

THIS AGREEMENT dated this 20 day of December 2016

**BETWEEN:**

**NORTH ISLAND 9-1-1 CORPORATION**

600 Comox Road  
Courtenay, B.C.  
V9N 3P6

(hereinafter called the "North Island 9-1-1 Corp")  
**OF THE FIRST PART**

**AND:**

**CITY OF CAMPBELL RIVER**

301 St. Ann's Road  
Campbell River, B.C.  
V9W 4C7

(hereinafter called "Campbell River")  
**OF THE SECOND PART**

**WHEREAS:**

- A. North Island 9-1-1 Corp's purpose is to operate a 9-1-1 System (as defined herein) and such ancillary purposes relating to the 9-1-1 System.
- B. Campbell River, through the Campbell River Fire Department, has agreed to act as the sole 9-1-1 Fire Dispatch Centre ("9-1-1 Fire Dispatch Centre") for the 9-1-1 System for all of the Fire Departments and will provide emergency response dispatch services to all fire departments included in the 9-1-1 System, and;
- C. Campbell River and North Island 9-1-1 Corp wish to define their respective rights and obligations for the operation and funding for the 9-1-1 Fire Dispatch Centre.

NOW THEREFORE, in consideration of the mutual promises and obligations set out below, North Island 9-1-1 Corp and Campbell River hereby agree as follows:

1. **GENERAL**

1.1 Interpretation - In this Agreement:

**"Communication Equipment Sites"** means locations where Equipment and systems are located for the 9-1-1 Fire Dispatch System;

**"Equipment"** means the equipment, materials, publications, spare parts and supplies provided to Campbell River by North Island 9-1-1 Corp to operate and manage the 9-1-1 Fire Dispatch Centre;

**"Fire Departments"** means the fire departments that North Island 9-1-1 Corp is obligated to provide fire dispatch services as listed in Schedule "A" and as may be amended by North Island 9-1-1 Corp from time to time;

**"Fire Dispatch Advisory Committee"** means the committee of Fire Departments representatives that advise on the operational and administrative delivery of fire dispatch services;

**"9-1-1 Fire Dispatch Centre"** means the 9-1-1 Fire Dispatch Centre to be operated and managed by Campbell River in accordance with the terms of this Agreement;

**"9-1-1 Fire Dispatch Operating Guidelines"** means the general operating guidelines as amended and maintained by the 9-1-1 Fire Dispatch Manager to ensure the ongoing efficient and effective operations of the 9-1-1 Fire Dispatch Centre, and which will include disaster recovery guidelines;

**"9-1-1 Fire Dispatch Training Standard"** means the training disciplines of Public Safety Telecommunicator (Canada) Level 1 and Fire Service Communications Level 1 as provided by the Association of Public-Safety Communications Officials (APCO) International.

**"9-1-1 Fire Dispatch System"** means all radio, computer, telephone, recording, mechanical and electrical systems (attached to the 9-1-1 System) used for the delivery of fire dispatch services within the entire area served by North Island 9-1-1 Corp, managed and operated by Campbell River through agreement with North Island 9-1-1 Corp;

**"9-1-1 Fire Dispatch Manager"** shall be a deputy fire chief of Campbell River Fire Department or designate/s appointed by the fire chief of Campbell River Fire Department from time to time;

**"9-1-1 System"** means the 9-1-1 emergency answering and dispatch systems managed by North Island 9-1-1 Corp for the provision of both a primary public safety answering point and a secondary fire public answering point and dispatch system;

**"NFPA 1221, Chapter 7"** means the National Fire Protection Association, Standard 1221, Chapter 7, as it may be amended from time to time;

**"Operating Costs"** means the operating costs defined in Schedule "B", which is attached to and forms part of this Agreement; and

**"Services"** means the operation and management of the 9-1-1 Fire Dispatch Centre and System on behalf of North Island 9-1-1 Corp in accordance with this Agreement, and NFPA 1221, Chapter 7 as it may be amended from time to time as outlined in Schedule "C".

- 1.2 **Term** - The term of this Agreement is for a period of five (5) years commencing January 1, 2017 and ending on December 31, 2021. This Agreement may be extended for one additional five (5) year term, provided that both parties agree in writing to the Operating Costs for the additional term. This Agreement may be terminated in accordance with Section 7.1 herein.

## **2. OBLIGATIONS OF CAMPBELL RIVER**

- 2.1 **Provision of Services** - Campbell River shall provide the Services in accordance with this Agreement.

- 2.2 **Staff** - Campbell River shall:

- a) provide the 9-1-1 Fire Dispatch Centre, with a minimum of 2 employees 24 hours a day who are trained to the 9-1-1 Fire Dispatch Training Standard in emergency dispatch operations, and in the operation of equipment;

- b) provide a manager for the 9-1-1 Fire Dispatch Centre who is experienced in fire department management;
- c) carry out the operation and management of the 9-1-1 Fire Dispatch Centre and which shall include, but is not limited to, the responsibility of the 9-1-1 Fire Dispatch Manager to:
  - i) provide overall direction, planning, organizing, administration and training of 9-1-1 Fire Dispatch Centre staff;
  - ii) create and maintain operating guidelines for both external and internal 9-1-1 Fire Dispatch Centre users;
  - iii) provide ongoing reporting to the North Island 9-1-1 Corp with regard to call volume, quality assurance, compliance to NFPA 1221, Chapter 7 and other information related to the operation and management of the 9-1-1 Fire Dispatch Centre and the 9-1-1 Fire Dispatch System as required by the North Island 9-1-1 Corp;
  - iv) attend North Island 9-1-1 Corp management, administrative and board meetings, as required by the North Island 9-1-1 Corp, with reasonable notice provided by North Island 9-1-1 Corp for scheduling purposes;
  - v) establish protocols to promote efficiency of the 9-1-1 Fire Dispatch Centre;
  - vi) liaise with and maintain a close cooperative working relationship with the North Island 9-1-1 Corp's technology manager (the "Technology Manager") and the mapping and database manager for the 9-1-1 Fire Dispatch System;
  - vii) provide operational advice respecting the 9-1-1 Fire Dispatch System to North Island 9-1-1 Corp;
  - viii) in cooperation with the Technology Manager recommend and assist with the operations and maintenance of the 9-1-1 Fire Dispatch System;
  - ix) provide support to the Technology Manager both in 9-1-1 Fire Dispatch Centre and the Communication Equipment Sites as requested by the Technology Manager from time to time, with reasonable notice provided for scheduling purposes;
  - x) provide contract management services regarding the user agreements for Communication Equipment Sites between North Island 9-1-1 Corp and the Fire Departments, as well as, any radio site co-locators using the 9-1-1 Fire Dispatch System;
  - xi) liaise with and maintain close cooperative relationships with the Fire Departments;
  - xii) coordinate meetings with, and provide administrative support to, the Fire Dispatch Advisory Committee according to the North Island 9-1-1 Corp Board of Directors' approved terms of reference, and provide minutes of the meetings to North Island 9-1-1 Corp on a timely basis;
  - xiii) maintain minimum staffing levels in accordance with the NFPA 1221, Chapter 7; and

xiv) provide North Island 9-1-1 Corp with notice of the 9-1-1 Fire Dispatch Manager's unavailability due to planned or unplanned leaves, and provide ongoing management of the 9-1-1 Fire Dispatch Centre during those absences by the on-duty Chief Fire Officer for Campbell River.

