



Washoe County Regional 9-1-1 Master Plan Update Recommendations Report

Final

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Prepared by:



"Unleashing the Power of Technology"

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Washoe County Regional 9-1-1 Master Plan Update Recommendations Report

Executive Summary

Federal Engineering, Inc. (**FE**) is pleased to provide 9-1-1 consultant services in supporting the update of the County's *9-1-1 Emergency Response Five-Year Master Plan* (Plan). This document provides technical expertise, industry knowledge, public safety answering point (PSAP) operational skillsets, and policy guidance to assist the County with the update of their Plan in compliance with Nevada Revised Statutes NRS 244A.7643.

Review of legislation, budget documents, and Washoe County-provided data, helped form the foundation of the contents of this document. This collected data was accompanied by direct interviews with many stakeholders within the public safety and technical support infrastructure of Washoe County, the City of Reno, and the City of Sparks. **FE** acknowledges the valuable input by each of these stakeholders in the preparation of this document.

Regional PSAP Back-up Plans

The renovation and construction plan for each of the three emergency communications operations will create a mutually beneficial triangle back-up configuration.

FE recommends that the three PSAPs create a regional back-up plan that details the capabilities, capacities, networking/bandwidth needs, technology, and equipment needs for each of the PSAPs. As part of the transition and back-up planning for the three PSAPs, the Washoe County Sheriff's Office (WCSO), Reno, and Sparks must also consider the capacity of the regional radio system.

FE recommends expanding the back-up planning for each PSAP to include accommodating remote worksites as was demonstrated in PSAPs across the country during the early months of the pandemic.

Other critical back-up plan components include making certain that the back-up plan is exercised via drills and scheduled relocation exercises. Security for all systems, fixed and remote, should be priority and exercised/drilled, and maintained by the systems' owners' IT support.

FE recommends the regional back-up planning include consideration for the addition of a remote mobile command center designed to support the PSAP in short-term emergency back-up scenarios and for special events and incident command situations to benefit all



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the regional public safety agencies. Discussion with the PSAP leaders included potential for federal funding from the CARES Act¹ for this purpose.

Regional Computer Aided Dispatch (CAD) System

Details regarding the overall system replacement are in Section 3.2. Considerations for the 9-1-1 Committee and budget planning include the following:

The system planning activities should be guided by the 9-1-1 Committee membership with technical guidance from the user community and technical support entities. The 9-1-1 Committee develops and recommends the annual budget for the Regional Public Safety CAD and Records System (RPSCR). Interim expenditure considerations are the responsibility of the County Technology Services Director, as the contracting authority for the system.

The initial acquisition of the hardware and software associated with the RPSCR is supported by the 9-1-1 surcharge as managed by the 9-1-1 Committee and approved by County Commission. It should be noted that the associated services of provisioning, ongoing maintenance, future upgrades/updates, expansion or augmenting the future system, will have certain costs associated to this effort. As such, the 9-1-1 Committee should establish a funding plan for the long-term maintenance and localized support necessary to sustain the system(s) for the life of the selected vendor(s) contract.

Budgetary data for the CAD initial and ongoing costs are in Section 3.2.5.3 *Ten Year Cost Impacts*.

Legislative Review

Review and recommendations are focused on the impact of the expanded surcharge for supporting the Washoe County 9-1-1 ecosystem and for the non-9-1-1 use for acquiring and maintaining recording devices.

FE recommends that Washoe County consider mounting an effort to support changes to existing legislation to be compliant with the FCC regulations.

FE recommends that Washoe County establish a structured process for the funding of 9-1-1 programs and equipment. This would include the establishment of definitive funding Rules, a more formal application process, a system of managing awards, and an audit

¹ [Text - S.3548 - 116th Congress \(2019-2020\): CARES Act | Congress.gov | Library of Congress](#)



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process that ensures projects are completed, and that requests for reimbursement are fulfilled.

Funding Analysis

The funding analysis included a review of the revenues and expenditures for the past five years, and projected same for the coming five years. The results are not definitive as there are several key initiatives for which costs are not yet known. However, a rough order of magnitude (ROM = ~25% in range of accuracy) estimate of costs are provided in Section 3.4.4.3. for the call handling equipment (CHE), and in Section 3.2.5.3 for the regional CAD system.

Non-9-1-1 future budget planning will be impacted as there is a need for human capital/personnel costs associated with camera systems management and evidentiary redaction. **FE** recommends addressing the impact on staff needs and workload as the data gathered via the cameras, voice, and video is an exhaustive avenue for public information. The current practice of assigning one fulltime employee or equivalent (FTE) is not enough to maintain the records, manage access and use, prepare evidentiary packages, redact, and secure data, and manage the ever-growing database.

FE recommends addressing 9-1-1 future budget planning through the completion of a NG Readiness Assessment with options for acquisition and deployment. A NG Plan will define current state of network, equipment, and governance/relationships, and will provide cost projections for same.

It is critical to the stewardship of the 9-1-1 revenues that once these initial and maintenance costs are known that the 9-1-1 Committee begin preparing a life cycle plan for each expenditure. None of these are one-time costs as they all require planning for ever changing technology, growth, and expansion within the user communities, as well as the expectation from the public of the service provided by the public safety agencies. The public expectation will drive much of the technology especially in the data sharing components of NG9-1-1 and recording devices. There is also a human capital expense that must be planned for, and provided to, support the changing technology, the regional systems, and relationships (through governance), and specific human resources necessary to operate the technology. Examples include storage and maintenance of recordings, access, use, provision, and redaction of data from recordings both in the field (body worn cameras, in-car video), and in the PSAPs (logging recorders that incorporate all data associated with an event). This will require an investment in training, transitional and new hires, and additional skilled staff.



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1. Introduction

Federal Engineering, Inc. (**FE**) has been awarded a contract by Washoe County, Nevada (County) to provide 9-1-1 consultant services in supporting the update of the County's 9-1-1 *Emergency Response Five-Year Master Plan* (Plan). **FE** is to provide technical expertise, industry knowledge, PSAP operational skillsets, and policy guidance to assist the County with the update of their Plan in compliance with Nevada Revised Statutes NRS 244A.7643.

1.1 Research and Analysis

- *Legislative Analysis*
 - Review the 2018 and 2019 Nevada Revised Statutes (NRS) changes.
 - Assess the impact of NRS changes to the County and prepare a pro/con analysis of implementing them.
- *Funding Analysis*
 - Conduct a 5-year analysis of 9-1-1 surcharge revenue and expenditures including 9-1-1 fund projections.
 - Based on analysis, update cost estimates for enhancing the 9-1-1 system and purchasing portable/vehicular event recording devices (body/vehicle cameras).
 - Identify proposed sources of funding.
 - Review results of research/analysis and preliminary recommendations with 9-1-1 Committee.

1.2 Draft and Final Updated 9-1-1 Master Plan

- *9-1-1 Master Plan Update Recommendations Report*
 - Prepare draft Legislative and Funding assessment portions of 9-1-1 Master Plan Update Recommendations report.
 - Review draft report with 9-1-1 Committee.
 - Incorporate changes and finalize Legislative and Funding assessment portions of final 9-1-1 Master Plan Update Recommendations report.



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2. Methodology

2.1 Request for Information

The team spent five days on site and held several interview sessions with public safety communications stakeholders. The schedule of meetings including the participants and the topics discussed are found in sections 2.2 and 2.3 of this report.

During these interviews, a broad range of issues were covered. Topics included:

- Planning, budget projections, and legislative impact discussions.
- Administration over the 9-1-1 call handling equipment and portable recording devices.
- Washoe County Technical Services.
- Portable event recording devices; and Administration and Funding.
- Emergency Operations Plan content and backup planning impact.
- PSAP Management.
- Emergency Managers.
- Call Handling Equipment NG9-1-1 Planning.
- 9-1-1 Surcharge Administration.
- Responsible parties for collection, distribution, expenditures

2.2 Data Gathering and Stakeholder Interviews

The first interview and project kickoff sessions were held on February 16th, 2021, from 08:00 – 10:30, and took place at the Regional Emergency Operations Center (REOC) facility located at 5195 Spectrum Blvd, Reno, NV.

The Topics of discussion included:

- 9-1-1 Planning,
- Budget Projections, and
- Legislation impact.

In-person participants included:

- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Doug Campbell – Sparks Police IT
- Chief Chris Ketring – Truckee Meadows Fire Protection District
- Quinn Korbolic – Acting CIO, Washoe County Technology Services
- Lisa Rose-Brown – Manager, Sparks Police PSAP



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- Chief Jeff Voskamp – Reno Fire

Telephone Bridge Participants included:

- Jamie Rodriguez – Washoe County
- D/Chief Zach Thew – Reno PD
- Sara Delozier – Technology Services, Washoe County
- Alex Kukulus – Washoe County

The second interview session was held on February 16th, 2021, from 10:30 – 11:30, and took place at the Regional Emergency Operations Center (REOC) facility located at 5195 Spectrum Blvd, Reno, NV.

The Topics of discussion included:

- Administration over 9-1-1 Call handling equip, and
- Portable Event Recording Devices.

In-person participants included:

- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Lt. Blaine Beard – Administrative Division, Washoe County Sheriff's Office
- Brad Beith – Network Analyst, City of Reno
- Doug Campbell – Sparks Police IT
- Jennifer Felter – A/Director, Washoe Co. Sheriff's Office PSAP
- Quinn Korbolic – Acting CIO, Washoe County Technology Services
- Brantley Hancock - Systems Analyst, City of Reno
- Lisa Rose-Brown – Manager, Sparks Police PSAP
- Chief Jeff Voskamp – Reno Fire
- D/Chief Zach Thew – Reno PD
- Paul Wiley – Communications & Technology, City of Reno

The third interview session was held on February 16th, 2021, from 12:00 – 13:00, and took place at the Regional Emergency Operations Center (REOC) facility located at 5195 Spectrum Blvd, Reno, NV.

The Topics of discussion included:

- Portable Event Recording Devices
 - Administration, and
 - Funding.

In-person participants included:



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- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Lt. Blaine Beard – Administrative Division, Washoe County Sheriff's Office
- Brad Beith – Network Analyst, City of Reno
- Lisa Rose-Brown – Manager, Sparks Police PSAP
- Brantley Hancock - Systems Analyst, City of Reno
- Quinn Korbolic – Acting CIO, Washoe County Technology Services

The fourth interview session was held on February 16th, 2021, from 13:15 – 14:15, and took place at the Regional Emergency Operations Center (REOC) facility located at 5195 Spectrum Blvd, Reno, NV.

