In 2020 the Wireless 911 Center received 213,014 emergency calls and the RECC received and dispatched 27,621 emergency calls. The combined Centers are located at 18 Manning Road, Middleton, MA 01949.
- The Massachusetts State Police operates a combined Wireless Center and a RECC at the Northampton State Police Headquarters. The RECC provides call taking and dispatching for fourteen (14) communities. The Center received a combined 154,326 calls for service in 2020.

Transitional Training

The development of a plan for transitional training is essential to prepare the dispatch personnel for their call taking and dispatching roles in the newly formed RECC. Recommendations for elements of that plan include the following:

- Familiarization of the dispatchers with all of the communities that join the RECC, their unique areas, and the public safety response agencies to inform the dispatchers of the unique features within each community.
- Information gathered from interviews with the new dispatchers as to any needs that they identify.
- New call-taking and dispatching procedures as developed by the Director and the Operations Committee.
- Emergency Medical Dispatch protocols. Once a vendor for the RECC is selected and signed off by each community's medical director, the unique training requirements and protocols will be included in the transitional training plan.
- Computer Aided Dispatch (CAD) and Records Management System (RMS) training after a vendor has been awarded a contract and data has been integrated into the regional system.
- Console/radio systems usage.
- State 911 Training recommendations.

In the time leading up to the actual activation of the RECC, it is recommended that the designated Director of the RECC interview the training coordinator from the State 911 Department regarding their recommendations for transitional training, and to put those recommendations into a Transitional Training Plan. The Plan would then be the basis of a grant proposal that would be submitted to the State 911 Department for funding to implement the plan.

Governance Analysis

Governance Models

Regional Emergency Communication Districts (RECDs) and hosted **Regional Emergency Communication Centers (RECCs)** are different in their organizational structure but similar in their service

provided. The Districts are regional government entities as established by Massachusetts legislation. The hosted RECCs are entities within a community’s municipal government structure (i.e., Police or Fire Departments or a separate Emergency Communications Department). Both are governed by an Inter-Municipal Agreement (IMA). See Draft IMA for a Regional Emergency Communication District in Appendix A for the seven communities.

A significant difference between the two is how their Administrative Support Functions are provided. Those functions include payroll, financial management, procurement, human resources (including collective bargaining), medical insurance, retirement, and other personnel-related insurance and taxes.

A District provides those services through contractual relationships. The community members of the District bear all these costs. The personnel are employees of the District. A hosted RECC is provided those services through the municipal government departments and contracted services. The personnel are employees of the host community. A portion of these costs for these services are passed on to the community members of the RECCs.

The State 911 Department through their Regional Emergency Dispatch Development Program currently provides the funding for these administrative tasks. It is entirely up to the municipalities involved as to their choice of the type of structure for the RECC. Both have been successful in Massachusetts. The most successful RECCs have been led by Directors who embrace their role as a partnership with their member communities and their public safety agencies and are focused on excellence in providing emergency communications services by their dispatch personnel. Of importance to the long-term success of the RECC is the role of community ownership in the RECC that is achieved by the responsibilities of the District Administrative Board. A Dispatch District does present the best opportunity to achieve ownership. Below is a chart that analyzes the differences between Hosted RECCs and Dispatch Districts.

Governance Model Key Functions	Hosted RECC	Regional Dispatch District
Appointing Authority	Host Municipality Town Manager/Board of Selectmen (BOS)	District Administrative Board Member Municipality Town Managers
Budgetary oversight and approval	Host Municipality Board of Selectmen	Administrative Board
Administrative Input	Informal with regular meetings with chief	Board of Directors – quarterly meetings
Operations Input	Standards and operations committee	Working Groups with chiefs from member towns
Administrative Functions: <u>Accounting Services</u> payroll, financial management <u>Procurement</u> , <u>Human resources</u> collective bargaining, medical insurance, retirement, and other personnel related insurance	Town Accountant Procurement Director HR Department	Contracted services* Contracted services Contracted services *Contracted services may be provided by the host municipality or a private entity.
Technical expertise	Reliance on town IT	Requires outside consultant

Governance Model Key Functions	Hosted RECC	Regional Dispatch District
	services	
Dispatch site space	Requires available sufficient Dispatch floor space for expansion capability, Office, dispatcher locker room, break room and bathroom in existing public safety building	Requires lease or procurement of sufficient space and room requirements in a new location, public or private.

Standardized Operational Protocols/Call Taking and Dispatching Procedures

The operational protocols used by the RECC should be laid out in a set of Policy and Procedures (P&Ps). Each community has developed their unique P&Ps for their public safety services. For the RECC to operate most effectively, it requires those public safety leaders to work together to develop uniform P&Ps. Both communities have processes to train and guide dispatchers in carrying out their responsibilities. To undertake the responsibilities of the RECC in providing their services, there is a need for a dispatch manual that provides general call taking and dispatch services, as well as the unique responsibilities for fire and police emergency calls as well as Emergency Medical Dispatch (EMD) guidelines as defined by the State 911 regulations. The RECC Director and the Operations Committees or their designees should develop these P&Ps together.

The P&Ps will encompass information from local ordinances, Massachusetts statutes, the board bylaws and any current labor agreement or one subsequently adopted. Massachusetts has implemented, under the State 911 Department, 560 CMR 5.00, the Establishment of Certification Requirements for Enhanced 911 Telecommunicators/Dispatchers, governance of EMD, and the establishment of 911 Call-Handling Procedures. Adherence to these standards is mandatory. As part of these regulations, the Commonwealth has also provided that:

“All levels of PSAPs shall be required to negotiate call-handling procedures with all public safety agencies to ensure proper handling of emergency calls. The PSAP and public safety providers served by the PSAP shall review these procedures every six months for the first two years and then annually thereafter and make changes as needed.”

In developing a common set of operational procedures, the Director and the Operations Committee should be guided by the standards developed by the Commission on Accreditation of Law Enforcement Agencies (CALEA), in conjunction with the Association of Public Safety Communications Officials (APCO), for a national accreditation program for communications centers. Two hundred eighteen standards have been developed as a part of the program. These standards are organized into six topic areas as follows:

- Organization
- Direction and Authority
- Human Resources
- Recruitment and Selection
- Training
- Operations

The standards represent the best professional requirements and practices and describe what the agency should be doing, not how they should be doing it. The standards are a useful guide to the establishment of policies and procedures regardless of whether accreditation is sought. Other sources of best practice information for call-taking and dispatching procedures are as follows:

- NENA – National Emergency Number Association.
- NFPA – National Fire Protection Association

This process works most effectively when one person is designated as the original writer for draft documents and Point of Contact (POC) for the RECC Dispatch Guidelines/Procedures Sub-Committee. That person would develop a draft procedure based upon the draft protocols of current procedures in the community dispatch centers, and the best practices that come from the above cited sources. The Operations Committee would provide feedback on the draft documents, changes to be made and the final document during facilitated sessions of the designated members of the Operations Committee. This work is time-consuming and should be accomplished during the transition time prior to the RECC facility being completed.

Cost Benefit Analysis

The following analysis provides a financial assessment if the seven communities chose to establish a RECC and an appropriate site is agreed upon.

Financial Role of State 911 Department

The State 911 Department is charged with coordinating and effecting the implementation of enhanced 911 service and administering such service in the Commonwealth. In fulfilling this responsibility, the State 911 Department provides the public safety answering points (PSAP) in Massachusetts that serve as the first point of reception of a 911 call with call processing equipment, database, network, and technical support services, training for personnel handling the calls at the PSAPs, and with funding to support the operation of the PSAPs through the administration of an extensive grant program.

The State 911 Department has been committed to a more effective and economical 911 system through regionalization of those services. The Massachusetts State 911 Department provides a specific grant program to develop and operate Regional Emergency Communications Centers (RECC). The State 911 website provides the FY22 Guidelines for the application process for these grant programs. Below is a listing of the relevant information for these grants from the website.

Support Grants

Primary PSAPs, regional PSAPs, regional secondary PSAPs, and RECCs are eligible to participate in the Program and are eligible to receive support grant funding. For Fiscal Year 2020, \$23,464,196.00 of the total surcharge revenues of the previous fiscal year shall be allocated to support grant awards and are disbursed according to a formula weighing both 911 call volume and population served.