- 2.3 **9-1-1 Fire Dispatch Operations** - Campbell River shall provide the necessary training and supervision to ensure that its staff are in compliance with North Island 9-1-1 Corp policies, 9-1-1 Dispatch Fire Operating Guidelines and make best efforts to operate in accordance with the standards set out within NFPA 1221, Chapter 7.
- 2.4 **Protection of Equipment** - Campbell River shall make all reasonable efforts to ensure the protection of all Equipment.
- 2.5 **Responsibility** - Campbell River is responsible for any damage to the Equipment caused by a willful act or omission of its employees but Campbell River is not responsible for damage to the Equipment caused by normal wear and tear.
- 2.6 **Fire Dispatch Services** - Campbell River shall provide emergency response dispatch services to the Fire Departments during the Term.
- 2.7 **Dispatch Outside Boundaries** –
- a) Campbell River shall not willfully dispatch any Fire Department for fire suppression or rescue services to a location beyond the fire or rescue area boundaries of such Fire Department as identified in the mapping data provided by the North Island 9-1-1 Corp through the 9-1-1 Fire Dispatch System, or unless otherwise as agreed to in writing or other enabling agreements such as mutual aid, automatic aid, road rescue or wildfire protection.
  - b) where there is any doubt regarding fire or rescue area boundaries, or when notifying a Fire Department about an incident occurring immediately beyond its fire or rescue area boundaries, the duty officer for that Fire Department shall determine the appropriate response.
- 2.8 **9-1-1 Fire Dispatch Operating Guidelines Changes** - the 9-1-1 Fire Dispatch Manager shall ensure that all new or revised 9-1-1 Fire Dispatch Operating Guidelines are forwarded to the North Island 9-1-1 Corp administrative offices to update the master 9-1-1 Fire Dispatch Operating Guidelines.
3. **OBLIGATIONS OF NORTH ISLAND 9-1-1 CORP**
- 3.1 **Supply of Equipment** - North Island 9-1-1 Corp shall:
- c) supply, and maintain all the Equipment necessary for Campbell River to provide the Services; and
  - d) retain ownership of all the Equipment; and
  - e) immediately notify, and promptly provide detailed written procedures or instructions to the 9-1-1- Fire Dispatch Manager where changes are made to the 9-1-1 Fire Dispatch System.

- 3.2 **Costs** - North Island 9-1-1 Corp shall:
- f) pay all capital expenses of the 9-1-1 Fire Dispatch System as approved by North Island 9-1-1 Corp in writing, except for capital expenses for computer equipment used for Campbell River business and capital expenses for computer equipment connected to Campbell River's computer network; and
  - g) pay to the City Campbell River Operating Costs in accordance with Schedule "B" hereof.
- 3.3 **Seismic Event** - North Island 9-1-1 Corp acknowledges that the 9-1-1 Fire Dispatch Centre located in the existing building located at 675 13<sup>th</sup> Avenue, Campbell River, BC (the "**Existing Centre**") was constructed in 1978 and that the 9-1-1 Fire Dispatch Centre is not designed to comply with current seismic design requirements. North Island 9-1-1 Corp agrees that in the event of a seismic event at the Existing Centre, it will release, save harmless and indemnify Campbell River, its officers, officials, agents, and employees from and against any and all claims, loss or damage suffered by or made against Campbell River, its officers, officials, agents, or employees to the extent that such claims, loss, or damage directly arise from any failure on the part of Campbell River, its officers, officials, agents or employees with respect to the Services as a result of such seismic event.
- 3.4 **Corporation Policies** - North Island 9-1-1 Corp may establish policies that it determines to be necessary for the operation and administration of the 9-1-1 Fire Dispatch System. North Island 9-1-1 Corp shall advise Campbell River, in writing, of any policy that the 9-1-1 Fire Dispatch Centre is required to comply with.
- 3.5 **Notice of Policy Changes** - North Island 9-1-1 Corp's policies may be amended from time to time by North Island 9-1-1 Corp, and Campbell River shall be given not less than thirty (30) days written notice of any changes in the policies and, immediately following such notice period Campbell River shall be fully compliant with such changes.
- 3.6 **Dispute Regarding Policy** – If Campbell River determined that it would be impossible or impractical to comply with a policy that it has received written notice of, in accordance with sections 3.4 or 3.5, it will promptly provide North Island 9-1-1 Corp with written notice of the policy or portion thereof that it would be impossible or impractical for Campbell River to comply with. Upon receipt of such notice, the parties will cooperate to find a solution, and if necessary amend the policy, so that it is possible and practical for Campbell River to comply with the policy or portion thereof.

#### **4. FINANCIAL**

- 4.1 **Payment** - North Island 9-1-1 Corp will pay Campbell River for the provision of the Services in the amounts described in Schedule "B" hereof. Payment will be made in four (4) equal instalments on the first day of January, April, July, and October of the calendar year in which Services are rendered.

## 5. INDEMNITY

- 5.1 North Island 9-1-1 Corp shall indemnify and save harmless Campbell River, its officers, officials, agents, and employees from all claims, loss or damage arising out of or resulting from the operation of the 9-1-1 System except to the extent that such claims, loss and damage are contributed to by the willful or negligent acts, errors or omissions of Campbell River, its officers, officials, agents, or employees.
- 5.2 Campbell River shall indemnify and save harmless North Island 9-1-1 Corp, its officers, agents and employees from all claims, loss or damage arising out of or resulting from Campbell River's provision of the Services, except to the extent that such claims, loss and damage are contributed to by the willful or negligent acts, errors or omissions of North Island 9-1-1 Corp, its officers, officials, agents, or employees.
- 5.3 North Island 9-1-1 Corp shall indemnify and save harmless Campbell River for any legal defense costs to a maximum of \$50,000.00 per claim incurred by Campbell River by reason of its being named a party in any legal proceeding arising out of or resulting from the operation of the 9-1-1 System so long as Campbell River is ultimately found not to be liable in whole or in part.