The Topics of discussion included:

- 9-1-1 Call Handling (CHFE), and
- Next Generation 9-1-1 (NG9-1-1) Planning

In-person participants included:

- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Lisa Rose-Brown – Manager, Sparks Police PSAP
- Jennifer Felter – A/Director, Washoe Co. Sheriff's Office PSAP
- Quinn Korbolic – Acting CIO, Washoe County Technology Services
- Cody Shadle - City of Reno PSAP
- Chief Jeff Voskamp – Reno Fire

The fifth interview session was held on February 16th, 2021, from 14:30 – 15:30, and took place at the Regional Emergency Operations Center (REOC) facility located at 5195 Spectrum Blvd, Reno, NV.

The Topics of discussion included:

- Emergency Operations Plan Content, and
- Backup Center Planning

In-person participants included:

- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Lisa Rose-Brown – Manager, Sparks Police PSAP
- Quinn Korbolic – Acting CIO, Washoe County Technology Services



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- Cody Shadle – City of Reno PSAP
- Chief Jeff Voskamp – Reno Fire

Telephone Bridge Participants included:

- Angela Askey – System Analyst, City of Reno
- Brad Beith – Network Analyst, City of Reno
- Brantley Hancock - Systems Analyst, City of Reno
- Paul Wiley – Communications & Technology, City of Reno

The sixth interview session was held on February 16th, 2021, from 15:45 – 16:45, and took place at the Regional Emergency Operations Center (REOC) facility located at 5195 Spectrum Blvd, Reno, NV.

The Topics of discussion included:

- 9-1-1 Surcharge Administration
 - Collection,
 - Distribution, and
 - Expenditures

In-person participants included:

- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Sara Delozier – Technology Services, Washoe County
- Kari Estrada – Senior Fiscal Analyst, Washoe County
- Quinn Korbolic – Acting CIO, Washoe County Technology Services

The seventh interview session was held on February 18th, 2021, from 11:40 – 13:00, and took place at the Washoe County Administration Complex located at 1001 E 9th St, Reno, NV.

The Topics of discussion included a recap of the discussions and findings from the previous sessions as well as a discussion of the current PSAP facilities.

Participants included:

- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Quinn Korbolic – Acting CIO, Washoe County Technology Services



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2.3 PSAP Tours

The first PSAP tour took place from 15:40 – 16:00, on February 17th, 2021, at the Washoe County/Reno PSAP located at the Regional Emergency Operations Center (REOC), 5195 Spectrum Blvd, Reno, NV.

The Topics of discussion included a discussion of the various PSAP facilities and functions.

Participants included:

- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Jennifer Felter – A/Director, Washoe Co. Sheriff's Office PSAP
- Cody Shadle – City of Reno PSAP

The second PSAP tour took place from 17:00 - 18:00 on February 17th, 2021 at the City of Sparks PSAP located at 1701 East Prater Way, Sparks, NV.

The Topics of discussion included a discussion of the various PSAP facilities and functions.

Participants included:

- Sherri Bush – Federal Engineering
- Eric Parry – Federal Engineering
- Lisa Rose-Brown – Manager, Sparks Police PSAP



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3. 9-1-1 Master Plan Update Assessment

3.1 Assess PSAP Locations and Identify Back-up PSAP Options

The current PSAPs for the Washoe Sheriff's Office (WCSO) and the City of Reno (Reno) are co-located on the second floor above the County's Emergency Management Operations Center located the Regional Emergency Operations Center, 5195 Spectrum Blvd, in Reno. The configuration of the emergency communications operations for the WCSO and Reno currently has Reno occupying half of the operations floor for call-taking and dispatching, and the front office spaces for administration, supervisors, training, and quality assurance. The Sheriff's Office occupies the other half of the operations floor and a few back offices for administration and supervisors.

The City of Sparks (Sparks) has a PSAP occupying approximately 930 square feet of the upper floor of the Sparks Police Department Headquarters located at 1701 East Prater Way, Sparks. This space has adjacent offices for administration, supervisors, training, and quality assurance.

The current back-up plans for the three PSAPs is to relocate WCSO/Reno at Sparks, and Sparks to relocate at the WCSO/Reno facility. The issue as stated in previous reviews is that Sparks in the current state cannot accommodate the capacity necessary to have both WCSO and Reno PSAP operations for a short- or long-term period. The crux of the issue is that if the WCSO/Reno shared facility were to be compromised it would more than likely impact both WCSO and Reno PSAPs, as they are sharing the same space and some technology.

During on-site interviews with PSAP leadership and staff, plans to separate WCSO and Reno were shared, with Sparks indicating that they also have plans to improve their back-up site.

The City of Reno is planning a new police facility that will house the emergency communications center for the City. This plan includes up to 30 equipped console positions allowing space for growth and for accommodating back-up needs for the WCSO and the City of Sparks.

The identified threat to the proposed Reno PSAP location is flooding from a nearby river, as well as being in the flightpath of helicopters traveling to/from a nearby hospital. Also of



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note is that the new facility was first envisioned to house only the Reno Police, and second consideration to the housing of the PSAP.

The WCSO will expand within the facility they currently occupy once Reno vacates the facility. The additional space will accommodate additional WCSO administrative, supervisor, training, and quality assurance offices. The space will also accommodate growth within the WCSO emergency communications operation and will provide back-up needs for Reno and Sparks. Leaving the formerly occupied console positions from the Reno occupation, adding the technology, and confirming bandwidth, will accommodate both Reno and Sparks as needed.

There were no identified threats or vulnerabilities to the WCSO facility.

The City of Sparks has a space in their lower level that was temporarily outfitted to accommodate their emergency communications operation during renovations. This back-up space is planned to be expanded to accommodate approximately six equipped console positions to provide back-up needs for the WCSO and Reno. Sparks is also planning a renovation and expansion of their existing PSAP operations area and adjacent offices that will increase their console positions to ten. This expansion will result in 16 positions located at Sparks providing adequate space and technology, and bandwidth as planned. To accommodate the transition during renovation, Sparks doubled their bandwidth infrastructure inside and to/from this facility. This expansion will remain in place to accommodate back-up needs of WCSO and Reno.

The identified threats to the Sparks facility are a nearby tank farm that is in the flight path of the airport, as well as an operating rail line that may pose a threat if there were to be a train derailment.

3.1.1 Recommendations

The renovation and construction plan for each of the three emergency communications operations will create a mutually beneficial triangle back-up configuration.

FE recommends that the three PSAPs create a regional back-up plan that details the capabilities, capacities, networking/bandwidth needs, technology, and equipment needs for each of the PSAPs. This back-up plan should describe how the transition from primary to back-up will occur and under what circumstances. For example, short-term relocation to long-term housing of one or more PSAPs in the same facility. Once the full physical and technological capacities are known/finalized for each of the three PSAPs, then the regional plan must be updated to include any restrictions or additional growth plans.



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During the regional back-up plan development, each PSAP must confirm their back-up space, console, and bandwidth requirements.

As part of the transition and back-up planning for the three PSAPs, the WCSO, Reno, and Sparks must consider the capacity of the regional radio system. The current system capacity will reportedly be exhausted once Sparks completes their expansion of console positions. The system vendor, Harris, is proposing an expansion of talkgroups to occur with, or following, the Reno transition to a new facility.

The WCSO emergency communications leadership described a pending transition of 9-1-1 trunks from CAMA² to SIP³. **FE** recommends expanding the back-up planning for each PSAP to include accommodating remote worksites as was demonstrated in PSAPs across the country during the early months of the pandemic. Laptops that can accept 9-1-1 calls via SIP trunks, have CAD application, and IP access to the radio system for dispatch, provide complete functionality in a remote environment. To that end, bandwidth from remote locations, e.g., work from home, is critical to data-sharing, and voice exchange for phones and radio. Per WCSO leadership, handheld radios have Wi-Fi (radio over internet – RoIP) capability to accommodate access only limited by coverage and bandwidth.

Other critical back-up plan components include making certain that the back-up plan is exercised via drills and scheduled relocation exercises. Security for all systems, fixed and remote, should be priority and exercised/drilled, and maintained by the systems' owners' IT support. Call routing, future SIP, and network access to CAD and logging recorders, will require design and regional support.

FE recommends the regional back-up planning include consideration for the addition of a remote mobile command center designed to support the PSAP in short-term emergency back-up scenarios and for special events and incident command situations to benefit all the regional public safety agencies. Discussion with the PSAP leaders included potential for federal funding from the CARES Act⁴ for this purpose.

² Centralized Automated Message Accounting - A type of in-band analog transmission protocol that transmits telephone number via multi-frequency encoding. Originally designed for billing purposes.

[https://nenawiki.org/wiki/CAMA_\(Centralized_Automated_Message_Accounting\)](https://nenawiki.org/wiki/CAMA_(Centralized_Automated_Message_Accounting))

³ Session Initiation Protocol - An IETF defined protocol (RFC3261) that defines an application-layer control (signaling) protocol for creating, modifying, and terminating sessions with one or more participants. These sessions include Internet telephone calls, multimedia distribution, and multimedia conferences.[1] Used as the call signaling protocol in VoIP, i2 and i3.

[https://nenawiki.org/wiki/SIP_\(Session_Initiation_Protocol\)](https://nenawiki.org/wiki/SIP_(Session_Initiation_Protocol))

⁴ [Text - S.3548 - 116th Congress \(2019-2020\): CARES Act | Congress.gov | Library of Congress](#)



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3.2 Assess Existing CAD Technology and Cost Impacts of Upgrades

The Computer Aided Dispatch (CAD) system is one of the most important tools used by the public safety agencies who provide vital protection to the communities that they serve. Most modern CAD systems include a tightly integrated mobile data system as part of its core functionality. The CAD and mobile data systems work jointly and are two of the primary components of a fully integrated modern public safety solution. The other three core components of a public safety solution are Law Records Management System (LERMS), Fire Records Management System (FRMS) and a Jail Management System (JMS).

This report concentrates on the CAD and mobile data components of the replacement public safety system, but the overall replacement project also includes replacement of the current LERMS and JMS solutions. Those two components are planned to be funded by alternative means.