Incentive Grants

In addition to amounts allocated as part of the above support grant, existing regional PSAPs and RECCs are eligible to receive incentive grant funding through the Program based on the following allocation formula.

- For regional PSAPs serving 2 municipalities:
0.75 of one percent (1%) of the total surcharge revenues of the previous fiscal year.
- For regional PSAPs serving 3 to 9 municipalities:
a minimum of 1½ percent (1.5%) of the total surcharge revenues of the previous fiscal year.
- For regional PSAPs serving 10 or more municipalities:
1½ percent (1.5%) of the total surcharge revenues of the previous fiscal year.
- For regional emergency communication centers:
ten percent (10%) of the total surcharge revenues of the previous fiscal year.

Regional Development Grants

Grant funds may be used by grantees only for the permissible categories of use listed within the specific categories set forth below:

- Associated with the provision of enhanced 911 service; and
- Approved by the State 911 Department.

Funds may be used for clerical, administrative, or other costs associated with administration of the Program, provided that funds may not exceed one percent (1%) of the total amount awarded to the Grantee. The services shall be specifically identified with the project, and the Grantee shall provide detailed documentation, to the satisfaction of the State 911 Department, supporting the services (including, without limitation, the time and dollar amount of the services).

The State 911 Department will allow funding for the purchase or lease of equipment, allowable construction items, and allowable structural improvement items and for debt service on equipment, allowable construction items, and allowable structural improvement items, including without limitation, principal and interest payments on loans, notes, and bonds. The State 911 Department will allow grantees to assign lease, debt service, and/or or incremental purchase costs to this grant. However, all funding requested under this grant program shall be for goods and/or services received. Funding will not be disbursed for obligations made without receipt of goods/services. The State 911 Department makes no guarantee of funding from year to year and does not assume any obligation, as guarantor or otherwise, under any purchase, lease, or debt instrument.

All technology or telecommunications related goods or services must be compliant with applicable laws, rules, regulations, and standards.

Security Measures Grants

Existing and proposed regional PSAPs and RECCs are eligible to apply for funds for the following allowable items within the transition expenses category:

- Security measures (such as remote cameras, remote printers, and security doors); and
- One-time costs associated with the installation of such security measures.

Equipment Grants

Existing and proposed regional PSAPs, regional secondary PSAPs, RECCs, and the Northampton wireless state police PSAP are eligible to apply for funds for equipment associated with the provision of enhanced 911 service that is not directly provided by the State 911 Department and/or equipment to be used to foster the development and startup of regional PSAPs, regional secondary PSAPs, and RECCs or the expansion or upgrade of existing regional PSAPs and/or regional secondary PSAPs. Allowable items to be funded through this grant include, but are not limited to:

- Radio systems and consoles;
- Computer-aided dispatch;
- Records management systems;
- Fire alarm receiving and alerting equipment; and
- Consultant services in support of equipment.

All radio systems shall comply with EOPSS Statewide Inter-Operability Emergency Communications (SIEC).

Funds for radio systems may be used to defray the costs associated with the acquisition of radio systems used for police, fire, emergency medical services, and/or emergency management communications.

In FY21, the State 911 Commission approved a new criterion for the Transition Award. Below is chart that explains that Award.

State 911 Department – Development Grant Program FY22
Transition Award
<p>Transition award, payable to the entity that operates a regional PSAP or RECC on behalf of the participants, for each PSAP that is decommissioned on or after July 1, 2018, and becomes operational as a participant in such regional PSAP or RECC, in the amount that represents the <i>greater of</i>:</p> <p>the last allocation for the decommissioned PSAP under the State 911 Department Support Grant; or the amount of the assessment or charge allocated to such PSAP for the current fiscal year under the terms of the signed inter-municipal agreement or other equivalent agreement governing the operations of the regional PSAP or RECC.</p> <p>Such transition award(s) shall be credited against the obligation of the decommissioned PSAP(s) by the grantee. A decommissioned PSAP may be provided with the credit three (3) times to be applied for in three (3) different grant cycles, or two (2) times to be applied for in two (2) different grant cycles if a transition award was already applied for and awarded in the FY 2020 grant cycle pursuant to grant guidelines in effect at that time.</p> <p>After applying for and being awarded a transition award a total of three (3) times, a decommissioned PSAP may be provided with a credit an additional two (2) times to be applied for in two (2) different grant cycles, but the award will be limited the first time to fifty percent (50%) of the <i>greater of</i>:</p> <p>the last allocation for the decommissioned PSAP under the State 911 Department Support Grant; or the amount of the assessment or charge allocated to such PSAP for the current fiscal year under the terms of the signed inter-municipal agreement or other equivalent agreement governing the operations of the regional PSAP or RECC, and limited for the <i>second time to 25% of the greater of</i> the last allocation for the decommissioned PSAP under the State 911 Department</p>

State 911 Department – Development Grant Program FY22

Transition Award

port Grant; or ii) the amount of the assessment or charge allocated to such PSAP for the current fiscal year under the terms of the signed inter-municipal agreement or other equivalent agreement governing the operations of the regional PSAP or RECC.

Documentation that such credit has been granted in the form of a written acknowledgment from the decommissioned PSAP shall be required prior to reimbursement. ii) the amount of the assessment or charge allocated to such PSAP for the current fiscal year under the terms of the signed inter-municipal agreement or other equivalent agreement governing the operations of the regional PSAP or RECC.

Documentation that such credit has been granted in the form of a written acknowledgment from the decommissioned PSAP shall be required prior to reimbursement.

Current FY2022 Budget

The participating communities were asked to provide their current budget information. This will be used for comparison with any new projections related to RECC operations.

The Table below displays the current budgets for each of the communities emergency dispatch services with a breakout of personnel expenses and support (administrative and maintenance) expenses:

Municipality	Personnel Expenses*	Support Expenses	Budget Total
Grafton	\$ 290,400.00		\$ 290,400.00
Hopkinton	\$ 689,008.00	\$ 25,000.00	\$ 714,008.00
Hudson	\$ 835,265.56		\$ 835,265.56
Marlborough	\$ 628,960.26		\$ 628,960.26
Northborough	\$ 591,315.12		\$ 591,315.12
Southborough	\$ 446,645.38		\$ 446,645.38
Westborough	\$ 769,043.60		\$ 769,043.60
Totals	\$ 4,250,637.92	\$ 25,000.00	\$ 4,275,637.92

*Includes salary, overtime, OPEB and other government costs

Capital Expenditures

Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough, and Westborough are currently responsible for financing, planning, and meeting a replacement schedule for their equipment, which can come at a substantial capital cost. Operating on a 24/7 schedule places significant demands on emergency communications center equipment. The estimated life cycle of dispatch equipment is as follows:

Equipment	Life Cycle
PCs & Laptops	3 years
Servers & Routers	5 years
Software Upgrades	7 years

Radio Console	7 years
Dispatch Furniture	10 years

The Grafton Police and Fire Departments provided following technology assessment:

- Police Department Radio system is in good condition
 - Consoles updated in 2016
 - Mobile radios 1-5 years old
 - Portable radios 5 years old
 - Outdated CAD/RMS - IMC
- Fire Department Radio system needs replacement due to age of systems
- The Radio system does have gaps in coverage in South Grafton and North Grafton near the Westborough town line which would require engineering and equipment to remedy the problem,
- Outdated CAD/RMS – IMC system is an older software

Hopkinton Public Safety Communication provided the following technology assessment:

- Radio system was identified as being approximately 30 years old and nearing the end of life for the system
 - Forty-nine (49) Mobile radios of various ages
 - Ninety-six (96) Portable radios of various ages
- Radio system does have dead spots on the southeast side of town. Some points north side of town due to failing receiver sites
- CAD/RMS - ProPhoenix

The Hudson Police and Fire Departments provided the following technology assessment:

