Chittenden County Regional Planning Commission

Regional Dispatch Implementation Roadmap

February 2017

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Introduction

Background and Methodology

Communities in Chittenden County, Vermont have long explored the potential of consolidating emergency dispatching services. The Chittenden County Regional Planning Commission (CCRPC), on behalf of the communities of Burlington, Colchester, Essex, Milton, Richmond, Shelburne, South Burlington, Williston and Winooski, retained DELTAWRX to develop a practical roadmap that depicts the optimal state of consolidated dispatch services and details the steps necessary to transition to this future state. The primary driver for this effort is improved service delivery. It is hoped that consolidation will contain the rising costs of providing dispatching services over the long-term, however cost savings is not a project driver.

This implementation plan is the result of a participative and interactive process between DELTAWRX and the project sponsors. To gather our initial information, we interviewed more than sixty individuals from public safety agencies, municipal offices, Vermont State Police, Vermont Enhanced 9-1-1 Board and technology vendors. A complete interview list is provided in Appendix A. We analyzed the data collected based on quantitative and qualitative metrics, industry standards and our experience assisting other regional consortia facing similar issues. Midway through our analysis, we conducted a Roadmap Development Workshop to provide a forum for the project sponsors to reach a preliminary agreement on consolidation requirements, assumptions and preferences. The results of this workshop, as well as the ongoing efforts of the Governance Working Group, are incorporated into this plan.

Benefits of Consolidating Dispatch Services

Communities across the country choose to consolidate the dispatching of emergency services for a number of reasons, including facilitating inter-agency communication and the coordination of resources, staffing advantages offered through pooled teams, and the rigor afforded by dedicated, standards-based communications environment. Some communities pursue consolidation to comply with state legislation, while others do to share fixed capital costs and qualify for federally funded interoperability grants and state based incentives. The financial advantages of consolidation vary by case. In Chittenden County, Vermont, consolidation has the potential to improve service delivery in four specific areas:

- **Pooled Staffing:** Six out of the seven participating communications centers have periods of the day when a single person is on duty. With one person working, there is no immediate redundancy in the event of a major emergency. Agencies report being, "one call away from a very bad day," with limited ability to handle multiple, simultaneous high-priority calls. Consolidation reduces this risk by pooling dispatchers and increasing the number of individuals available to process calls at a given time. Consolidation also positively impacts staffing by designating resources to supervision and quality assurance, allotting time for ongoing training and after action reporting, and offering dispatchers career advancement opportunities.

- **Systematic Mutual Aid:** Mutual aid is currently requested through a manual, sequential process which lengthens call processing times and introduces the potential for human error. By moving

all agencies to a common platform in a single center, the Computer Aided Dispatch (CAD) application will possess a collective view of resource availability and be able to immediately recommend the most appropriate resource based on pre-defined parameters.

- **Dedicated Fire/EMS Oversight:** Dispatchers do not currently maintain operational control over fire/Emergency Medical Services (EMS) incidents and nor do they monitor responses once the agency has been informed of the incident, posing a risk to first responder safety. Consolidation eliminates this issue by creating a fire operations position(s) consistent with National Fire Protection Association (NFPA) guidelines. Further, associated improvements in CAD technology (closest unit dispatching, integrated pre-plans, automated move-up management, etc.) will help bring Fire/EMS dispatching in line with industry standards.

- **Streamlined Call Answering:** In all communities except Shelburne, one of the regional Public Safety Answering Points (PSAP) answers the incoming call from the reporting party and transfers the call to the appropriate dispatch center for processing. This transfer adds on average 90 seconds to the call processing time, ultimately delaying public safety agencies from responding. As a point of reference, the NFPA recommends that 80% of calls are processed within 60 seconds and that 95% of calls are processed within 106 seconds. By consolidating dispatch operations, communities in Chittenden County have the opportunity to become a PSAP, answer calls directly, and eliminate the vast majority of transfers (a small percentage of calls will still be transferred).

Challenges Associated with Consolidating Dispatch Services

Consolidating dispatching services is inevitably a challenging undertaking that entails difficult decision making and requires a commitment to compromise. Some of the main challenges Chittenden County will face are listed below.

- **Organizational Change Posed to Dispatchers:** Moving to a consolidated state represents a significant organizational change to the dispatcher's professional environment, including workspace and location, supervision, systems and processes. Dispatchers are integral to the process, must be respected as professionals and thoughtfully involved in consolidation efforts. Project Sponsors should communicate transparently with dispatchers, address rumors of job loss, invest in transition training and create a forum for soliciting pre-and post-cutover feedback.

- **Pay and Benefit Consideration:** Alongside organizational changes, dispatchers will see changes to their employment agreements. Team leadership should consider the current bargaining agreements, workload, experience, technology and complexity and develop a competitive compensation package for the future environment.

- **Standardization:** With few exceptions, standard operating procedures (SOPs) that cannot be uniquely configured in CAD to agency-specific guidelines should be standardized. In addition, radio and other system usage will need to be standardized in the consolidated state. Agency

chiefs must be prepared to compromise and should refer to published industry guidelines should standardization discussions stall.

- **Operational Changes:** In addition to changes in the dispatch center, field personnel will need to change how they conduct daily business (e.g., radio usage). To mitigate resistance to change, representative end users should sit on subcommittees that determine operational policies.

- **Differing Perspectives on Technology:** The project sponsors have yet to reach consensus on the CAD system that will be used by the consolidated entity. To move discussions forward, the Technical Advisory Committee should focus on "must have" functionality over a given vendor and leave the door open for future changes in technology.

- **Leadership:** The consolidated entity requires the leadership of a competent individual who is perceived as fair and strong, and available to support transition efforts. As such, the project team should adequately fund this position and begin recruiting early in the process.

- **Emergency Service and Community Equity:** The governance structure must be perceived as fair by all parties and provide a voice for smaller communities.

- **Loss of 24x7 Administrative Desk:** In the consolidated state, some police departments may choose to limit the Administrative Desk (also known as the Front Counter) to business hours. Should this be the case, communication will be necessary to educate citizens on such changes, provide assurance that public safety emergency services will remain available around the clock and convey how the community will benefit from improved dispatch services.

While the process of consolidating will be challenging, none of the hurdles are insurmountable. DELTAWRX recommends Chittenden County continue to pursue dispatch consolidation given the potential benefits to multiple aspects of service delivery that touch public safety agency personnel and citizens alike.

Description of the Future State

This section provides a high-level description of the future consolidated dispatch center. Chittenden County Public Safety Communications is dubbed "CC-COMM" for convenience in this plan, however the project team should determine the final shorthand name.