Within the CAD system, all reported incidents are entered, dispatched, managed, and tracked, making it a mission critical system. Working in conjunction with CAD, an effective and functional mobile data system provides silent dispatch, message switching, status changes, mapping, routing, CJIS/database queries, premise information, and alerts/hazards to the end users out in the field. For law enforcement, the mobile system also provides access to LERMS field-based reporting functionality.

The agencies participating in the Reno/Sparks/Washoe (RSW) CAD/RMS/JMS Replacement Project that included the 9-1-1 Emergency Response Committee, regional law records consortium and the Washoe County Sheriff's Office Detention Center, all recognized the need to replace the current Public Safety System.

3.2.1 Regional CAD Assessment

One of the first three phases of the RSW CAD/RMS/JMS Replacement Project was to complete a thorough needs assessment process that placed emphasis on current operational practices and the needs and wants of the CAD and mobile data system users. **FE** completed a review of documentation provided by the participating agencies, observed operations, and conducted several separate interviews and focus group sessions. All of these were to gather input and gain a better understanding of each agency's operations, identify existing system challenges or shortcomings; and capture needs / functional requirements for the new public safety solution.



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Currently all three communication centers share the same Central Square (originally Tiburon) CAD system. The Tiburon CAD system was originally installed and went 'live' in 1999 and the City of Sparks was added to the system in October 2015. In February 2015, TriTech Software Systems announced the purchase of Tiburon and took over management of their existing client sites. In September of 2018, Central Square Technologies (CST) was formed when they announced the merger of three public safety software companies: Superion, TriTech Software Systems, Zuercher Technologies, and Aptean, a well-known healthcare business application.

Within a year after CST was formed, they made the corporate decision that they would no longer provide the Tiburon solution as part of their current product offerings. Even though CST stated that they would continue to support and maintain the Tiburon system, there would be no more application development or enhancements made to the software. In our experience, once the 'end of sale' is announced it is not long before a system 'end of life' could be announced. 'End of life' means the vendor would no longer provide any type of support and maintenance services for the system. In addition, as time went on, the agencies started to see a decline in the number of CST employees who were familiar or had experience with the Tiburon application and they were not familiar with solution installed for the RSW system. This is problematic when users have questions, report issues, or need assistance with the application.

Early in the interviews, it became quite apparent that each of the participating agencies, their workgroups and stakeholders had common challenges related to limitations with the current system. The operational environment had several issues with system functionality. The current system did not include some common industry standard functionality or best practice features. Some of the most basic operations had issues that were being caused by the lack of a working interface or the interface not providing the level of functionality needed. This was especially evident regarding the performance and integration between the Tiburon CAD and mobile data systems.

3.2.1.1 Recommendations Based on Assessment and Gap Analysis

FE conducted a Needs Assessment and recommended that the project participants continue to move forward with a competitive procurement process for an integrated public safety solution. The outcome of the procurement will be an integrated CAD and Mobile system, that meets the primary requirements of each stakeholder agency.

The replacement public safety solution should be based upon public safety best practices and industry standards to provide the participating Reno, Sparks, Washoe County and



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secondary/tertiary agencies and any future vendor with clearly defined functional requirements and performance metrics. The results of this assessment and subsequent documents will provide recommendations for improvements and work process changes that the participating agencies should also consider and that could be impacted by the replacement public safety solution. These recommendations provide the basis for the required functional criteria that will be incorporated into a competitive procurement.

The current industry practice for public safety systems is to provide a highly configurable Commercial-off-the-Shelf (COTS) system rather than the earlier practice of customizing a system to meet customer needs. Initially, customization can be costly as well as when system updates are released because the custom feature must often be updated separately by the vendor at additional cost. Most major vendors do not want to provide custom installations due to long term support and maintenance implications posed by these systems. Current technology systems are highly user configurable COTS systems that can be adapted to meet most user requirements; however, some operational workflow changes may be needed.

As an alternative to local, server-based systems, some vendors are starting to offer hosted, or cloud-based solutions for some of their products. Common-place in the Information Technology (IT) industry, migration to cloud-based solutions have been slow in the mission critical public safety industry, particularly for agencies with the size and scope of the agencies and jurisdictions participating in this project. These cloud-based solutions have allowed smaller agencies that may have limited or no IT support to gain the benefits of full-featured systems. That said, **FE** suggests that the Request for Proposal (RFP) be prepared to allow the widest range of vendors to respond, offering integrated solutions that have a proven performance and implementation track record to take advantage of local, server-based, or hosted, cloud-based, and other emerging technologies to provide the best solution for the participating stakeholders.

The new public safety solution should be tightly integrated among the various modules and applications to reduce possible points of failure or functional disconnects and be supported by a vendor(s) capable of providing sustained long-term system support, enhancement, and maintenance.

3.2.2 *Integration of Systems*

With a new system, integration among as many systems as possible to ease information sharing and improve the overall comprehensiveness of information available on individuals, vehicles, and locations is necessary. This integration will be specified to



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include the CAD, mobile data, field-based reporting, law enforcement records management, and jail management system.

The participating agencies are currently using multiple third-party siloed applications, and as they move forward with the replacement project, they will be looking to integrate as much of the current functionality into a new single system as possible. One of the most common requests heard during the data collection process was the need for a single fully integrated system that provides as many modules or components as possible to reduce the overall number of software applications the users need to access or manage the system.

The participating agencies are interested in an integrated public safety solution that provides seamless access to information, independent of the component or module that they are logged into and using.

3.2.3 Next Generation 9-1-1 Features and Applications

The participating agencies have included NG9-1-1 considerations as they move forward in procuring the replacement system that will have new equipment, hardware, software, and interfaces. The new technology must be able to accept and process additional information that will be provided by future NG9-1-1 applications, such as text messages, streaming video, fixed or still images and other data possibly related to a caller's location or type of emergency. There will be a planned interface to the new public safety system and associated modules so that this additional information can be captured and utilized by dispatch staff, local emergency responders and agency support staff.

NENA and other organizations continue to work on new or update existing NextGen 9-1-1 (NG9-1-1) standards, CAD system interoperability and the exchange of information between those applications. As these standards continue to evolve, they should be monitored, considered, and incorporated in any new interfaces between the replacement CAD system, 9-1-1 answering equipment, and any future NG9-1-1 applications.

The new replacement system that will be procured will include asking the potential vendors how their solution will interface to NG9-1-1 and if it includes the following:

- Ability to receive IP-based 9-1-1 embedded and reference location data.
- Ability to attach all data to a CAD system event, including streaming and fixed video and audio, telemetric and other data.



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- Capability to utilize 9-1-1 call data included in the Presence Information Data Format Location Object (PIDF-LO)
- Ability to transfer all incident record attachments to a mobile data device.
- Capability to parse XML data provided as a component of the 9-1-1 request for service.
- Capability to establish a CAD-to-CAD interface and ability to perform two-way XML data exchange via a CAD-to-CAD interface when required to transfer to another PSAP or system.
- Capability to use links to additional information, to retrieve that information from other systems.
- Establishment of security measures to all input data streams.

The replacement system functional requirements that **FE** has provided for the project includes all the above. In addition, the project team will continue to monitor the work and progress being made by several organizations that are working on NG9-1-1 standards development, specifically CAD system interoperability and the exchange of information between those applications.

These include:

- National Emergency Number Association (NENA) i3 Technical Standards
- Internet Engineering Task Force (IETF) Request for Comment (RFC) 1539
- National Information Exchange Model (NIEM)
- Department of Homeland Security SAFECOM Project
- APCO Project 36

Most of the major CAD system vendors are still assessing their need to interface and accept the additional information that NG9-1-1 systems will provide. Most have already addressed text to 9-1-1. The vendors are trying to determine the true cost that will be encountered as the needed functionality is developed, deployed, and made available. The new CAD and mobile data system procurement documents will include the language



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needed in the functional specifications portion of that documentation to solicit a response from vendors on their status as it relates to NG9-1-1 data.

The participating agencies should continue to monitor any Next Generation progress being initiated by the State of Nevada or any regional agencies.

3.2.4 *Regional Governance Structures*

As part of the CAD replacement project, **FE** was asked to share our knowledge/experience and provide recommendations for a regional governance structure that could be used for the project. These recommendations were developed based on **FE's** experience, understanding, and knowledge with other regional projects that have successfully been implemented in similar sized jurisdictions within the United States. The project team worked with the participating agency stakeholders to create recommendations for a local IT governance structure and service level agreements to maintain system reliability and fast response to service requests and workflow to assure prompt reaction for regional technical support that will meet the expectations of internal and external customers.

The following sections provide guidance for a governance framework as memorialized within the content of an interlocal agreement (ILA) or memorandum of understanding (MOU) that will meet the current and future needs of the City of Reno (Reno), City of Sparks (Sparks), and Washoe County (Washoe County). Note that legal counsel for the Cities and County will and should have additional terms and conditions relative to their specific needs within a long-term regional relationship.

3.2.4.1 *Formal Agreement*

The Cities and County have the authority to form Cooperative agreements between political subdivisions for performance of governmental functions; budget for expenses (NRS 277.045). This cooperative agreement and interlocal contract would be like the existing agreements between the Cities of Reno and Sparks, and Washoe County, via the GIS Interlocal Agreement and the Nevada Shared Radio System (NSRS) Contract.

3.2.4.2 *Agreement Parties, Roles and Responsibilities*

The CAD/Mobile CAD and LERMS primary users are the founding entities of the governance framework, and therefore the central parties to an ILA/MOU. The roles and responsibilities of the Cities and Counties (Parties) are as owners, operators, and



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stewards of the system. The specific responsibilities to be committed to in the execution of an ILA/MOU include management of vendor contract(s), system planning and provisioning, system budgeting and funding, system vendor management, and data ownership.

The first decision of the Parties is to either establish the 9-1-1 Committee as the general oversight of the RPSCR; or establish a separate regional Board, Commission, or Committee that provides a platform for input and oversight by and on behalf of the Parties' public safety agencies.

The first responsibility of the Parties will be to draft and finalize an ILA or MOU that forms and empowers a system governance structure.

3.2.4.3 Purpose of the Agreement

The purpose of the agreement should be explicit and establish the boundaries of the relationships and the legal standing of the framework.