## 6. DISPUTE RESOLUTION

- 6.1 **Procedure** - If there is any dispute arising out of or relating to this Agreement, then the parties will use reasonable good faith efforts to resolve such dispute, first by direct negotiation and then, if that is not successful, by mediation with a neutral third party mediator acceptable to both parties. Each party will bear its own costs and expenses in connection with any mediation and all costs and expenses of the mediator will be shared equally by the parties.
- 6.2 Any dispute arising out of or relating to the Agreement that is not settled by agreement between the parties or mediation within 90 days or such other time as the parties may agree to in writing, may, on written agreement of the parties, be settled exclusively by binding arbitration by a single arbitrator. The location of any arbitration proceeding will be at Campbell River, British Columbia. The arbitration will be governed by the *Arbitration Act [RSBC 1996] Chapter 55* (British Columbia). The arbitrator will be selected and the arbitration conducted in accordance with the British Columbia International Commercial Arbitration Rules, except that the provisions of this Agreement will control over such rules. The parties will share equally in the fees and expenses of the arbitrator and the cost of the facilities used for the arbitration hearing, but will otherwise each bear their respective costs incurred in connection with the arbitration. The parties will use their best efforts to ensure that an arbitrator is selected promptly and that the arbitration hearing is conducted no later than three (3) months after the arbitrator is selected. The arbitrator must decide the dispute in accordance with the substantive law which would govern the dispute if it were litigated in court. This requirement does not, however, mean that the award is reviewable by a court for errors of law or fact. Following the arbitration hearing, the arbitrator will issue an award and a separate written decision which summarizes the reasoning behind the award and the legal basis for the award. The arbitrator will not:
- h) award damages in excess of the amount limited by the terms of the Agreement; or
  - i) require one party to pay the other party's legal costs and expenses.

6.3 If the parties do not agree to arbitration as described in section 6.2, each party is free to commence litigation without further notice.

6.4 **Exception** - The dispute resolution procedures set forth in Sections 6.1 to 6.3 are the sole and exclusive procedures for resolving any dispute under this Agreement, except that either party may also seek preliminary or temporary injunctive relief from a court if, in that party's sole judgment, such action is necessary to avoid irreparable harm or to preserve the status quo. If a party seeks judicial injunctive relief as described in this section 6.4, then the parties will continue to participate in good faith in the dispute resolution procedures described in section 6.1. Except in the case that a party has commenced litigation in accordance with section 6.3, the parties agree that no court which a party petitions to grant the type of preliminary or temporary injunctive relief described in this section 6.4 may award damages or resolve the dispute.

## 7. **TERMINATION**

7.1 **Right to Terminate** - Either party may terminate this Agreement at any time, without penalty, and for any reason, by giving at least eighteen (18) months notice in writing to the other party, with the effective date to be no earlier than December 31 of the following year.

## 8. **REPRESENTATIONS**

8.1 **Prior Negotiations** - All prior negotiations and agreements between the parties related to the subject matter of this Agreement are superseded by this Agreement.

8.2 **No Representations** - There are no representations, warranties, understanding or agreements other than those expressly set forth in this Agreement or subsequently agreed to in writing by a duly authorized representative of North Island 9-1-1 Corp and Campbell River.

## 9. **WAIVER**

9.1 **Failure to Enforce Not Waiver** - Any failure on the part of North Island 9-1-1 Corp or Campbell River to enforce or to require the strict performance of any of the provisions of this Agreement shall not, in any way, constitute a waiver of those provisions or affect or impair those provisions or any right North Island 9-1-1 Corp or Campbell River has at any time to avail itself of any remedies that may have for any breach of these provisions or to require the Services to be performed in accordance with this Agreement.

9.2 **Waiver in writing** - Neither party is bound by a waiver of any provision of this Agreement unless the waiver is clearly expressed in writing and signed by the party's authorized signatory.

## 10. **GENERAL**

10.1 **Governing Law** - This Agreement will be governed by the laws of the Province of British Columbia and the laws of Canada applicable therein. The parties attorn to the exclusive jurisdiction of the courts of British Columbia.

10.2 **Relationship of Parties** - This Agreement will not create nor will it be interpreted as creating any association, partnership or any agency relationship between the parties.

- 10.3 **Severability** - If any provision of this Agreement is held to be unenforceable, then such provision will be severed from this Agreement and the remaining provisions will remain in full force and effect. The parties will in good faith negotiate a mutually acceptable and enforceable substitute for the unenforceable provision, which substitute will be as consistent as possible with the original intent of the parties.
- 10.4 **Compliance** - The parties shall comply with all applicable enactments.
- 10.5 **Benefit** - This Agreement shall operate and take effect for the benefit of, and be binding upon, North Island 9-1-1 Corp and Campbell River and their respective successors and its permitted assigns.
- 10.6 **Further Assurances** – Each party agrees from time to time and at all times at the reasonable request of the other party to do and execute or cause to be made, done or executed any further and other lawful acts, deeds, things, devices, conveyances and assurances in law required to ensure the other party of its rights under this Agreement.
- 10.7 **Time is of the Essence** - Time is to be the essence of this Agreement.
- 10.8 **Amendment** - This Agreement may not be modified or amended except by written agreement of the parties.
- 10.9 **Notices** - All notices and demands required or permitted to be given under this Agreement shall be in writing and addressed as follows:

To North Island 9-1-1 Corp:  
 North Island 9-1-1 Corporation  
 600 Comox Road  
 Courtenay, B.C. V9N 3P6  
 Attention: Secretary

To Campbell River:  
 City of Campbell River  
 301 St. Ann's Road  
 Campbell River, B.C. V9W 4C7  
 Attention: City Manager

or to such other address or addressed or individuals as may from time to time be provided in writing by the parties.

- 10.10 **Counterparts** – This Agreement may be executive in counterpart, both of which together shall constitute one and the same instrument, and either party may deliver its counterpart page by electronic transmission.



IN WITNESS WHEREOF the parties have executed this Agreement effective the date first above written.

**THE CITY OF CAMPBELL RIVER** )

in the presence of: )

 )

Mayor )

 )

Corporate Officer )

The **NORTH ISLAND 9-1-1** )

**CORPORATION** in the presence of: )

 )

President )

 )

Secretary )

**SCHEDULE "A"****FIRE DEPARTMENTS****SCHOOL DISTRICT 69 – NANAIMO REGIONAL DISTRICT**

Bow Horn Bay	Dashwood	Errington	Parksville
Coombs-Hilliers	Deep Bay	Nanoose Bay	Qualicum Beach
CF METR (Canadian Forces Experimental Test Ranges - Nanoose)			

**ALBERNI-CLAYOQUOT REGIONAL DISTRICT**

Bamfield	Cherry Creek	Sproat Lake	Ucluelet
Beaver Creek	Port Alberni	Tofino	Yuu-Thlu-Ilth-At

**COMOX VALLEY REGIONAL DISTRICT**

Comox	Cumberland	Hornby Island	Ship's Point
Courtenay	Denman Island	Oyster River	Union Bay
CFB Comox	Fanny Bay		

**STRATHCONA REGIONAL DISTRICT**

Campbell River	Gold River	Sayward	Zeballos
Cortes Island	Quadra Island	Tahsis	

**MOUNT WADDINGTON REGIONAL DISTRICT**

Alert Bay	Hyde Creek	Port McNeill	Quatsino (Town Site)
Coal Harbour	Port Alice	Sointula	Woss
Holberg	Port Hardy		

**POWELL RIVER REGIONAL DISTRICT (excluding Electoral Area 'E'-Lasqueti Island)**

Gillies Bay	Northside	Savary Island	Van Anda
Malaspina	Powell River	Sliammon	

**SCHEDULE "B"**  
**OPERATING COSTS**

**COSTS** North Island 9-1-1 Corp shall pay the following fixed costs to Campbell River for the operation of the 9-1-1 Fire Dispatch Centre:

**B-1 Fire Dispatch Discounted Cost Summary (2.5% Annual increase)**

2017	2018	2019	2020	2021
\$1,196,000	\$1,226,000	\$1,257,000	\$1,288,000	\$1,320,000

**B-2** The North Island 9-1-1 Corporation may secure additional annual revenue for the provision of emergency response dispatch services using Campbell River fire dispatch staff to fire departments not currently listed in Schedule "A". Should any additional annual revenues be realized that exceed the difference between the discounted costs found in Schedule B-1 and the full costs found in Schedule B-3, then the full costs as found in Schedule B-3 shall be used in that year and subsequent calendar years as long as the additional annual revenues are realized and exceeds the difference between B1 and B3 costs.

