

IMPLEMENTING HB 441: NG-911 CALL TRANSFER PLAN

Ron DeSantis, Governor

Jonathan R. Satter, Secretary

Table of Contents

[**BACKGROUND 3**](#_Toc33001950)

[**E911 BOARD GOVERNANCE & ORGANIZATIONAL OVERVIEW 4**](#_Toc33001951)

[RECOMMENDATIONS 5](#_Toc33001952)

[**WHAT IS NG-911? 6**](#_Toc33001953)

[HOW DOES NG-911 WORK? 7](#_Toc33001954)

[NATIONAL PERSPECTIVE 8](#_Toc33001955)

[FLORIDA PERSPECTIVE 9](#_Toc33001956)

[**NG-911 OPEN STANDARDS-BASED & COMPLIANT ESINET 10**](#_Toc33001957)

[RECOMMENDATIONS 10](#_Toc33001958)

[**AVAILABILITY AND RELIABILITY INDUSTRY RECOMMENDATIONS 11**](#_Toc33001959)

[MOBILE BROADBAND NETWORKS 12](#_Toc33001960)

[LEVERAGE EXISTING NETWORKS 12](#_Toc33001961)

[**NG-911 IMPLEMENTATION PLAN 13**](#_Toc33001962)

[DATA COLLECTION 13](#_Toc33001963)

[EXECUTE 13](#_Toc33001964)

[SUSTAINMENT OF THE SYSTEM 14](#_Toc33001965)

[CREATION OF A COMMUNICATIONS PLAN 16](#_Toc33001966)

[CREATION OF A CHANGE MANAGEMENT PLAN 16](#_Toc33001967)

[MAPPING SYSTEM & GEOSPATIAL ROUTING 17](#_Toc33001968)

[CLEARINGHOUSE 18](#_Toc33001969)

[**CONCLUSION 18**](#_Toc33001970)

[**RECOMMENDATIONS 19**](#_Toc33001971)

[**APPENDIX ONE: REFERENCE LIST 20**](#_Toc33001972)

[**APPENDIX TWO: ACRONYM LIST 21**](#_Toc33001973)

[**APPENDIX THREE: RULES AND STATUTES 22**](#_Toc33001974)

[**APPENDIX FOUR: E911 BOARD RULES 23**](#_Toc33001975)

# BACKGROUND

In response to the directives passed through HB 441 during the 2019 Legislative Session, the Department of Management Services (DMS), provides the following plan to address the transfer of E911 calls between systems. As required by the legislation, this plan adheres to the requirements of s. 365.177, Florida Statutes[[1]](#footnote-1):

**365.177 - Transfer of E911 calls between systems.**

(1) The office shall develop a plan by February 1, 2020, to upgrade 911 public safety answering points within the state to allow the transfer of an emergency call from one local, multijurisdictional, or regional E911 system to another local, multijurisdictional, or regional E911 system in the state. Such transfer should include voice, text message, image, video, caller identification information, location information, and additional standards-based 911 call information.

(2) In developing the plan, the office shall:

(a) Coordinate with public agencies to identify and resolve any technological or logistical issues.

(b) Identify or establish a system or clearinghouse for maintaining contact information for all E911 systems in the state.

(c) For both a regionally phased and statewide approach, establish a date, considering any technological, logistical, financial, or other identified issues, by when all E911 systems in the state must be able to transfer emergency calls pursuant to subsection.

Florida’s current 911 systems must leverage technology to better serve citizens and first responders. The current 911 systems within the state should be modernized to meet the evolving needs of Floridians, visitors and first responders due to the current demands and capabilities of an ever-evolving technological world.

Many calls placed in Florida for emergency services come from wireless devices. Due to the lack of information provided by the Wireless Service Provider, PSAPs are unable to accurately determine a caller’s exact location, thus delaying lifesaving support from Law Enforcement, Emergency Medical, or Fire Services. By implementing call routing procedures PSAPs will be able to increase their ability to better assist Floridians and visitors alike.

Public Safety response agencies may not be able to locate a caller quickly due to outdated technology and challenges of interoperability with legacy 911 systems. As the use of wireless devices continues to increase, the need to have public safety answering points (PSAPs) receive multiple forms of communications has continued to grow. Not all PSAPs in Florida are able to receive text messages, thereby placing those that have speech or hearing impediments at a disadvantage. As technology advances, it is imperative that PSAPs be able to engage with the public regardless of the form of communication, whether via video, text, Voice over Internet Protocol (VoIP), and others.

The implementation of a statewide Internet Protocol Emergency Services Network through regional upgrades to an NG-911 system will provide the ability for PSAPs to accept and/or re-route multimedia (currently text only) to other PSAPs. As technology advances, the ability to send multimedia messages (text messages), such as images and video, will be implemented into the system. A robust NG-911 system will improve the interoperability of PSAPs across the state through increased communications methods, updated call routing, location accuracy, and capability to receive multimedia data when implemented by Originating Service Providers (OSPs).

This plan was developed in response to the passage of House Bill 441 during the 2019 Legislative Session to be used as a guide to transition through a regional and, subsequently, a statewide NG-911 system that provides for a statewide NG-911 Call Routing Plan. This plan identifies the steps and tasks necessary to assess, strategize, test, and implement a regional and a statewide NG-911 system using a flexible, scalable solution. This plan identifies high-level timetables, critical decision points, and outputs. To be successful, the following must be executed:

* Approval of a spending plan that involves spending a large portion of the E911 Trust Fund;
* Legislative Budget Requests (LBRs) to support additional regional implementation;
* Annual LBRs for ongoing NG-911 system maintenance and further implementation;

Currently 9-1-1 is a local service managed within each county, therefore it will be a local decision on how to move forward in executing a NG-911 deployment. Some states have implemented PSAP consolidation plans to reduce the substantial costs of implementing NG-911. Additionally, some states have assumed control of the statewide call routing infrastructure to ensure connectivity and interoperability.