The Agreement should state the framework of governance beginning with the body that will provide the direct oversight at the decision-making level, the advisory and planning oversight, the perpetual or daily technical support of the system, and the operational use and access of the system.

The County Commission should retain overall decision-making oversight for contracting and funding matters since they are the source of funding.

Each Party to this agreement should contribute financially or in-kind services to a centralized sub-committee of the 9-1-1 Committee. The sub-committee should be comprised of technical expert staff from each of the Parties. This sub-committee should act in an advisory and support role to the core County technical services in the maintenance and monitoring of the system.

The daily monitoring of the system should be a combined effort of the contracted support service level agreement with the vendor(s) and assigned County and Cities' technical staff. Based on the system(s) acquired by the Parties, the selected and assigned support staff should have specific focus on different aspects of the system.

If a combined on-premises server and cloud-based/software as a service (SaaS) is acquired as the best solution for the Parties, then the assigned staff from the Parties must



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have expertise and vendor provided training to be able to provide first level (Tier 1) support for the system components, features, and functions.

A staffing allocation review will be necessary to determine the resources necessary for support at the County and the contributing support of the Cities.

3.2.4.4 Legislation, Ordinances, Authority

The Agreement should include citation of the Nevada Revised Statutes (NRS) and local ordinances that give approval and authority to the Parties to enter an Interlocal Agreement (ILA) through which the system will be governed to include ownership, maintenance, life cycle and support management, and data management.

Other citations that must be incorporated by reference in the Agreement is the acknowledgement by the Parties of all constraints, restrictions, and requirements for access, use, compilation, reporting, storage, and distribution of public safety information and data inclusive of, and not limited to, those requirements specified by the following:

- Criminal Justice Information System (CJIS)
- Health Insurance Portability and Accountability Act of 1996 (HIPAA)
- Nevada Chapter 603A Security and Privacy of Personal Information
- Nevada Mental Health Sec. 433A.360 Clinical records: Contents; confidentiality (including Nevada Administrative Code § 458.163, and NRS § 458.055)
- Jeanne Clery Act for transparency in campus crime reporting.

3.2.4.5 Administration

The administrator of the systems and Agreement will be Washoe County unless otherwise changed by the County Commission following the advice of the 9-1-1 Committee as in all things relative to emergency communications in the County and Cities. The administrative support for the system should be the County with contributing support by the Cities. Administrative support includes project management coordination with the Cities' designated contacts for the planning and implementation of the system.

The County and Cities should maintain records of all staff hours and resources applied to the support of the system. This can then be submitted either as an invoice for services to



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the 9-1-1 Committee annually, or to document in-kind services contributed to the upkeep of the systems. If invoiced, the amount can be reduced from the individual Party's share of costs of ownership as will be detailed in the contract(s) planned with a selected vendor(s).

3.2.4.5.1 Bylaws

The interlocal operating procedures should be captured in a set of Bylaws specific to the system and may be separate and apart from the 9-1-1 Committee Bylaws. Note that the system interlocal operating procedure should be incorporated by reference into the ILA/MOU.

3.2.4.5.2 Change Management

Change management applies to the operational and technical aspects of the system. In the provisioning of the systems, the Parties' appropriate agency representatives and technical support staff will partner with the selected vendor(s) to develop and apply the system configuration to meet their needs. In the provisioning planning phases, the Parties should collect and maintain not only the system data and documentation but develop (and include in the Bylaws) a change management plan.

3.2.4.6 Entering and Terminating Agreements

If other local governments or agencies seek to join the system, the founding Parties are first cautioned to wait until after their system is completely implemented and operational. The Parties should require any new participants to submit a written request proposal that contains their requirements and expectations in the use and access of the system, and the commitment to the agreement existing terms and conditions. The Parties must determine the impact of the new Party to the system as it relates to provisioning, data sets, partitioning of access to data, cost/value associated with onboarding and ongoing support.

To withdraw from the ILA, a member agency must present written notice of intention to withdraw at least six months prior to an annual automatic renewal date and such withdrawal should be effective on an automatic renewal date.

A member seeking to terminate and withdraw from the ILA should be required to submit the request in writing and include the specific data elements that are to be removed and/or deemed not for use by the remaining members.



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The ILA may be terminated in its entirety or amended at any time by unanimous vote of the 9-1-1 Committee with recommendation to the County Commission for approval.

3.2.4.7 System Ownership

The system will be owned by the collective Parties. The County should be the contracting entity that establishes the relationship with the vendor(s). The City of Reno and City of Sparks desire to have individual contracts with the vendor(s) for their hardware, connectivity, interfaces, unique modules (if licensed or priced in that manner), licensing and any other system components that the other Parties have declined.

As this will be a complicated and possibly impossible parsing of contracted elements and services, the Parties should allow the County to hold the vendor contract on behalf of all Parties. Then, the Cities should either 1) utilize the planned ILA to define the relationship with the County for contracting the vendor products and services, or 2) execute independent interlocal agreements with the County acknowledging and defining the unique County and City roles and responsibilities.

3.2.4.8 Data Sharing Requirements

The ILA and associated Bylaws may contain data sharing requirements, or the Parties may elect to develop and execute a separate or individual data sharing agreements. Data sharing requirements should be included in the ILA or Bylaws or executing a separate data sharing agreement that includes all parties.

3.2.4.8.1 Data Ownership

The Parties of the ILA will be committing to the shared ownership and governance of the system as a multi-agency and multi-jurisdictional CAD, Mobile CAD, LERMS, and data management system. The individual public safety agencies will operate and maintain their CAD, Mobile CAD, and LERMS data within their own organizations to include a pre-defined error correction process.

3.2.4.8.2 Use and Access

The ILA and associated Bylaws should contain explicit security requirements and designate the County Technology Services as oversight to compliance with these requirements. The most recent security features and functions will be available in the new system and should be documented and enforced within the ILA and associated Bylaws.



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3.2.4.8.3 Planning

The system planning activities should be guided by the 9-1-1 Committee membership with technical guidance from the user community and technical support entities. A collaborative technical support group provides technical information, advice, and recommendations to the 9-1-1 Committee membership. The technical support group also conducts or recommends the technical planning and implementation functions and duties for the 9-1-1 Committee in the oversight of the system.

The 9-1-1 Committee develops and recommends the annual budget for the RPSCR. Interim expenditure considerations are the responsibility of the County Technology Services Director, as the contracting authority for the system.

3.2.4.8.4 Funding and Budget

The initial acquisition of the hardware and software associated with the RPSCR is supported by the 9-1-1 surcharge as managed by the 9-1-1 Committee and approved by County Commission. The associated services of provisioning, ongoing maintenance, future upgrades/updates, expansion or augmenting the future system, will have costs associated. The 9-1-1 Committee should establish a funding plan for the long-term maintenance and localized support necessary to sustain the system(s) for the life of the selected vendor(s) contract.

3.2.4.8.5 Vendor Management

The Parties should form a project management team led by the County Technology Services Director or designee that includes contracted professional services as needed.

A project management plan is needed and will include monitoring and tracking of issues, risks, communication, responsible parties, contact information, testing plan, training plan (users and administrators), acceptance plan, and cutover plan. The County Technology Services Director or designee should be directly responsible for vendor management and oversight of the implementation. There should be individual project management team leaders within each agency with direct responsibility and reporting to/from individual department project management team members.



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3.2.5 Regional CAD Cost Impacts

This section of the report addresses the Regional CAD Cost Impacts based on the alternative solutions available for a new system, a premises-based Commercial off-the-Shelf solution and a Cloud-Based and Software as a Service (SaaS) Solution.

FE provides the following cost estimates to the Washoe County 9-1-1 Emergency Response Committee based on knowledge of the industry and interaction with most of the major Computer Aided Dispatch (CAD) and Mobile Data System (MDS) vendors in the Public Safety domain, many of which could be offering a proposal to the RFP that is currently being developed. However, the cost information provided is subject to change based on the state of the economy, geographic proximity for certain vendors and competitive positioning among vendors within the industry. The following cost parameters constitutes a Rough Order of Magnitude (ROM) estimate as requested by the 9-1-1 Emergency Response Committee as a component of their five-year master plan.

As part of the CAD Assessment and Gap Analysis **FE** recommended that the regional partners participating in the CAD and Mobile Data replacement project consider both Cloud-based/SaaS and On-Premises Solution so the ROM includes pricing for both. This is necessary because of the differences in how the systems initial and ongoing costs are calculated.

3.2.5.1 Premises-Based Commercial Off-the-Shelf (COTS) Solution

This ROM estimate represents current approximations for traditional on-premises-based systems that have been procured and are of similar size, functional features, and enhancements. To account for pricing that may be offered by vendors that conduct business in different tiers (large, medium, and small operations), the actual cost of the system is given a range of +/- 30%. Note that the degree of data conversion and custom interfaces required of the selected vendor can also have a considerable impact on final system cost.

In addition to the cost estimate(s) shown in this section, **FE's** experience is that in any project of this complexity, unexpected and/or unanticipated costs are likely to be incurred. For example, as the project progresses, the City and Regional Partners may choose to make an investment in emerging technology to maximize the return on investment or achieve efficiency or functionality gains not previously available. Establishing a project contingency envelope of 10 to 20 percent of the overall project value is a prudent approach to prevent funding shortfalls during project execution.



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The pricing in this section of the report represents a high-availability solution, with 99.999% uptime, no single point of failure and a proven geo-diverse disaster recovery design. This includes automatic fail-over from primary to back-up/secondary server(s) and a geographically diverse hardware solution that incorporates the current benefits of network virtualization.

3.2.5.1.1 CAD, Integrated Mapping and Mobile Data

The estimate below includes the costs associated with the CAD system, mapping, mobile data, system integration services, standard interfaces, and CAD/file maintenance training. It does not include any cost for data conversion, or any special interfaces identified by the City that may not be available from the Vendor but would have to be developed if determined to be a critical requirement based on the City's operational needs.

