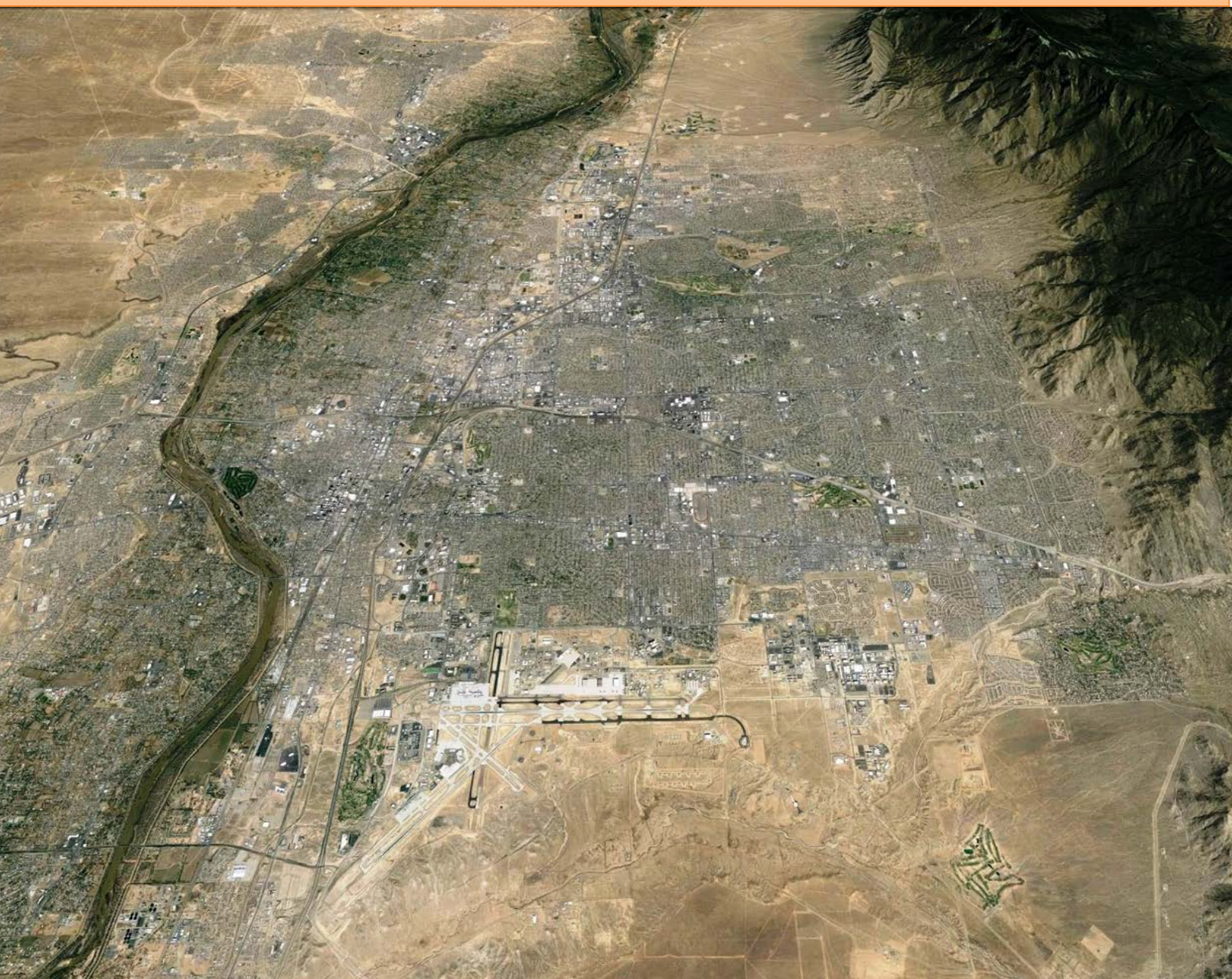
Emergency Support Function (ESF) #2

Communications & Information Technologies (IT)

Primary Agency

Albuquerque Department of Technology & Innovation



City of Albuquerque, New Mexico
Emergency Support Function (ESF) #2
Communications & Information Technologies (IT)

Purpose:

1. Support public safety and the operation of government agencies by maintaining continuity of information and telecommunication infrastructure equipment and other technical resources. The emergency communications/notification and warning system is described in the Public Protection: Alert & Warning Emergency Support Function (ESF #14.