**B-3 Fire Dispatch Full Cost Summary (3.4% Annual increase)**

2017	2018	2019	2020	2021
\$1,206,000	\$1,247,000	\$1,289,000	\$1,333,000	\$1,378,000

**B-4**

**COST ASSUMPTIONS**

- a. All 9-1-1 Fire Dispatch Centre costs described in this Schedule B are fixed based on Campbell River dispatching less than 25,000 incidents annually.

In the event that dispatched incidents exceed 25,000 annually North Island 9-1-1 Corp and Campbell River shall re-negotiate costs to operate the 9-1-1 Fire Dispatch Centre.

The maximum capacity of the 9-1-1 Fire Dispatch Centre is understood to be 19,000 incidents and may be increased by mutual agreement to 25,000 incidents through technical enhancements intended to automate certain dispatch functions.

Automation options may include but are not limited to:

- i. the use of an automated 9-1-1 voice alerting/ paging system and;
  - ii. the elimination of requests for services from British Columbia Emergency Health Services that do not result in the dispatch of a fire department.
- b. The 9-1-1 Fire Dispatch Centre costs reflect 80% of a Campbell River deputy fire chief salary and benefits for management of the 9-1-1 Fire dispatch System, in recognition of the fact that the Fire Dispatch Manager provides certain administrative and operational services to the sole benefit of Campbell River.
- c. 9-1-1 Fire Dispatch Centre costs reflect 85% of a dispatch staff salary and benefits for fire dispatch costs, in recognition that fire dispatchers provide certain administrative and dispatch services to the sole benefit of Campbell River.

- d. 9-1-1 Fire Dispatch Centre costs are further based on annual lease plus improvements, including utilities, generated emergency power, and building operating costs of the 775 square foot dispatch centre at 675 13th Avenue, Campbell River. Campbell River will provide written notice of change of Fire Dispatch location not less than eighteen (18) months before the anticipated move is scheduled to occur. A change of location to a post disaster fire dispatch centre will require re-negotiation of these costs.
- e. 9-1-1 Fire Dispatch Centre costs described in this Schedule B are fixed based on the understanding that if providing the Services in accordance with this Agreement requires Campbell River to travel either:
  - i. outside of Vancouver Island for the purposes of operating or managing the 9-1-1 Fire Dispatch System or both; or
  - ii. for the purpose of assisting the Technology Manager;or both, North Island 9-1-1 Corp and not Campbell River is responsible for paying the cost of all travel expenses reasonably incurred by Campbell River under this Schedule B-4(e).

**SCHEDULE "C"**

**NFPA 1221 (2016) Chapter 7 & Appendix**

dispatching systems shall be connected to the single-point facility ground in accordance with *NFPA 70*, Article 647.

**5.8.2** Listed isolated ground receptacles in accordance with *NFPA 70* shall be provided for all cord-and-plug-connected essential and sensitive electronic equipment.

**5.8.3** Where required by the AHJ, unused wire or cable pairs shall be grounded.

**5.8.4** Ground connection for surge suppressors shall be made to the single-point facility ground system in accordance with *NFPA 70*.

**5.9 Access.** All equipment shall be accessible for the purpose of maintenance.

**5.10\* Pathway Survivability.** All pathways shall comply with *NFPA 70*. [72:12.4]

**5.10.1 Pathway Survivability Level 0.** Level 0 pathways shall not be required to have any provisions for pathway survivability. [72:12.4.1]

**5.10.2 Pathway Survivability Level 1.** Pathway survivability Level 1 shall consist of pathways in buildings that are fully protected by an automatic sprinkler system in accordance with *NFPA 13* with any interconnecting conductors, cables, or other physical pathways installed in metal raceways. [72:12.4.2]

**5.10.3\* Pathway Survivability Level 2.** Pathway survivability Level 2 shall consist of one or more of the following:

- (1) 2-hour fire-rated circuit integrity (CI) or fire-resistive cable
- (2) 2-hour fire-rated cable system [electrical circuit protective system(s)]
- (3) 2-hour fire-rated enclosure or protected area
- (4)\* Performance alternatives approved by the authority having jurisdiction

[72:12.4.3]

**5.10.4 Pathway Survivability Level 3.** Pathway survivability Level 3 shall consist of pathways in buildings that are fully protected by an automatic sprinkler system in accordance with *NFPA 13* and one or more of the following:

- (1) 2-hour fire-rated circuit integrity (CI) or fire-resistive cable
- (2) 2-hour fire-rated cable system [electrical circuit protective system(s)]
- (3) 2-hour fire-rated enclosure or protected area
- (4)\* Performance alternatives approved by the authority having jurisdiction

[72:12.4.4]

## Chapter 6 Emergency Response Facilities

**6.1 General.** A primary and a secondary means of dispatch notification shall be provided at the ERF and comply with 6.1.1 and 6.1.2.

**6.1.1** The primary means of dispatch notification at the ERF shall be compatible with the primary means of dispatch notification that is provided at the communications center.

**6.1.2** The secondary means of dispatch notification at the ERF shall be compatible with the secondary means of dispatch notification that is provided at the communications center.

**6.1.3** Dispatch notification equipment shall be kept in working order at all times.

**6.1.4** A publicly accessible means for reporting alarms to the communications center shall be provided on the exterior of the ERF.

## 6.2 Commercial Telephone.

**6.2.1\*** A commercial telephone shall be provided at each emergency response facility.

**6.2.2\*** When no other means of voice communication between the communications center and an ERF is provided, the telephone at the ERF shall be arranged so that it cannot be used by the public.

**6.3 Fire Protection.** Fire protection shall be provided as required by *NFPA 5000* or in accordance with the building code legally in force, whichever is more restrictive.

**6.3.1** Sprinkler systems shall comply with *NFPA 13*.

**6.3.2** Fire alarm systems shall comply with *NFPA 72*.

**6.4 Power.** Two independent and reliable power sources shall be provided, each of which shall be of adequate capacity for operation of the communications equipment.

## 6.5 Lighting.

**6.5.1** Lighting shall be provided to enable personnel to operate communications equipment that is used for the receipt of alarms.

**6.5.2** Emergency lighting shall be provided in accordance with *NFPA 101*, Section 7.9.

**6.6\* Communications Conductors.** Communications conductors in an ERF shall be installed in accordance with *NFPA 70*.

