March 19, 2021

U.S. House of Representatives
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Pallone, Chairman Doyle, Ranking Member McMorris Rodgers, and Ranking Member Latta:

The National Association of State 911 Administrators (NASNA) and the National Emergency Number Association (NENA) appreciate the opportunity to provide the Committee with their perspectives on "*Leading Infrastructure for Tomorrow's America Act of 2021*" (*LIFT America Act*; H.R. 1848), which includes $15 billion of Federal funds to accelerate the implementation of Next Generation 9-1-1 (NG911) across the country.

As the only public safety organizations exclusively dedicated to 911, NASNA and NENA's expertise in emergency calling standards, technology, procurement, and deployment of 911 and NG911 systems is absolutely unparalleled, worldwide. There is simply no comparable group of NG911 experts in existence.

NASNA's members are directly responsible for nearly every NG911 deployment in the United States. Their expertise in NG911 grants comes from two sources: First, they represent the vast majority of federal grant recipients of the $115M provided in the 2012 Middle Class Tax Relief and Job Creation Act; even further, many NASNA members have administered state-level NG911 grant programs *of their own* in recent years.

NENA working group volunteers — who hail from both public safety and industry — devote over 30,000 hours every year to developing and maintaining NENA's roughly two hundred technical and operational standards for 911 and NG911. NENA volunteers literally invented Next Generation 9-1-1, and many of them still participate in its continued development. Among NENA standards is the NENA *i3 Standard for Next Generation 9-1-1*, known simply as "i3" — the only complete NG911 specification in existence. As of this letter's writing, just over half the United States' population is either being served by or is under contract to be served by an NG911 system built to the NENA i3 standard.

NASNA and NENA support the accelerated deployment of NG911 — our organizations have called for a nationwide, coordinated transition to NG911 since the early days of the concept itself. This advanced communications capability provided by NG911 is critical to the safety and security of our communities. It will enable the nation's 911 systems to keep pace with advancing technology and provide improved communications resiliency during emergencies. While many states have invested in NG911 technology, funding remains the biggest obstacle to full nationwide deployment. We strongly support Congressional efforts to make the investments necessary to ensure an advanced and secure emergency communications infrastructure.

The *LIFT America Act* recognizes that the governance and control of 911 systems, including NG911, should remain at the State, regional, and local level. At the same time, it establishes a nationwide framework to facilitate cooperation among Federal, State, and local officials and to promote the interoperability and reliability of NG911 systems. NASNA and NENA support these important objectives but believe they would be undermined

by some of the Act's provisions. Congress must act to rectify the following provisions or risk compromising NG911 for many years ahead.

Commonly Accepted Standards

NG911 interoperability is critically important, and the path to interoperability begins with adherence to commonly accepted standards. In NG911, the single most commonly referred to standard is NENA i3, bar none. All NG911 systems currently deployed in the U.S. are based on the NENA i3 (i3) standard, and in many ways i3 is synonymous with NG911. Of course, like all communications technologies, standards are always evolving. The current version of the standard is NENA i3 Revision 3; this version of the standard is expected to be accredited by the American National Standards Institute (ANSI) later this year.

i3 is not the only standard necessary for NG911 — indeed, specifying the interfaces and functional elements of an entire NG911 network requires much more than a single standard. Numerous standards addressing PSAP equipment, data structures for Geographic Information Systems (GIS), or standards for 911 data management, are referenced by i3. To track these standards, the 911 Implementation Coordination Office (ICO) publishes an annual compendium of NG911 standards, and that report lists more than twenty-five organizations in addition to NENA that develop standards relevant to NG911.[1]

Unfortunately, the introduced legislation fails to fully account for this robust standards ecosystem. In pursuit of so-called "seamless" interoperability, the *LIFT America Act* conditions NG911 grant eligibility on applicants' use of the defined term "commonly accepted standards." The definition of "commonly accepted standards" is thus crucial, as improperly limiting grant eligibility (by inadvertently prohibiting use of certain standards, for example) could stifle future technological innovation and even undermine interoperability objectives. It is for this reason that our organizations — the peerless experts in Next Generation 9-1-1 standards, procurement, and deployment — find reason for alarm in the current definition. The definition of "commonly accepted standards" found in the *LIFT America Act* could inadvertently impede the implementation of $15B worth of interoperable NG911 systems.