- Radio system was recently upgraded for both the RF infrastructure and existing MCC7500 dispatch console equipment that included:
 - Three (3) MCC7500 operator positions at Hudson PD HQ and added MCC7500e Console in the Hudson FD dispatch area.
 - RF Infrastructure: IP based transmitters, receivers and comparators forming a 2-channel UHF (PD and FD) and a 3-site ASTRO25 simulcast system
 - Site work at Popes Hill and Crestview including shelter, electrical work, and grounding.
 - Mobiles range in age of from 16 years old to 1 year old
 - Portables are less than 1 year old
- Radio system gaps were identified as being very few at the street level
- Outdated CAD/RMS – IMC system

The Marlborough Police and Fire Departments provided the following technology assessment:

- Radio system needs upgrade due to the age of the system
 - Consoles require replacement prior to 2028 as they will be unsupported by that time
 - Fifty-one (51) Mobile radios needed replacement
 - One hundred sixty-four (164) portable radios needed replacement
 - Outdated CAD/RMS

The Northborough Police and Fire Departments provided the following technology assessment:

- Radio system was identified as being six (6) years old and in good condition
 - Twenty (20) mobile radios needed replacement
 - Twelve (12) portable radios needed replacement
- Radio system does have coverage gaps due to some equipment in need of replacement
- Outdated CAD/RMS – NextGen

The Southborough Police and Fire Departments provided the following technology assessment:

- Radio system was installed in 2019 in good condition
 - No mobile radios were nearing end of life
 - No portable radios were nearing end of life
- Radio coverage gaps were identified in the far NE and SE sections of the community. Mobile coverage was identified as 95% and portable radios at 90% coverage
- Outdated CAD/RMS – IMC for dispatch and PD RMS. ESO provides RMS for FD

The Westborough Police and Fire Departments provided the following technology assessment:

- The radio system is eighteen (18) years old in fair condition
 - A portion of the mobile radios are nearing the end of life with replacement in the near future
 - A portion of the portable radios are nearing the end of life with replacement in the near future
- Little if any gaps in coverage at the street level
- Outdated CAD/RMS - IMC

Municipality	Type of Equipment	Replacement (3-Year Total Cost)	Annual Replacement Cost
Grafton	Engineering, coverage analysis and equipment, FD Mobile and Portable Radios Outdated CAD/RMS	\$1,950,000.00	\$650,000.00
Hopkinton	Radio System Replacement	\$1,250,000.00	\$416,666.67
Hudson	Outdated CAD/RMS	\$300,000.00	\$100,000.00
Marlborough	System Engineering, Mobile Radios (51) and one hundred sixty-four (164) outdated Outdated CAD/RMS	\$2,283,799.21	\$761,266.40
	Portable Radios (75) outdated Outdated CAD/RMS	\$646,199.25	\$215,399.73
Northborough	Radio system equipment partially past end of life	\$500,000.00	\$166,666.67
Southborough	Radio coverage gaps – engineering and equipment Outdated CAD/RMS	\$950,000.00	\$316,667.00
Westborough	Outdated CAD/RMS	\$300,000.00	\$100,000.00

Cost Sharing

The recommended cost-sharing ratio for this center would be based on the population and 911 call volume of the communities as shown below. This method is utilized by the State 911 Department in the distribution of their support and incentive grant program and is seen as a fair and equitable method to share the costs for the Regional Emergency Communications Center (RECC). The State 911 Department uses these two categories to distribute their Incentive and Operations Grant funding. This method calls for an equal ratio of 911 call volume (50%) and population (50%). The information for the criteria is developed using independent sources, i.e., the State 911 Department and the federal census data. The data and the ratio are listed below.

Community	911 Calls (2020)	911 Calls (%)	Population (2020)	Population (%)	911 Calls/Population (Ratio 50%/50%)
Grafton	3,497	9.41%	19,664	13.28%	11.34%
Hopkinton	2,995	8.06%	18,758	12.67%	10.36%
Hudson	4,380	11.78%	20,092	13.57%	12.67%
Marlborough	11,176	30.06%	41,793	28.23%	29.14%
Northborough	4,375	11.77%	15,741	10.63%	11.20%
Southborough	2,023	5.44%	10,450	7.06%	6.25%
Westborough	8,735	23.49%	21,567	14.57%	19.03%
Totals	37,181	100.00%	148,065	100.00%	100.00%

Projected State 911 Support for RECC for Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough, and Westborough

The State 911 Department provided its estimate for Support and Incentive Grant funds on a recurring basis for a RECC for the seven municipalities in this RECC Study. This estimate was received for this study and is as follows:

Entity	Support	Regional PSAP	Total Grant Funding
GHHMNSW RECC (Grafton, Hopkinton, Hudson, Marlborough, Northborough, Southborough, Westborough)	\$811,057	\$1,814,357	\$2,625,414
Calculations assume configurations are as noted. Changes to the communities included/excluded will impact funding levels. All estimates are subject to funding availability.			
Above RECC projections are calculated based upon anticipated regional PSAP and RECC configurations for FY 2023. Timelines impacting current project(s) may impact these projections. Allocation amounts are further subject to change in compliance with the following excerpt from the S&I grant guidelines <i>"The percentages in clauses i to iv, inclusive, and the percentages of the total amounts allocated to each grantee eligible within such clauses i through iv may be adjusted by the State 911 Commission to ensure a proper allocation of incentive funds as more regional PSAPs and regional emergency communication centers are added. The amount allocated to a grantee may be adjusted or capped."</i>			
Please note funding levels represent a surcharge of \$1.50;			
Allocations are subject to change at such time as the surcharge is reduced to \$1 on January 1, 2024.			

Projected FY23 RECC Budget

		YEAR 1	
Regional Emergency Communications Center (RECC) Budget		FY 2023 Draft Budget	% of Budget
Personnel			
Director Salary		\$121,000.00	
Supervisors Salary (4)		\$312,000.00	
Dispatcher Salaries (32)		\$2,066,149.31	
Overtime Allowance		\$150,000.00	
Admin. Assistant		\$67,000.00	
Other Personnel Employee Benefits (OPEB) - 32%		\$799,727.78	
Total for Personnel		\$3,515,877.09	91.87%
Other Non personnel expenses			
Technology/IT and Radios		\$90,000.00	
Maintenance Costs		\$86,000.00	
CAD/RMS License Fees		\$95,000.00	
Admin. Costs (legal-HR-Ins)		\$40,000.00	
Total for Maintenance/Admin.		\$311,000.00	8.13%
Total for Dispatch Services		\$3,826,877.09	100.00%
State 911 - S&I Grant		\$2,625,414.00	68.60%
RECC minus State 911 Funds		\$1,201,463.09	31.40%
Cost per Community as RECC			
Grafton		\$136,245.91	
Hopkinton		\$124,471.58	
Hudson		\$152,225.37	
Marlborough		\$350,106.34	
Northborough		\$134,563.87	
Southborough		\$75,091.44	
Westborough		\$228,638.43	
Current Costs FY22 Budgets			
Grafton		290,400.00	
Hopkinton		714,008.00	
Hudson		835,265.56	
Marlborough		628,960.26	

Northborough	591,315.12
Southborough	446,645.38
Westborough	769,043.60
Current Total Cost	4,275,637.92
Cost Savings per community	
Grafton	154,154.09
Hopkinton	589,536.42
Hudson	683,040.19
Marlborough	278,853.92
Northborough	456,751.25
Southborough	371,553.94
Westborough	540,405.17
Total Savings	\$3,074,294.98

Cost Savings Summary

Community	Recurring Cost Savings	Non-Recurring Savings	Total Savings
Grafton	\$154,154.09	\$650,000.00	\$804,154.09
Hopkinton	\$589,536.42	\$416,666.67	\$1,006,203.09
Hudson	\$683,040.19	\$100,000.00	\$783,040.19
Marlborough	\$278,853.92	\$351,137.97	\$629,991.89
Northborough	\$456,751.25	\$166,666.67	\$623,417.92
Southborough	\$371,553.94	\$316,666.67	\$688,220.61
Westborough	\$540,405.17	\$100,000.00	\$640,405.17
Total Savings	\$3,074,294.98	\$2,101,137.98	\$5,175,432.96

Research & Planning

Professionalism of Communications Centers & Emerging Trends

The primary goal of agency leaders interviewed was to increase the level of communication services to their communities and to their departments. Several the interviewees noted that a strength of an RECC is the development of long-term professional dispatch services. Professionalism is a determination of specific practitioners, methods, and performance criteria for a particular profession. The current trend of the 911 communication discipline is strongly focused on standards, best practices, personnel selection, training requirements, and utilization of technology. To enhance professionalism of communications centers requires a better understanding of the current plans to modernize emergency communications services nationwide. The trends are focused on:

- Increased capability to handle data, voice, and video;
- Inter-connect with other communications centers such as traffic management centers to coordinate movement of resources, personnel, equipment, and supplies;
- Enhance the cost effectiveness of human and technical resources;
- The integration of text messaging into our PSAP center operations and personnel training to meet societal trends;
- Challenges of dealing with multiple calls for service to the same events from the transition from wire to wireless communication devices; and
- The increased prevalence of video recording among younger generations.