Primary:

- Albuquerque Department of Technology & Innovation

Support:

- Albuquerque Fire Department
- Amateur Radio Emergency Service / Radio Amateur Civil Emergency Service
- Broadcast Media (Cable, TV, and Radio)

Likely Tasks:

- Staff the C&IT ESF within the CABQ EOC.
- Determine condition, status of the CABQ communication systems.
- Contact dispatch centers and request operational status.
- Ensure EOC internal communications are adequate.
- Manage the emergency communications section in the EOC to include radio, telephone, repair crews, runners, amateur radio, backup resources etc.
- Support media center communications operations, as needed.
- Coordinate, acquire and deploy additional resources, equipment and personnel technicians to establish point-to-point communications as required.
- Obtain and coordinate communication resources as requested by field incident commanders.

Likely Tasks Continued:

- Sources for resources can include:
  - All CABQ departments.
  - State EOC.
  - Amateur Radio.
  - Commercial vendors.
  - State or Region Radio Cache.
- Establish, maintain contact with State EOC through the CABQ EOC.
- Provide information on status of CABQ communication systems.
- Request additional communications resources, as needed.
- Prioritize and coordinate restoration of communications with public utility communication providers.
- Ensure communication links to/from shelters.
- Assess damages to CABQ's communications and data system.
- Provide installation/restoration and repairs.
- Provide voice and data support to recovery operations.
- Establish communications with operational units and field incident commanders.

State of New Mexico

Primary:

- Department of Homeland Security and Emergency Management

Support:

- Civil Air Patrol Department of Health
- Department of Military Affairs Department of Public Safety
- Radio Amateur Civil Emergency Service
- Security & Continuity Services (DOA/ITSD)
- Transportation

Likely Actions:

- Coordination with telecommunications and information technology industries
- Restoration and repair of telecommunications infrastructure Protection, restoration, and sustainment of national cyber and information technology resources
- Coordination of communications within the Federal and State incident management and response structures

Federal Government

Primary:

- Department of Homeland Security/ Information Analysis and Infrastructure Protection/National Communications System

Support:

- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Homeland Security
- Department of the Interior
- Federal Communications Commission
- General Services Administration

Likely Actions

- Coordination of available federal telecommunication systems, equipment, personnel, facilities.
- Coordinate federal actions to provide the required temporary National Security and Emergency Preparedness (NS/EP) telecommunications, and the restoration of the telecommunications infrastructure.
- Communications services may be provided through various Department of Homeland Security/Information Analysis and Infrastructure Protection/ National Communications System (DHS/IAIP/NCS) National–Level Programs, including the Shared Resources (SHARES) High–Frequency Radio Program, Telecommunications Service Priority (TSP) Program, Government Emergency Telecommunications Service (GETS), and Wireless Priority Service (WPS).

EMERGENCY SUPPORT FUNCTION #2
COMMUNICATIONS & INFORMATION TECHNOLOGIES (IT)

Primary Agency:	**Albuquerque Department of Technology & Innovation**
Primary Coordinator:	Associate Chief Information Officer
Support Organizations:	• Albuquerque Fire Department • Amateur Radio Emergency Service / Radio Amateur Civil Emergency Service • Broadcast Media (Cable, TV, and Radio)

I. Introduction.

A. PURPOSE.

Support public safety and the operation of City of Albuquerque (CABQ) government agencies by maintaining continuity of information and telecommunication infrastructure equipment and other technical resources. The CABQ's emergency communications, notification, and warning system are further described in the Public Protection: Alert & Warning Emergency Support Function ESF #14.

