

**Vermont Enhanced 911 Board
Enterprise Communications Systems (ECS) Rule**

Rule Governing the 9-1-1 Requirements for Enterprise Communications Systems

1.0 Authority

This rule is adopted pursuant to 30 V.S.A. § 7057.

2.0 Purpose

The public expects that a 9-1-1 call made from any device anywhere in the state will be routed to the appropriate Public Safety Answering Point (PSAP) with accurate location information so that a dispatchable location can be provided to emergency responders.

The purpose of this rule is to define the 9-1-1 requirements for all Enterprise Communications Systems (ECS), also referred to as privately owned telephone systems or multi-line telephone systems, that provide access to the Public Switched Telephone Network (PSTN) for end users within the State of Vermont.

3.0 Definitions

- 3.1 Automatic Location Identification (ALI)** – An enhanced 9-1-1 service capability that allows for the automatic display of information relating to the geographical location of the communication device used to place a 9-1-1 call.
- 3.2 Automatic Number Identification (ANI)** – The telephone number associated with the access line from which a call originates.
- 3.3 Enterprise Communications Systems (ECS)** – any networked communication system serving two or more stations, or living units, within an enterprise. ECS includes, but is not necessarily limited to, circuit-switched networks (Multi-Line Telephone Systems (MLTS) or Legacy ECS), IP-based systems and cloud-based technology. An enterprise may include, but is not limited to, business entities, governmental agencies or facilities, shared residential facilities, and educational institutions.
- 3.4 Call Back Number (CBN)** – a unique telephone number that can be dialed to reconnect with the originator of a 9-1-1 call.
- 3.5 Dispatchable Location** – the location information delivered to the PSAP by the ECS provider with a 9-1-1 call. The location information must consist of the verified street address and community name, plus additional information to adequately identify the location of the calling party. The additional location information must include floor level (if applicable) and the more granular of suite, apartment, or room identifier. Any single room larger than 10,000 square feet must include additional granular information such as number, cubicle number, visible

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signage, or other logical landmark or physical information to identify the location of the calling party.

- 3.6 Location Information Server (LIS)** – a functional element in an IP-capable originating network that provides locations of endpoints (i.e., calling device). A LIS can provide Location by-Reference, or Location-by-Value, and, if the latter, in geo or civic forms. A LIS can be queried by an endpoint for its own location, or by another entity for the location of an endpoint. In either case, the LIS receives a unique identifier that represents the endpoint, for example an IP address, circuit-ID or Media Access Control (MAC) address and returns the location (value or reference) associated with that identifier. The LIS is also the entity that provides the dereferencing service, exchanging a location reference for a location value.
- 3.7 Location Validation Function (LVF)** – a functional element that is part of a Next Generation Core Services (NGCS) that provides validation of a civic address against the authoritative 9-1-1 GIS database.
- 3.8 Multi-Line Telephone System (MLTS)** – A system comprised of common control unit(s), telephone sets, control hardware and software and adjunct systems providing telephone service to multiple end-use customers in businesses, apartments, townhouses, condominiums, schools, dormitories, hotels, motels, resorts, extended care facilities, or similar entities. This includes network and premises-based systems. e.g., Centrex, VoIP, as well as PBX, Hybrid, and Key Telephone Systems (as classified by the FCC under Part 68 Requirements) and includes systems owned or leased by governmental agencies and non-profit entities, as well as for profit businesses
- 3.9 National Emergency Number Association (NENA)** - professional organization focused on 9-1-1 policy, technology, operations, and education issues.
- 3.10 Public Safety Answering Point (PSAP)** – an emergency communications center capable of processing 9-1-1 calls.
- 3.11 Public Switch Telephone Network (PSTN)** - The interconnected set of telecommunications networks that use analog or Time Division Multiplexing (TDM) format to transmit voice calls between end-user customers and the telecommunications network.
- 3.12 Station** – a telephone handset, customer premise equipment (CPE) or calling device that is capable of initiating a call to 9-1-1.
- 3.13 Shared Residential ECS** - an ECS serving two or more living units.