Minimum Requirements, Assumptions and Timeline

The overall benefit of consolidation is directly correlated to the number of communities who participate in CC-COMM, particularly in terms of pooled staffing and the coordination of mutual aid. At a minimum, CC-COMM requires the participation of the City of Burlington and at least one other community with an around-the-clock dispatch center to achieve the scale necessary to launch. Given that CC-COMM will ultimately function as a PSAP, it would also benefit significantly from the participation of Shelburne, which already possesses call taking equipment and employs dispatchers who are trained to provide pre-arrival instructions.

During the Roadmap Development Workshop, the project sponsors expressed a preference for pursuing "full consolidation," which involves consolidating police and fire/EMS dispatch services for all project sponsor communities, over the other options presented. The workshop also brought to light a preference for a gradual transition to the fully consolidated state, as well as a desire to begin initial operations in July, 2018. The group validated the assumption that it takes approximately 5.5 full time equivalents (FTE) to staff a single round-the-clock position and noted the City of Burlington's commitment to provide a facility, should that be of interest to the other communities, with the terms still outstanding. Based on these assumptions and preferences, DELTAWRX recommends the following approach:

- **Phase 1: July 2018 –** CC-COMM serves Burlington and one or two other communities, functioning as a dispatch center. In this early stage, the entity could likely temporarily operate from the Burlington Police Department dispatch center until the final facility is secured. CC-COMM employs the Executive Director, Training and QA Specialist, Systems Support Specialist, 6 Supervisors and 17 Dispatchers for a total of 26 FTE.

- **Phase 2: January 2019 –** CC-COMM begins serving Shelburne and one or two other communities and transitions to operating as a PSAP. At this point, the entity is operating from its final facility. CC-COMM employs the Executive Director, Training and QA Specialist, Systems Support Specialist, Assistant, 6 Supervisors and 22 Dispatchers for a total of 32 FTE.

- **Phase 3: December 2019 –** CC-COMM adds the final project sponsor communities and is posed to add other communities on a contract-for-service basis, once operations have stabilized. CC-COMM employs the Executive Director, Training and QA Specialist, Systems Support Specialist, Assistant, 6 Supervisors and 28 Dispatchers for a total of 38 FTE. A depiction of this staffing plan is provided in Appendix B. Full Consolidation Staffing Plan

We believe this timeline is a doable, best case scenario that can be achieved through teamwork, a commitment to compromise and clear roles and responsibilities. That said, should the team decide to

procure a new CAD system through a competitive Request for Proposals (RFP) process, build a new facility, or make major renovations to an existing facility, the timeline may have to be extended.

Financial Considerations

It is difficult to draw conclusions about the total financial impact of consolidation at this stage, given the uncertainties regarding the future CAD system and facility, among other factors. That said, the team should consider the following financial points:

- **Annual Personnel Costs Will Decrease:** Personnel costs (i.e., salaries and benefits) account for more than 90 percent of dispatch expenses in the current environment and are thus a key metric in financial analysis. In the current environment, dispatch centers are authorized to employ 45 FTE (excludes part time employees). DELTAWRX recommends CC-COMM employ up to 38 FTE in the fully consolidated state, for a reduction of 7 FTE. With dispatch turnover estimated to be about eight percent per year, or about three FTE per year, this reduction could occur through natural attrition.

  In the current environment, all Police Departments except Burlington rely on dispatchers to perform administrative duties such as assisting citizens at the front counter, distributing forms, monitoring videos and unlocking doors. Depending on the number of employees that the Police Departments decide to hire to perform the administrative duties currently performed by dispatchers, the County as a whole could expect to save between $50,000 and $400,000 per year in personnel costs. See Appendix I for more information.

- **Annual Non-Personnel Costs are Unknown:** Given the uncertainty regarding the future facility, annual non-personnel costs such as rent, utilities, insurance and telecommunications are unknown. Other annual costs include software maintenance, contracted services, travel and training fees.

- **One-Time Transition Expenses are Expected:** The County should expect some one-time expenses with the development of CC-COMM. Big ticket items include CAD server and software, interface development services, facility upgrades, furniture, and radio infrastructure. It is anticipated that some equipment and furniture will be able to be repurposed and that some radio consoles and call handling equipment will be provided by the State E-911 Board.

Potential Transition Expenses
- CAD Servers and Software
- NetClock and Logging Recorder
- Interface Development
- Facility Upgrade
- Workstation Furniture
- Workstation Computers
- Moving Expenses
- Severance Packages
- Telecomm and Networking
- Call Handling Equipment
- Radio Infrastructure
- Mobile and Portable Radio
- Training
- Pre-hire Employment Services
- Legal Support
- GIS Data Development
- Data Conversion
- Hiring Bonuses
- Radio Consoles
- Radio Control Stations

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Implementation Plan

The following plan outlines the key tasks that the project sponsors will need to complete to transition to CC-COMM in a strategic and low-risk manner. Tasks are presented in chronological order, with some spanning multiple quarters. A high-level Gantt chart is provided under separate cover and a depiction of implementation team roles and responsibilities is provided in Appendix C. Implementation Team Roles and Responsibilities The individual or group that appears in parenthesis following each task is the suggested responsibility party, which corresponds with the roles in Appendix C. Implementation Team Roles and Responsibilities

Please note that this plan was prepared from a technical, financial and service delivery perspective. Critical local issues, such as financial and legal approval under Vermont law, were not within DELTAWRX's scope. All recommendations should be revisited and considered in more detail within the local context.

Quarter 1 – 2017

1. **Establish CC-COMM as an Organizational Entity:** Continue efforts to complete the legal and administrative steps required to establish CC-COMM as an organizational entity, including exploring the insurance requirements associated with operating as a Union Municipal District. (Governance Working Group)

2. **Develop a Draft Mission Statement:** Develop a draft mission statement for CC-COMM to be finalized by the Executive Director and his or her team. (Governance Working Group)

3. **Develop and Implement a Communications Strategy:** Develop and implement a communications strategy for sharing consolidation-related information with public safety agency employees, project stakeholders, citizens and the media. Communication should be proactive, transparent and provided through a credible channel to prevent rumors from spreading. (Project Sponsors)

4. **Prepare to Hire Executive Director:** Prepare to hire a full-time, civilian Executive Director for CC-COMM by conducting a salary survey and establishing a plan to fund the position prior to CC-COMM generating revenue. A draft position description for the Executive Director is provided in Appendix D. Sample Executive Director Position Description Concurrent with this task, the team may also wish to conduct salary surveys for the Supervisor, Training and Quality Assurance, Systems Support, Assistant and Dispatcher positions. (Subset of City/Town Managers and CCRPC)

5. **Conduct CAD Gap Analysis:** Conduct a detailed gap analysis of the CrossWind and Spillman CAD applications using *APCO ANS 1.110.1-2015* and *LEITSC Standard Functional Specifications for Law Enforcement CAD Systems* to determine if either solution meets CC-COMMs requirements. In addition to functionality, consider support and other contractual requirements. CrossWind

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Technologies' response to a subset of APCO Unified CAD functional requirements is provided under separate confidential cover.