National Standards

The National Fire Protection Association (NFPA) provides through their Standard 1221 the recommended time that an emergency call center dispatcher should answer an emergency call. 7.4.1 provides that 95% of emergency calls be answered within fifteen (15) seconds and 99% of emergency calls be answered within forty (40) seconds.

Accreditation

The Public Safety Communications Accreditation Program provides a communications center, or the communications unit of a public safety agency, with a process to systemically review and internally assess its operations and procedures. This program requires organizations to collect and analyze important data for the purpose of making sound operational and administrative business decisions, creating leadership and practitioner-accountability.

Geographic Information Systems (GIS)

Nothing is more important to dispatching a call for service than location. The adage of “Location, Location, Location” cannot be truer than in responding to a Call for Service (CFS). An increasing number of dispatch centers are adding layers of geographic information fire hydrant, hazmat, and critical infrastructures in addition to homes and businesses. It also provides for better routing of resources.

Enhanced Technology

Technology is making the combining of PSAP 911 Centers more cost effective through more robust communications systems, economy of scale in purchasing, establishment of dispatching and resource tracking standards, and increased employee morale through professionalism. Better dispatch systems in the marketplace allow greater ease of pass-off of resource control to Police, Fire, and EMS.

Additionally, strides are being made in the improved ability to work with the disabled through telecommunications devices for the hearing impaired, interpreting services for foreign languages, texting for the speaking impaired, and coordinating with local, country, state, and federal planning organizations for standards in address assignments.

Organizations actively improving communications infrastructures and standards development are:

- Massachusetts State 911 Department;
- APCO (Association of Public-Safety Communications Officials);
- NENA (National Emergency Number Association);
- USDOT (US Department of Transportation);
- IETF (Internet Engineering Task Force); and
- TIA (Telecommunications Industry Association).

Personnel Selection and Training Standards

The Massachusetts Communications Supervisors Association (MCSA) provides recommendations for minimum basic training standards for full and part-time public safety telecommunicators or dispatchers in Massachusetts. Those standards include the following elements:

- Standards for telecommunicators for taking 911 calls and dispatching police, fire, and emergency medical services;
- In-service and continuing education standards; and
- Supervisor and center management standards.

FirstNet

In response to the identified problems with the lack of radio interoperability for first responders to the September 11 attacks, the First Responder Network Authority (FirstNet) was created by Congressional action and is being planned and implemented throughout the country. Massachusetts is in the second year of planning this effort. FirstNet is establishing a nationwide, interoperable public safety broadband network dedicated to first responders. In establishing this network, FirstNet is guided by these important principles:

- A public safety-grade network built to meet the needs of our nation's first responders;
- Provide public safety users with true priority access to the network;
- Will harden the network to assist with resiliency during natural disasters, incidents, and man-made threats;
- Will enhance public safety communications by delivering mission-critical data and applications

- that augment the voice capabilities of today's land mobile radio (LMR) networks;
- Enable local communications management and keep incident commanders in control;
- Be judicious with taxpayer dollars while remaining focused on offering its services to public safety at a compelling cost; and
- Will have effective security controls that protect data and defend against Cyber Threats.

Prior 911 Center Consolidation Research

Thomas Kennedy and CTC, Inc. managed a research study from 1998 to 2000 for the National Institute of Justice, Office of Science and Technology, regarding a **Multijurisdictional Information Systems Assessment**. After analysis of 400 systems identified in paper surveys and then conducted an in-depth assessment of 17 diverse systems, including those provided by state, county, city, and regional agencies. The findings of that study are very applicable for the development of RECC's, concluded that the attributes of a successful multi-jurisdiction system were as follows:

- **Key leaders** were identified as the most important reason these systems were successful;
- **People** issues, not technology issues, were identified as being the most important factor in establishing an effective multi-jurisdictional information system;
- Managers of virtually all the successful information systems examined were **thinking strategically**;and
- All the systems developed **advisory boards** or steering committees to oversee long- term development of the system.

NIJ had the study conducted to identify a technology or process as the key to the success of the multi-jurisdictional system. The Study found that it was people who made the difference.

Minnesota's Governor's Work Group on PSAP Consolidation, A Guidebook for PSAP Consolidation Strategies. 2009. The Guidebook provides the most detailed document that has been published regarding the needed information regarding the process to consider the regionalization of emergency communication and then to implement the transition phase. An excerpt of the Executive Summary of the Guidebook provided thefollowing:

The evolution of 911 technology and difficult economic times have encouraged both state and local governments, and public safety agencies to investigate the concept of shared services or consolidation. The simplest definition of consolidation is the combining of two or more PSAPs into a single facility and/or organization using one of several existing models. Though the consolidation process is often complex and difficult, it can yield substantial improvements in service levels, responder safety, employee retention, and potential cost savings if implemented correctly.

The Phases identified in the Guidebook include:

- Identifying a champion for the project
- Interest building for decision makers
- Feasibility Study
- Planning Phase
- Implementation/Transition Phase
- Post consolidation Phase (service and technology)

The **John J. Heldrich Center for Workforce Development, Rutgers University, New Jersey** completed a comprehensive analysis of New Jersey's E911 system and the experience of other states with consolidation of 911 operations in 2005 - 2006. Key findings from that study were as follows:

- Local Officials in New Jersey and 911 officials from other states cite improved service and public safety as potential benefits of consolidation.
- There are clear economies of scale in the cost of handling 911 calls.
- There is potential for improved efficiency through consolidation of PSAPs (Public Safety Answering Points) and PSDPs (Public Safety Dispatch Points) that have a low workload or call volume.
- Reducing the number of PSAPs and PSDPs has the potential to generate cost savings for state and local government.
- State policy can influence the direction of 911 consolidation by creating a supportive environment.

At the **International Association of Chiefs of Police (IACP) Law Enforcement Information Management (LEIM)** conference in 2012, a presentation was made on Dispatch Consolidation by public safety practitioners based upon the development and operational experience of a large regional emergency communication center in Indiana. The presentation provided that the benefits of a regional emergency communication center included the following:

- Long term cost savings potential
- Better systems and service model
- Opportunity to reduce duplication, share costs and focus on core mission (new public sector emphasis)
- Improved employee retention and growth opportunities for dispatch personnel

The session also identified the challenges, which the presenters identified as:

- Political buy-in (need concept champion)
- Governance structure (key point)
- Cost sharing formulas (key point)
- Perception of a potential loss of control and organizational identity
- Adoption of a shared service model – differences must be resolved so there will be a consistent service provision approach/change management (business rules/protocols).

Research Within Massachusetts

Thomas Kennedy, the principal consultant for this project, was the President at the Center for Technology Commercialization Inc. (CTC) who conducted twelve feasibility studies involving thirty-four (41) municipalities. Tom was able to document the results of one hundred and ninety-eight (198) interviews that were conducted with Police and Fire Chiefs, Town Administrators, Mayors, police officers, fire fighters and dispatchers.

Below is a listing of the responses from interviewees to a standardized list of questions regarding the Strengths, Weaknesses/Concerns of RECCs as well as transition Recommendations to consider if their

community joined or developed a RECC.