B. SCOPE.

1. ESF #2 will coordinate the establishment, maintenance, and restoration of the CABQ's communications systems to ensure the provision of efficient communications during emergency operations. This function will enable the receipt and transmission of priority messages by coordinating emergency systems used to communicate with and among the various response departments and emergency systems used to communicate disaster information to the general public.

2. ESF #2 applies to all departments that may require communications services, or whose communications systems may be affected during emergency response operations.

3. This function is the focal point for all voice and data communications infrastructure support at the CABQ level before, during, and after activation. ESF #2 responsibilities include:

   - Providing for functioning redundant warning and response communications systems.
   - Coordination with/among telecommunications and information technology (IT) industries.
   - Restoration and repair of communications infrastructure and services.
   - Oversight of interoperable communications to support Incident Command, the EOC, and other response structures.

C. SITUATION.

1. The City of Albuquerque's communication infrastructure will sustain damage. This damage will influence the quantity and types of communications assets available for the coordination of response and recovery efforts by government agencies and the ability to communicate with emergency victims.

2. Disaster responses which require communications will be difficult to coordinate effectively due to a break–down in public and private systems

3. The requirement for communications during the response phase may exceed the capability of existing resources.

4. The initial assistance effort will rely heavily on the capability of individual support agencies of this ESF.

5. Emergencies could have an adverse effect on the City's communications system.

6. The commercial telephone system serving the City is vulnerable to the effects of emergencies and to possible system overload due to increased usage.

7. Electricity may be lost during emergencies, necessitating the use of auxiliary power.

8. Technical failure, damage to, or loss of a telecommunications central office, a communications tower, or repeater could hamper communications or the ability to page emergency personnel throughout the region.

9. The ability to repair damage to the City communications system is contingent upon the availability of private commercial repair technicians.

10. State assistance may be needed to procure supplemental communications equipment or to locate available repair technicians following a major emergency.

11. Mutual aid repeaters in contiguous jurisdictions may not be available, or may not be able to provide sufficient coverage or channel loading to compensate for technical failure or damage to telecommunications resources in the City during an emergency.

D. POLICIES.

1. Each CABQ department will ensure the ability to communicate with the CABQ Emergency Operations Center (EOC) from their operations center and from their operations center to their operational units.

2. Emergency response activities will be given priority use of all the CABQ communications systems and resources.

3. Normal communications systems will be utilized as much as possible during an emergency. Some communications needs will be met by re-prioritizing day-to-day frequency use to special emergency use.

4. Priority will be given to restoration of communications systems in the event of an emergency.

5. In the event of an emergency, all CABQ departments will ensure the security of computer equipment and printers located in their areas.

6. Department of Technology & Innovation and other CABQ departments will have regularly scheduled computer back up programs in effect for critical computer applications and data.

7. Department of Technology & Innovation will ensure that all network data is adequately backed up and secured in an offsite location.

8. CABQ facilities management agencies will coordinate with Department of Technology & Innovation, and all other CABQ departments to ensure the necessary emergency power systems are in place to keep the voice and data communications infrastructure operating when there is a commercial power outage.

II. Concept Of Operations.

A. GENERAL.

1. A coordinated, effective response to emergencies requires communications among emergency responders, among incident sites and EOC and linkages to the general public and other levels of government. Local government's day–to–day communications systems are seldom sufficient to meet the increased communications demands caused by emergency conditions. The communications function aims to provide a structure whereby all public, private, and volunteer communications capabilities are linked to and coordinated by the EOC.

2. Post–emergency routine modes of communications and information systems that are operational will continue to be used after the occurrence of the event.

3. The identification, acquisition, prioritization, and deployment of communications and information system assets will be coordinated as appropriate within the EOC to assure continuity and consistency of City response actions. ESF #2 enables effective and interoperable communications between responders. As a result, response departments are able to:

   - Establish and maintain a common operating picture of the event.
   - Develop and disseminate appropriate public warnings.
   - Formulate, execute, and communicate operational decisions made at an incident site and among CABQ response departments.
   - Facilitate departmental awareness and understanding of the event.
   - Enable emergency management personnel to develop, coordinate, and execute operational decisions and requests for assistance.