**6.6.1** Circuit protection shall be in accordance with Section 5.6.

**6.6.2** Lightning protection shall be in accordance with Section 4.9.

## Chapter 7 Operations

### 7.1 Management.

**7.1.1** All system operations shall be under the control of a manager, director, or supervisor of the jurisdiction served by the system.

**7.1.1.1** Emergency services dispatching entities shall have trained and qualified technical assistance available for trouble analysis and repair by in-house personnel or by authorized outside contract maintenance services.

**7.1.1.1.1** All maintenance records shall be maintained in accordance with the requirements of the AHJ.

**7.1.1.2** Where maintenance is provided by an organization or person other than an employee of the jurisdiction, complete written records of all installation, maintenance, test, and extension of the system shall be forwarded to the responsible employee of the jurisdiction.

7.1.1.3 Maintenance performed by an organization or person other than an employee of the jurisdiction shall be by written contract that contains a guarantee of performance as approved by the AHJ.

7.1.2\* All equipment shall be accessible to the AHJ for the purpose of maintenance.

7.1.3 Personnel in supervisory roles shall receive supervisory training as defined by the AHJ.

7.1.4 The AHJ shall be responsible for initial and ongoing training in supervisory skills for personnel in supervisory roles.

## 7.2 Telecommunicator Qualifications and Training.

7.2.1 Telecommunicators shall meet the qualification requirements of NFPA 1061 as appropriate for their position.

7.2.2\* Telecommunicators shall be certified in the knowledge, skills, and abilities related to their job-related function.

7.2.2.1 The certification program shall have a skill maintenance component for recertification as defined by the certifying organization.

7.2.3 Telecommunicators shall be trained in general emergency service operations and shall have access to information regarding the following:

- (1) Locations of streets
- (2) Locations of important structures, including schools, hospitals, and other buildings with a high life hazard
- (3) Locations of congested or hazardous areas

7.2.4 Telecommunicators shall have operational knowledge of the functions of communications equipment, systems, and networks in the communications center.

7.2.5 Telecommunicators shall know the rules and regulations that relate to equipment use, including those of the Federal Communications Commission that pertain to emergency service radio use.

7.2.6 The AHJ shall be responsible for providing training to maintain the skill levels of telecommunicators to the level appropriate to their position as identified in NFPA 1061 and Section 7.2.

7.2.7 Telecommunicators shall be trained in TDD/TTY procedures, with training provided at a minimum of every 6 months.

7.2.8 Telecommunicators shall receive training on the CEMP, including the TICP, at least annually.

## 7.3 Staffing.

7.3.1 There shall be a minimum of two telecommunicators on duty and present in the communications center at all times.

7.3.1.1\* The AHJ shall ensure that there are sufficient telecommunicators available to effect the prompt receipt and processing of alarms needed to meet the requirements of Section 7.4.

7.3.1.2\* Where communications systems, computer systems, staff, or facilities are used for both emergency and non-emergency functions, the non-emergency use shall not degrade or delay emergency use of those resources.

7.3.1.3 A communications center shall handle emergency calls for service and dispatching in preference to non-emergency activities.

7.3.2\* When requested by the incident commander, a telecommunicator shall be dedicated to the incident and relieved of other duties within the communications center.

7.3.3 The AHJ shall establish standard operating procedures to identify the circumstances under which a telecommunicator will be assigned to the incident and how that will be accomplished.

7.3.4\* Supervision shall be provided when more than two telecommunicators are on duty.

7.3.4.1 Supervision shall be provided by personnel located within the communications center who are familiar with the operations and procedures of the communications center.

7.3.4.2 The supervisor shall be allowed to provide short-term relief coverage for a telecommunicator, provided that the telecommunicator does not leave the communications center and is available for immediate recall as defined in the policies and procedures of the AHJ.

## 7.4 Operating Procedures.

7.4.1\* Ninety-five percent of alarms received on emergency lines shall be answered within 15 seconds, and 99 percent of alarms shall be answered within 40 seconds. (*For documentation requirements, see 12.5.2.*)

7.4.1.1 Compliance with 7.4.1 shall be evaluated monthly using data from the previous month.

7.4.2\* With the exception of the call types identified in 7.4.2.2, 90 percent of emergency alarm processing shall be completed within 64 seconds, and 95 percent of alarm processing shall be completed within 106 seconds. (*For documentation requirements, see 12.5.2.*)

7.4.2.1 Compliance with 7.4.2 shall be evaluated monthly using data from the previous month.

7.4.2.2 Emergency alarm processing for the following call types shall be completed within 90 seconds 90 percent of the time and within 120 seconds 99 percent of the time:

- (1) Calls requiring emergency medical dispatch questioning and pre-arrival medical instructions
- (2) Calls requiring language translation
- (3) Calls requiring the use of a TTY/TDD device or audio/video relay services
- (4) Calls of criminal activity that require information vital to emergency responder safety prior to dispatching units
- (5) Hazardous material incidents
- (6) Technical rescue
- (7) Calls that require determining the location of the alarm due to insufficient information
- (8) Calls received by text message

7.4.3\* For law enforcement purposes, the AHJ shall determine time frames allowed for completion of dispatch.

7.4.4\* Where alarms are transferred from the primary public safety answering point (PSAP) to a secondary answering point, the transfer procedure shall not exceed 30 seconds for 95 percent of all alarms processed. (*For documentation requirements, see 12.5.2.*)

**7.4.4.1** The PSAP shall transfer alarms as follows:

- (1) The alarm shall be transferred directly to the telecommunicator.
- (2) The answering/transferring agency shall remain on the line until it is certain that the transfer is effected.
- (3) The transfer procedure shall be used on emergency 9-1-1 calls.

**7.4.5** All alarms, including requests for additional resources, shall be transmitted to the identified emergency response units over the required dispatch systems.

**7.4.6** An indication of the status of all emergency response units shall be available at all times to telecommunicators who have dispatching responsibility.

**7.4.7\*** Records of the dispatch of emergency response units to alarms shall be maintained in accordance with the records retention policy of the AHJ and shall identify the following:

- (1) Unit designation for each emergency response unit (ERU) dispatched
- (2) Time of dispatch acknowledgment by each ERU responding
- (3) Enroute time of each ERU
- (4) Time of arrival of each ERU at the scene
- (5) Time of patient contact, if applicable
- (6) Time each ERU is returned to service

**7.4.8\*** Where voice transmission is used as a dispatch method, the announcement for the emergency response shall be preceded by an audible warning or alerting signal that differentiates the emergency from routine radio traffic.

**7.4.9** The first emergency response unit that arrives at the location of the alarm shall provide a brief preliminary report on observed conditions to the communications center.

**7.4.10\*** A communications officer shall be assigned at major incidents.

**7.4.11\*** All emergency response agencies that interact shall use common terminology and integrated incident communications.

**7.4.11.1** Integrated incident communications shall include a plan that provides for on-demand interoperability of communication methods among emergency response agencies.