# E911 BOARD GOVERNANCE & ORGANIZATIONAL OVERVIEW

The Florida Wireless Board was established in 1999 by the Legislature and transitioned to become the E911 Board, in 2007. DMS and the E911 Board are working together to transition Florida to NG-911.

The E911 Board’s Mission Statement[[2]](#footnote-2) :

*Promote and support the development, coordination, and integration for an evolved, fully-functional, seamless "Next Generation 911” system that is accessible anytime, anywhere, from any device in order to realize the full potential for 911 to provide emergency services, enable interoperability between systems, protect human life, preserve property, and maintain public safety for the residents, visitors, and first responders in the State of Florida.*

The E911 Board also administers the Emergency Communications Number E911 System Fund (E911 Trust Fund), used for the following:

* Wireless service provider Phase I and Phase II E911 deployment and services;
* County E911 funding for equipment and services specified in ss. 365.172(10), Florida Statutes;
* Rural County Grants (annual grant program utilizing three percent of the non-wireless, wireless and prepaid wireless E911 fee revenue for equipment and maintenance of E911 systems);
* E911 State Grants (grant program is open to all counties utilizing E911 trust fund revenues); and
* E911 Board administration and operations.

The E911 Board was established to help implement a statewide E911 system for wireless and non-wireless voice communication users. The E911 Board’s primary function is to administer the funds derived from a monthly fee on each subscriber with a Florida billing address (place of primary use). These disbursements are made from the E911 Trust Fund to county governments and wireless providers in accordance with s. 365.173, Florida Statutes.

The E911 Board is comprised of 11 members including the DMS System Director as Chair of the Board, and the DMS Bureau of Public Safety providing a small support staff for board meetings, financial reporting, financial collections and disbursements, and board initiatives. Currently, there are 8 active board members with 3 vacancies. DMS Public Safety Staff function as a liaison between DMS, the E911 Board, and the 67 local 911 coordinators.

## RECOMMENDATIONS

As Florida moves forward with a statewide call routing system, the system must provide for increased situational awareness, increased stakeholder interaction, and improved and increased communications. Specific areas to be addressed would include but not be limited to:

* Operational issues;
* Training needs;
* FirstNet Integration;
* Disaster Recovery, Continuity of Operations Plan (COOP), and Resilience;
* Cybersecurity issues;
* Communication/Outreach.

The creation of NG-911 workgroups to assist in the transition to NG-911 would be beneficial to address the following:

*Figure 1: Possible new governance structure*

New governance-based documents will assist in ensuring a successful call routing and NG-911 system implementation across the state. Creating additional governance documents will ensure stakeholders are familiar with policies, processes, and timelines while creating a strong foundation for a robust, efficient system.

# WHAT IS NG-911?

NG-911 is an initiative to enhance emergency number services allowing for the transmission and reception of voice and data-rich information such as text messages that include photos or videos. NG-911 core services are as follows [[3]](#footnote-3):

* Location Validation Function (LVF) that validates an individual’s location against updated Geographic Information System (GIS) information;
* Emergency Call Routing Function (ECRF) and Emergency Services Routing Proxy (ESRP) which route and process the call;
* Border Control Function (BCF) for security and control of emergency calls and presentation of the information to the Emergency Services Internet Protocol Network (ESInet); and
* All other elements that support routing, logging, bridging and all other Internet Protocol (IP) based services.

An NG-911 system includes hardware, software, data, and operational policies and procedures encompassing the following attributes[[4]](#footnote-4):

* Provides standardized interfaces from call and message services;
* Processes all types of emergency calls including text messages;
* Acquires and integrates additional data useful to call routing and handling;
* Delivers the calls/messages and data to the appropriate PSAPs and other appropriate emergency entities support data and communications needs for coordinated incident response and management;
* Provides a secure environment for emergency communication; and
* Allows for seamless call routing both intrastate and interstate.

The foundational blocks required to implement NG-911 are as follows:

* **ESInet:** ESInets use broadband, packet switched technology that can carry voice and large amounts of varying types of data using IP standards. ESInets are intended to be a multi-purpose support extending public safety communication beyond traditional 9-1-1 services.
* **Internet Engineering Task Force (IETF) Standards:** IP standards, developed by the National Emergency Number Association (NENA), provide the basic functional ability of the system. Examples of requirements are standards to meet: LVF and ECRF among others. NG-911 uses service-oriented architecture, software applications, and data content to manage and control the IP based process.
* **Databases and Data Management:** The NG-911 Geographic Information System (GIS) Data Model lists the information, formats, requirements, and related information that is to be used for NENA compliant NG-911 Core Services (NGCS).
* **Security:** NG-911 provides extensive security measures
* **Human Processes:** NG-911 is a system that involves an extensive list of procedures and system operations that control, monitor, and increase effectiveness of the NGCS. Some of these procedures include the establishment of maintenance procedures, IP network operations, security procedures and processes, GIS data submission and updates and other auditing and accuracy validation procedures.

## HOW DOES NG-911 WORK?

When receiving an emergency call, a multimedia message, or an alert, the following are critical in processing and routing a phone. First, the originating service providers deliver a call to the IP emergency services network. Second, the incoming call will be processed by the service provider to determine call information such as number, location, type of call, etc., and based on the location of the call, route to the appropriate PSAP. The call is then presented to 911 call taker at the PSAP who will then engage the caller to determine what type of services are needed. The call information is then loaded in the Computer Aided Dispatch (CAD) for dispatching the appropriate First Responders.

## NATIONAL PERSPECTIVE

All states are encouraged to voluntarily share their 911 demographic and statistical data annually with national public safety organizations such as NENA, National Association of State 911 Administrators (NASNA), and the National 911 Office. This data includes each state’s population, PSAP count, collected fee total and fee structure, along with its progress toward NG-911 implementation.