4. Public Warning Communications

   (a) Public warning systems may be activated by local government officials, and will typically contain alert, notification, and educational information. Such public warning systems are valuable due to their ability to communicate critical information to the public when other communications systems are undependable.

   (b) Public warnings may be issued during severe weather, flooding, fire, hazardous material release, terrorist threat, water contamination, and any other threats to life, property, and safety. Several public warning systems are utilized throughout the CABQ, to include:

      - Commercial Broadcast Media.

- Emergency Alert System (EAS).
- New Media (Blogging, Websites, Social Networking).

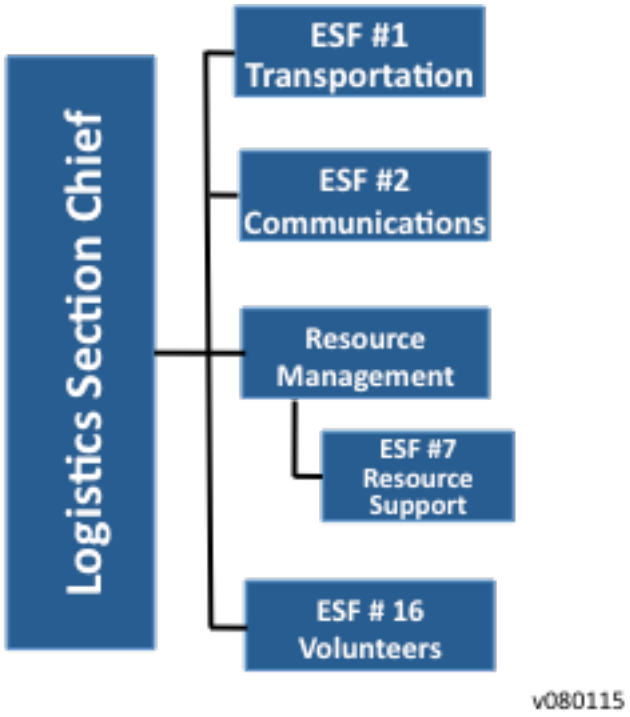
5. A coordinated, effective response to emergencies requires communications among

B. RESPONSE ORGANIZATION & STRUCTURE.

1. Organizational Chart.

- ESF #2 is positioned within the Logistics Section during an EOC activation, each ESF under Logistics Section will be led by a CABQ representative carrying out their ESF role.

The Organizational Structure Of The Logistics Section



C. PRIMARY DEPARTMENT RESPONSIBILITIES/TASKS BY PHASE

PRIMARY DEPARTMENT RESPONSIBILITIES/TASKS BY PHASE	
DEPARTMENT OF TECHNOLOGY & INNOVATION	
Pre-Emergency	Primary and support departments will collaborate and coordinate with the Office of Emergency Management to: • Maintain this Emergency Support Function (ESF). • Identify communications facilities and resources available for use (VHF Radios, Cell Phones, Satellite Phones, and telephonic public notification networks, etc.). • Develop inventories of equipment. • Ensure that the emergency communications section in the EOC is equipped with the appropriate voice and data equipment. • Ensure redundant communications to CABQ EOC. • Ensure that backup power generation is in place or planned for. • Maintain list of radio frequencies. • Develop frequency use procedures and protocols. • Schedule tests, exercises. • Develop emergency action checklists. • Develop network mutual aid agreements. • Develop a prioritized list of networks to be restored in the event of failure.
Emergency	• When notified report to City of Albuquerque EOC. • Coordinate activities of support agencies.
Emergency Operations Center (EOC)	• Staff the ESF #2 position in the EOC. • Determine condition, status of the communication and technology systems. – Contact dispatch centers and request operational status. • Ensure EOC internal communications and technology systems are adequate. – Support the communications unit in the EOC Logistics Section. • Support Joint Information Center communications operations, as requested. • Prioritize and coordinate restoration of communications and technology systems with public utility communication providers. • Assess damages to communication and technology systems. • Provide installation/restoration and repairs. • Provide voice and data support to recovery operations. • Establish and maintain communications links with operational units and field incident commanders.

