

09 NCAC 06C .0402 GRANTS FOR CONSTRUCTION OR RENOVATION

(a) The requirements in this Rule, Grants for Construction or Renovation, shall apply only to new construction and construction renovations of an existing structure or facility funded by the North Carolina 911 Board. PSAPs receiving grants for construction or renovation shall ensure compliance with the provisions of this Rule.

(b) HVAC.

- (1) HVAC systems shall be designed to maintain temperature and relative humidity within limits specified by the manufacturer of the equipment critical to the operation of the PSAP.
- (2) HVAC systems shall be independent systems that serve only the PSAP.
- (3) HVAC system intakes for fresh air shall be arranged to minimize smoke intake from a fire inside or outside the building and to resist intentional introduction of irritating, noxious, toxic, or poisonous substances into the HVAC system.
- (4) HVAC emergency controls shall be provided in the operations room to permit closing of outside air intakes.
- (5) Back-up HVAC systems shall be provided for the operations room and other spaces housing electronic equipment essential to the operation of the PSAP.
- (6) HVAC systems shall be designed so that the PSAP is capable of uninterrupted operation with the largest single HVAC unit or component out of service.

(c) Fire Protection.

- (1) The PSAP and spaces adjoining the PSAP shall be provided with an automatic fire detection, alarm, and notification system.
- (2) The alarm system shall be monitored in the operations room.
- (3) Operation of notification appliances shall not interfere with communications operations.
- (4) Electronic computer and data processing equipment shall be protected in accordance with the manufacturer's recommended specifications, and common business practices.

(d) Security.

- (1) The PSAP and other buildings that house essential operating equipment shall be protected against damage from vandalism, terrorism, and civil disturbances.
- (2) Entry to the PSAP shall be restricted to authorized persons.
- (3) Exterior entryways to the PSAP shall have a security vestibule. "Security Vestibule" means comprising a compartment with two or more doors to prevent unobstructed passage by allowing the release of only one door at a time.
- (4) Door openings shall be protected by listed, self-closing fire doors that have a fire resistance rating of not less than 1 hour.
- (5) Where a PSAP has windows, the following requirements shall apply:
 - (A) Windows shall be a minimum of 4 ft (1.2 m) above floor level.
 - (B) Windows shall be rated for bullet resistance to Level 4 as defined in UL 752, Standard for Safety Bullet-Resistant Equipment, which is hereby incorporated by reference, including subsequent amendments and editions. This may be accessed at no cost at <http://ulstandards.ul.com/standard/?id=752>.
 - (C) Windows that are not bullet resistant shall be permitted provided that they face an area that cannot be accessed or viewed by the general public.
 - (D) Windows that are required to be bullet resistant shall be configured so that they cannot be opened.
 - (E) Walls with bullet-resistant windows shall be required to provide the same level of protection as the window.
- (6) Means shall be provided to prevent unauthorized vehicles from approaching the building housing the PSAP to a distance of no less than 82 ft (25 m). Alternatively, unauthorized vehicles shall be permitted to approach closer than 82 ft (25 m) if the building has been designed to be blast resistant.

(e) Lighting.

- (1) Artificial lighting shall be provided to enable personnel to perform their assigned duties.
- (2) The PSAP shall be equipped with emergency lighting that shall illuminate automatically immediately upon failure of normal lighting power.
- (3) Illumination levels shall be sufficient to allow all essential operations.

(f) Circuit Construction and Arrangement.

- (1) As-built drawings shall be provided.

- (2) Circuits shall not pass over, under, through, or be attached to buildings or property that are not owned by, or under the control of, the PSAP or the entity that is responsible for maintaining the system.
 - (3) 911 call instruments installed in buildings not under control of the PSAP shall be on separate dedicated circuits.
 - (4) The combination of public emergency services communication and signaling (C&S) circuits in the same cable with other circuits shall comply with the following:
 - (A) Other municipally controlled C&S circuits shall be permitted; or
 - (B) Circuits of private signaling organizations shall be permitted only by permission of the PSAP.
- (g) **Underground Cables.**
- (1) Underground communication and signal cables shall be brought above ground only at points where the PSAP has determined there is no potential for mechanical damage or damage from fires in adjacent buildings.
 - (2) All cables that are installed in manholes, vaults, and other enclosures intended for personnel entry shall be racked and marked for identification.
 - (3) Cable splices, taps, and terminal connections shall be located only where accessible for maintenance and inspection and where no potential for damage to the cable due to falling structures or building operations exists.
 - (4) Cable splices, taps, and terminal connections shall be made to provide and maintain levels of conductivity, insulation, and protection that are at least equivalent to those afforded by the cables that are joined.
- (h) **Aerial Cables and Wires.** Protection shall be provided where cables and wires pass through trees, under bridges, and over railroads, and at other locations where damage or deterioration is possible.
- (i) **Wiring Inside Buildings.**
- (1) Wiring at the PSAP shall extend to the operations room in conduits, ducts, shafts, raceways, or overhead racks and troughs of a construction type that protects against fire and mechanical damage.
 - (2) Cables or wiring exposed to fire hazards shall be protected from the hazards.
 - (3) At the PSAP, cable terminals and cross connecting facilities shall be located either in or adjacent to the operations room.
 - (4) All wired dispatch circuit devices and instruments whose failure can adversely affect the operation of the system shall be mounted in accordance with the following:
 - (A) On noncombustible bases, pedestals, switchboards, panels, or cabinets; and
 - (B) With mounting designed and constructed so that all components are readily accessible to authorized personnel.
- (j) **Circuit Protection.**
- (1) All protective devices shall be accessible for maintenance and inspection.
 - (2) Wired surge arresters shall be designed and listed for the specific application.
 - (3) Each conductor that enters a PSAP from a partial or entirely aerial line shall be protected by a surge arrester.
- (k) **Grounding.**
- (1) Sensitive electronic equipment determined by the PSAP to be essential to the operation of telecommunications and dispatching systems shall be grounded.
 - (2) Listed isolated ground receptacles shall be provided for all cord-and-plug-connected essential and sensitive electronic equipment.
 - (3) Unused wire or cable pairs shall be grounded.
 - (4) Ground connection for surge suppressors shall be made to the isolated grounding system.
 - (5) All surge arresters shall be connected to earth ground.
- (l) **Access.** All equipment shall be accessible to authorized personnel for the purpose of maintenance.

*History Note: Authority G.S. 62A-42; 62A-47;
Eff. July 1, 2016.*