- CAD System Software
- CAD Client Positions
- Integrated Mapping
- Integrated Mobile Data
 - AVL
 - Mapping
 - Messaging
 - Query (CJIS/NCIC)
 - Routing
 - Silent Dispatch
 - Status Changes
- Standard System Interfaces
 - Active Directory



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- Alarm Tracking (PM AM and CryWolf)
- Automated Secure Alarm Protocol (ASAP)
- Automatic License Plate Reader
- Body Camera (Axon)
- Dispatch Protocol Software Interface (ProQA)
- E9-1-1
- ePCR
- Email
- Emergency Notification System (CodeRed and AlertSense)
- Fire RMS (Zoll and First Due)
- Fire Station Alerting (WestNet and Zetron)
- In-Car Camera
- CJIS/NCIC Interface
- Logging Recorder Interface
- Master Time Interface
- Next Generation 9-1-1 Interface
- Pictometry Interface
- PulsePoint
- Radio System GPS Interface
- Radio Tone Encoding
- RapidSOS
- Rip and Run



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- Text Paging/Notification Interface
- Video Management System
- WebCAD
- Data Exchange
 - Crime Analysis/Incident Management (GeoShield)
 - External Database Interface
- File Maintenance
- System Integration Services
- Training

Subtotal Cost Estimate – \$2,043,036

3.2.5.1.2 On-Premises System Hardware

The cost below is an estimate of system hardware costs to implement the replacement CAD and Mobile Data System. These hardware costs include all required backroom equipment such as server hardware, operating system software, database licenses and virtual environment hypervisor necessary to stand up the system. They do not include any end-user CAD workstation, mobile data hardware for the field units or LERMS field-based-reporting functionality.

Hardware costs will vary among vendors since their software is typically benchmarked against specific hardware configurations, utilizing a variety of components offered by distinct manufacturers. As an option, the City and Regional Partners may elect to purchase this hardware separately, based on vendor provided specifications. Based on **FE's** recent experience, most clients choose to procure their own system hardware as they have existing current relationships with computer suppliers and the ability to get discounted pricing. Any hardware purchased through the vendor will likely include a markup.

As should be requested in any Request for Proposal (RFP), vendor proposals are required to provide minimum and/or optional specifications and requirements for all hardware components. They must also certify that the end solution is configured to meet



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the recommended performance configuration and specifications to support the applications proposed. The vendors must provide support to their clients during the hardware configuration process, and they are responsible for configuring and installing their own software.

3.2.5.1.3 On-Premises Estimated Hardware Cost:

- System Hardware
- System Software
- Servers
- Hypervisor Software
- Network Components
- Network / Communications Infrastructure
- Miscellaneous Equipment
- Redundancy and Scaling
- Shipping and Insurance
- Hardware Maintenance

Subtotal Cost Estimate – \$464,640

In the absence of a complete understanding of the configuration and architecture of the software solutions that would be proposed, it is difficult to estimate the possible costs for any improvements or modifications the City and Regional Partner's network and infrastructure might require. Depending on the standard(s) selected, for example those published by the Institute of Electrical and Electronics Engineers (IEEE) for mission critical networks or by the National Fire Protection Association (Standard 1221-2019), achieving compliance, or the intent of those standards can result in additional costs ranging between \$10,000 and \$100,000 to upgrade network capabilities. Since the need for network upgrades is unknown at this time, this cost has not been included in this estimate.



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3.2.5.1.4 On-Premises System Enhancements and Non-Standard Interfaces

FE defines system enhancements and non-standard interfaces as those items requiring vendor development and result in charges that exceed what would be included in their base product or with a standard interface. These items are typically: a) not currently in development, b) not identified as future product enhancements, and c) are not scheduled for delivery in any planned release of the vendor's product road map. During the Needs Assessment process, only a few interfaces were identified by **FE** as possible non-standard interfaces that would likely require new development.

FE does not recommend that any client mandate software customizations specific to their procurement unless the vendor agrees to incorporate that same functionality in their base software package. This ensures that future vendor-issued software updates account for existing functionality across all client locations and any new programming or software updates or patches do not impact or cause problems for that functionality. The newer COTS systems tend to be highly configurable and the need for localized customizations is rarely present anymore.

Based on **FE's** experience, custom interfaces can range from \$10,000 to \$200,000 for a single interface, depending on the functional complexity and whether the desired interface is bi-directional or one-way only. Software customizations to a vendor's standard product can range from \$25,000 to \$100,000 for each customization based on complexity and functionality needed, but as stated above, it is highly recommended that this be avoided. No costs for system enhancements were included, but **FE** did identify some existing interfaces that may be considered "non-standard". Those have been included in this estimate.

3.2.5.1.5 On-Premises Estimated Non-Standard Interface Pricing:

Non-standard interfaces identified that may require new vendor development work:

- CAD-to-CAD (REMSA)
- Time and Attendance (SAP)

Subtotal Cost Estimate – \$140,000



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3.2.5.1.6 On-Premises Data Conversion

The price for converting data can vary substantially between vendors. This often depends on prior experience the vendor may have with the existing system data. Based on **FE's** experience, a vendor is often reluctant to engage in converting data because of the potential difficulty in obtaining information and support from the existing system supplier. Therefore, a vendor will provide a price for converting existing data but will be highly dependent on the Partner Agencies to assist them in getting them information and access to existing data. Once the data is converted, all responsibility will be placed on the Partner Agency staff to verify the converted data for both completeness and accuracy. This typically requires significant effort and can be time consuming.

Based on our experience the most common CAD data that is included in conversion is:

- CAD Events
- Common Places
- Premise Alerts/Caution Notes

The cost for CAD data conversion has been included in the current estimate.

Subtotal Cost Estimate – \$75,000

3.2.5.1.7 On-Premises Support and Maintenance

The cost shown below is the budgetary estimate for vendors to provide 24/7 software support and maintenance for the CAD and Mobile Data modules. The timing for the first invoice for annual maintenance varies between vendors. This date is typically determined during final contract negotiations and can affect Total Cost of Ownership over system life. The cost estimate is for first year of support and maintenance only. The current industry standard averages a 5% annual increase, to be negotiated with the selected vendor.

Subtotal Cost Estimate – \$326,252

The annual cost for support and maintenance is not included in the total public safety systems cost estimate based on the unknown timing of the first invoice. Typically support and maintenance is not due until cutover which could be more than a year after contract execution. In addition, many agencies do not see this as a capital cost but as more of an annual operational cost.



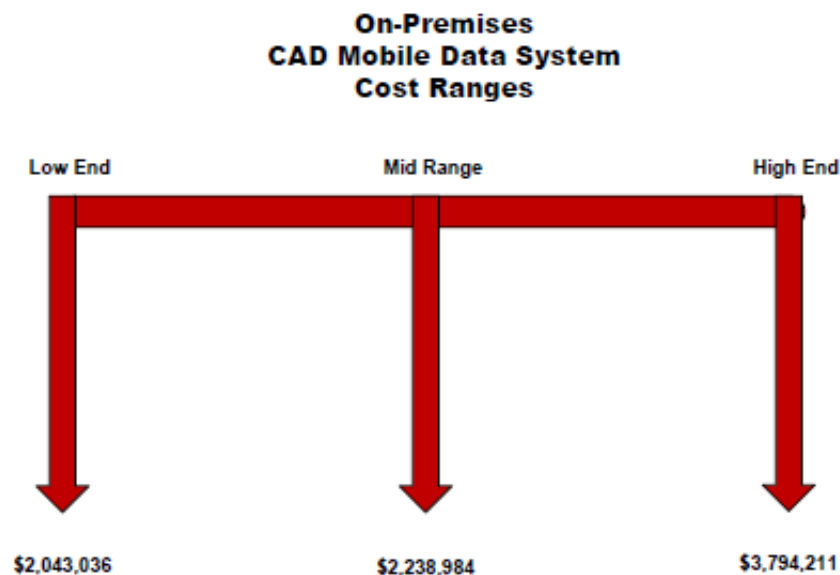
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3.2.5.1.8 Cost Range – On-Premises System

Figure 1 provides the anticipated cost impact for the replacement CAD and Mobile Data System. This estimate provides a 30 percent high and low range (+/-30%) from the typical mid-range price the 9-1-1 Emergency Response Committee is likely to encounter in proposals received. The cost range includes initial procurement software and system hardware costs. It also includes the cost range for data conversion and non-standard interfaces but does not include maintenance and support in subsequent out-years.

They do not include any end-user CAD workstation, mobile data hardware for the field units or LERMS field-based-reporting functionality.

Figure 1 – Cost Range – On-Premises System



3.2.5.2 Cloud-Based and Software as a Service (SaaS) and On-Premises Solutions Cost Estimates

This ROM estimate represents current costs based on Cloud-based or SaaS systems which are gaining interest in the public safety market. This estimate has been developed based on staff research, in reviewing limited project documentation and other related resources. The estimated cost of the system includes a range of plus or minus 30 (+/-30%) percent. This is based on differences in vendor pricing structure, base product features and discounts offered.

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3.2.5.2.1 Cloud-Based/Software as a Service (SaaS) Solutions and On-Premises Solutions Fee Structures

FE's exposure to Cloud-based or SaaS solution fee structures has been limited to reviewing a small number of executed contracts. Many of these contracts include high level costs with no line-item module pricing. As of the date of this report, **FE** has only had one SaaS Vendor submit a response to one of our client's RFPs. Because this vendor did not make that project's short-list due to a lack of standard functionality, the client rejected their cost proposal in accordance with purchasing rules. Most of the SaaS vendors are not yet responding to published RFPs, due to direct marketing efforts and the ability to negotiate sole-source contracts.

Based on the research we have conducted, along with limited discussions and/or vendor webinars and trade show presentations, **FE** has learned that the method by which these solutions are priced is not standard with all vendors and can vary greatly even between opportunities. Some vendors provide their CAD pricing based on the amount of public safety answering point (PSAP) telecommunicator console positions, while others price their solution based on the number of sworn law enforcement officers. The same is true for mobile data where pricing is either based on the number of staff or the number of mobile units. Annual subscription prices for the applications can vary based on the size of the agency(ies); it is not uncommon to see significant subscription cost discounts for the larger agencies with multiple users.

Operations demand that solutions accommodate existing interfaces and provide mobile data/AVL functionality. Based on the limited documentation available, it appears the interface model is mostly standard across the vendors and includes E9-1-1, master clock and text/email notification for little to no cost. Also, a common thread between SaaS solutions and traditional on-premises solutions is that they both have the same high costs for custom interfaces.

FE recommended and will ask for detailed line-item pricing in the RFP proposals from the Cloud-based SaaS providers. Available pricing that **FE** has been able to review has been based on annual or monthly subscription costs with very few details. Often items, interfaces, modules, and local hardware costs, were listed as a 'lump sum' cost with no supporting details on specific functionality.