CC-COMM should participate in the City of Burlington's CAD Request for Information (RFI) development process in conjunction with this task.
(Technical Advisory Committee or Subcommittee)

6. **Continue to Pursue PSAP Requirements and Formation:** Continue to pursue the PSAP formation process with the E-911 Board to stay abreast of changes to their technical and/or operational requirements.
(CCRPC)

Quarter 2 – 2017

7. **Draft and Sign an MOU/MOA Expressing Intent to Join CC-COMM:** Draft and sign a preliminary agreement (typically either a Memorandum of Understanding or a Memorandum of Agreement) that details the key terms of the consolidation and formalizes communities' intent to join CC-COMM. Key elements of the agreement are provided in Appendix E. Key Elements of a Preliminary Agreement
(Project Sponsors)

8. **Reach Agreement on CAD; Pursue CAD Path:** Following the completion of the CAD Gap Analysis (Task 5), the Technical Advisory Committee should reach an agreement on how to address any gaps that have been identified, and pursue the agreed upon CAD path. This could include working with CrossWind Technologies to upgrade Valcour, upgrading the Spillman solution in use by either the State/Shelburne PSAP or the Hartford, Vermont PSAP, procuring a local instance of Spillman or issuing an RFP for a new solution. In the case of the latter, the timeline will likely need to be extended to allow ample time for RFP development, proposal development, proposal evaluation and contract negotiation activities.
(Technical Advisory Committee)

9. **Begin Standardization Discussions:** Early in the planning process, the Technical Advisory Committee should delegate representatives from the public safety agencies and dispatch community to discipline-based operational subcommittees. These subcommittees should begin standardization discussions and ultimately develop the first draft of the Operational SOP manual to be used at cutover. While many decisions will be dependent on the CAD path and the future system's ability to support multi-agency configurations, some decisions can be made early in the process. Examples of policies requiring standardization and documentation are provided in Appendix F.

In general, dispatchers should be expected to follow a common set of CC-COMM policies and procedures. Each functional position (e.g., FD Dispatch, FD Operations, BPD Dispatch, Local PD Dispatch) will have a position-specific workflow. Any agency-specific required functions or

workflow should be configured in CAD. Workflows that cannot be configured in CAD may be accepted at the discretion of the Technical Advisory Committee.

At this point, the Project Sponsors may also wish to explore the use of a standardized, integrated Fire Records Management System (FRMS). FRMS usage currently varies across Chittenden County, with most agencies using standalone systems or conducting manual NFIRS reporting. The establishment of a countywide FRMS may be financially and operationally beneficial for Fire Departments since it reduces the number of CAD-FRMS interfaces necessary, allows maintenance costs to be shared, improves the ease of NFIRS reporting and potentially facilitates the sharing of pre-plan data when providing mutual aid, if this data resides in the FRMS and not the future CAD. CC-COMM may wish to provide FRMS as a "value-added" service, if there is demand among the project sponsors.
(Technical Advisory Subcommittees)

10. **Draft Administrative SOPs:** Prepare the first draft of the administrative SOPs that will guide workplace practices at CC-COMM, including processes for hiring, evaluation, and disciplinary action and shift schedules, among others. The Executive Director will ultimately be responsible for finalizing and maintaining the currency of the Administrative SOPs.
(Administrative Work Group)

11. **Refine Facility Requirements; Pursue Facility Path:** DELTAWRX has prepared a high-level set of CC-COMM facility requirements (Appendix G. Sample Facility Requirements) that pertain to site location, space, security and other factors. The Project Sponsors should review and refine these requirements and begin seeking a facility that meets these requirements. If new construction or major renovations are required, the timeline will likely need to be extended.
(Project Sponsors)

12. **Establish a Human Resources Plan:** Develop a Human Resources Plan for transitioning existing dispatch center staff to CC-COMM, for inclusion in the preliminary agreement referenced in Task 7. The plan should specify the process for onboarding staff, either through guaranteed placement, a competitive interview and hiring process, or some other method. It should also specify the employment agreement that will be used, to include being directly employed by CC-COMM, a police department employee assigned to CC-COMM, a grandfathered approach or some other method. The Project Sponsors may also wish to include salary and benefit information for the various roles, including the option for communities to cover a potential delta in compensation for legacy employees.
(Administrative Work Group)

13. **Consider Municipal Dispatch Responsibilities:** Many dispatch centers currently support notifications for services such as tow companies, public works, water and sewer departments, municipal and commercial electric, telephone and cable companies, veterans and elder services, building maintenance and medical examiners. The Administrative Work Group should survey

dispatch centers to prepare a comprehensive list of municipal and third party services potentially requiring dispatch following consolidation, and determine if these notifications fit into CC-COMM's mission statement. As planning progresses, the Administrative Work Group should work with the impacted municipalities and service providers to develop procedures for after-hours notifications as necessary and develop a process for maintaining accurate notification data over time.

(Administrative Work Group)

Quarter 3 – 2017

14. **Develop Service Level Agreement:** Early in the planning process, the Technical Advisory Committee should develop a Service Level Agreement (SLA) to document public safety agencies' dispatch requirements and control expectations about CC-COMM's service delivery levels. The SLA should define service levels for CC-COMM responsibilities, such as call answering and processing standards and staff assignment, and clarify those services for which CC-COMM is not responsible (e.g., CAD uptime, agency response times, mobile support). It should define the consequences for CC-COMM's failure to deliver services, document an agreed upon approach for measurement and reporting and include provisions for modifying the document over time, resolving disputes and other organizational considerations.

(Technical Advisory Committee)

15. **Evaluate Radio Communications and Develop Communications Plan:** Evaluate all existing public safety radio frequencies and draft a preliminary radio communications plan that takes into account anticipated CC-COMM business practices for both law enforcement and fire/EMS. The plan should cover capabilities (analog, digital and multi-mode), coverage (inbound and outbound), usage and licensing. In addition, this task could include a revision to the encryption key sharing policy to include fire department command staff, thereby increasing inter-discipline interoperability.