The Act defines "commonly accepted standards" as:

> COMMONLY ACCEPTED STANDARDS. —The term 'commonly accepted standards' means the technical standards followed by the communications industry for network, device, and Internet Protocol connectivity that enable interoperability, including but not limited to—
>
> ''(A) standards developed by the Third Generation Partnership Project (3GPP), the Institute of Electrical and Electronics Engineers (IEEE), the Alliance for Telecommunications Industry Solutions (ATIS), the Internet Engineering Taskforce (IETF), and the International Telecommunications Union (ITU); and
>
> ''(B) standards approved by the American National Standards Institute (ANSI) that meet the definition of interoperable within this section.

This definition appropriately recognizes that there are a variety of standards relevant to an NG911 implementation. Unfortunately, *LIFT America* draws distinctions between these various organizations haphazardly, and in doing so risks excluding key standards from grant eligibility. Standards developed by five named organizations, i.e., 3GPP, IEEE, ATIS, IETF, and ITU, are automatically deemed acceptable for the proposed NG911 grant program, while standards developed by any other organization (including NENA) must be

[1] https://www.911.gov/pdf/National_911_Program_NG911_Standards_Identification_Analysis_2018.pdf

approved by ANSI and meet the definition of interoperable in the title. The result of these distinctions borders on absurd.

For instance, standards developed by the Open Geospatial Consortium (OGC®), which include numerous foundational OpenGIS standards, are neither ANSI-accredited nor a member of the five named organizations in the proposed legislation. The potential for improper exclusion extends to numerous other organizations found in the ICO's compendium, including

- The Federal Geographic Data Committee (FGDC)
- The International Academies of Emergency Dispatch (IAED)
- The International Organization of Standardization (ISO)
- The European Telecommunications Standards Institute (ETSI) — which, coincidentally, is home of the NG112 standard, sister specification to NENA's i3 NG911 standard.

This capricious treatment of standards risks impeding the development of NG911 and undermining interoperability of NG911 systems across the country.

As already noted, the NENA i3 Revision 3 standard is currently under review by ANSI but has not yet been formally approved. Finalization of NG911 grant guidelines prior to ANSI approval of i3 or other NENA standards could disqualify NG911 systems based on the NENA i3 Revision 3 standard; the mere chance of this disqualification would have a chilling effect on all NG911 grant applications.

Further, the Act's restrictive definition could impede NG911 implementation irrespective of when the NENA i3 Version 3 standard is approved. Technology standards are constantly evolving, just as the technologies on which they are based are evolving. There will undoubtedly be a Version 4 of NENA i3, as there will undoubtedly be other future standards relevant to NG911 that are not currently envisioned or fully developed. The statutory provisions of the *LIFT America Act* should not attempt to judge which standards or technologies are most relevant to NG911 any moreso than it should prescribe the use of a specific standard.

NASNA and NENA understand the importance of standards accreditation. If Congress wishes to implement a requirement for accreditation of a relevant standard, that requirement should be forward-looking, and avoid the exclusion of standards that are *already* commonly accepted simply by nature of their widespread implementation. NASNA and NENA believe that statutory definitions should not unnecessarily restrict innovation but should be sufficiently flexible to support the ever-evolving state of technology and relevant standards. With that in mind, we urge Congress to replace the Act's current definition of "commonly accepted standards" with the following definition:

> COMMONLY ACCEPTED STANDARDS. —The term 'commonly accepted standards' means standards followed by the communications industry that enable interoperability, are consensus-based, and are developed by recognized standards development organizations.

Should Congress fail to make these crucial changes to eligible standards, and should the grant rulemaking process fail to account for this oversight, states faced with the choice between NENA standards-compliant procurements and federal dollars may simply decline the opportunity to use these funds.