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3.2.5.2.2 SaaS Solution CAD, Integrated Mapping and Mobile Data Estimate

The estimate below includes the costs associated with the CAD system, mapping, mobile data, system integration services, standard interfaces, system administrator, CAD user, and file maintenance training. This will include CAD user training and train-the-trainer for the mobile data users.

It does not include any cost for data conversion (or legacy system data access), or any special interfaces identified by the City or Regional Partners that require custom development to meet a critical requirement based on the agency's operational needs.

- CAD System Software
- CAD Client Positions
- Integrated Mapping
- Integrated Mobile Data
 - AVL
 - Mapping
 - Messaging
 - Query (CJIS/NCIC)
 - Routing
 - Silent Dispatch
 - Status Changes
- Standard System Interfaces
 - Active Directory
 - Alarm Tracking (PM AM and CryWolf)
 - Automated Secure Alarm Protocol (ASAP)



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- Automatic License Plate Reader
- Body Camera (Axon)
- Dispatch Protocol Software Interface (ProQA)
- E9-1-1
- ePCR
- Email
- Emergency Notification System (CodeRed and AlertSense)
- Fire RMS (Zoll and First Due)
- Fire Station Alerting (WestNet and Zetron)
- In-Car Camera
- CJIS/NCIC Interface
- Logging Recorder Interface
- Master Time Interface
- Next Generation 9-1-1 Interface
- Pictometry Interface
- PulsePoint
- Radio System GPS Interface
- Radio Tone Encoding
- RapidSOS
- Rip and Run
- Text Paging/Notification Interface
- Video Management System



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- WebCAD
- Data Exchange
 - Crime Analysis/Incident Management (GeoShield)
 - External Database Interface
- File Maintenance
- System Integration Services
- Training

Subtotal Cost Estimate – \$1,962,616

3.2.5.2.3 SaaS System Hardware

The price below is an estimate of the limited system hardware costs that would be needed to implement a Cloud or SaaS solution. It is expected that there will be a need for some local hardware (servers and system software) to accommodate local interfaces and some of the required mobile data/AVL functionality.

Some vendors are recommending internet bandwidth connection of at least 2+ Mbps, per concurrent user and a backup Internet Service Provider connection that provides geographic diversity and is capable of automatic failover.

Subtotal Cost Estimate – \$137,940

3.2.5.2.4 SaaS Solution System Enhancements and Non-Standard Interfaces

FE defines system enhancements and non-standard interfaces as those items requiring vendor development resulting in costs that exceed what is normally included in their base product or with a standard interface. These items are typically: a) not currently in development, b) not identified as future product enhancements, and c) are not scheduled for delivery in any planned release of the vendor's product road map. During the Needs Assessment process, only a few interfaces were identified by **FE** as possible non-standard interfaces that would likely require new development.



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As with the COTS solution, **FE** does not recommend that the participating agencies mandate software customization specific to their procurement unless the vendor agrees to include this feature or function in their base software package. This ensures that future vendor-issued software updates account for existing functionality across all client locations and any new programming or software updates or patches do not impact functionality.

Based on research **FE** conducted, it appears that these vendors have limited experience with custom interfaces. This may account for estimated costs that are slightly higher than traditional COTS vendors. As **FE** identified some existing interfaces considered to be “non-standard”, they are included in this estimate.

Non-standard interfaces identified that may require new vendor development work:

- CAD-to-CAD (REMSA)
- Time and Attendance (SAP)

Because Cloud/SaaS solutions are still so new to providing CAD systems for large sized agencies, it is expected that many of the standard interfaces currently provided by the COTS vendors may still have to be developed and engineered by the SaaS vendors.

Subtotal Cost Estimate – \$175,000

3.2.5.2.5 SaaS Solution Data Conversion or Access

Our research identified very little reference or documentation regarding data conversion. Again, this is most likely because the SaaS vendors have had limited interactions with existing COTS systems and little experience with data conversion.

At least one vendor documented the process by which the data is extracted by the vendor, then placed in cloud storage for access via the new SaaS system through a search function. The stored data is then imported as needed into any new data record. No cost was documented for this specific data access solution.

The cost for CAD data conversion has been included in the current estimate.

Subtotal Cost Estimate – \$75,000



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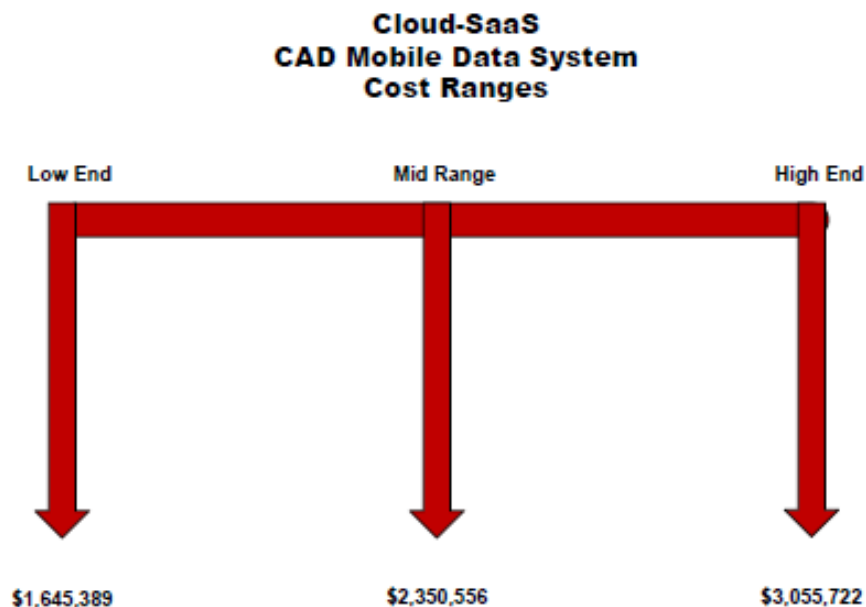
3.2.5.2.6 Cloud-based and SaaS Service Fees

To provide this high-level ROM cost estimate for a cloud-based or SaaS solution, **FE** used a telecommunicator per seat, per mobile unit and per officer model. Based on our research this format is consistent to how these vendors are determining pricing. One-time costs associated with interfaces, hardware, and data conversion/access typically are included in the service fees costs invoiced between contract execution and system cutover. Annual subscription costs begin at cutover and/or system acceptance.

3.2.5.2.7 Cost Range – Cloud-based and SaaS System

Figure 2 provides the anticipated cost impact for the replacement CAD and Mobile Data System with a Cloud-based SaaS system. This estimate provides a 30 percent high and low range (+/-30%) from the typical mid-range price the 9-1-1 Emergency Response Committee is likely to encounter in proposals received. The cost range includes initial procurement software and system hardware costs. It also includes the cost range for data conversion and non-standard interfaces but does not include the annual service fees for the subsequent out-years.

Figure 2 – Cost Range – Cloud-based and SaaS System



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3.2.5.3 Ten-year Cost Impacts

The following two tables depict the ten-year cost impact of both types of systems. *Table 1* provides the anticipated ten-year cost for the replacement CAD and Mobile Data System with an On-Premise's solution.

Table 1 – Ten-year Cost Impact – On-Premises

On-Premises - Ten Year Cost of Ownership			
Year	Low Range	Mid-Range	High End
Initial Cost	\$2,043,036	\$2,918,624	\$3,794,211
Year 1	\$228,376	\$326,252	\$424,128
Year 2	\$239,796	\$342,565	\$445,335
Year 3	\$251,785	\$359,693	\$467,601
Year 4	\$264,375	\$377,678	\$490,981
Year 5	\$277,593	\$396,562	\$515,531
Year 6	\$291,473	\$416,390	\$541,307
Year 7	\$306,047	\$437,210	\$568,373
Year 8	\$321,350	\$459,071	\$596,792
Year 9	\$337,418	\$482,025	\$626,633



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On-Premises - Ten Year Cost of Ownership			
Year	Low Range	Mid-Range	High End
Year 10	\$354,288	\$506,126	\$657,964
Total	\$4,915,536	\$7,022,196	\$9,128,855

Table 2 provides the anticipated ten-year cost for the replacement CAD and Mobile Data System with a Cloud-based SaaS solution.

Table 2 – Ten-year Cost Impact – Cloud-based SaaS

SaaS - Ten Year Cost of Ownership			
Year	Low Range	Mid-Range	High End
Initial Cost	\$1,645,389	\$2,350,556	\$3,055,722
Year 1	\$200,539	\$286,484	\$372,429
Year 2	\$205,552	\$293,646	\$381,740
Year 3	\$210,691	\$300,987	\$391,283
Year 4	\$215,958	\$308,512	\$401,066
Year 5	\$221,358	\$316,225	\$411,093



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SaaS - Ten Year Cost of Ownership			
Year	Low Range	Mid-Range	High End
Year 6	\$226,892	\$324,131	\$421,370
Year 7	\$232,564	\$332,234	\$431,904
Year 8	\$238,378	\$340,540	\$442,702
Year 9	\$244,338	\$349,054	\$453,770
Year 10	\$250,446	\$357,780	\$465,114
Total	\$3,892,104	\$5,560,149	\$7,228,193

3.3 Review of 2019 Legislation and Use of 9-1-1 Surcharge Funds

3.3.1 Background

As the Master Plan is to serve as a guidebook for the 9-1-1 Committee for the use of the 9-1-1 surcharge and include legislative analysis, the following section focuses on a review of the 2019 Legislation and the impact of the revisions to NRS 244A that increase the surcharge and affix a portion for funding recording devices.

3.3.2 Senate Bill 176

In 2017, the Nevada Legislature was planning to introduce a Senate Bill (SB 176) that would change NRS 244A.7643 to allow the use of 9-1-1 surcharge funds to purchase bodycams. It should be noted here that SB 176 was successfully passed on May 25th, 2017.