(Technical Advisory Subcommittee(s))

16. **Inventory Equipment and Develop Redeployment Plan:** Inventory existing communications center equipment and develop preliminary redeployment plan that specifies equipment and furniture that is tentatively slated to be used by CC-COMM.

(Technical Advisory Subcommittee)

17. **Finalize Plan for Contracted Services:** Some services, such as payroll, legal counsel, and GIS, may be best provided by the CCRPC, a project sponsor community, or by a professional third party service provider, as opposed to being provided directly CC-COMM. The Administrative Work Group should document what services will be provided on a contracted basis and any agreed upon terms and rates.

(Administrative Work Group)

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18. **Begin Recruiting Executive Director:** Begin recruiting the Executive Director, understanding that this role could be temporarily filled by an interim director, if necessary.
(Administrative Work Group)

Quarter 4 – 2017

19. **Hire Executive Director:** Hire the interim Executive Director, followed by the permanent Executive Director in Q1/Q2 2018, to assist with pre-cutover tasks such as developing SOPs, preparing the facility, developing test plans and overseeing software, interface and radio testing, developing job descriptions and overseeing employee training.
(Executive Board)

20. **Develop Job Descriptions:** Develop job descriptions for the Supervisor, Training and Quality Assurance, Systems Support, Assistant and Dispatcher positions. It may be more appropriate to update the "Dispatcher" title to "Telecommunicator" or "Communications Specialist" to reflect the fact that CC-COMM will function as a PSAP with line staff responsible for both call-taking and dispatching responsibilities.
(Executive Director)

21. **Hire 6 Supervisors, Training and Quality Assurance Specialist and Systems Specialist:** Begin hiring CC-COMM staff, starting with the Supervisors, Training and Quality Assurance Specialist and Systems Specialist. These individuals will support pre-transition tasks such as system configuration and testing, finalization of the SOPs, preparation of the facility and dispatcher training. While the hiring process will ultimately conform to the guidelines set forth in the Human Resources Plan (Task 12), it is envisioned that the Supervisor, Training and Quality Assurance and Systems Specialist roles would be filled through a competitive process that draws from the entire pool of Project Sponsor communities. While this is a benefit to CC-COMM, legacy employees and the county as a whole because the most qualified candidates are slotted into the specialized positions, it may create temporary staffing challenges for communities who join CC-COMM in Phase 2 or Phase 3, should they "lose" key employees to CC-COMM earlier in the process.
(Executive Director)

Quarter 1 – 2018

22. **Develop and Implement Test Plan:** Develop or modify vendor-supplied functional, performance and reliability test plans. Functional testing should include end-to-end operational workflow scenarios, as well as interface features. While the timing and content of the test plans will depend on the CAD path, CC-COMM should seek to begin testing as early as possible before each of the three cutovers.
(Technical Advisory Subcommittee)

23. **Configure CAD:** Configure CAD according to CC-COMM's business practices, including individual agency requirements and the outcome of standardization discussions (Task 9).

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(Technical Advisory Subcommittee)

24. **Modify CC-COMM Facility:** Depending on the outcome of Task 11, the CC-COMM facility may need to be renovated or upgraded to meet the agreed upon requirements. While the timing and subtasks involved will be dictated by the Facility Path, CC-COMM should move into the final facility in conjunction with assuming PSAP responsibilities (Phase 2).
(Executive Director)

25. **Build or Buy Interfaces to External Systems:** The future CAD system should be interfaced to a number of third party systems to support the seamless flow of data. At the time this plan was prepared, the following interfaces have been identified:
    - 911 Call Handling System (ANI, ALI, TTY)
    - Agency Supplied GIS System
    - Records Management Systems (Law, Fire, ePCR (ImageTrend))
    - Network Based Time System
    - NCIC/VCIC
    - Fire Station Alerting System (Burlington and South Burlington)
    - Fire Personnel Alerting System (e.g., IamResponding)

    Burlington and South Burlington both utilize dedicated fire station alerting circuits supplemented by over-the-air dispatch in accordance with NFPA 1221. The remaining departments utilize over-the-air two-tone paging for notification of stations and responders. As part of the transition to a consolidated state, Burlington and South Burlington directed circuits must be re-directed to the CC-COMM facility. In addition, CC-COMM should establish fire station/personnel alerting procedures that are in accordance with NFPA 1221 and evaluate countywide use of automated personnel alerting technologies (e.g. IamResponding) interfaced to CAD in addition to two-tone over the air paging/dispatch.
    (Executive Director)

26. **Establish Emergency Call Routing Plan:** Dialing 9-1-1 is the preferred method for initiating an emergency call because it provides the PSAP with ANI/ALI information and establishes a line lock that cannot be disconnected. In Chittenden County, some citizens dial seven-digit numbers to initiate emergency calls. CC-COMM, in partnership with the participating communities, will need to determine the best approach for managing the existing seven-digit lines in the consolidated environment. Options include fully re-directing seven-digit lines to CC-COMM, partially re-directing existing seven-digit lines to CC-COMM after hours, and establishing new seven-digit lines for emergency transfers from PSAPs.
    (Technical Advisory Subcommittee and Systems Specialist)

Quarter 2 – 2018

27. **Identify and Outfit Backup Facility:** Identify and outfit a backup facility that will enable the continuity of operations in the event of an emergency requiring staff to evacuate the CC-COMM

facility. This will depend on the CAD Path, as web-based CAD solutions may provide more flexibility than traditional alternatives when determining backup facility options. One of the legacy dispatch centers from a community that joins CC-COMM in the third phase could potentially serve as a backup facility during the first and second phases, and/or beyond. (Executive Director/Systems Support Specialist)

28. **Procure a Voice Logging System:** CC-COMM requires a voice logging system to record audio on all radio channels, radio consoles and telephone lines. CC-COMM should purchase a system that meets these requirements, and establish a recorded audio file retention schedule in accordance with state guidelines.
(Systems Support Specialist)

29. **Develop Training Program:** Develop a training program for employees from legacy dispatch centers and for new hires. The program should include E-911 sponsored training, classroom training, on-the-job training and a probationary observation period, and should address both APCO and NENA training standards and CC-COMM SOPs.
(Training/QA Specialist with support from Supervisors and Executive Director)

30. **Develop Protocols for Hiring New Employees:** Develop protocols for hiring new (non-legacy) employees, including recruitment, screening, testing and interviewing.
(Executive Director and Training/QA Specialist)