Information collected by NENA can be used to identify the status and document the basic functions of State 911 agencies, as well as to measure and report on their progress in implementing NG-911 technology. Reports over the past five years show continuous improvement in NG-911 implementation across the country. Figure 2 is a snapshot of NG-911 planning and implementation by state as of August 2019[[5]](#footnote-5). It is important to note this is a high-level snapshot that does not reflect detailed state information and may reflect variables in reporting as each state may assess and report their NG-911 data transition differently.

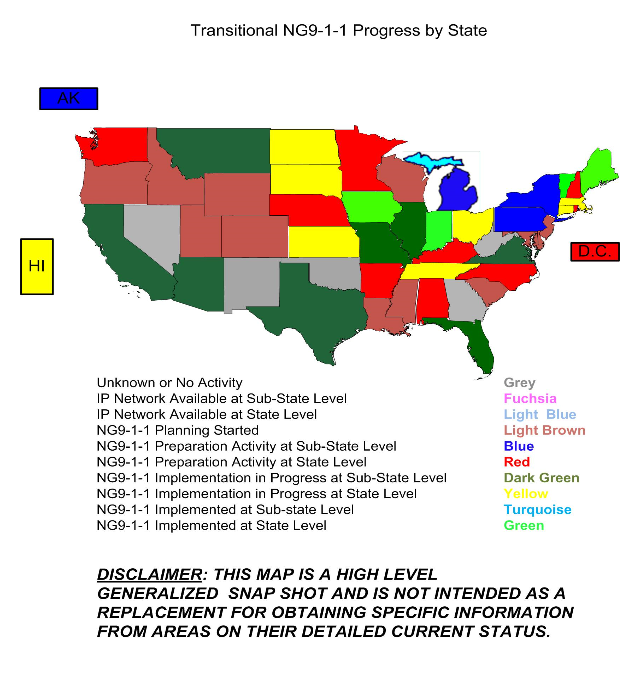


Figure 2: Snapshot of the Nation's progress towards NG-911 Implementation

## FLORIDA PERSPECTIVE

The purpose of this plan is to upgrade 911 PSAPs within the state to allow the transfer of an emergency call from one local, multijurisdictional, or regional E911 system to another local, multijurisdictional, or regional E911 system in the state. Such transfers should include:

* Voice;
* Text Message;
* Image;
* Video;
* Caller identification information; and
* Location information

Further, this plan complies with s. 365.177, F.S. This plan provides a roadmap to assist PSAPs in the upgrade of their systems to enable their ability to transfer and receive emergency calls to/from other PSAPs around the state. This plan provides information on methods that the PSAPs can currently receive voice messages and some areas are able to receive text messages, however, through the progression of technology and the implementation of NG-911 the goal is to have the ability to receive image, video, caller identification, and location information.

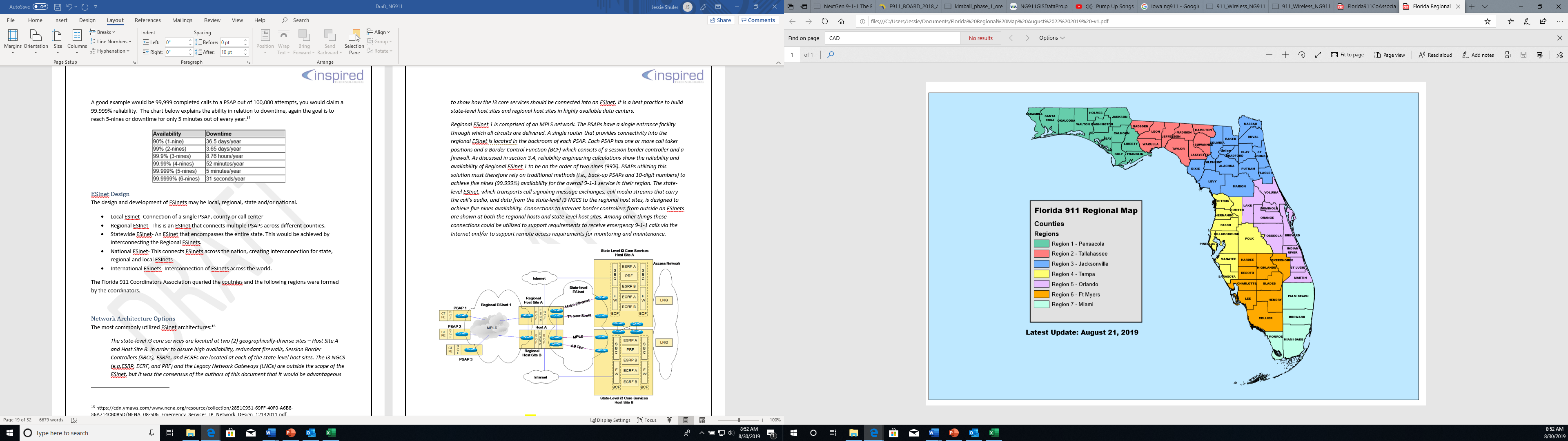
Data on the number of PSAPs that are text ready-vs-not text ready, and PSAPs that are ESInet capable-vs-not ESInet capable is provided in Figure 3 below. This data was produced as part of an annual County Survey at the end of FY 2019. Note that the following data is a snapshot in time and changes could have been made since the survey.

**COUNTY STATUS REPORT**

|  |  |  |  |
| --- | --- | --- | --- |
| **TEXT READY COUNTIES** | **REMAINING** | **ESInet CAPABLE COUNTIES** | **REMAINING** |
| 45 | 22 | 43 | 24 |

*Figure 3: DMS County Survey Data*

Counties self-identified through two separate information gathering exercises (DMS and through the 911 Coordinators Association) and the below proposed regions were created (Figure 4).



*Figure 4: Florida 911 Regional Map*

# NG-911 OPEN STANDARDS-BASED & COMPLIANT ESINET

The ESInet is a strong backbone that lends itself to interoperability, enhanced transport, and robust security that provides the foundation for NG-911 core services. Per NENA-STA-010, the ESInet is “a managed IP network that is used for emergency services communications, and which can be shared by all public safety agencies. It provides the IP transport infrastructure upon which independent application platforms and core functional processes can be deployed, including, but not restricted to, those necessary for providing NG-911 services. ESInets may be constructed from a mix of dedicated or shared facilities. ESInets may be interconnected at a local, regional, state, federal, national, and international levels to form IP-based inter-network (network of networks).”