The top five cited Benefits of an RECC as believed by the interviewees are as follows:

- Standardized/use of the same dispatch protocols
- Resources – more dispatch personnel for major events and increased surge of 911 calls
- Cost Savings, Financial Support – state contributions to center development and recurring costs
- Enhanced Mutual Aid
- More effective call taking and dispatching services for the public and emergency response

The top five cited Weaknesses/Concerns of an RECC as believed by the interviewees are as follows:

- Labor issues – seniority
- Keep out the dynamics of politics
- Not having anyone at the PD window or to monitor prisoners
- Loss of local knowledge, i.e., landmarks etc.
- Need updated dispatch protocols

The top five cited recommendations for a successful transition to a RECC:

- Need open communications/transparency
- Work out labor / union issues
- Provide a greater level of training opportunities
- Transition training – dispatch protocols (SOPs and radio codes)
- Local knowledge-landmarks, repeat callers and responder nuances

Requires:

- Management coordination meetings
- Ride along with public safety personnel from new community
- Requires clear cut plan
 - Best option
 - Cost estimate including staffing and other recurring costs
 - Policy and Procedures

Findings and Recommendations

The Towns of Grafton, Hopkinton, Hudson, Northborough, Southborough, Westborough, and the City of Marlborough are suited quite well to establish or join the State 911 Department operated Wireless Center and Regional Emergency Communication Center (RECC). Both options provide financial and operational benefits that are recognized by the leadership of the seven communities.

Each community should make their own decision regarding the two options. The specific findings and recommendations are as follows:

- It is feasible to Regionalize Grafton, Hopkinton, Hudson, Northborough, Southborough, Westborough, and the City of Marlborough into the State 911 Department Wireless/RECC that will be established in the region of these seven communities. A significant benefit is financial as the communities would not have to pay for the call taking and dispatching services. The operational benefit is the expertise that the State 911 Operations Division brings to the operations of the center. In the former Essex RECC and now North Shore RECC during the transition to the State 911 Department provided leadership and expertise to the center that has allowed the center to be an Accredited Emergency Communication Center and is providing excellence in call taking and dispatching services. Due to the timing of the development of this RECC and the potential RECC/Dispatch District which both would be approximately twenty-four (24) to thirty (30) months we would recommend that this should be the Option One as the State 911 department would be responsible to plan and fund the development of the RECC and to staff the site according to State 911 Department standards and operate with the best practices and operational protocols. The purpose of doing such a move would be to provide:
 - Standardized/use of the same dispatch protocols
 - Resources – more dispatch personnel for major events and increased surge of 911 calls
 - Cost Savings, Financial Support
 - Enhanced Mutual Aid
 - More effective call taking and dispatching services for the public and emergency response

- It is also feasible to Regionalize Grafton, Hopkinton, Hudson, Northborough, Southborough, Westborough, and the City of Marlborough into one of the three sites that were identified during the feasibility study process. This would be considered Option Two. The funding for such a site would be provided by the competitive State 911 Department Development Grant funds for the conversion of the site to a state-of-the-art RECC. Funding for the recurring costs would be provided by State 911 Department Support and Incentive Grant awards. RECCs operate with excellent dispatch protocols. Operationally the purpose of doing such a move would be to provide:
 - Standardized/use of the same dispatch protocols
 - Resources – more dispatch personnel for major events and increased surge of 911 calls
 - Cost Savings, Financial Support
 - Enhanced Mutual Aid
 - More effective call taking and dispatching services for the public and emergency response

- Prior to making decision regarding joining or developing a RECC, we would recommend each community team (manger/mayor, Police and Fire Chiefs) to visit one or more RECC that is operating in the state to see the RECC in operation and to ask questions that are important to

them and their community.

- Develop an outreach program to all the communities to inform them of the enhanced capability of the RECC and their rationale for joining or developing a RECC.
- Develop a plan to assess the administrative and security needs for each of the Police and Fire Departments to ensure that there is no loss of the services provided to the public.
- Develop a Transition Training Plan to incorporate all elements of required dispatch training as required by State 911, CAD/RMS, Dispatch Protocols, EMD and community knowledge. Ensure that the transition training is provided to the Police and Fire personnel for the changes to the revised/new dispatch protocols.
- Utilize the insight of the dispatchers and public safety personnel to develop excellence in operational guidelines/practices for the citizens of both communities and their public safety services.
- Assist the RECC that the town chooses to provide the emergency communications services for the State 911 Development Grant to provide the necessary equipment and services for the appropriate transition.

(DRAFT) District Agreement

Grafton-Hopkinton-Hudson-Marlboro-Northborough-Southborough-Westborough Regional Emergency Communications Center District

This District Agreement is dated as of the _____ day of _____ 2022, in accordance with the provisions of Massachusetts General Laws, Chapter 6A, Sections 18P to 18V, inclusive by and between the "Participating Communities" (as defined below). The effective date of the District Agreement (the "Effective Date") shall be the date when both Participating Communities have executed this document.

PREAMBLE

In order to establish, operate and maintain a consolidated emergency services communication and dispatch system for the Grafton-Hopkinton-Hudson-Marlboro-Northborough-Southborough-Westborough communities and any other community that chooses to join, in accordance with Massachusetts General Laws, Chapter 6A, Sections 18P to 18V, inclusive. The "Participating Communities" agree to jointly exercise their common powers in the manner set forth in this agreement.

WITNESSETH

WHEREAS the Participating Communities are each empowered by law to staff, maintain, and operate a public safety communications and dispatch facility, which is a proper governmental function and service; and

WHEREAS the Participating Communities desire to join together to establish a regional 911 emergency communication district comprised of their communities and any other communities which may in the future be admitted into the district; and

WHEREAS the Participating Communities desire to operate and maintain a consolidated regional 911 emergency communication facility in the region and to provide an orderly method for the accomplishment thereof; and

WHEREAS, the Participating Communities have agreed to share the costs, responsibilities, and obligations of constructing, operating, and maintaining a municipal regional 911 emergency communication facility, and

WHEREAS, the Participating Communities have agreed that the Town of Westborough shall be reimbursed for the administrative costs of procurement for the District while acting as its Fiduciary; and

WHEREAS, the Participating Communities have established this inter-municipal relationship for the purpose of combining their resources to maximize effective emergency and 911 dispatch services, as well as to provide regional interoperability for the public safety agencies from a single primary location, initially to be located in Westborough, Massachusetts; and

WHEREAS, the Participating Communities, pursuant to Chapter 6A of the Massachusetts General Laws, may enter into this District Agreement to perform joint activities or undertakings which the municipalities are authorized by law to perform.

NOW THEREFORE, the Participating Communities, in consideration of the mutual benefits, promises and agreements set forth herein agree to the following:

AGREEMENT

1. Purpose

This District Agreement is intended to set forth the responsibilities and obligations of the Participating Communities for cost-efficient, shared, and effective municipal emergency dispatch and communications services. The purpose of this District Agreement is to provide for the establishment, operation, and maintenance of a consolidated regional 911 emergency communication center (RECC) by constructing, equipping, staffing, maintaining, and operating a facility or facilities, which provide call receiving and dispatching services to the Participating Communities, by providing computers, radios, and other equipment for use in the field.

2. Name

The Participating Communities shall operate under the name "..... Regional Emergency Communication Center District", (hereinafter, theRECC District). Operating under the District, the services provided, and the center facility will be known as the Regional Emergency Communication Center (hereinafter, theRECC).

3. Term

The initial term of the District Agreement shall be for a term beginning on the Effective Date and ending on Thereafter, this District Agreement shall automatically renew for additional terms of five (5) years each up to twenty-five (25) years, or until terminated by mutual agreement, superseded by legislation and/or a subsequent agreement, or terminated sooner as set forth below.

Notwithstanding the above, this District Agreement shall have no force and effect unless and until each of the Participating Communities have executed this agreement with due authority. The Grafton-Hopkinton-Hudson-Marlboro-Northborough-Southborough-Westborough District has been established under Chapter 6A of the Massachusetts General Laws, which was enacted to empower the operation of the Regional Emergency Communication Center (RECC). Such operation shall be undertaken by the Participating Communities and the Participating Communities shall be bound by the obligations set forth herein. At all times, this District Agreement shall be subject to municipal appropriation.