31. **Hire/Transfer Dispatchers from Phase 1 Communities:** Hire or transfer dispatchers from the Phase 1 communities to CC-COMM in accordance with Human Resources Plan developed in Task 12.
(Executive Director)

Training Standards

- APCO ANS 3.101.2-2013 - Core Competencies and Minimum Training Standards for Public Safety Communications Training Officer (CTO)
- APCO ANSI 3.103.2.2015 - Minimum Training Standards for Public Safety Telecommunicators
- APCO ANS 3.102.1-2012 - Core Competencies and Minimum Training Standards for Public Safety Communications Supervisors
- APCO ANS 3.109.2-2014 - Core Competencies and Minimum Training Standards for Public Safety Communications Manager/Director
- APCO ANS 3.104.1-2012 - Core Competencies and Minimum Training Standards for Public Safety Training Coordinator
- APCO ANS 3.108.1-2014 - Core Competencies and Minimum Training Standards for Public Safety Communications Instructor
- APCO ANS 3.106.10-2013 - Core Competencies and Minimum Training Standards for Public Safety Communications Quality Assurance Evaluator
- NFPA 1961 - Standard for Professional Qualifications for Public Safety Telecommunications Personnel

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32. **Train Phase 1 Dispatchers:** Train Phase 1 Dispatchers on technology usage, CC-COMM Administrative and Operational SOPs and agency-specific requirements as necessary.
(Training/QA Specialist with support from Supervisors and Executive Director)

33. **Train Phase 1 Police, Fire and EMS Personnel:** Train Police, Fire and EMS personnel from Phase 1 public safety agencies on new mobile functionality, policies, operations and system usage.
(Phase 1 Public Safety Agencies in coordination with Training/QA Specialist)

34. **Reassign Non-Communications Duties:** Address backfill issue by reassigning non-communications duties performed by dispatchers in Phase 1 communities.
(Phase 1 Police Departments)

35. **Communicate Changes to Citizens:** In conjunction with the communications strategy established in Task 3, citizens from the Phase 1 communities should be informed of the upcoming changes in services, including limiting administrative services to business hours.
(Phase 1 Police Departments and City/Town Managers)

<div align="center">***First Cutover***</div>

Quarter 3 – 2018

36. **Hire Administrative Assistant:** Hire Administrative Assistant to support Executive Director with administrative duties.
(Executive Director)

37. **Initiate Continuous Improvement Tasks:** Initiate continuous organizational improvement tasks, to be performed after each cutover, and on a regular basis once operations have stabilized. These tasks include, but are not limited to, soliciting feedback from staff, soliciting feedback from public safety agencies, assessing staffing levels, assessing SOPs, providing refresher training, conducting systems health checks and testing the backup facility.
(Executive Director and Management Staff)

Quarter 4 – 2018

38. **Hire/Transfer Dispatchers from Phase 2 Communities:** Hire or transfer dispatchers from the Phase 2 communities to CC-COMM in accordance with Human Resources Plan developed in Task 12.
(Executive Director)

39. **Train Phase 1 and Phase 2 Dispatchers:** Train Phase 2 Dispatchers on technology usage and CC-COMM Administrative and Operational SOPs. Train Phase 1 and Phase 2 dispatchers on PSAP call taking, EMD and other requirements (if not already covered) and agency-specific requirements as necessary.
(Training/QA Specialist with support from Supervisors and Executive Director)

40. **Train Phase 2 Police, Fire and EMS Personnel:** Train Police, Fire and EMS personnel from Phase 2 public safety agencies on new mobile functionality, policies, operations and system usage.
(Phase 2 Public Safety Agencies in coordination with Training/QA Specialist)

41. **Reassign Non-Communications Duties:** Address backfill issue by reassigning non-communications duties performed by dispatchers in Phase 2 communities.
(Phase 2 Police Departments)

42. **Communicate Changes to Citizens:** In conjunction with the communications strategy established in Task 3, citizens from the Phase 2 communities should be informed of the upcoming changes in services, including limiting administrative services to business hours.
(Phase 2 Police Departments and City/Town Managers)

<div align="center">

Second Cutover: PSAP Transition

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Quarter 3 – 2019

43. **Hire/Transfer Dispatchers from Phase 3 Communities:** Hire or transfer dispatchers from the Phase 3 communities to CC-COMM in accordance with HR plan developed in Task 12.
(Executive Director)

44. **Train Phase 1, Phase 2 and Phase 3 Dispatchers:** Train Phase 3 dispatchers on technology usage and CC-COMM Administrative and Operational SOPs. Train all dispatchers on PSAP call taking, EMD and other requirements (if not already covered) and agency-specific requirements as necessary.
(Training/QA Specialist with support from Supervisors and Executive Director)

45. **Train Phase 3 Police, Fire and EMS Personnel:** Train Police, Fire and EMS personnel from Phase 3 public safety agencies on new mobile functionality, policies, operations and system usage.
(Phase 3 Public Safety Agencies in coordination with Training/QA Specialist)

46. **Reassign Non-Communications Duties:** Address backfill issue by reassigning non-communications duties performed by dispatchers in Phase 3 communities.
(Phase 3 Police Departments)

47. **Communicate Changes to Citizens:** In conjunction with the communications strategy established in Task 3, citizens from the Phase 3 communities should be informed of the upcoming changes in services, including limiting administrative services to business hours.
(Phase 3 Police Departments and City/Town Managers)

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Third Cutover

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Appendix A. Interview List

Name	Agency
Trevor Whipple	South Burlington Police
Doug Dubie	South Burlington Police
Moira Adams	South Burlington Police
Jeff Martell	South Burlington Police
Douglas Brent	South Burlington Fire
Kevin Dorn	South Burlington City Manager
David Nease	Winooski Police Department
Sharon Patenaude	Winooski Police Department
Rick Herbert	Winooski Police Department
John Spittle	Winooski Fire Department
Ray Coffey	Winooski City Manager
Brett Van Noordt	Milton Police Department
Peggy McCabe	Essex Police Department
Rick Garey	Essex Police Department
Brad LaRose	Essex Police Department
Tom Richards	Essex Fire Department
Dan Manz	Essex Rescue
Pat Scheidel	Essex Town Manager
Alan Buck	Richmond Police Department
Geoff Urbanik	Town Manager
Michael Chiarella	Richmond Rescue
Eric Shepard	Williston Police Department
Anne Hardman	Williston Police Department
Ben Hollwedel	Williston Police Department
Justin Huizenga	Williston Police Department
Ken Morton	Williston Fire Department
Rick McGuire	Williston Town Manager
Steven Locke	Burlington Fire Department
Brandi Barbeau	Burlington Police Department
Jannine Wright	Burlington Police Department
Joe Colangelo	Shelburne Town Manager
John Goodrich	Shelburne Fire Department
Linda Goodrich	Shelburne Rescue
Ann Janda	Shelburne Director of Administration
Dan Eickenberg	Shelburne Police Department
James Warden	Shelburne Police Department
James Mack	Shelburne Police Department
Peter Frankenburg	Shelburne Director of Finance
Steve Burke	Milton Fire Department
Al Barber	Hinesburg Fire Department
Steve Bourgeois	Malletts Bay Fire Department
Mike Cannon	Colchester Technical Rescue
Amy Akerlind	Colchester Rescue
Michael Chimielewski	Colchester Fire Department