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3.3.2.1 NENA Comments

The CEO of the National Emergency Number Association (NENA), Brian Fontes, sent a letter to Honorable David R. Parks, Chairman, Senate Government Affairs Committee (Nevada) that read as follows:

“Please be aware that SB 176 would foreclose Nevada’s ability to secure federal grant funding to improve its 9-1-1 infrastructure. In 2004, Congress passed legislation, which was amended in 2012, to authorize federal grants to assist states and local governments in implementing E9-1-1 and NG 9-1-1. In the legislation, the diversion of 9-1-1 funds is specifically addressed, in the respect that applicants for federal grants must certify at the time of their request and annually thereafter that no portion of *any* designated 9-1-1 charges imposed by the state or other taxing jurisdiction is being obligated or expended for any other purpose. (47 U.S.C. § 942(c)(2)).”

“The federal legislation also precludes states that receive 9-1-1 funds from using the grants for any purpose other than for E9-1-1 or NG9-1-1 enhancements. If a state awarded federal 9-1-1 funding is found to have misrepresented or misused any 9-1-1 funds, then *all* the federal grant funds it received must be returned. (47 U.S.C. §942(c)(3)). At least one state (Arizona) has had to return its federal grant money after it passed legislation that transferred 9-1-1 surcharge funds to the state General Fund.”

In short, Senate Bill 176⁵ was enacted, NRS 244A.7643 was amended, and bodycams were subsequently purchased in 2018 for use in Washoe County. This procurement using \$430K of 9-1-1 surcharge funds. Although there has been other procurement of Event Recording Devices across the state, it appears that Washoe is the only county to have directly used 9-1-1 surcharge funds to purchase this equipment. Note that the FCC Twelfth Annual 9-1-1 Fee Report⁶ indicates that two Nevada municipalities, Carson City and Churchill County, in self-reporting use of 9-1-1 surcharge in 2019 that the FCC determined to be a diversion of said fee. This report has very limited information from Nevada as the state does not report statewide but as individual counties or cities. It has not been substantiated that additional municipalities in Nevada have followed the legislated allowance of use of 9-1-1 surcharge for recording devices.

⁵ [SB176.pdf \(state.nv.us\)](https://leg.state.nv.us/sb176.pdf)

⁶ [12thannual911feereport2020.pdf | Federal Communications Commission \(fcc.gov\)](https://www.fcc.gov/12thannual911feereport2020.pdf)



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3.3.2.2 NASNA Comments

It should be noted here that the FCC tracks states that divert 9-1-1 funds to inappropriate expenditures. As such, the FCC's Public Safety and Homeland Security Bureau opened PS Docket No. 20-291⁷.

In response to this Docket, the National Association of State 9-1-1 Administrators (NASNA) filed the following comments:

"NASNA opposes the diversion and re-appropriation of 911 funds to state general fund programming or to a use not designated by that state's own statute or rules applicable to that funding source. It is important to clarify at the outset also, that when the revenue from 911 fees is diverted and applied to a state's general fund or to a use not designated by that state's applicable statute or rules, that decision and action is not made by the local 911 systems nor is it made by that state's 911 programming office, but rather it is the state's legislature that makes the decision and action."

Note that in NASNA's statement, the clarification of "...or to a use not designated by that state's own statute or rules applicable to that funding source." NRS 244A explicit includes recording devices as an eligible expense of the surcharge. The intent of the NASNA statement however is to mirror that of the FCC regarding diversion of fees for non-9-1-1 expenditures.

3.3.3 Lift America Act of 2021

On March 11, 2021, members of the Energy and Commerce Committee introduced the Leading Infrastructure for Tomorrow's America Act, or LIFT America Act ([Lift America Act](#)).

This legislation intends to modernize the nation's infrastructure, rebuild the economy, combat climate change, and protect public health and the environment. The legislation invests more than \$312 billion in clean energy, energy efficiency, drinking water, broadband, and health care infrastructure.

This legislation, if approved, allows for the awarding of \$15 billion in grants for the deployment and implementation of Next Generation 9-1-1 services across the country to protect American lives through more accessible, interoperable, effective, and resilient 9-1-1 services that allow callers to send text messages, images, or videos to 9-1-1 in times of emergency.

⁷ [Public Safety and Homeland Security Bureau opens PS Docket No. 20-291 | Federal Communications Commission \(fcc.gov\)](#)



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In short, Nevada would not be eligible for any of this funding.

It should also be noted that in Nevada, the majority of 9-1-1 operations are funded through local government using general revenue funds.

Historically, federal grant monies have only been able to offer far less than actual needs. With the passage of the Lift America Act, there would be an unprecedented amount of funding available for 9-1-1 infrastructure toward NG9-1-1 transitions. This makes any fee diversion by any Nevada county or city have the statewide impact of disallowing federal funding to all Nevada 9-1-1 centers.

3.3.4 9-1-1 Revenues in Washoe County

As there has never been a State-Level 9-1-1 Program Manager, there has been no formal organization of the 9-1-1 system throughout the state, with local entities operating independently from each other.

In 2018 Washoe County passed an increase to the local 9-1-1 fee which increased the surcharge from \$.25 cents to \$.85 cents per access line. This resulted in a significant increase in the available funds – from a budget of \$1.7M to \$5.7M. The new surcharge has greatly increased the availability of funds. The funding of 9-1-1 systems and equipment will assist the operation of PSAPs.

Initially, there were concerns Washoe County would have a lot of unknown costs associated with bodycams, so the Board set the surcharge an extra \$.10 to cover any unanticipated costs, as such, it was not anticipated that they would reach the statutory cap within five years, where in fact it was reached in two years.

Camera costs have been relatively stable because of the annual SaaS costs.

Typical 9-1-1 surcharge spending included Intrado services, GIS salaries, travel, and training, CodeRED, language interpretive services, PSAP headsets and other related PSAP equipment.

The new budget includes backup handheld portable radios, the radio interfaces, CAD, logging recorder systems, and remote call-taking and dispatch equipment.

The budgeting process needs to be standardized and planned out for a five-year period to better manage the fund within the \$5M cap on fund balance. This means that distribution and use must be structured and planned to maintain the regulated limit, or the surcharge must be reduced to align with actual and future projections. As stated



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previously, consideration should be given to the impact of fee diversion on Washoe and the State of Nevada.

3.3.5 Evaluation of the 2019 Legislation

3.3.5.1 Section 1. Chapter 244A

In this section of 244A, Senate Bill 12⁸ allowed for the use of 9-1-1 surcharge funds to pay for the engagement of an independent auditor to review the surcharges collected by a telecommunications provider.

FE supports this change and believes it is an appropriate use of 9-1-1 surcharges.

3.3.5.2 Section 1.3 NRS 244A.7645

In section 3(a), Senate Bill 12⁹ allowed for the use of 9-1-1 surcharge funds to pay for costs of adopting and reviewing the five-year master plan for the enhancement of the telephone system for reporting emergencies in the county that is required pursuant to NRS 244A.7643

FE supports this change and believes it is an appropriate use of 9-1-1 surcharges.

In section 3(c) sub-sections 1, 2, 3, Senate Bill 12¹⁰ allowed for the use of 9-1-1 surcharge funds to pay for a variety of costs associated to portable event recording devices.

In section 4, Senate Bill 12¹¹ allowed for the use of 9-1-1 surcharge funds to assist in the establishing of priorities as well as the further auditing of expenditure for the use of funds expended on the portable event recording device program.

FE does not support this change and believes it is an inappropriate use of 9-1-1 surcharges.

⁸ [Senate Bill 12](#)

⁹ *ibid*

¹⁰ *ibid*

¹¹ *ibid*



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3.3.6 *Legislative Changes*

Nevada is at a crossroads when considering the long-range implications of the diversion of 9-1-1 funds. In the case of Washoe County, the diversion of funds has already occurred. The current legislation, if unchanged, disqualifies the State of Nevada, and all PSAPs in Nevada, from being eligible for any Federal funding.

This is particularly concerning as there are a broad range of PSAP operations throughout the state that would benefit substantially from being able to access the critical funding needed to migrate to NG9-1-1.

If NRS 244A.7641, 244A.7645 and remain unchanged, and if entities within the state continue to divert 9-1-1 fees as defined by the FCC, Nevada's 9-1-1 community will suffer.

3.3.7 *FCC Report and Order on Diversion of 9-1-1 Fees*

On June 25th, 2021, the FCC released its much-anticipated Report and Order that addresses the Diversion of 9-1-1 fees.¹²

In addition to background information, the document describes the Standard for determining acceptable purposes and functions for 9-1-1 Fees, a designation of acceptable purposes and functions for 9-1-1 expenditures, as well as a designation of unacceptable purposes and functions for 9-1-1 expenditures.

The Report and Order underscores the situation regarding what is acceptable (and not acceptable) use of 9-1-1 revenues.

Refer to Attachment C – FCC Final Rules on Acceptable Expenditures of 9-1-1 Surcharge Revenues for further detail.

3.3.8 *The Role of Washoe County*

Washoe County is in a unique position to influence sweeping change in 9-1-1 funding across the state.

FE believes that there is an opportunity for Washoe County to provide the necessary leadership to establish a state 9-1-1 program, as well as articulate the benefits of

¹² [FCC-21-80A1.pdf](#)



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establishing a state 9-1-1 Office, along with a 9-1-1 Program Manager, and the establishment of a 9-1-1 Committee that represents all PSAPs across the state. This would allow Nevada to fall in line with most other states, as well as begin a move towards a formalization of a statewide migration to Next Generation 9-1-1 for all Nevada PSAPs, as well as fall in line with the recently released FCC Report and Order on the diversion of 9-1-1 fees.

As the telco's decommission the legacy E9-1-1 equipment, and as the traditional 9-1-1 systems transition to an Internet Protocol (IP) environment, the need to migrate Nevada's PSAP community to the new technology cannot be overstated.

If the choice of Nevada's legislators remains status quo, and steps are not undertaken to revise and update current 9-1-1 legislation, many Nevada PSAPs will not be able to migrate to NG9-1-1 and take advantage of the benefits of this new technology. In short, the citizens and visitors to Nevada, as well as the 9-1-1 stakeholder community, will not be afforded the same level of service available in other states.

3.3.9 Recommendations

FE recommends that Washoe County consider mounting an effort to support changes to existing 9-1-1 legislation to be compliant with the FCC regulations.

FE recommends that Washoe County establish a structured process for the funding of 9-1-1 programs and equipment. This would include the establishment of funding Rules, a formal application process, a system of managing awards, and an audit process that ensures projects are completed, and that requests for reimbursement are fulfilled.