This District Agreement shall not be affected by any change in leadership of any party hereto, unless terminated or modified pursuant to the terms of this District Agreement. Withdrawal or termination of a party to this District Agreement shall not, in itself, have the effect of terminating this agreement as to the remaining parties.

4. Governance

The Board of Directors shall be established for the District to oversee the construction or siting, administration, operation, and financing of the center and provide said board with the powers, duties and liabilities of a regional 911 emergency communication district, which powers shall be vested in and

exercised by the district board established by the agreement. Members of the Board of Directors shall serve without compensation, but each member shall be entitled to reimbursement from their actual and necessary expenses incurred for their official duties.

A. The Mayor, Town Manager/Administrator, or Chief Administrative Officer or their designee of each of the participating towns shall serve as the town's respective representative on the Board of Directors. The Participating Communities shall each have one (1) vote on the Board of Directors to act upon matters before the Board. Votes shall only be cast in accordance with Paragraph 4(H) below. As required under Chapter 500 of the Acts of 2014, the Finance Advisory Subcommittee will submit an annual budget to the Board of Directors. The subcommittee shall be comprised of the Chief Financial Officer and Chief Administrative Officer in each Participating Community. The Board of Directors will review and approve of the final products produced by the Operations Committee.

B. There will be an established Operations Committee to provide general oversight of the performance of the District, including operational protocols and procedures. The Police Chief and Fire Chief for each participating community shall serve as their community's respective representatives on the Operations Committee.

The Police Chief and Fire Chief for each Participating Community may also appoint an alternate representative to serve in place of the primary Committee representative in the event the primary Committee representative cannot serve at one or more meetings of the Committee. An alternate representative shall have the authority to vote in the name and stead of the person who appointed him/her. The Participating Communities shall each have one (1) vote on the Operations Committee to act upon matters before the Committee. Votes shall only be cast in accordance with Paragraph 4(H) below. A Committee representative shall cease to be a Committee representative if his/her community ceases to be a party to this District Agreement.

C. The Board of Directors shall appoint an Executive Director. The Executive Director shall be an employee of the District and his/her salary and benefits shall be established by the Board of Directors. The Executive Director shall be responsible for the day-to-day operation and maintenance of the District, subject to the specific authority retained herein by the Board of Directors and the general supervisory authority of the Board of Directors. The specific job qualifications, duties and responsibilities of the Executive Director shall be recommended by the Operations Committee and approved by the Board of Directors. The Executive Director shall report to the Board of Directors.

D. The Board of Directors shall have responsibility for all matters relating to the overall administration of the District, such as establishing the annual operating budget and capital budgets, as well as all human resource matters. Notwithstanding the above, the Board of Directors may, by a majority vote of its members, delegate to the Operations Committee such administration and budgetary matters as it may deem appropriate.

E. The Operations Committee shall have responsibility for the effective and orderly operation of the District, including, without limitation, communications equipment and systems, maintenance, operations, protocols, policies and procedures, facilities, personnel, training, billing, and making budget recommendations to the Finance Advisory Subcommittee. The Committee shall coordinate with each of the Participating Communities all local protocol and standard operating procedures required to implement regional dispatch services for each of the Participating Communities and shall ensure

compliance with all applicable, local, state, and federal protocol, rules, regulations, directives, and laws.

Notwithstanding the above, the Operations Committee may, with Notice to the Board of Directors and by a majority vote of all its members, delegate to the Executive Director such operational matters as it may deem appropriate.

F. Board/Committee Action. All actions by either the Board of Directors or the Operations Committee shall require the presence of a quorum and an affirmative vote of a simple majority of members present (except as is otherwise set forth herein including future financial obligations and the hiring of the Executive Director). A quorum shall be by super majority of the voting members. A quorum of voting members must be present for a vote of the Board of Directors to be valid and binding upon the Participating Communities.

G. Designation of Officers. The Board of Directors and the Operations Committee shall each have a Chairperson and a Vice Chairperson selected by ballot among its membership. The Chairmanship and Vice Chairmanship of the Board of Directors and the Committee shall be rotated among the Participating Communities. The person serving as Vice Chairman shall serve as the Chairman in the following year.

The Chairman of the Board of Directors and the Chairman of the Operations Committee shall be responsible for giving proper notification of their respective meetings (as required by applicable provisions of the Open Meeting Laws (M.G.L. c.30A ss. 18-25), setting agendas and performing administrative activities. The Executive Director will be designated by the Board of Directors and the Operations Committee to ensure proper notes are being taken. The Chairman of the Board of Directors and the Chairman of the Operations Committee shall notify all of its respective members, and the Town Clerk of each of the Participating Communities of all meetings. In the event that the Chairman is unable to fulfill these duties, the Vice Chairman shall act as Chairman for so long as the Chairman is unable to fulfill these duties.

H. Board/Committee Meetings

The Board of Directors and the Operations Committee shall each conduct regular meetings, holding at least two regular meetings each fiscal year. The first meeting of each fiscal year shall be the Annual Meeting. The date and hour of any regular meeting shall be scheduled by order of the Chairman of the Board of Directors and/or Operations Committee. The Board of Directors and Operations Committee shall provide for additional meetings as may be deemed necessary on a mutually agreed upon date and time.

The Board of Directors and the Operations Committee may each adopt rules for conducting their respective meetings and other business, as they deem necessary and appropriate. In the absence of rules to the contrary, common-law principles for the operation of meetings shall govern. The failure, however, to comply with such rules shall not affect the validity of any action. The Board of Directors and Operations Committee may suspend its rules if it so chooses.

The Executive Director shall ensure that at Board of Directors and Operations Committee meetings that minutes of regular and special meetings are kept. A copy of the approved minutes shall be provided within ten (10) business days after approval to each Board/Committee member, the Town Clerk of each Participating Community, and to any member of the public requesting same.

All meetings of the Board of Directors and the Operations Committee are subject to and shall comply with all applicable provisions of the Open Meeting Laws (M.G.L.c30A ss. 18-25) and the Public Records Laws

(M.G.L. c. 66), as amended from time to time.

I. Provision of Services to Other Entities; Additional Members

The District may provide dispatch or other communication services to other public or private entities, which provide a critical public health or safety service and/or public agencies not a party to this District Agreement, but only upon the written approval of and subject to such terms and conditions as the Board of Directors may establish. Such service may be evidenced by contract, inter-municipal agreement, or other form of written agreement.

The District shall establish the amount of charge for the service being provided to other non-member entities. Charges will be set with the intent of recovering all capital, operational, and maintenance costs expended in providing the services to a particular entity, both annually and for prorated periods thereof, as well as sums as may be needed for future improvements, repairs, upgrades, or expansions.

Any municipality, which is not a party to this District Agreement as of the effective date, may seek membership in the District. Admission of additional municipalities to the District shall be considered an amendment to the District Agreement and, as long as there is an affirmative vote by the super majority of the District.

5. Dispatch Facility

A. The initial District facility shall be located in, Massachusetts. The dispatch facility shall provide suitable and necessary components for a modern dispatch center. All equipment and materials within the facility will be supported and maintained through an annual operational budget. All equipment or materials used as part of the dispatch system will be owned as set forth in the following paragraph.

B. The District shall in its own name, by purchase, written lease, or written license, procure an area whereby a tower or other structure for the installation of antenna shall be constructed, and a facility in which the dispatch facility will operate. The District shall procure in its own name all equipment, systems, fixtures, goods, or other personal property, as it may deem necessary or appropriate from time to time. Upon termination or dissolution of the District, all equipment fixtures, goods, or other personal property installed or otherwise used at the facility (other than that which has been constructed or installed and is permanently affixed to the facility premises, or affixed in a manner so that it cannot be removed without defacing or damaging the premises) and which has been procured by or on behalf of the District with funds provided by the Participating Communities shall remain the property of the District. Any such personal property which has been purchased with funds provided by a grant shall, upon proper request, become the property of the granting authority which provided such funds. Upon the dissolution of the District, diligent efforts shall be made to sell the property of the District (excluding property purchased with grant funds) and the proceeds therefrom shall be equitably distributed to the then Participating Communities.