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Name	Agency
Dawn Francis	Colchester Town Manager
Aaron Frank	Colchester Assistant Town Manager
Jeffrey Barton	Colchester Police Department
Douglas Allen	Colchester Police Department
Jeff Beane	Colchester Police Department
Earl Benway	Colchester Police Department
Jonathan Wheeler	Colchester Police Department
Mike Schmoll	Colchester Police Department
Jennifer Morrison	Colchester Police Department
Lee Krohn	CCRPC
Jim Cronan	Vermont State Police
Judy Dunn	St. Albans Police Department
Gary Taylor	Vermont Enhanced 9-1-1 Board
Chris Knudsen	CrossWind Technologies
David Wellington	CrossWind Technologies
Nicole Koenig	CrossWind Technologies

Appendix B. Full Consolidation Staffing Plan

For conservative planning purposes, the staffing plan depicted in Figure 1 represents the "high staffing" model discussed during the Roadmap Development Workshop. Once operational, CC-COMM may be able to drop the Call Taker (C/T) Dispatch position and/or the Shift Supervisor position during periods of low call volumes, or otherwise reduce staffing. Brief position descriptions follow.

Figure 1. CC-COMM Full Staffing
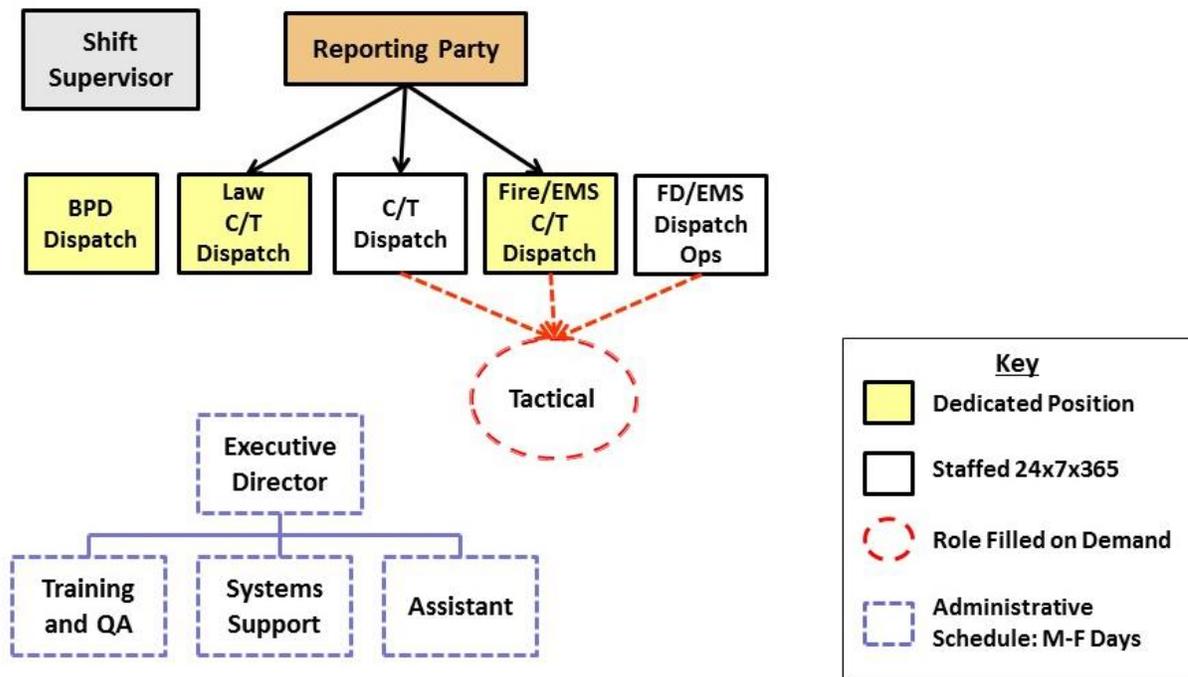
Position Descriptions

- **Shift Supervisor:** Oversees operations on the dispatch floor, supports the coordination of resources during peaks in incident activity, provides on-the-spot feedback and responds to inquiries. Capable of performing all call taking and dispatching functions, but does not regularly sit at a console. May also prepare shift schedule support CAD administration and other duties.
- **Burlington Police Department (BPD) Dispatch:** Primarily responsible for dispatching Burlington Police Department units. Capable of performing all call taking and dispatching functions.
- **Law Call Taking (C/T) Dispatch:** Primarily responsible for answering calls and dispatching units for all non-Burlington police departments. Capable of performing all call taking and dispatching functions.
- **Call Taking (C/T) Dispatch:** Backup position capable of answering calls and dispatching units for any agency during heavy call times. May assume tactical dispatching responsibilities in the event of a high priority, large or otherwise complex fire/EMS incident. Capable of performing all call taking and dispatching functions.
- **Fire/EMS Call Taking (C/T) Dispatch:** Primarily responsible for answering calls, providing pre-arrival medical instructions and dispatching units for all fire/EMS departments. May assume

tactical dispatching responsibilities in the event of a high priority, large or otherwise complex fire/EMS incident. Capable of performing all call taking and dispatching functions.