PRIMARY DEPARTMENT RESPONSIBILITIES/TASKS BY PHASE	
DEPARTMENT OF TECHNOLOGY & INNOVATION	
	• Establish and maintain communications to Local, regional and State EOC's. • Obtain, and coordinate communication resources as requested by field incident commanders. • Sources for resources can include: – All departments. – State EOC. – Amateur Radio. – Commercial vendors. • Establish, maintain contact with State EOC. – Provide information on status of communications systems. – Request additional communications and technology resources, as requested. • Ensure communication links to/from shelters. • Maintain records of cost and expenditures to accomplish this ESF and forward them to the EOC Finance/ Administration Section Chief
Recovery Actions	• Department of Technology Innovation Recovery Team evaluates initial condition of the network infrastructure and equipment and reports status to Department of Technology Innovation Director. • ESF #2 reports status of systems to EOC Manager. • Conduct a safety inspection and document damages photographically. • Department of Technology and Innovation Recovery Team establish communications with network, application, and workstation Recovery Teams to begin network infrastructure recovery. • Contact Public Service Company of New Mexico to restore power if necessary. • Contact telephone companies to reconnect data circuits. • Contact necessary vendors to assist in recovery efforts. • Accumulate damage information obtained from assessment teams, the local emergency operations center and other departments specific to: – Damaged or missing antenna structures. – Damaged or missing radio transmission systems. – Damaged or inoperable power generation sources at radio transmitter sites. – Damaged telephone systems, critical cellular telephones and pagers. • Other local agencies with communications assets may be requested to contribute assets to the response efforts. Availability, operational condition and duration of need must be considered.

PRIMARY DEPARTMENT RESPONSIBILITIES/TASKS BY PHASE	
DEPARTMENT OF TECHNOLOGY & INNOVATION	
	• Restore systems in accordance with predefined priorities. • Begin setup of departmental computer equipment based on priorities set by administration. • Provide computer, telephones, and data support to disaster operations and recovery. – Assess damages to data system. – Provide installation/restoration and repairs. • Secure off-site storage for back–up of City computer system. • Provide voice and data support to disaster recovery operations.

D. SUPPORT ORGANIZATION'S RESPONSIBILITIES AND TASKS.

SUPPORT ORGANIZATIONS' RESPONSIBILITIES AND TASKS	
Albuquerque Fire Department	• Provide back–up communications. • Coordinate with ESF #2 to provide communications support. • Source for mobile communications on VHF and UHF frequencies, cross band repeaters, VHF hand held radios, cellular capabilities, three VHF repeaters spread throughout the city.
Amateur Radio Emergency Service / Radio Amateur Civil Emergency Service	• Coordinate with ESF #2 to provide communications support. • Provide assistance to enhance emergency communications capabilities when requested. • Augment emergency communications section in the EOC. • Support media center communications operations, as requested. • Provide communications links to areas outside local area for transmission of critical information. • Provide backup communications to critical areas within the City as requested. • Record costs and expenditures and forward them to this ESF's Group Supervisor.
Broadcast Media (Cable, TV, and Radio)	• Recommendation to develop emergency communications support plans, which provide alternate or supplementary support to the voice and data communications infrastructure during emergency situations.

E. LIFE SAFETY ASSESSMENT.

An initial EOC priority is to gather as much information about the extent of damage as soon as possible. Department of Technology & Innovation personnel constitute a large presence in the field and are the eyes and ears of the EOC. Whenever they identify an unusual situation, they should report the need for rescue, damage to buildings or public facilities, and utilities. These reports will be compiled by the department and immediately communicated to the EOC.