The core requirements for an ESInet, as summarized in the NENA-STA-010 Detailed Functional and Interface Specification for the NENA i3 Solution – Stage 3 [1], are as follows[[6]](#footnote-6):

* The network between the PSAP and an ESInet will be a private or virtual private network based upon Transmission Control Protocol/Internet Protocol (TCP/IP);
* It will have scalable bandwidth to support new enhanced services;
* The Emergency Services IP Network shall be a conventional routed IP network;
* Multi-Protocol Label Switching (MPLS) or other sub-IP mechanisms are permitted as appropriate;
* The PSAP should use redundant local area networks for reliability;
* PSAP LAN to an ESInet must be resilient, secure, physically diverse, and logically separate;
* ESInets shall be engineered to sustain real time traffic, including data, audio, and video;
* Connections between the PSAP and an ESInet Wide Area Network (WAN) shall be secured TCP/IP connections;
* ESInets should be capable of operating on IPv4 and IPv6 network infrastructures;
* ESInets should consider how the Domain Name System (DNS) is designed and managed;
* ESInet implementations should consider coordination efforts to understand Autonomous System (AS) number implications for statewide deployments; and
* ESInet configurations may impact Voice Quality and shall be designed to support the minimal acceptable levels defined by NENA-STA-010.

## RECOMMENDATIONS

It is recommended that the requirements be reviewed and updated by the E911 Board, and that they identify any additional requirements to be included in potential future procurements DMS conducts to move towards statewide NG-911.

# AVAILABILITY AND RELIABILITY INDUSTRY RECOMMENDATIONS

Performance availability and reliability are a top concern of the system architecture. The recommended availability objective is that the service reliability achieves “five nines” (99.999%). Though reliability and availability are interrelated, they are not interchangeable terms. Reliability is the ability of a system or component to perform its required functions under stated conditions for a specific time whereas availability is the degree to which a system or component is operational and accessible when required for use[[7]](#footnote-7).

Example: If the network is operating (i.e., available) and 99,999 calls are successfully completed to a PSAP out of 100,000 attempts, then 99.999% reliability has been achieved. If network is out-of-service (i.e., unavailable) for less than 5 minutes of the year, then 99.999% availability has been achieved.

The chart below explains the availability in relation to downtime, again the goal is to reach 5-nines or downtime for only 5 minutes out of every year.[[8]](#footnote-8)

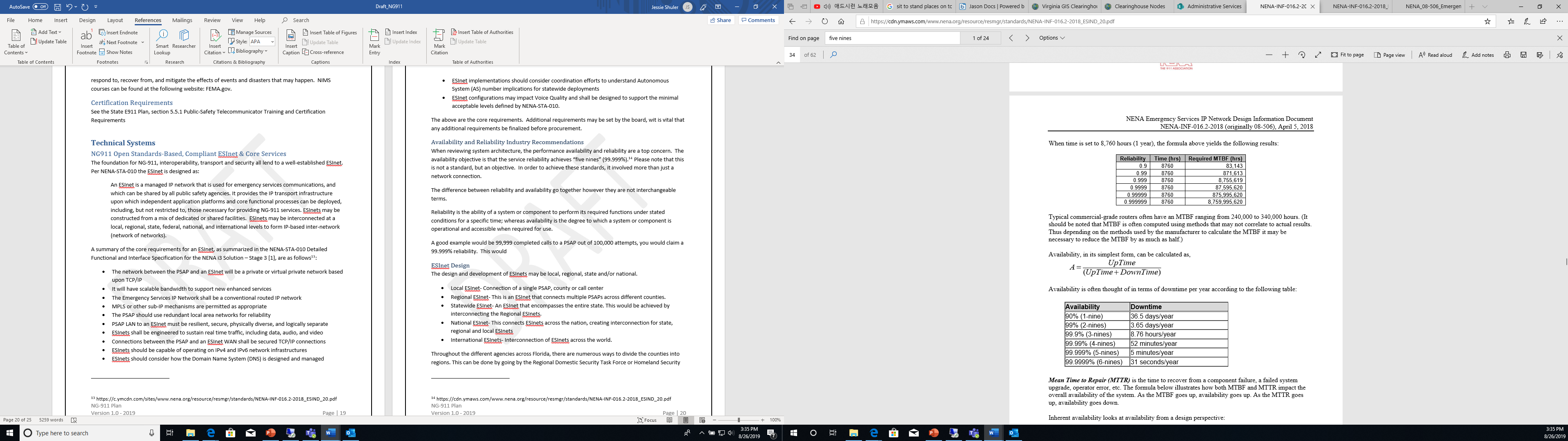


Figure 1:Availability in Relation to Downtime

It should be noted that calls that are not successfully completed while the network is unavailable, are not included in the reliability calculation.



Figure 2:Availability vs. Reliability

The design and development of ESInets may be local, regional, state, and/or national:

* Local ESInet- Connection of a single PSAP, county or call center;
* Regional ESInet- ESInet that connects multiple PSAPs across different counties;
* Statewide ESInet- An ESInet that encompasses the entire state. This would be achieved by interconnecting the Regional ESInets;
* National ESInet- This connects ESInets across the nation, creating interconnection for state, regional, and local ESInets; and
* International ESInets- Interconnection of ESInets across the world.

## MOBILE BROADBAND NETWORKS

According to the First Responder Network Authority, FirstNet is a nationwide broadband network for first responders being built and deployed through public-private partnership between the federal government and AT&T. Verizon offers a competing plan for public safety broadband services. These services are separate from NG-911. However, it is important that integration take place between the LTE and NG-911 systems.