Ensuring Interoperability

NASNA and NENA believe that standards compliance will provide a high degree of assurance that NG911 interoperability objectives will be achieved. However, we support an additional explicit requirement in the

legislation that NG911 systems be interoperable and that grant applicants take steps to demonstrate in their state plans how they will achieve interoperability.

Unfortunately, the definition of "interoperable" in the Act does not provide sufficient clarity as to how the Act's interoperability requirement should be satisfied. The definition makes no mention of NG911 but speaks generally to the process of receiving and processing 911 calls "regardless of jurisdiction, equipment, device, software, service provider, or other relevant factors." We agree that this is the fundamental meaning of the term "interoperable." However, the definition requires this level of functionality "without the need for proprietary interfaces." This is an appropriate expectation if the definition is explicitly referencing interoperability of NG911 systems. NG911 uses "standardized" interfaces which are necessarily not "proprietary," so the imposition of this requirement on NG911 is reasonable and appropriate. However, it is unclear as to whether this interoperability requirement applies to NG911 alone or whether it also applies to any legacy 911 component that remains in use and connects to the NG911 system. Some of these legacy components (e.g., call boxes) do not have standardized interfaces. Consequently, interoperability requires that non-standardized interfaces (i.e., proprietary interfaces) be used. If proprietary interfaces are prohibited, then interoperability between NG911 systems and legacy 911 systems cannot be assured.

NASNA and NENA urge Congress to either make clear in the legislative language that the definition of "interoperable" in the Act only applies to NG911 or, alternatively, to modify the definition of "interoperable" in a way that ensures interoperability between NG911 systems and legacy 911 systems, as noted below.

> INTEROPERABLE. —The term 'Interoperable' or 'interoperability' means the capability of emergency communications centers to receive 9–1–1 requests for emergency assistance and related data such as location information and callback numbers from the public, then process and share the 9–1–1 requests for emergency assistance and related data with other emergency communications centers and emergency response providers, regardless of jurisdiction, equipment, device, software, service provider, or other relevant factors, and without the need for proprietary interfaces, except for those which are required for the continued operation of legacy systems already in use.

The importance of interoperability between NG911 and legacy 911 systems during the NG911 transition cannot be overstated. Many states will continue to have legacy components in use as they transition towards NG911, and states will transition to NG911 on different schedules and in different ways. The impact of these disparate NG911 deployment timelines on interoperability was described in detail in the March 2020 report of the FCC's Communications Security Reliability and Interoperability Council (CSRIC).[2] As the report concludes, interoperability challenges experienced today are largely attributed to the fact that the nation's 911 systems are in different stages of NG911 deployment. Some states have deployed a statewide NG911 system, while others have only deployed certain NG911 components, and still others have deployed nothing at all. Imposing restrictive requirements on how NG911 and legacy components interconnect will only make those interoperability issues more challenging.

Reliability

[2] CSRIC VII Report on the Current State of Interoperability in the Nation's 911 Systems, https://www.fcc.gov/file/18394/download

Reliability of 911 is of course very important, and enhanced reliability is one of the promises of NG911. NASNA and NENA have worked with the Federal Communications Commission (FCC) to ensure that service providers take reasonable measures to ensure the reliable operation of 911 and NG911 services including by eliminating single points of failure for critical system facilities. The FCC's rules identify certain best practices designed to ensure reliability but also provide a fair degree of flexibility for service providers to employ alternative measures that provide comparable reliability.

NASNA and NENA believe the reliability requirements imposed on NG911 grant recipients should be consistent with the FCC's rules, as State 911 authorities will necessarily look to NG911 service providers to comply with any grant obligations. We recommend changing the definition of "reliability" to the following:

> RELIABILITY. —The term 'reliability' or 'reliable' means the employment of reasonable measures to ensure the ongoing operation of Next Generation 9-1-1 through the elimination of single points of failure consistent with 911 reliability rules established by the Federal Communications Commission.