F. EVACUATION.

TBD

G. FIELD OPERATIONS.

TBD

III. Response Actions.

A. NOTIFICATION.

Upon notification by CABQ OEM Director or designee of an incident, the ESF coordinator will notify support departments and organizations of potential need for ESF #2 response in accordance with ESF #2 procedures and checklists. Notification may occur via landline, cell phones, electronic means, and/or two-way radios.

B. ACTIVATION.

Activation of ESF #2 will be determined by the OEM Duty officer, by the OEM Director or by request of the ESF responding agency based on the needs of the incident.

C. ONGOING ACTIVITIES.

1. ESF #2 departments and organizations participate in activities throughout the emergency management cycle:

    - Staff the Communications & IT Group Supervisor position within the CABQ EOC.
    - Determine condition and status of the City communication and technology systems.
        – Contact dispatch centers and request operational status.
    - Ensure EOC internal communications and technology systems are adequate.
        – Support the communications unit in the EOC Logistics Section.
    - Support Joint Information Center communications operations, as needed.

- Prioritize and coordinate restoration of communications and technology systems with public utility communication providers.
- Assess damages to CABQ's communication and technology systems.
  - Provide installation/restoration and repairs.
- Provide voice and data support to recovery operations.
- Coordinate with facilities management to restore power.

D. DEACTIVATION.

1. The EOC will be deactivated or the response level will be lowered when the event needs have decreased. Deactivation or change in response level may also occur as a result of a transition of the EOC mission from response to recovery. EOC activation status may be changed when determined appropriate by the EOC Manager.

2. Upon EOC deactivation, ESF #2 responsibilities will either be deactivated or assumed by an appropriate department. Once the decision to deactivate the EOC has been reached, the following activities may be necessary:

   - Complete or transfer remaining coordinating activities to the appropriate department operation center or ESF(s).
   - Coordinate the physical closing of the EOC, to include staff release, equipment pack up, return and inventory.
   - Coordinate the release of a public deactivation announcement with the JIC.
   - Provide deactivation information and a final status report to all involved response departments and/or coordinating and supporting ESF departments.

IV. Attachments And References.

A. ATTACHMENTS.

1. Communication Systems.

B. REFERENCES.

None.

C. PROVISO.

1. This support annex has been prepared in accordance with the standards of the National Incident Management System and other Federal and State requirements and standards for emergency plans applicable of the plan's preparation date.

2. The plan provides a broad planned framework for response and recovery; it is intended for use in further development for response capabilities, implementation of training and exercises, and defining the general approach to incident response. The actual response to an incident is dependent on:

    a. The specific conditions of the incident, including incident type, geographic extent, severity, timing, and duration;

    b. The availability of resources for response at the time of the incident;

    c. Decisions of incident command staff and political leadership;

    d. Actions taken by neighboring jurisdictions, the State, and the Federal Government.

    e. These and other factors may result in unforeseen circumstances, prevent the implementation of plan components, or require actions that are significantly different from those described in the plan.