This integration will: [[9]](#footnote-9)

* Assist in compatibility with mobile and digital technology;
* Increase situational awareness;
* Assist in controlling costs through digital resources;
* Allow data feedback loops for analysis and system improvements;
* Improve real-time Data for situational awareness and collaboration;
* Enhance existing and add new data which improves analysis and decision making;
* Create a more robust system with built-in redundancy; and
* Increase the ability to share infrastructure.

## LEVERAGE EXISTING NETWORKS

To gain efficiencies in implementation, many states are exploring use of existing infrastructure in the development of their statewide ESInets. A key component for any ESInet consideration includes the assessment of existing networks and alternate networks provided by other governmental agencies. For example, using transport from a higher education network or other available existing network may positively impact the costs of the overall design. Connections to such networks may allow for an offset of major cost implications in areas where broadband connectivity is expensive, or redundancy is limited. During the initial planning stages, all available broadband network resources should be evaluated for possible utilization in design and deployment of the ESInet.

# NG-911 IMPLEMENTATION PLAN

This plan was based around the NG-911 Study completed in late 2018.[[10]](#footnote-10) This study was completed to provide information on the national progress towards NG-911 and the State of Florida’s possible pathways to execute implementation of a robust NG-911 system.

## DATA COLLECTION

The 2018 NG-911 study recommended the following questions be answered prior to moving forward:

1. What service or system will provide the ESInet backbone for statewide connectivity?
2. What is the cost estimate of the selected ESInet backbone?
3. Based on #1 and #2, what additional core functionality should be evaluated for possible delivery to PSAP’s via the ESInet backbone? And what will be left up to local PSAP funding?
4. What are cost estimates of the additional core functionality identified in #3, since the decision of additional functionality is relied heavily on total cost from #2 and #3.
5. What funding model should be used for the state’s transition to NG-911?

Currently, there is insufficient information on the specifics of each PSAP to adequately estimate the cost of upgrading software and hardware that is needed to facilitate a call routing system.

A number of surveys to identify a pilot region(s) and gain further knowledge of the cost to upgrade were executed in the Fall of 2019 and will continue through the Winter of 2019. A comprehensive review of the results, and the decision on pilot region(s), will be made in the third quarter of the fiscal year (January-March 2020).

## EXECUTE

1. Additional survey to create cost analysis on cost of each regional upgrade.
2. Establish the pilot region and lead county.
3. Identify and procure a vendor for ESInet implementation.
4. Adjust rules and statutes to allow for a group of counties to be work through one identified county within their region to lead the charge within the region and dispense funds to all counties within.
5. Execute PSAP/County specific plans with DMS and appropriate vendors. This plan will detail how the PSAP/County will integrate into the statewide ESInet.
6. Future LBRs to ensure that all regions are upgraded, provide annual maintenance, and ultimately link all regional ESInets together.
7. An increase to DMS’ budget authority may be required to allow for increased costs to operate a NG-911 system.

On the following page, you will find a chart of high-level milestones that need to be completed. The process for establishing which regions will be upgraded and when they will be upgraded has not been established. As soon as this is established, a regional schedule will be established. **The below timeline is subject to funding, governance, and statutory authority changes.**



*Figure 7: Timeline Overview*

The deployment of a NG-911 system will eventually replace the current E911 systems. This transition should be monitored, managed, and budgeted to ensure that there is no interruption in the services locally provided. This oversight will also enable the state to minimize the overall cost.

An evaluation of current statutes indicate that changes may need to be incorporated in the existing statutes and funding to appropriately address funding of services vs. the purchasing of equipment. With NG911 Systems, vendors have increasingly moved to a service-based delivery of products and equipment to fully incorporate processes and integration with modern telecommunications equipment. Local agencies are significant partners in this transition as PSAP’s in Florida are managed and funded locally with some assistance from the E911 Board and trust fund revenues. Computer Aided Dispatch Systems should also be evaluated for interoperability while standards for those systems need to be developed and codified.

## SUSTAINMENT OF THE SYSTEM

A detailed cost-analysis will need to be executed to update the cost of upgrades across each region. DMS is currently working with the counties to identify the pilot region(s). Further discussion of the cost of a statewide ESInet and upgrade to a region or regions will need to be developed and executed with support from the E911 Board, legislature, local 911 coordinators, and other key stakeholders across the state. This will be done after the pilot region(s) have been developed.

Key cost drivers will depend on the requirements of the system being developed, including the number of routing cores, redundancy and diversity, current standards and equipment availability, supplemental emergency databases, and interface connectivity needed for NG-911 systems. Other determining factors include, but are not limited to:

* Broadband Connectivity: Assessment of broadband connectivity throughout the state and at each connecting site/location;

• ESInet Design and Deployment: It is possible that a current statewide IP platform can be used such as MFN reducing cost;

• Number of PSAPs Transitioning: Identifying the number of PSAPs requiring transition, and determining and analyzing all opt in and/or opt out scenarios;

• Centralized or Shared Network Architecture: Analysis on regionalization and consolidation scenarios, and assessing regional ESInet already in place around the state;

• Timeline and Implementation Stages: A shortened timeline to speed up implementation introduces new cost variables and possibly additional exposure to risk and its correlating cost;

• Direct PSAP control versus hosted solution for provision of NG-911;

• New or upgraded CPE to handle multimedia communications such as text, data, and video;

• New or enhanced system capabilities such as GIS, Management Information System (MIS), and translation services;

• Operations and personnel cost including training for coordinators, call takers, and other stakeholders;

• Public education cost associated with informing stakeholders and citizens of the transition, system capabilities, and implementation timeline; and

• Maintaining current operations and legacy 911 systems during the transition.

A major concern in sustaining the state’s current level of E911 service and transition to NG-911 is the funding required for statewide implementation. Section 365.172, F.S., provides for the collection of a fee (currently set at 40 cents and capped under the statute at 50 cents) assessed to each subscriber with a Florida billing address (place of primary use) for wireless, VoIP, local access lines, and prepaid wireless. All fees are collected by the state and disbursed by DMS based on the allocation and pro-rata disbursement approval of the E911 Board.