**7.4.11.2\*** The plan shall identify the communications links and protocols to be used among emergency response agencies at incidents, including the following:

- (1) Type 5 incidents (local, discipline specific) as defined in NFPA 1561
- (2) Type 4 incidents (local, jurisdiction specific) as defined in NFPA 1561
- (3)\* Type 3 incidents (regional or state, multi-agency and multi-discipline specific) as defined in NFPA 1561

**7.4.11.3** The plan shall be written, distributed to all agencies identified in the plan, and reviewed at least annually by each agency identified.

**7.4.12** The communication equipment involved in each alarm shall be restored promptly after each alarm.

**7.4.13** When the device monitoring the system for integrity indicates that trouble has occurred, the telecommunicator shall act as follows:

- (1) Take appropriate steps to troubleshoot and repair the fault according to the policies and procedures of the AHJ.
- (2) Isolate the fault and notify the official responsible for maintenance as soon as practical.

**7.4.14** Standard operating procedures shall include but not be limited to the following:

- (1) All standardized procedures that the telecommunicator is expected to perform without direct supervision
- (2) Implementation plan that meets the requirements of 4.1.5.3
- (3) Procedures related to the CEMP
- (4) Emergency response personnel emergencies
- (5) Activation of an emergency distress function
- (6) Assignment of incident radio communications plan matrix
- (7) Time limit for acknowledgment by units that have been dispatched
- (8) Methods for call trace
- (9) Methods for caller location determination

**7.4.15\*** Every communications center shall have a comprehensive regional emergency communications plan as part of the CEMP.

**7.4.15.1\*** The emergency communications plan shall provide for real-time communications between organizations responding to the same emergency incident.

**7.4.15.2\*** This plan shall be exercised at least once a year.

**7.4.16** A distinctive alert tone signal shall precede the transmission of emergency message traffic.

**7.4.16.1** A separate and unique alert tone shall be operated for emergency evacuation orders.

**7.4.17** In the event that an ERU(s) has not acknowledged its dispatch/response within the time limits established, the telecommunicator shall perform one or more of the following:

- (1) Attempt to contact the ERU(s) by radio
- (2) Redispach the ERU(s) using the primary dispatch system
- (3) Dispatch the ERU(s) using the secondary dispatch system
- (4) Initiate two-way communication with the ERU's supervisor
- (5) If the SOP time for dispatch has elapsed, initiate dispatch of backup ERU

**7.4.18\*** The AHJ shall develop and implement standard operating procedures for responding to and processing TDD/TTY calls.

**7.4.19** Calls received as an open-line or "silent call" shall be queried as a TDD/TTY call if no acknowledgment is received by voice.

## **7.5 Time.**

**7.5.1** All systems shall have the ability to interface with a master time source and to synchronize the time clocks of all appliances, devices, computers, and servers.

**7.5.2** All systems shall have the ability to automatically update the time clocks of all appliances, devices, computers, and servers without the intervention of the AHJ.

**7.5.3** All systems shall have the ability to automatically update the time clocks of all appliances, devices, computers, and servers to adjust from standard time to daylight savings time and



from daylight savings time to standard time without the intervention of the AHJ.

7.5.4 All timekeeping devices not capable of being synchronized with the master time source shall be maintained within 60 seconds of the master time source.

7.6 Recording.

7.6.1 Communications centers shall have a logging voice recorder with one channel for each of the following:

- (1) Each transmitted or received radio channel or talkgroup
- (2) Each voice dispatch alarm circuit
- (3)\* Each telecommunicator telephone

7.6.2 All logging recording equipment shall have the ability to associate the date, time, and channel designation with each transmission.

7.6.2.1 All logging recording equipment connected to a Next Generation 9-1-1 ESInet shall have the ability to record logging events data.

7.6.3 Each telecommunicator position shall have the ability to instantly recall telephone and radio recordings from that position.

7.6.3.1 All recordings, including transmissions and data, shall be maintained in accordance with the records retention policies of the AHJ.

7.6.4 Alarms that are transmitted over the required dispatch circuit(s) shall be automatically recorded, including the dates and times of transmission.

7.6.4.1 The recording device shall be networked with the master time source.

7.7\* **Quality Assurance / Improvement.** Communications centers shall establish a quality assurance/improvement program to ensure the consistency and effectiveness of alarm processing.

Chapter 8 Telephones

8.1\* **Telephone Receiving Equipment.** The provisions of Chapter 8 shall apply to facilities and equipment that are needed to receive alarms.

8.2 Directory Listing.

8.2.1 Where 9-1-1 service is not provided, all of the following requirements shall be met:

- (1) A specific telephone number shall be assigned for calls requesting emergency services.
- (2) The telephone number shall be publicized as such.
- (3) A separate number shall be assigned for business (non-emergency) use.

8.2.1.1 A separate telephone line with a number that is not listed shall be maintained for communication with other emergency service agencies and receipt of central station alarms.

8.2.1.2\* A separate number shall be assigned for business (non-emergency) use.

8.2.2 Where 9-1-1 service is provided, the telephone directory listings shall indicate that 9-1-1 is the number to call for all emergencies.

8.2.3 Telephone directory listings shall be as specified in 8.2.3.1 through 8.2.3.5.

8.2.3.1 The text and symbols shown in Figure 8.2.3.1(a) through Figure 8.2.3.1(c) shall appear on the inside front cover or the page facing the inside front cover of the white pages directory.

8.2.3.2 The emergency services listing shall appear in the directory under the name of the jurisdiction, including government listings, and under the headings for police, fire, and ambulance where provided.

8.2.3.3 The following listings and telephone numbers shall appear as follows in the white pages directory:

- (1) Fire department
  - (a) To report an emergency [fire number] or, where available, 9-1-1
  - (b) Nonemergency purposes [business number]



or, where available,



FIGURE 8.2.3.1(a) Telephone Directory Listing for Fire Department.



or, where available,



FIGURE 8.2.3.1(b) Telephone Directory Listing for Police Department.

**A.4.10.8.1.2** During the design of a lighting system for a normally non-staffed facility, consideration should be given to the fact that it is customary for maintenance personnel to bring portable lights with them.

**A.4.10.9** U.S. Army Technical Manual TM 5-811-3, *Electrical Design: Lightning and Static Electricity Protection*, provides additional guidance that the AHJ might want to consider.

**A.5.1.1** Refer to *NFPA 70*, Section 90.2, for examples of installations that are and are not covered by *NFPA 70*.

**A.5.5.2** Environmental conditions could exist that necessitate the use of rigid nonmetallic conduit.

**A.5.6.4** Examples of fast-acting surge suppression criteria for power lines can be found in the Telcordia Technologies publication TR-NWT-001011, *Generic Requirements for Surge Protective Devices (SPDs) on AC Power Circuits*. Examples of fast-acting surge suppression criteria for telephone lines can be found in the Telcordia Technologies publication TR-NWT-001361, *Generic Requirements for Gas Tube Protector Units (GTPUs)*.