Notwithstanding the above, the Participating Communities acknowledge, agree and consent to the City/Town of, acting as (1) the procurement agent of the District, and (2) the applicant and grantee or agent for any and all grant programs that may be available to the District, provided however, that any funds, equipment, property, or services procured or received by the City/Town of as the result of a grant award or otherwise shall be for the benefit of the District, and to the extent practicable, ownership of any funds, equipment, property, or services procured or received shall be assigned or

otherwise transferred to the District.

C. The Operations Committee shall be responsible for recommending to the Board of Directors what communications equipment is necessary to operate and maintain the dispatch system. In carrying out its responsibilities, the Operations Committee shall be subject to the following standards:

- 1) The dispatch facility shall be intended to provide consolidated regional public safety communications and dispatch services facility to the Participating Communities.
- 2) All dispatch facility components shall be compatible with each other.
- 3) The choice of dispatch facility components and the operation and maintenance of the system shall be based upon cost efficiency, including budget constraints and effectiveness and upon a desire to establish appropriate response to the emergency dispatch and communications needs of the citizens of the district.
- 4) The Participating Communities acknowledge that system quality is subject to cost efficiency and budget constraints and that various sections of this agreement impose requirements related to budget approval by the Board of Directors.
- 5) Each of the Participating Communities shall provide and maintain all necessary telephone circuits, radio circuits/frequencies, two-way radios, antennae and any related and/or necessary equipment required for the operation of the dispatch facility and their respective emergency networks. All such telecommunications costs, maintenance costs, and expenses for equipment located within its community shall be the responsibility of each respective community.

6. Fiscal Year of the District

The fiscal year for the District shall be July 1st to June 30th of each year, except if the Effective Date of this District Agreement is other than July 1st, in which case, the first fiscal year shall be the short year commencing on the Effective Date and ending the following June 30th.

7. Annual Budget

With the assistance of the Executive Director, the Operations Committee shall develop and recommend to the Finance Advisory Subcommittee an annual budget by mid-December of each year. The Finance Advisory Subcommittee shall recommend an annual budget to the Board of Directors on or before January 15th of each year. The annual budget shall set forth all anticipated expenses and revenues for the following fiscal year and contingency funds for unanticipated operating and capital expenses. The annual budget shall include: (1) the operating budget and (2) the capital budget. The budget shall include any planned or future capital expenses and the salaries and benefits for all persons employed by the District, which shall be subject to the budget approval process set forth herein. Upon approval of the budget by the Board of Directors, the Board shall apportion the amount so determined among the member municipalities under the terms of the District Agreement. The amounts apportioned for each member municipality shall be certified by the District Treasurer to the chief executive officers, board of assessors and treasurers of the participating municipalities not later than February 1, annually, and the amounts so certified shall be appropriated and paid to the District Treasurer at the times specified in the District

Agreement. If any of the participating municipalities fails to include any apportioned amount so certified in its appropriations for the fiscal year, the Board of Assessors shall raise the amount in the tax levy for that year under section 23 of Chapter 59.

The useful life of equipment and other assets shall be considered when formulating the annual budget. Any unspent portion of a reserve budget shall be carried forward to the next fiscal year in addition to the reserve allocation for each such fiscal year.

The total budget, upon which the assessment against each of the Participating Communities is based, may be reduced by revenue from entities not a party hereto, by unexpected or unencumbered funds available at the end of each fiscal year prior to the year for which the budget is applicable, or by other revenues available to the District.

In the event that emergency expenditures are required to maintain system integrity in excess of the amount budgeted, the District is authorized to incur the same amount, first from the reserve fund and second from any other available funds. Any debt incurred by the District shall not be subject to the limit of indebtedness prescribed in Section 10, Chapter 44 per section 18R (g) of Chapter 500 of the Acts of 2014. The District may incur debt for a term not exceeding 25 years to acquire land, buildings, and equipment to construct or site and maintain a regional 911 emergency communication center, provided, however, that written notice of the amount of debt and of the general purposes for which it would be authorized shall first be given by the district board to the finance advisory subcommittee for approval, which shall require a majority vote. The finance advisory subcommittee shall vote on the proposed debt within 14 days of receiving notice. If the finance advisory subcommittee approves the debt, the debt may be authorized by the district board and written notice of the amount of debt and its general purposes shall be given to the Boards of Selectmen of each Participating Community not later than 7 days after the date on which the debt was authorized by the district board. No debt shall be incurred until the expiration of 60 days from the date the debt was authorized by the district board. If, prior to the expiration period, the Board of Selectmen of any member municipality votes to disapprove of the amount authorized by the district board, the debt shall not be incurred.

All financial obligations of the Participating Communities shall at all times be subject to annual municipal appropriation, including, but not limited to the Participating Communities' indemnification obligations under Paragraph 16 below.

Notwithstanding the above, in the event that a Participating Community does not pay the District its allocated share of the expenses of the District in any year, such community's membership in the District shall be subject to termination, which may be made in accordance with the provisions of Paragraph 12(B).

8. Allocation of Costs of Dispatch Facility

The Board of Directors shall annually determine the necessary amounts to maintain and operate the District and the amounts required to pay any debt and interest incurred by the District. Each Participating Community shall be charged according to an equal ratio based upon population (50%) and 911 calls (50%) received. Each Participating Community agrees to assume a proportional share of all costs and expenses for equipment, facilities, (including maintenance thereof), personnel and operations of the District and to promptly remit payment upon proper request. The amounts apportioned shall be certified by the District Treasurer to the Chief Executive Officers, Board of Assessors and Treasurers in each municipality no later

than February 1st each year. Payments of assessments are automatically due and payable each year without further notice as follows:

July 1st: 25% of total assessment
October 1st: 25% of total assessment
January 1st: 25% of total assessment
April 1st: 25% of total assessment

Each Participating Community agrees to provide in its annual budget an appropriation to be available in an amount adequate for that party's assessment for the same fiscal year. If any participating community fails to include any apportioned amount so certified in its appropriations for the fiscal year, the Board of Assessors shall raise the amount in the tax levy of that year under Section 23 of Chapter 59 of the Massachusetts General Laws.

9. Appointment of Secretary and Treasurer; Revolving Fund.

A. The Board of Directors shall appoint a Secretary and Treasurer (who may be the same person), who may be a treasurer of one of the Participating Communities in the District. The Treasurer, subject to the direction and approval of the Board of Directors, shall be authorized to receive, invest, and disburse all funds of the District without further appropriation. The Treasurer shall give bond for the faithful performance of his/her duties in a form and amount as fixed by the Board of Directors. The Treasurer shall be entitled to charge the District reasonable fees and collect its reasonable expenses for its services, as approved by the Board of Directors. The Treasurer shall be subject to Sections 35, 52 and 109A of Chapter 41 of the Massachusetts General Laws.

B. In order to finance the operation and administration of the District, there shall be established and maintained a segregated revolving fund account (the "Revolving Fund") and such other accounts, as may be appropriate. The District shall have its own taxpayer identification number. All payments received by the District and all expenses paid by the District shall be deposited into or paid from the Revolving Fund.

C. The Treasurer shall maintain accurate and comprehensive records, on the basis of accepted accounting principles consistently applied, of all funds deposited into and paid from the Revolving Fund and other accounts as well as records of all services procured, costs incurred, liabilities, reimbursements.

D. Financial statements shall be issued to all Participating Communities quarterly and annually. These statements shall also be provided to the Finance Advisory Committee. There shall be an audit of the books and records of the District performed by an independent third-party certified public accountant following the end of each fiscal year. Copies of the audit shall be provided to the Chairpersons of the Boards of Selectmen /City Council, the Finance Advisory Committee, the State Auditor, the State 911 Department and the Division of Local Services of the Executive Office for Administration and Finance. (A&F). In addition, the Board of Directors shall have the right, upon sixty (60) days advance written notice, to audit or otherwise examine the books and records of the District to verify the accuracy of the financial statements. The costs of performing any audit shall be an expense of the District. The Board of Directors shall be entitled to request and receive copies of the information described above upon reasonable notice.