As outlined, the state revenues have only been able to pay for 43 percent of the E911 total estimated expenses. The state could consider moving towards a consolidated PSAP structure to reduce costs and better leverage the available resources.

Further evaluation of broadening allowable fee use should also be completed at this time to allow for a higher degree of first responder telecommunications integration service layers, e.g., CAD, public safety radio operations, etc. The continued leveraging of Federal grants is strongly encouraged for immediate increases in NG-911 transitional funding for state and individual PSAP NG-911 initiatives.

## CREATION OF A COMMUNICATIONS PLAN

A comprehensive education and outreach program will be established to assist in the coordination of other state entities and stakeholders. During this time, DMS will work to overcome any technological, logistical, or other issues that can be foreseen when implementing a call routing process. For this to be successful, it is imperative for communication between DMS and local agencies and key stakeholders be open, transparent, and in both directions. A robust communications plan needs to be developed to ensure the proper execution of this project.

Currently, the Federal Communication Commission (FCC) and NENA maintain separate registries containing basic information about PSAPs nationwide but contact information within these registries can be outdated or lack a 24/7 number. As a bid to establish a statewide call routing system is executed, a clearinghouse will be established to maintain contact information for all E911 systems within the state. Currently, there is an excel spreadsheet that local 911 County Coordinators have access to.

## CREATION OF A CHANGE MANAGEMENT PLAN

A change management plan and additional guidance documents will allow PSAPs to be provided with current information. A review of all current policies and procedures is necessary to ensure policies and procedures will mirror call-routing and NG-911 implementation guidelines.

Figure 8: Change Management Process

This process should be a conditional process that is executed with all stakeholders to ensure alignment with regional or statewide NG-911 implementation.

## MAPPING SYSTEM & GEOSPATIAL ROUTING

Currently there is a need for an increased understanding of the software solutions and capabilities within the counties in relation to GIS data that has been collected as it is critical for a successful NG-911 call routing capability.

The NENA Standard for NG-911 GIS Data Model[[11]](#footnote-11) defines the GIS standards for an NG-911 system. All counties must meet this standard for them to be interoperable across the state. The vendor that is chosen to synchronize and establish a statewide GIS Repository will provide recommendations to DMS on the GIS file format.

NG-911 requires GIS data to also comply with the World Geodetic System of 1984 (WGS84) coordinate system. Local data can reside within any coordinate system, but a conversion to WGS84 is required in   
  
order to create a unified GIS repository. Though the NENA Standard for Spatial Data Accuracy is set at a 98% confidence rate, DMS’s goal is to achieve a confidence rate closer to 100%.

The GIS data layers that are described within the NG-911 GIS Data Model need to be clearly established. These layers **must** be available for the ECRF and LVF to work, and are **required** for call taking and dispatch operations:

* Road Centerlines;
* Site/Structure Address Points;
* PSAP Boundary;
* Emergency Service Boundary (this MUST include Law, Fire, and Emergency Medical Service (EMS) as separate layers); and
* Provisioning Boundary.

**Strongly Recommended** – These layers may aid in the functionality of the ECRF and LVF, and are strongly recommended for call taking and dispatch operations:

* Street Name Alias Table;
* Landmark Name Part Table;
* Complete Landmark Name Alias Table;
* States or Equivalents;
* Counties or Equivalents;
* Incorporated Municipality Boundary;
* Unincorporated Community Boundary;
* Neighborhood Community Boundary; and
* Other Emergency Service Boundaries (these MAY include, but are not limited to, Poison Control, Forest Service, Coast Guard, Animal Control, etc.).

**Recommended** – Other layers in this document that complete the minimum recommended GIS data for NG-911 and E911 call taking, and dispatch operations are:

* Railroad Centerlines;
* Hydrology Line;
* Hydrology Polygon;
* Cell Site Location; and
* Mile Marker Location.

## CLEARINGHOUSE

PSAP coordinators will use NENA’s Enhanced PSAP Registry and Census (EPRC) as the clearinghouse for PSAPs until further notice. The FCC also maintains a 911 Master PSAP Registry which can be accessed through unrestricted online access.

It is recommended that a state clearinghouse be developed to be accessed by those working within a PSAP, County 911 Coordinators, and state level 911 stakeholders. This clearinghouse will be used as a hub to access GIS data, submit GIS data, locate training materials, governance documents, and gain access to updated contact information to access PSAPs across the state. It is recommended that the NENA databases and FCC’s 911 Master PSAP Registry be updated regularly based upon information contained within the state’s clearinghouse.

# CONCLUSION

As a statewide network is established, it will enable service providers across the state to deliver calls to the appropriate PSAP, transfer calls across the state to other PSAPs, and ultimately transfer across state line to adjacent states when required. It will also allow PSAPS to securely receive multimedia communications.

Since there are over 200 PSAPs across the state, that are at varying degrees of NG-911 implementation, it is critical that further analysis of each PSAP be performed to obtain a detailed cost assessment. When reviewing different transition plans from around the country, the cost to implement NG-911 solutions range from $12 million to over $80 million, however this is dependent upon the implementation process and number of PSAPS to be transitioned. The goal of the initial deployment is for the call routing system to enable IP enabled PSAPs to connect to each other and be able to transfer calls amongst each PSAP to any location within the state to comply with House Bill 441.

This project may require a significant state investment, statewide governance, and a procurement vehicle to properly integrate all 7 regions with a viable and long-term call routing solution. The procurement process will need to be determined based on overall cost, scope of the program, and available funding sources. It is probable that a business case and invitation to negotiate may be the appropriate procurement process which will necessarily delay the implementation of this statewide initiative.

# RECOMMENDATIONS

The goal of this plan was to create a plan to transition the State of Florida through a regional, and eventually a statewide, NG-911 Call Routing System. Until the following steps are fulfilled, the State of Florida will not be able to implement a successful, sustainable NG-911 system.