Cybersecurity

While IP-based NG911 technologies will vastly improve emergency response, the increased use of IP-based communications platforms increases the risk of cyberattacks. Effective cybersecurity is critical. States are already making considerable efforts to implement effective cybersecurity protections, and the *LIFT America* Act should provide the additional resources and national framework to help the States in their efforts. Unfortunately, the Act falls short in this area.

First, while the Act generally authorizes the use of NG911 grant funds for "implementation of NG911," it does not explicitly authorize cybersecurity expenses. NASNA and NENA believe that such expenditures should be expressly permitted. Notably, some states have already implemented an NG911 system but may have plans to establish an emergency communications cybersecurity center (EC3) to provide intrusion detection and protection services for PSAPs in their states. The implementation of State-based EC3s was recommended by the FCC's Task Force on Optimal PSAP Architecture (TFOPA) as an efficient and effective framework for addressing cyber-based threats; this concept was also endorsed by CSRIC. Use of grant funds to deploy and operate EC3s should be permitted even if the NG911 system has already been deployed. NASNA and NENA urge Congress to amend the Act to explicitly identify cybersecurity as an eligible expense.

Second, the Act should require NG911 grant applicants to certify annually that they are employing effective cybersecurity resources to protect NG911 systems and services from cyber-based attacks. While the Act requires applicants to address cybersecurity resources in their State plans, we believe that annual certification from the grant recipient that effective measures are being employed will provide additional assurance that NG911 systems will be protected.

Finally, NASNA and NENA oppose the establishment of a Federally managed security operations center (SOC) to manage cybersecurity on behalf of the nation's PSAPs. While the security of our nation's 911 systems is vital, the solution outlined in the Act would undermine State and local control of 911 systems, inject significant and complex privacy, technical and legal challenges into the NG911 implementation and operations process, and impose additional costs and administrative burdens on the National 911 Program — all without a clear roadmap for success. As already noted, TFOPA and CSRIC have recommended the establishment of State-based or regional EC3s, and some states are already deploying them. No federal authority or expert multistakeholder group has ever called for a national SOC. As made clear above, NG911 cybersecurity is an absolute priority for

NENA and NASNA, but as representatives of those actually deploying NG911 systems, we ask that federal dollars be spent on effective, fully baked cybersecurity measures, not nebulous additional federal programs with unclear parameters.

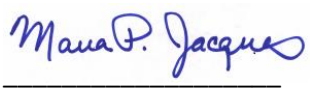
Grant Administration

Lastly, NASNA and NENA do not believe an NG911 Advisory Board is necessary. The ICO has implemented Federal 911 grant programs previously, and none of these programs utilized an advisory board to assist the Office in developing grant guidelines or in the award of individual grants. We don't see a compelling need to establish an advisory board here. However, if Congress should decide to include an advisory board in this legislation, we believe it is imperative that it meet certain criteria:

- the board should be comprised of individuals experienced in NG911;
- the board should not add unnecessary bureaucracy, cost, or administrative burden to the grant process;
- the board's role should be limited to providing advice on grant guidelines; and
- the board's actions should be undertaken with full transparency (e.g., no exemption from Federal Advisory Committee Act).

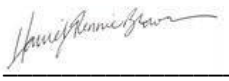
Thank you again for the opportunity to provide the Committee with NASNA's and NENA's perspectives on the importance of providing critical funding for Next Generation 9-1-1. Our organizations are committed not only to passage of this essential measure, but in the creation of a successful grant program that allows public safety to save countless lives while also being an effective steward of federal dollars.

Respectfully,

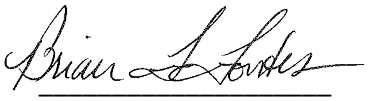


Maria Jacques, ENP
President
NASNA
Maria.jacques@maine.gov

Gary Bell, ENP
President
NENA
president@nena.org



Harriet Rennie-Brown
Harriet.Rennie-Brown@nasna911.org
Executive Director
NASNA



Brian Fontes
Chief Executive Officer
NENA
bfontes@nena.org