E. For the initial term of this District Agreement, the designated Treasurer shall ensure that the accounting system for the District includes the following:

- General ledger;
- Accounts payable-invoice processing and payments as directed by the Executive Director;
- Accounts receivable-invoice and cash receipt processing as directed by the Executive Director;
- Payroll processing and associated human resources services;
- Bank account maintenance and reconciliations;
- Billing the District for administrative support provided by the designated Treasurer's Participating Community;
- Financial statement preparation, as required;
- Audit preparation, as required;
- Preparation of year-end 1099's and W-2s; and
- Grant management and administration functions, as required and appropriate.
- For all subsequent terms of this District Agreement, the Treasurer shall provide the Board of Directors with a list of the services his/her office will provide to the District and the rates charged. Such services and rates shall be approved in advance by the Board of Directors.

10. Reconciliation of Revolving Fund Account

Not less frequently than annually, the Executive Director shall reconcile cumulative payments made by the Participating Communities into the Revolving Fund against cumulative amounts owed. Participating Communities shall be credited for over payments or billed for shortfalls, as appropriate. Positive balances will be carried over to the following fiscal year.

11. Procurement

All goods and services procured by the District shall be procured pursuant to applicable procurement laws, rules, or regulations.

12. Termination or Withdrawal

A. A Participating Community may elect to withdraw and terminate its membership in the District by providing written notice to the Chairman of the Board of Directors not less than five (5) years prior unless there is a unanimous vote by the Board of Directors. Termination of membership shall be effective thirty (30) days following the payment of all obligations incurred and no less than two years from the receipt of notice of termination. No Participating Community shall be entitled to retain or be reimbursed for any costs or liabilities incurred prior to the effective date of termination of membership, including without limitation, any fees, costs, or expenses attributable to this District Agreement.

Following receipt of notice of termination, the remaining Participating Communities shall address the impacts caused by termination by either encouraging other parties to join the District or by reducing expenses of the District, but until any mitigation actually occurs, the terminated party shall remain liable for its assessment in full until the end of the current fiscal year. The type of activities to be taken in mitigation shall be determined at the sole discretion of the remaining Participating Communities. All parties to this District Agreement agree that the dispatch system is configured, and expenditures are committed based upon the understanding that all parties will remain members of the District at least until the end of the current term and that the payments to be made hereunder represent reasonable liquidated

damages and not a penalty. In the event that the District shall be comprised of less than two communities, the District shall be dissolved pursuant to the applicable law.

If any party to this District Agreement defaults on payment of any assessment or otherwise breaches this agreement, such party shall be notified in writing stating therein the nature of the alleged default or breach and directing such party to cure such default or breach within ten (10) days. If such party in default or breach fails to cure said default or breach within sixty (60) days, that party shall be subject to termination as a party to this District Agreement upon the vote of a super-majority of the Board of Directors representing those communities not in default. The party in default or breach shall not be entitled to vote on its own termination or be counted in determining a majority in interest. The terminated party shall remain liable for any defaulted payment and late charges accruing through the end of the current fiscal year.

13. District Personnel

The Executive Director and all other District personnel shall be employees of the District. The District shall employ supervisory and operations staff, as approved in each annual budget. Salaries and benefits of all such personnel shall be approved by the Board of Directors.

14. District Personnel Retirement Plans

Eligible employees of the District shall be entitled to participate in the Commonwealth of Massachusetts' retirement system established under Chapter 32 of the Massachusetts General Laws. Administration of the District's employees' retirement plans shall be administered by the Retirement System.

15. Severability Compliance with Applicable Law

Should any part, term, portion or provision of this District Agreement or the application thereof to any person or circumstances be in conflict with any local, state, or federal law or otherwise be rendered unenforceable or ineffectual, the validity of the remaining parts terms portions or provisions or the application thereof to other persons or circumstances shall be deemed severable and shall not be affected thereby. The parties further intend for this District Agreement to be modified to comply with any applicable local, state, or federal law, should it be determined not to be complying and to remain binding between them as so modified. In particular but without limiting the generality of the foregoing, the parties intend for this District Agreement to remain binding against each of them notwithstanding any legal requirement that would alter the term hereof or change the way in which any party is required to pay its share of assessments. The parties will remain bound hereunder subject to such modified terms.

16. Indemnification

Each of the Participating Communities shall indemnify, defend and hold harmless each other and their successors and assigns, and all of their officers, directors, lenders, agents, contractors, volunteers, and employees (collectively the "Indemnitees") from and against any and all claims, suits, actions, judgments, demands, losses, costs, attorney's fees, expenses, damages and liability to the extent caused by, resulting from, or arising out of the intentional acts, negligent acts, errors, omissions, or allegations thereof, of their

employees, agents, volunteers, or representatives in the performance of the terms of this District Agreement, to the extent allowed by law.

By entering into this District Agreement, none of the parties has waived any governmental immunity or limitation of damages which may be extended to them by operation of law. This agreement is by and between the parties which have executed it and each state that it is intended for their mutual benefit alone and is not intended to confer any express or implied benefits on any other person or entity. This District Agreement is not intended to confer third party beneficiary status on any person. It is expressly understood that the services provided hereunder are deemed for public and governmental purposes and all privileges and immunities from liability enjoyed by municipalities shall extend to their participation hereunder and to the activities so undertaken to the fullest extent provided by law.

17. Performance Bond

In accordance with the provisions of M.G.L. c. 40, section 4A, the District shall provide a nominal bond in the amount of one dollar (\$1.00) for the performance of its duties and obligations under this District Agreement.

GENERAL PROVISIONS

18. This District Agreement shall not affect any pre-existing, independent relationship(s), or obligations between the parties on any other subject or between the parties and any other third party or parties, including without limitation, "mutual aid" agreements.

19. None of the parties hereto shall be responsible for delays or failures in performance from acts beyond the reasonable control of such party (e.g., riot or institutional disturbance, natural or man-made disaster).

20. Notices

All correspondence or other notice related to this District Agreement shall be in writing and delivered to each Participating Community to the address and contact person provided from time to time by each Participating Community. Each party hereto authorizes the other to rely in connection with their respective rights and obligations under the District Agreement upon approval by the party so designated or any person designated in substitution or addition hereto by notice, in writing, to the party so relying.

21. Amendments

Amendments to this District Agreement shall require a super majority vote of the members of the Board of Directors. All amendments shall be in writing and shall be executed by the Chief Administrative Officer of each Participating Community. The addition of any other community as a participating member of the District shall require an amendment to the District Agreement.

22. Execution in Counterparts

This District Agreement may be executed in several counterparts, each of which shall be an original and

all of which shall constitute but one and the same instrument.

23. Binding Effect

This District Agreement shall be binding upon and shall inure to the benefit of each party and its successors and permitted assigns.

24. Governing Law

This District Agreement has been executed and delivered in and shall be construed and enforced in accordance with the laws of the Commonwealth of Massachusetts and parties hereto submit to the jurisdiction of any of its appropriate courts for the adjudication of disputes arising out of this District Agreement.

25. Choice of Forum

Any legal proceeding brought by an employee of the District, or any party hereto may be brought in a court with proper jurisdiction in Middlesex County.

26. Relationship of Parties

None of the provisions of this District Agreement is intended to create any relationship between the parties other than that of independent parties contracting with each other for the purpose of effecting the provisions of this District Agreement. The parties are not, and shall not be construed to be, in a relationship of joint venture partnership or employer-employee.

27. Waiver

No delay or failure to require performance of any provisions of this District Agreement shall constitute a waiver of the provision as to that or any other instance. Any waiver granted by a party must be in writing.

28. Entire Agreement

This District Agreement represents the entire agreement of the parties and supersedes any previous agreements between the parties relating to the same subject matter.

IN WITNESS WHEREOF, the Towns have hereto intended to be legally bound have caused their duly authorized representatives to set their hands and seals on the set forth below.

Town of Grafton

By: _____

Name: _____

Title: _____

Town of Northborough

By: _____

Name: _____

Title: _____

Town of Hopkinton

By: _____

Name: _____

Title: _____

Town of Southborough

By: _____

Name: _____

Title: _____

Town of Hudson

By: _____

Name: _____

Title: _____

Town of Westborough

By: _____

Name: _____

Title: _____

City of Marlborough

By: _____

Name: _____

Title: _____