The following will need to be considered and evaluated with respect to actual implementation of this plan.

1. Governance
2. Operational and Technical Guidance
3. Existing PSAP Assessment including considerations where appropriate
4. Statute Revisions
5. Funding
6. Future Enhancements.

# APPENDIX ONE: REFERENCE LIST

1. Florida Statute. 365.177 Transfer of E911 calls between systems. Retrieved February 4, 2020 from <http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0365/Sections/0365.177.html>
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National Association of State 911 Administrators (NASNA) and 911.gov, NG-911 & First Net Together Building the Future of Public Safety Communications. Retrieved from September 5, 2019, from <https://www.911.gov/pdf/NASNA_National_911_Program_NG911_FirstNet_Guide_State_Local_Authorities.pdf>

# APPENDIX TWO: ACRONYM LIST

1. Autonomous System (AS)
2. Border Control Function (BCF)
3. Continuity of Operations Plan (COOP)
4. Department of Management Services (DMS)
5. Domain Name System (DNS)
6. Emergency Call Routing Function (ECRF)
7. Emergency Communications Number E911 System Fund (E911 Trust Fund)
8. Emergency Services Internet Protocol Network (ESInet)
9. Emergency Services Routing Proxy (ESRP)
10. Enforcement Radio System (SLERS)
11. Federal Communication Commission (FCC)
12. Florida Wireless Board (E911 Board)
13. Geographic Information System (GIS)
14. Internet Engineering Task Force (IETF)
15. Legislative Budget Request (LBR)
16. Location Validation Function (LVF)
17. Management Information System (MIS)
18. Multi-Protocol Label Switching (MPLS)
19. MyFloridaNet (MFN)
20. National Emergency Number Association (NENA)
21. Next Generation 911(NG-911)
22. NG-911 Core Services (NGCS)
23. Public Safety Answering Points (PSAPs)
24. Transmission Control Protocol/Internet Protocol (TCP/IP)
25. Voice over Internet Protocol (VoIP)
26. Wide Area Network (WAN)
27. World Geodetic System of 1984 (WGS84)

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# APPENDIX THREE: RULES AND STATUTES

* **Section** [365.171](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0365/Sections/0365.171.html), **Florida Statutes: Emergency Communications Number E911 State Plan.**
* **Section** [365.172](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0365/Sections/0365.172.html), **Florida Statutes: Emergency Communications Number "E911."**
* **Section** [365.173](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0365/Sections/0365.173.html), **Florida Statutes: Emergency Communications Number E911 System Fund.**
* **Section** [365.174](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0365/Sections/0365.174.html), **Florida Statutes: Proprietary Confidential Business Information.**
* **Section** [365.175](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0365/Sections/0365.175.html), **Florida Statutes: Emergency Telephone Number 911 Private Branch Exchange.**
* **Section** [365.177](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0365/Sections/0365.177.html), Florida Statutes: Transfer of E911 calls between systems
* **Section** [365.179](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0365/Sections/0365.179.html), Florida Statutes: Direct radio communication between 911 public safety answering points and first responders

# APPENDIX FOUR: E911 BOARD RULES

**Rule** [**60FF1-5.001**](https://www.flrules.org/gateway/RuleNo.asp?title=E911%20BOARD&ID=60FF1-5.001)**, Florida Administrative Code: Requirements for Sworn Invoices Submitted by or on Behalf of Wireless Service Providers**

Purpose and effect: This rule provide the requirements for sworn invoices submitted by or on behalf of wireless service providers.

Rule adopted effective date: Dec. 3, 2010

[Final adopted rule presented in Florida Administrative Code 60FF1-5.001](https://www.dms.myflorida.com/content/download/57942/244466/60FF1-5.001.pdf) (Adobe PDF Document 18.88 KB)

**Rule** [**60FF1-5.002**](https://www.flrules.org/gateway/RuleNo.asp?title=E911%20BOARD&ID=60FF1-5.002)**, Florida Administrative Code: Rural County Grant Program**

Purpose and effect: This rule provide the requirements and approval process for the Rural County Grant Program. The E911 Rural County Grant Program is a semi-annual grant program provided for the purpose of assisting rural counties, as defined by paragraph 365.172(3)(z), Florida Statutes, with the installation and maintenance of an E911 system.

Rule adopted effective date: Sept. 23, 2015

[Final adopted rule presented in Florida Administrative Code 60FF1-5.002](https://www.dms.myflorida.com/content/download/118530/650762/60FF1-5.002_post%5b1%5d.pdf) (Adobe PDF Document 32.74 KB) 

**Rule** [**60FF1-5.003**](https://www.flrules.org/gateway/RuleNo.asp?title=E911%20BOARD&ID=60FF1-5.003)**, Florida Administrative Code: E911 State Grant Program**

Purpose and effect: This rule provide the requirements and approval process for the E911 State Grant Program. The E911 State Grant Program is provided for the purpose of assisting Florida counties with the installation of enhanced 911 and next generation 911 systems.

Rule adopted effective date: June 26, 2019

[Final adopted rule presented in Florida Administrative Code 60FF1-5.003](https://www.dms.myflorida.com/content/download/118531/650765/State_Grant_Rule_FAC_60FF1-5.003.pdf) (Adobe PDF Document 101.93 KB)

**Rule** [**60FF1-5.004**](https://www.flrules.org/gateway/RuleNo.asp?title=E911%20BOARD&ID=60FF1-5.004)**, Florida Administrative Code: Requirements for Fee Remittance Submitted by or on Behalf of Wireless and Non-wireless Service Providers.**

Purpose and effect: The purpose of the development is to set forth the procedural requirements for submitting and reporting the E911 fees including E911 fee remittance submitted by or on behalf of wireless and non-wireless service providers required by subsection 365.172(8), Florida Statutes.