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4.0 General Requirements

- 4.1 ECS end users shall have the ability to directly initiate a call to 9-1-1 without dialing any additional digit, code, prefix or post-fix.
- 4.2 The ECS shall provide ANI for every station or living unit with a station.
- 4.3 The ECS shall provide a unique Call Back Number (CBN) for every station or living unit with a station. The CBN will allow the Vermont 9-1-1 system to dial-back the originating station or living unit.
- 4.4 The ECS shall provide ALI to include a CBN and a dispatchable location for every station or living unit with a station. The location information must correlate to a physically posted dispatchable location in the facility.
- 4.5 The ALI shall be provided by a third-party database provider, a LIS, or a future technology recognized and accepted by NENA standards and the Vermont Enhanced 9-1-1 Board.
- 4.6 The ECS shall route 9-1-1 calls to the appropriate Public Safety Answering Point (PSAP) based upon the caller's physical location.
- 4.7 An ECS with remote and/or mobile users must allow the user to connect using the native phone application and the mobile network of the device when dialing 9-1-1, if capable. If the mobile or remote user can only contact 9-1-1 through the ECS then an accurate dispatchable location of the remote/mobile user must be provided.
- 4.8 Compliance with this rule will be assessed through a 9-1-1 test call procedure coordinated and authorized by the Vermont Enhanced 9-1-1 Board.
 - 4.8.1 No test calls to 9-1-1 are permitted unless authorized in advance by the Vermont Enhanced 9-1-1 Board.

5.0 ALI/Location Provider Maintenance

- 5.1 ECS ALI information must be validated using the Vermont LVF or a Board approved GIS validation process to confirm the accuracy of house number, street address, and community name in the ALI.
- 5.2 ECS ANI, ALI, CBN and dispatchable location must be accurately maintained for each station or living unit equipped with a station in the system.
- 5.3 ALI or other reported database discrepancies must be resolved within two (2) business days.

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- 5.4 All ALI and dispatchable location information shall be audited at least once annually and any errors corrected.
- 5.5 The Vermont 9-1-1 Board may request, review and/or test the location data of any ECS at any time and require that corrections be made to any errors within a Board-determined time frame.

6.0 Data Exchange Format for the ECS Database

- 6.1 ECS database systems must comply with the data exchange format currently in use by the Vermont Enhanced 9-1-1 Board's Database Management Service Provider.

7.0 Service Provider Customer Education Requirements

- 7.1 Ninety (90) days after the approval of this rule, all dial tone service providers providing equipment or services capable of multi-line PSTN access and terminating in an ECS, and all vendors providing ECS solutions or equipment must:
 - 7.1.1 Direct existing customers to the customer advisory brochure (*ECS 9-1-1 Advisory Brochure*) on the Vermont Enhanced 9-1-1 Board website.
 - 7.1.2 Direct their prospective customers the customer advisory brochure (*ECS 9-1-1 Advisory Brochure*) on the Vermont Enhanced 9-1-1 Board website when those customers initiate ECS services, request information on Enterprise Communication Systems; and/or purchase equipment or services capable of multi-line PSTN access terminating in an ECS.

8.0 Waivers and Enforcement

- 8.1 The Vermont Enhanced 9-1-1 Board may grant a waiver to these requirements if, in the judgment of the Board, the ECS is actively engaged in becoming compliant with this rule, is likely to comply with this rule in a reasonable amount of time and will do so in accordance with standards and procedures adopted by the Board by rule.
- 8.2 Any ECS seeking a waiver to any provision of this rule must contact the Enhanced 9-1-1 Board, and provide, in writing,
 - 8.2.1 The provision for which the waiver is sought;
 - 8.2.2 The reason the waiver is sought
 - 8.2.3 The plan to remedy the violation.
- 8.3 If a waiver is granted, the ECS must comply with any interim requirements imposed by the Board to mitigate the impact of system limitations on end users. Such

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requirements may include, but are not limited to, end user education, posting of location information, or other similar requirements.

- 8.4** Pursuant to section 30 V.S.A. § 7061(a), the Enhanced 9-1-1 Board may file a civil action for injunctive relief in Washington county superior court to enforce this rule. The court shall award the board its costs and reasonable attorneys' fees in the event that the board prevails in an action under this subsection.