- **FD/EMS Dispatch and Operations (Ops):** Responsible for dispatching units for all fire/EMS departments and providing ongoing unit and incident oversight until the call is closed. May assume tactical dispatching responsibilities in the event of a high priority, large or otherwise complex fire/EMS incident. Capable of performing all call taking and dispatching functions.
- **Executive Director:** Responsible for all aspects of CC-COMM operations. See position description in Appendix D.
- **Training and Quality Assurance (QA) Specialist:** Coordinates and provides new hire training and recurring training for existing employees (some training will be provided by external trainers). Regularly prepares and analyzes statistical reports to ensure service levels are being met and addresses training deficiencies as necessary.
- **Systems Support:** Provides support for all technology systems used by CC-COMM including performing CAD and interface system administration duties, overseeing radio infrastructure, managing servers and CC-COMM desktop computers and conducting regular systems health checks. Conducts system backups and ensures viability of the backup facility.
- **Administrative Assistant:** Supports Executive Director with administrative duties including preparing reports, maintaining files, coordinating recruiting, outreach and other calendaring activities, liaising with third party providers on issues such as payroll, ordering supplies and other duties.

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Appendix C. Implementation Team Roles and Responsibilities

The groups identified in Figure 2 should carry out the tasks listed in the implementation plan, with other subcommittees developed on an as-needed basis. It is envisioned that representatives from dispatch be included on the operational subcommittees.

Figure 2. Implementation Team
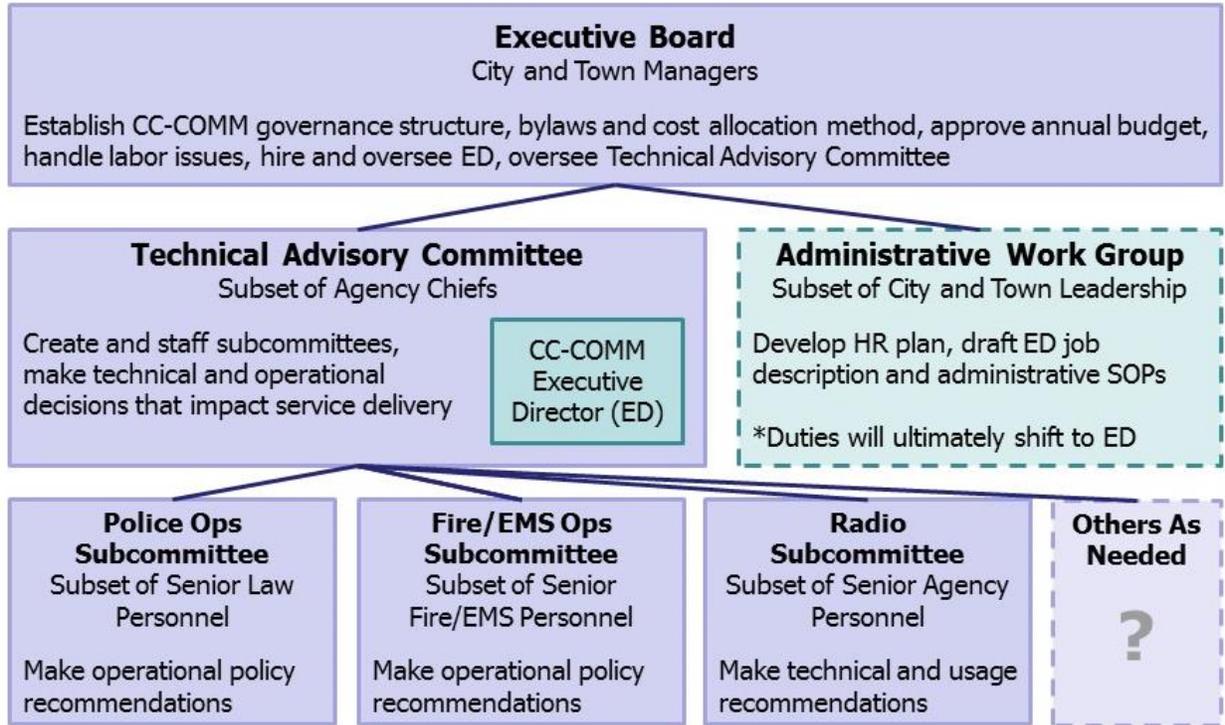
Appendix D. Sample Executive Director Position Description

Responsibilities

- Oversees the efficiency and stability of CC-COMM operations
- Ensures compliance with applicable state and federal laws
- Communicates with dispatched agencies, including responding to inquiries and concerns, resolving problems and communicating changes to SOPs
- Analyzes and evaluates protocols and makes recommendations to public safety officials for standardization and the effective delivery of communications services
- Liaises with the Vermont E-911 Board; provides call-taking reports as necessary
- Manages CC-COMM personnel (establishing goals/standards, maintains staffing, interviews and selects candidates, coordinates assignments, authorizes leave, conducts evaluations, etc.)
- Administers CC-COMM policies and procedures
- Manages annual budget for approval by the Executive Board
- Regularly updates the Executive Board on all aspects of the organization
- Oversees equipment and technology (CAD, radio systems, logging recorders, etc.)
- Provides recordings to Prosecutor's Office, attorneys and appropriate law enforcement agencies and testifies in court as necessary
- Compiles statistical and administrative data, analyzes trends, maintains records

Qualifications and Experience

- Baccalaureate Degree in Public Safety Administration, Business Administration, Communications, or a related area, with a minimum of seven years of relevant experience, including at least five years of supervisory experience within a multi-agency public safety communications center equal to or greater in projected call volume and employee numbers to CC-COMM (under full consolidation); or equivalent combination of education and experience
- NCIC/VCIC certification, EMD Certification, and CPR certification
- Understanding of public safety agency accreditation standards and processes
- Ability to supervise and direct assigned personnel, including hiring, planning/making work assignments, providing corrective instruction, recommending personnel actions as appropriate, and maintaining discipline
- Ability to develop, disseminate and implement standard policies and procedures
- Ability to comply with all employer personnel policies and work rules, including, but not limited to, attendance, safety, drug-free workplace, and personal conduct
- Familiarity with Chittenden County area geography and law enforcement, EMS and fire demands, and ability to use and understand maps
- Working knowledge of radio talk group, procedures, limitations, acronyms and codes as well as how to use a two-way radio
- Knowledge of the principles and practices of public safety communications, public administration including public works, emergency planning, mitigation and coordinated response to emergencies, which require timely effective response actions
- Knowledge of Microsoft Office and familiarity with CAD applications

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- Ability to effectively communicate orally and in writing
- Knowledge of all federal, state and local regulatory requirements applicable to public safety communications and major issues which require effective coordinated actions.
- Knowledge of the funding process in a local government environment as related to budgeting, cost accounting, financial planning and management
- Ability to establish and maintain effective working relationships with the general public, co-workers, elected officials and people from diverse backgrounds
- Ability to work on several tasks at the same time, often under time pressure, and complete tasks effectively amidst frequent distractions and interruptions
- Ability to provide public access to or maintain confidentiality of department information/records according to state requirements
- Ability to serve on 24-hour call and respond swiftly, rationally and decisively to emergencies
- Ability to occasionally work weekend, and/or extended hours, and travel out of town

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Appendix E. Key Elements of a Preliminary Agreement

It is common for communities preparing to consolidate dispatch services to develop a preliminary agreement that documents expectations about the transition to the consolidated state. The preliminary agreement could take the form of an MOU, an MOA or a different, locally-appropriate format.