**A.5.8.1** Sensitive electronic equipment includes computers, telecommunications equipment, and two-way radio systems.

**A.5.10** The intent of the pathway survivability designation is to provide options for the protection of the pathway circuits and not to create a hierarchical ranking. [72:A.12.4]

**A.5.10.3** Methods of survivability protection might alternate within a protected premise. For example, 2-hour resistive cable might extend from a 2-hour fire-rated enclosure. [72:A.12.4.3]

**A.5.10.3(4)** A performance-based alternative is needed because it is possible to construct a non-sprinklered, Type V(000) building that employs relocation or partial evacuation (e.g., a single-story ambulatory health care occupancy) that would not warrant either a 2-hour fire resistance-rated enclosure or a 2-hour cable. Examples of performance alternatives that might be considered in a design for survivability are a strategic application of Class A, Class X, or Class N segments and also wireless communication pathways. [72:A.12.4.3(4)]

**A.5.10.4(4)** A performance-based alternative is needed because it is possible to construct a sprinklered single-story Type V(111) or multistory Type II(111) building that employs relocation or partial evacuation (e.g., a health care occupancy) that would not warrant either a 2-hour fire resistance-rated enclosure or a 2-hour cable (a 1-hour enclosure would suffice). Examples of performance alternatives that might be considered in a design for survivability are a strategic application of Class A, Class X, or Class N segments and also wireless communication pathways. [72:A.12.4.4(4)]

**A.6.2.1** The ability to have access to a telephone system not maintained and operated by the AHJ allows for continuity of communication with ERFs. An AHJ's internal telephone system, using a system such as private branch exchange (PBX), is not considered a commercial telephone system.

**A.6.2.2** Such an arrangement is not meant to apply to the office of the chief and other executive officers or to the communications center, which can be housed in an ERF.

**A.6.6** Local area network (LAN) computer and telephone cable are examples of communications conductors.

**A.7.1.2** In the case of equipment such as repeaters, transmitters, towers, and generators, access needs to be available at all times.

**A.7.2.2** The AHJ can develop a certification program or use the certification programs of others. Examples of other certification programs are Associated Public Safety Communications Officials International, International Municipal Signal Association, and National Academies of Emergency Dispatch and Power Phone.

**A.7.3.1.1** In jurisdictions receiving fewer than 730 alarms per year (an average of two alarms per 24-hour period), provision of a dedicated telecommunicator might not be necessary where alternate means approved by the AHJ can effect the prompt receipt and processing of alarms in accordance with Section 7.4. Telecommunicator staffing is an important issue in achieving prompt receipt and processing of alarms. Consider the following two concepts of communications center operations:

- (1) *Vertical Center*. A single telecommunicator performs both the call-taking and dispatching functions.
- (2) *Horizontal Center*. Different telecommunicators perform the call-taking and dispatching functions.

Telecommunicators working in a vertical center are known to engage in multitasking that can inhibit their ability to perform assigned job functions. Routine evaluation of telecommunicator staffing, number of inbound emergency and non-emergency calls, and other operational statistics are necessary to allow a prompt receipt and processing of alarms.

**A.7.3.1.2** The processing of N-1-1 calls or other non-emergency 7- or 10-digit calls should not degrade or delay the processing of any emergency calls.

**A.7.3.2** The issue of communication capabilities and/or failures is cited by the National Institute for Occupational Safety and Health (NIOSH) as one of the top five reasons for fire fighter fatalities. The importance of an assigned telecommunicator for specific incidents is a critical factor in incident scene safety. The assignment process should be outlined in specific SOPs within each agency represented in the communications center. This assignment process is further assisted when a command/communications vehicle is being staffed at the incident scene.

**A.7.3.4** The supervisor position(s) in the communications center are provided in addition to the telecommunicators positions. Although supervisory personnel are intended to be available for problem solving, the supervisor position is permitted to be a working position.

**A.7.4.1** Statistical analysis for performance measurement should be completed over a period of 1 month as shown in Figure A.7.4.1(a) and Figure A.7.4.1(b).

**A.7.4.2** See Figure A.7.4.1(a).

**A.7.4.3** Alarms should be retransmitted to emergency response personnel as soon as the location and general nature of the emergency have been ascertained by the telecommunicator. However, for some alarms involving criminal activity, the safety of emergency response personnel could require the telecommunicator to ascertain additional information from the caller, such as a description(s) of the suspect(s), a description(s) of the vehicle(s), the direction of travel, and the weapon(s) involved, which could make compliance with the 60-second

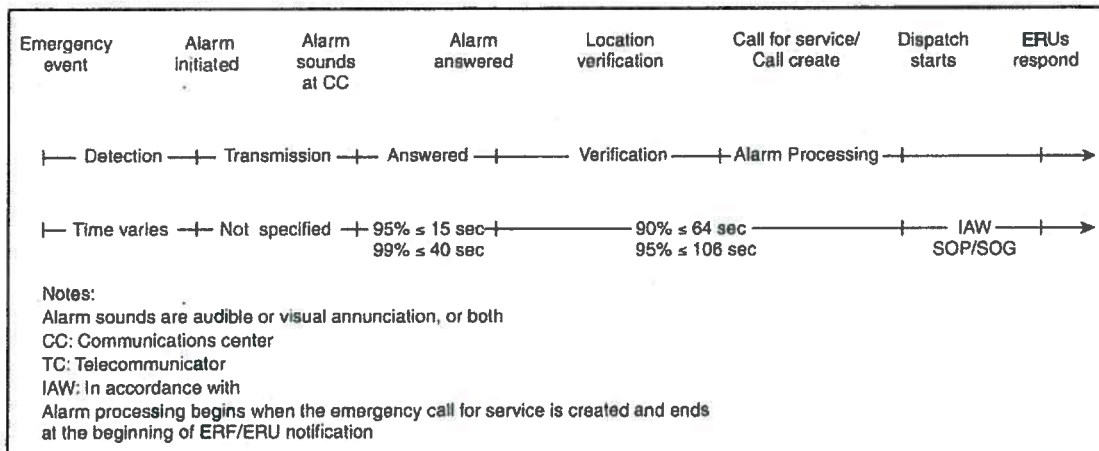


FIGURE A.7.4.1(a) Alarm Time Line Where Primary PSAP Is Communications Center.

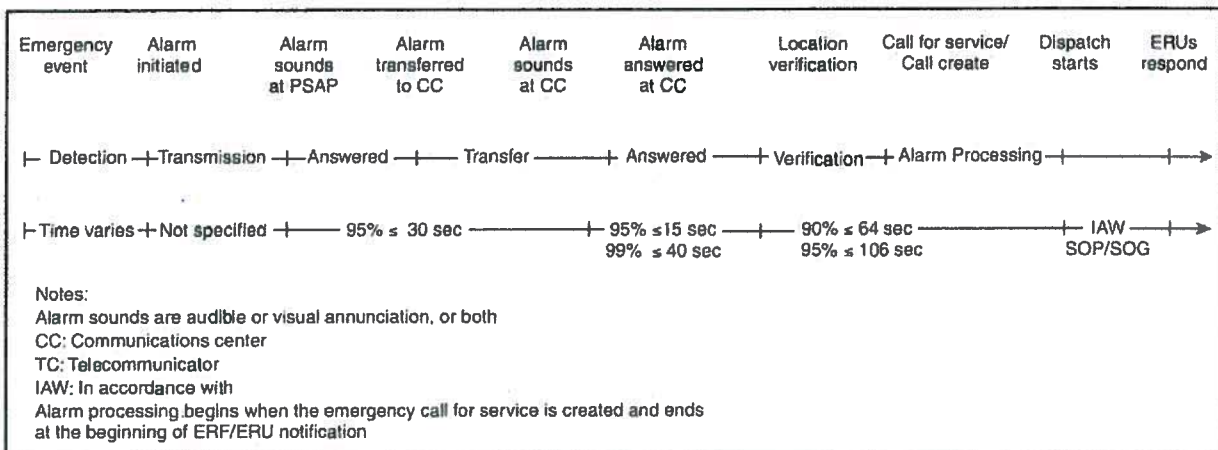


FIGURE A.7.4.1(b) Alarm Time Line Where Primary PSAP Is Other Than Communications Center.