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Attachment 1

COMMUNICATION SYSTEMS

TELEPHONE COMMUNICATIONS	
Systems	**Description**
Cellular Telephones	Cellular telephones are wireless radio telephones that are primarily dependent upon terrestrial cellular sites e.g., radio reception points, to enable transmission of calls. Cellular services in general are prone to disruptions due to user overload, system failures at times of disasters, emergencies and large special events, and therefore may not typically be fully reliable / dependable at such times.
Government Emergency Telecommunications System (GETS)	Provided by the National Communications System (NCS) in the Cyber Security & Communications Division, National Protection and Programs of the Department of Homeland Security. GETS provides National Security/Emergency Preparedness (NS/EP) personnel a high probability of completion for their phone calls when normal calling methods are unsuccessful. It is designed for periods of severe network congestion or disruption, and works through a series of enhancements to the Public Switched Telephone Network (PSTN). Users receive a GETS "calling card" to access the service from the Office of Emergency Management.
National Warning Alert System (NAWAS)	This is a dedicated, nationwide, party line telephone warning system operated on a 24 hours basis. It is used for the dissemination of warning and other emergency information from federal and state warning points to local warning points.
Plain Old Telephone System (POTS)	POTS lines are the standard wired systems using land-based copper lines for voice exchange between two telephones or multiple telephones via conference calling. All City agencies are connected within their premises by a mechanical switch or a PBX server, which regulates the internal extensions and all external incoming calls. In the event of telephone service failure, each City agency may still be able to communicate within their respective premises using the POTS in the intercom mode, e.g., retain ability to call internal extensions within premises.
Voice Over Internet Protocol (VOIP)	The VOIP Service is a method of voice communications using Internet Protocol. The telephone numbers and extensions rely on a computer system and server which executes the call routing and interfaces with the public telephone system. The VOIP Service can be either locally supported (within a given office or structure) or distributed through the City's Fiber Network.

Wireless Priority Access (WPS)	Provided by NCS in the Cyber Security & Communications Division, National Protection and Programs of the Department of Homeland Security. WPS is a method of improving connection capabilities for a limited number of authorized national security and emergency preparedness cell phone users. In the event of congestion in the wireless network, an emergency call using WPS will wait in queue for the next available channel. WPS calls do not preempt calls in progress or deny the public's use of the radio spectrum.

RADIO COMMUNICATIONS	
Systems	**Description**
800 MHz Citywide Radio System	Dedicated, 800 Mhz trunked public safety radio system that provides radio services to first responders and other Federal, State, and local agencies.
800 MHz Mutual Aid	There is an assigned deck of 800 Mhz frequencies specified for public safety mutual aid.
Interoperability	Patching is the ability to link channels or talk groups together to provide radio interoperability for dispatchers and users in the field and between agencies.
Handheld Amateur (HAM) Radio – Digital Communication	Utilizing digital modes within the UHF, VHF and HF amateur radio bands, text-based information can be relayed among CABQ departments and agencies. Communication with neighboring jurisdictions can also be established as needed. HAM Radios are operated as a function of OEM.
HAM Radio – Voice Communication	Amateur Radio frequencies in UHF, VHF and HF bands are used by the Federal Communications Commission (FCC) Licensed Amateur Radio Operators in the Auxiliary Communications Service of OEM to perform voice communications for departments and agencies of the City Albuquerque. Communication with neighboring jurisdictions can also be established as needed. HAM Radios are operated as a function of ACS.
Albuquerque Regional Coalition on Health-Preparedness (ARCH-P) Radio Network	City of Albuquerque Office of Emergency Management communicates with all Hospitals on 800 Mhz hand held radios. CABQ OEM communicates with Santa Fe control (NMDOH Bureau of Emergency Management) on a 400 Mhz Base station. CABQ OEM provides 400 Mhz Handheld units to each Hospital for in house communication.

Albuquerque Sunport International Airport	The City of Albuquerque Aviation Department, Albuquerque International Sunport Airport maintains a radio communications system within the geographic footprint of the Airport.
Albuquerque Transit Department	Albuquerque Transit Department utilizes 800 Mhz radio communications system for daily operations.

DATA / INTERNET CONNECTION COMMUNICATIONS	
Systems	**Description**
Fiber Connectivity	The fiber network connects most City-owned and City occupied buildings. The fiber network also connects several of the Radio Sites which offers redundant links to the sites.
Internet Services	Presently there is one internet connection point in CABQ maintained by the Department of Technology and Innovation. Additionally, individual departments have their own DSL connections that can access the Internet.
Private Wireless Data Network	The City owns and operates a private Wireless Data Network.
Public Carrier Service	Several City Departments utilize wireless data services offered by Public Carriers, including Sprint, Verizon and AT&T. Public Carriers use data technologies including EDGE, HSDPA and CDMA, depending on the carrier. These networks are accessed via subscription based service, and funded and maintained by each City Department.

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