Reaching an agreement on key issues early in the process prevents misunderstandings or "deal breakers" from arising at a later date, when much time and energy has already been invested. The agreement should focus on human resources and CC-COMM management, addressing, at a minimum:

- How CC-COMM will resolve human resource differences, including dispatcher benefits, pay and seniority
- How and when communities will join CC-COMM (if known)
- How the integration of communities and personnel will affect existing union contracts
- How call handling be determined and integrated for different communities and across different disciplines
- How and by whom CC-COMM will be managed
- Who will determine dispatch and personnel policies and procedures, and how and by whom will those policies be approved

The agreement could also document requirements for technology and facilities, and/or the anticipated cost allocation formula.

Appendix F. Standardization Expectations

CC-COMM will need to adopt a standard set of administrative and operational procedures to guide the daily operations. Examples of policies requiring standardization and thorough documentation are listed below.

Administrative Policies

- Hiring process
- Evaluation process
- Disciplinary process
- Ethics
- Work rules
- Shift schedules
- Chain of command

Operational Policies

- Language (10-codes versus plain English)
- Unit nomenclature
- Incident numbering
- Definition of what constitutes an incident
- Call taking procedures and the level of information provided at initial dispatch
- Dispatching procedures including expectations for dispatcher queries and follow up research
- Status updates (who, how)
- Timers
- Self-initiated calls
- General radio traffic policies

PSAP and Operations Standards

- APCO ANS 2.103.1-2012 - Public Safety Communications Common Incident Type Codes for Data Exchange
- APCO ANS 1.111.1-2013 - Common Incident Disposition Codes for Data Exchange
- NENA Standard 04-001 - E-9-1-1 PSAP Equipment
- NENA Standard 04-002 - PSAP Master Clock Standard
- NENA Standard 04-004 - Generic Standards for E9-1-1 PSAP Intelligent Workstation
- NENA Standard 04-501 - Integrating Applications on Intelligent Workstations; Technical Information Document
- NENA Standard 04-502 - E-9-1-1 PSAP CPE Site Characteristics
- NENA-INF-017.2-2015 - NENA Communications Center/PSAP Disaster and Contingency Plans Model Recommendation
- NFPA 1221 - Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems
- NFPA 1561 - Standard on Emergency Services Incident Management System and Command Safety

Should standardization discussions stall, subcommittees should look to national standards from bodies such as the Association of Public Safety Communications Officials (APCO), the Commission on Accreditation for Law Enforcement Agencies(CALEA), the National Fire Protection Association (NFPA) and the National Emergency Number Association (NENA) for guidance on widely accepted practices.

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Appendix G. Sample Facility Requirements

During the first phase, CC-COMM may be able to operate from the Burlington Police Department Dispatch Center. This is a low-cost, relatively simple option that would allow CC-COMM to begin operations without delay. CC-COMM should move into its final facility in conjunction with the transition to becoming a PSAP (second phase), given the associated equipment and infrastructure requirements.

Space and Site Requirements

A preliminary set of minimum square footage requirements is provided in Table 1.

Table 1. Minimum Interior Square Footage Requirements

Usage	Estimated Square Feet
Dispatch floor (6-8 full positions)	1000
Conference/training room (includes 2 training positions)	420
Executive Director's office (private)	150
Office/cubicle space for 4 management/supervisory employees	350
Controlled server and equipment room	250
Kitchen/shared break room	200
2 Bathrooms and group locker space	160
Closet, supply storage, miscellaneous other	250
Total	**2780**

In addition to interior space requirements, the future site should include parking to accommodate at least 20 vehicles (the maximum number employees present during shift change plus four potential trainees/visitors). These requirements are minimum levels. Ideally, the interior and parking space will include room for expansion, both due to organic growth and through the addition of agencies. Project sponsors should also consider the proximity of hazards and an evacuation route when examining sites, and review for compliance with the NENA Standard 04-502 - E-9-1-1 PSAP CPE Site Characteristics, and the additional requirements found in NFPA 1221, Chapter 4.

Technical Requirements

From a technical perspective, the future site should meet the following requirements:

- Controlled access and security provisions
- Redundant fiber connections to multiple carriers
- Redundant internet connectivity
- Alternate and uninterruptable sources of electrical power
- Ability to connect to VSP microwave network
- Sufficient HVAC systems to support dispatch floor, equipment room and office(s)
- Lighting (minimize glare) and acoustics (minimize noise)

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Appendix I. Personnel Costs/Savings

Inputs

- Current Authorized Dispatch Center FTE Count: 45
- Full Consolidation Number of Dispatchers (Estimate): 28
- Full Consolidation Number of Assistants (Estimate): 1
- Full Consolidation Number of Executive Directors (Estimate): 1
- Full Consolidation Number of Supervisors and Specialists: 8

- Average Dispatcher Annual Salary: $48,633
- Executive Director Annual Salary (Estimate): $70,000
- Supervisor/Specialist Annual Salary (Estimate): $55,000
- Assistant Annual Salary (Estimate): $40,000
- Backfill Support Annual Salary (Estimate): $40,000

- Blended Benefits Multiplier: 1.49

Outputs

Current Personnel Expenses	**$3,260,842**
CC-COMM Full Personnel Expenses	**$2,848,468**
Annual Savings with No Backfill	**$412,374**
Cost to Backfill 1 FTE	$59,600
Annual Savings with 1 FTE Backfill	**$352,774**
Cost to Backfill 2 FTE	$119,200
Annual Savings with 2 FTE Backfill	**$293,174**
Cost to Backfill 3 FTE	$178,800
Annual Savings with 3 FTE Backfill	**$233,574**
Cost to Backfill 4 FTE	$238,400
Annual Savings with 4 FTE Backfill	**$173,974**
Cost to Backfill 5 FTE	$298,000
Annual Savings with 5 FTE Backfill	**$114,374**
Cost to Backfill 6 FTE	$357,600
Annual Savings with 6 FTE Backfill	**$54,774**

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