Rule adopted effective date: Dec. 3, 2010

[Final adopted rule presented in Florida Administrative Code 60FF1-5.004](https://www.dms.myflorida.com/content/download/57560/242928/60FF1-5.004.pdf) (Adobe PDF Document 23.76 KB)

**Rule** [**60FF1-5.005**](https://www.flrules.org/gateway/RuleNo.asp?title=E911%20BOARD&ID=60FF1-5.005)**, Florida Administrative Code: Emergency Grants**

Purpose and effect: This rule provide the requirements for an emergency grant program. The E911 Emergency Grant Program is established to provide an expedited schedule for approval of grants to assist counties with the emergency restoration of enhanced 911 systems throughout Florida resulting from natural and man-made disasters or events.

Rule adopted effective date: Jan. 18, 2015

[Final adopted rule presented in Florida Administrative Code 60FF1-5.005](https://www.dms.myflorida.com/content/download/57943/244469/60FF1-5.005.pdf) (Adobe PDF Document 21.15 KB)

**Rule** [**60FF1-5.006**](https://www.flrules.org/gateway/RuleNo.asp?title=E911%20BOARD&ID=60FF1-5.006)**, Florida Administrative Code: Requirements for County Carry Forward Funds and Excess Funding**

Purpose and effect: This rule provide the procedural requirements for counties with the ability to carry forward funding for E911 capital outlay, capital improvements, or equipment replacement expenditures. The excess recovery provision provides a 30 percent limitation on the total E911 fee revenue retained during a county fiscal year as carry forward. Any overage not utilized by the county for allowable E911 expenditures shall be returned to the E911 Board in accordance with this rule.

Rule adopted effective date: July 26, 2015

[Final adopted rule presented in Florida Administrative Code 60FF1-5.006](https://www.dms.myflorida.com/content/download/117414/645562/60FF1-5.006_posted%5b1%5d.doc) (Microsoft Word Document 26.00 KB)    
Calculation rule form: [Excel Form](https://www.dms.myflorida.com/content/download/117415/645565/Form_6A_-_Carry_Forward_Rule_60FF1-5006_(Post)%5b1%5d.xlsx) (Microsoft Excel Document 15.93 KB) / [PDF Form](https://www.dms.myflorida.com/content/download/117416/645568/Form_6A_-_Carry_Forward_Rule_60FF1-5006_(Post)%5b1%5d.pdf) (Adobe PDF Document 19.05 KB)

**Rule** [**60FF1-5.007**](https://www.flrules.org/gateway/RuleNo.asp?title=E911%20BOARD&ID=60FF1-5.007)**, Florida Administrative Code: Requirements for T1 and Primary Rate Interface Fee Remittance**

Rule repeal effective date: Jan. 17, 2013

[Final repeal notice presented in Florida Administrative Code 60FF1-5.007](https://www.dms.myflorida.com/content/download/87426/500011/60FF1-5.007.doc) (Microsoft Word Document 19.50 KB)

**Rule** [**60FF1-5.008**](https://www.flrules.org/gateway/RuleNo.asp?title=E911%20BOARD&ID=60FF1-5.008)**, Florida Administrative Code: Public Comments**

Purpose and effect: This rule propose to facilitate public comment at E911 Board meetings.

Rule adopted effective date: Jan. 26, 2014

[Final adopted rule presented in Florida Administrative Code 60FF1-5.008](https://www.dms.myflorida.com/content/download/104994/594278/60FF1-5.008_1-26-14.doc) (Microsoft Word Document 22.50 KB)

**Rule** [**60FF1-5.011**](https://www.flrules.org/gateway/ruleNo.asp?id=60FF1-5.011)**, Florida Administrative Code: Text to 911**

Purpose and effect: This rule provide the procedures and guidelines for submitting a request for Text to 911 funding.

Rule adopted effective date: March 29, 2017

[Final adopted rule presented in Florida Administrative Code 60FF1-5.011](https://www.dms.myflorida.com/content/download/144923/967381/Final_adopted_rule_presented_in_Florida_Administrative_Code_60FF-5.001.pdf) (Adobe PDF Document 12.37 KB)

**Rule** [**60FF1-5.012**](https://www.flrules.org/gateway/ruleNo.asp?id=60FF1-5.011)**, Training/Regional Planning Reimbursement**

Purpose and effect: Provide the process for reimbursement for Regional Training and Planning Costs.

Rule adopted effective date: October 6, 2019

[Final adopted rule presented in Florida Administrative Code 60FF1-5.012](https://www.dms.myflorida.com/content/download/146981/979601/60FF1-5.012_(1).pdf) (Adobe PDF Document 50.64 KB)

**Rule** [**60FF-6**](https://www.flrules.org/gateway/ChapterHome.asp?Chapter=60FF-6)**, Florida Administrative Code: State E911 Plan**

**Status: Rule Adopted** - Effective date: Feb. 17, 2011

Purpose and effect: Provide necessary rules for implementing and coordinating a cohesive statewide emergency communications number “E911” plan for enhanced 911 services, which will provide citizens with rapid direct access to public safety agencies by accessing “911” with the objective of reducing the response time to situations requiring law enforcement, fire, medical, rescue, and other emergency services.

Final adopted rule presented in Florida Administrative Code:

[60FF-6.001](https://www.flrules.org/gateway/ruleNo.asp?id=60FF-6.001): Purpose  
[60FF-6.002](https://www.flrules.org/gateway/ruleNo.asp?id=60FF-6.002): County E911 Plan Compliance  
[60FF-6.003](https://www.flrules.org/gateway/ruleNo.asp?id=60FF-6.003): Request for Certification of Compliance  
[60FF-6.004](https://www.flrules.org/gateway/ruleNo.asp?id=60FF-6.004): Administration Rule  
[60FF-6.005](https://www.flrules.org/gateway/ruleNo.asp?id=60FF-6.005): Technical and Operations Rule

**Florida Emergency Communications Number E911 State Plan:** [**State E911 Plan**](https://www.dms.myflorida.com/content/download/108633/610926/State_E911_PLAN_2017_post.pdf) (Adobe PDF Document 918.25 KB)

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