time limit impractical. Therefore, the AHJ for each law enforcement agency served by the communications center should establish time frames for the dispatch of law enforcement personnel in accordance with the corresponding agency's SOPs.

A.7.4.4 See Figure A.7.4.1(b).

A.7.4.7 The first unit to arrive at an emergency incident is responsible for notifying the communications center by radio of its arrival and for providing a brief description of the conditions observed and the precise location of the incident. The responding officer should report arrival and should establish the initial command post at the emergency. As soon as conditions allow, the incident commander should report supplementary information to the communications center and should make additional progress reports if operations keep the units at the emergency longer than a few minutes. An extended or complex emergency incident can necessitate the use of a communications unit for effective coordination, command, and control.

A.7.4.8 The audible warning or signal is typically a distinctive tone.

A.7.4.10 The assignment of a communications officer/unit leader to incidents that are more complex ensures that adequate communication is achieved using available telephone and radio systems. Such an assignment also ensures that the availability of existing frequencies or networks is maximized and that system overloading is minimized. An assigned communications officer can be particularly important and useful during multi-agency fires and other incidents. It can be necessary to establish specific nets and monitoring systems to guarantee communications in some situations. In complex incidents, communications discipline is critical in avoiding system overload.

A.7.4.11 The common emergency organization, that is, the incident management system (IMS), includes two important communications concepts as follows:

- (1) *Common Terminology.* All participating departments and agencies use clear text and established standard terms and phrases. In multi-agency emergencies, it is extremely

difficult to guarantee that all agency and department codes represent identical meanings. To avoid potential misunderstandings between telecommunicators, the IMS requires clear text or plain language for all radio messages. Although this is a significant departure from public safety agency tradition, it has been found to be efficient in actual practice.

- (2) **Integrated Incident Communications.** Participating departments and agencies plan in advance for the use of integrated radio frequencies to tie together all tactical and support units assigned to an incident. To ensure the best possible use of all participating department and agency radios at major incidents, an Incident Radio Communications Plan matrix is developed. The matrix lists all available radio systems on an incident and aids in assigning them to provide command, tactical, and logistical coverage for a complete operation.

Preparation of the matrix necessitates training and a knowledge of cooperating department and agency frequencies and radio components. Use of the matrix is greatly enhanced by the existence of a frequency sharing agreement. (See *Annex B*.)

The Federal Communications Commission (FCC) has no prohibition against public agencies sharing frequencies during emergencies, provided that the responsible agency has granted permission to assisting agencies to do so. The agreement specifies the mutual permission of participating agencies to use other agency frequencies when providing assistance. The agreement lists the terms and conditions of use by others and includes all frequencies that can be made available under critical conditions. Such agreements facilitate better multiagency dispatching and incident communications and can be prepared by groups or agencies who work together frequently.

**A.7.4.11.2** These communications links can include but are not restricted to a number of methodologies, including radio, data communication, face-to-face, satellite communication, or telephone. Such communication links permit units from multiple agencies to interact with one another and to exchange information according to a prescribed method in order to achieve predictable results. These links permit communications between agencies when needed but not necessarily with every unit involved at an incident at all times.

**A.7.4.11.2(3)** Extended operations can include long-term disaster recovery, security at major events, or criminal justice surveillance.

**A.7.4.15** Effective communication among emergency response personnel during the initial response to any major incident and throughout its extended operations has a significant impact on the rapid mitigation to the affected population.

A plan should lend itself to rapid activation in case of an incident. These incidents include major storms, conflagrations, hazardous materials incidents, wildland fires, mass transit accidents, domestic terrorism, and other incidents that can overwhelm the agencies serving the community and their normal resources.

The plan should include all agencies that normally would be utilized to mitigate any major incident. The plan should also include the communication integration of all agencies into a command structure. Additionally, the plan should include the communications path for transition to the next level of support.

The plan should include SOPs that outline the following:

- (1) Activation of such plan
- (2) Radio systems to be utilized
- (3) Assigned radio frequencies and bandwidth for conventional or trunked systems
- (4) Talkgroups
- (5) Unit/agency designations
- (6) Talk paths to be utilized (e.g., gateway, cross band repeaters, and telecommunicator assisted)

The plan should define applicable continuous tone-coded squelch system (CTCSS) codes, in compliance with TIA-603-D, *Land Mobile FM or PM — Communications Equipment — Measurement and Performance Standards*, for analog channels designated for interoperability.

The plan should define interoperability channels designated for digital operation. These channels should be compliant with TIA/EIA-102.BAAA, *Common Air Interface*.

**A.7.4.15.1** The key to the successful operation of the various resources into a region depends heavily upon the ability of all public safety agencies to communicate effectively with each other in real time. At a minimum, interoperability should be supported at the command level. It is not required that every responder have total interoperability with every other responder.

**A.7.4.15.2** Exercising this plan identifies areas that need improvement.

**A.7.4.18** Procedures for handling telecommunication relay services (TRS) calls should be included in the SOPs.

**A.7.6.1(3)** Recording by telecommunicator position, rather than by line, allows all telephone lines that are used in the communications center to be taped using a minimum of recorder resources.

**A.7.7** The purpose of the quality assurance program is to follow up and review calls with communications center employees, improve procedures, and make the corrections needed to improve service and response. Generally accepted statistical methods should be used when selecting calls for review.

**A.8.1** Cellular or Internet personal communications services (PCS) systems include such devices as personal digital devices, advanced voice and data devices, and other cellular-based wireless systems. Text messaging, Internet access, cable modems, and other devices using wireless fidelity (WiFi) all use voice over Internet protocol (VoIP).

**A.8.2.1.2** The separate business number listed in the telephone directory and used for nonemergency purposes should terminate at a location where personnel are on duty at least 40 hours per week, Monday through Friday.

**A.8.2.3.6** A telephone line terminating at an unstaffed ERF and provided with a recorded message should not be used to meet the intent of the business line (nonemergency) listed in the directory and assigned for business (nonemergency) use as specified in 8.2.3.4.

**A.8.3(1)** In no case is it ever recommended that the telephone system be designed at less than P.01 GOS. An industry standard traffic study should be conducted that meets the public safety requirements of the AHJ.