3.4 Funding Analysis

3.4.1 Review of Five-Year Analysis Revenue & Expenditures

This section provides a five-year analysis of Revenue and Expenditures including 9-1-1 fund balance projections for 2021 to 2026. Note that there are some unknowns in the ever-changing evolution of 9-1-1 in Washoe County. Namely there are four key expenditures that have, or will have, significant impact on the 9-1-1 funding mechanism, regional relationships related to funding, and the ability to accurately project funding needs into the foreseeable future. These unknown costs are:

1. The renegotiation of the contract with Axon



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2. The replacement and new acquisition of body camera holsters for current and future users
3. The in-progress procurement of a replacement regional CAD system
4. The upgrade or replacement of the 9-1-1 call handling equipment (CHE) at the three PSAPs.

Items 1 and 2 are not fully known, nor can they yet be confidently estimated. Plus, these costs will require life cycle planning for the existing technology, and for future features and functionality that may require upgrades and replacements within the five years that this Plan is in action.

Item 3 is addressed in Section 3.2 with projected, or anticipated costs associated with the options available within the procurement of a new regional CAD system.

Item 4 is addressed in Section 3.4.4 with projected, or estimated costs associated with upgrades or replacement of CHE.

As was experienced by the 9-1-1 Committee in 2019, the use of the fund and the support structures for same, are changing rapidly. The increase in revenue and the impact of the expansion of the use of the 9-1-1 fee revenue for non-9-1-1 expenditures have revealed the need to introduce and implement standards to the budgeting and funding process that exceed what has been in place to date.

3.4.2 Revenues and Expenditures

Table 3 provides the revenues and expenditures and differences pre- and post-surcharge increase as impacted by the addition of recording devices as an expenditure. The table below shows the difference in revenue and expenditures before the surcharge increase, FY17 and FY18, and after the increase.

Table 3 – FY17 through FY21 Revenue and Expenditures

<i>Fiscal Year</i>	<i>Revenue Actual/Projected</i>	<i>Expenditures</i>	<i>Difference</i>	<i>Fund Balance*</i>
FY21	\$5,834,699	\$5,432,659	\$402,040	\$5,065,101
FY20	\$5,935,675	\$4,037,965	\$1,897,710	\$3,167,391
FY19	\$5,523,535	\$3,155,016	\$2,368,519	\$798,872
FY18	\$2,010,955	\$1,747,059	\$263,896	\$534,976
FY17	\$1,597,694	\$1,669,713	(\$71,253)	\$606,230

* Fund balance at the beginning of the specified fiscal year.



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Table 4 provides a description and illustration of the coming five years (2021-2026) of revenues and expenditures based on known and trending information. This includes anticipated changes increasing or decreasing revenues and expenditures. The projected revenue is based on population trend identified as an average annual increase of 1.5%. From FY21-FY26, Washoe County can anticipate an overall growth of 7.5% reaching a population base of approximately 527,000. This table shows the increase revenue growing by 1.5% annually. The expenses are based on known and existing contracts and expected expenses related to the City of Reno Public Safety Center, the Computer Aided Dispatch upgrade, and buildout of a regional Emergency Services IP network (ESInet) as recommended in this report.

Table 4 – FY21 through FY26 Revenues, Expenditures, & Fund Balance

<i>Fiscal Year</i>	<i>Revenue Projected</i>	<i>Expenditures Planned/Projected</i>	<i>Difference</i>	<i>Fund Balance*</i>
FY26	\$6,155,000	\$5,873,646	\$281,357	\$7,336,820
FY25	\$6,111,000	\$5,186,646	\$294,354	\$7,042,466
FY24	\$6,092,000	\$6,252,046	(\$160,046)	\$7,202,512
FY23	\$5,982,000	\$5,557,046	\$424,954	\$6,777,558
FY22	\$5,929,500	\$4,619,083	\$1,310,417	\$5,467,141

* Fund balance at the beginning of the specified fiscal year.

The expense projections in table 4 are a rough order of magnitude (ROM) estimate. Accurate details regarding the procurement, life cycle, and future acquisitions, in support of the NG9-1-1/ESInet build out, the City of Reno Public Safety Center, and CAD are not available at this time.

To plan for future 9-1-1 funding capacity, the following scenarios are provided to illustrate the potential impact on the fund balance for years FY22-FY26. Included is a scenario with all planned mobile computer (MDC, Table 5), fire station alerting (FSA, Table 6), and combined expenses (Table 7).

Table 5 – Baseline Plus Mobile Computers

<i>Fiscal Year</i>	<i>Revenue Projected</i>	<i>Expenditures Projected</i>	<i>Difference</i>	<i>Fund Balance*</i>
FY26	\$6,155,000	\$6,574,646	(\$419,646)	\$6,129,620
FY25	\$6,111,000	\$6,281,646	(\$170,646)	\$6,300,266
FY24	\$6,092,000	\$6,570,046	(\$478,046)	\$6,778,312
FY23	\$5,982,000	\$5,777,046	\$204,954	\$6,573,358
FY22	\$5,929,500	\$4,823,283	\$1,106,217	\$5,467,141

* Fund balance at the beginning of the specified fiscal year.



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Table 6 – Baseline Plus Fire Station Alerting

<i>Fiscal Year</i>	<i>Revenue Projected</i>	<i>Expenditures Projected</i>	<i>Difference</i>	<i>Fund Balance*</i>
FY26	\$6,155,000	\$4,873,646	\$1,281,354	\$5,951,395
FY25	\$6,111,000	\$4,816,646	\$1,294,354	\$4,657,041
FY24	\$6,092,000	\$6,252,046	(\$160,046)	\$4,817,087
FY23	\$5,982,000	\$5,557,046	\$424,954	\$4,392,133
FY22	\$5,929,500	\$7,004,508	(\$1,075,008)	\$5,467,141

* Fund balance at the beginning of the specified fiscal year.

Table 7 – Baseline with MDCs & FSA

<i>Fiscal Year</i>	<i>Revenue Projected</i>	<i>Expenditures Projected</i>	<i>Difference</i>	<i>Fund Balance*</i>
FY26	\$6,155,000	\$6,574,646	(\$419,646)	\$3,744,195
FY25	\$6,111,000	\$6,281,646	(\$170,646)	\$3,914,841
FY24	\$6,092,000	\$6,570,046	(\$478,046)	\$4,392,887
FY23	\$5,982,000	\$5,777,046	\$204,954	\$4,187,933
FY22	\$5,929,500	\$7,208,708	(\$1,279,208)	\$5,467,141

* Fund balance at the beginning of the specified fiscal year.

The scenarios presented in tables 5-7 illustrate how various expenditures would impact the annual 9-1-1 budget and the 9-1-1 fund balance. Each scenario except the Fire Station Alerting (table 6) and combined (MDCs and FSA, table 7) scenarios, 9-1-1 fund balance remains over the \$5 million statutory maximum. The Committee should keep in mind when reviewing these scenarios that there may additional and expanded costs that could be associated with the rollout of a regional ESINet and NGCS that will not be known until the County makes key decisions. These decisions will include whether there will be partnerships with other counties, whether the network and services will be owned and maintained by the County or will be hosted by a vendor(s). In decisions regarding the other scenarios there will be fluctuations to the impact on the fund balance based on procurement and support decisions made by the County. For example, hosted or cloud-based solutions or hybrid solutions may have lower capital and recurring costs in the short term, than ownership and county-provided upkeep for on-premises solutions.

3.4.2.1 Fund Distribution and Requests for Reimbursement

The Washoe County 9-1-1 Emergency Response Advisory Committee was created with the intent to develop a plan for the enhancement of the County's 9-1-1 emergency response system and make recommendations to the County Commission concerning the expenditures of the money collected through the telephone line surcharge.



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The historical method of the disbursement of 9-1-1 surcharge revenues consists of two parts – a call volume formula division of funds that PSAPs receive monthly, as well as a system of application for funds known as a Request for Reimbursement presented in the form of a Staff Report.

As previously stated, revenue from the 9-1-1 surcharge has created a significant increase in the available funds. The model has changed from the distribution of \$1.7M to \$5.7M. As such, the new surcharge has greatly increased the availability of funds.

There are no current boundaries set on past requests for project approval - each request is evaluated on its own merit. There is no set method for tracking the status or projects or whether funds have been expended. Agencies are on the honor system to report the status of their respective projects, and whether they have submitted for reimbursement or completed or progressed the initiative.

The 9-1-1 Committee review and approval is a mechanism for navigating the request to the County Commissioners who receive these requests at commission meetings subsequent to the 9-1-1 Committee meeting at which the requests were approved.

With the responsibility of funding a growing and evolving expanse of needs, operational and technical, and with the increased fund balance, there is a need to create structure in the reimbursement request process. This structure should be detailed and enforced via updated Bylaws for the Committee that include administrative rules governing use of the surcharge, formal and detailed process for requesting reimbursements, review/audit process by which PSAPs are confirmed to be expending the funds in line with requirements.

The expansion and evolution of eligible expenditures include body worn cameras (BWCs) for all Law Enforcement, School District Officers, and in-car video cameras (fleet cameras) in Reno and Sparks Marshall's vehicles. The inclusion of Marshals and School District Officers in this funding was added to NRS 244A in 2019. In 2018 the acquisition of recording devices for all initial agencies was for \$1.5M as accessed via a state contract originally established by Nevada Highway Patrol (NHP).

3.4.3 9-1-1 Purchasing Balance Projections

The budget authority was expanded to provide for the ability to replace the regional CAD system, cover recording devices, replace/upgrade CHE, and portable radios, along with other agency-specific emergency communications needs. The anticipated budget in coming years as shown in *Table 4* allows for expenditures to be less than the expected



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revenue. The proposed budget would grow the fund balance by approximately \$1.3 million in FY22 and by another \$1.8 million by FY26. Despite the positives that come with a growing fund balance, the statutory maximum balance of \$5 million must be maintained. Therefore, the 9-1-1 Committee and staff must identify necessary expenses that will result in maintaining a fund balance under \$5 million.

Staff and the 9-1-1 Committee will also need to work together to identify expenses one, two, or three years in advance so projected expenditures can be best planned for, and their impacts on the 9-1-1 fund balance can be calculated. The CAD project as a capital long life cycle event will split the upfront costs between FY22, FY23 and FY24. Planning and budgeting for upkeep, maintenance, emerging technology, additional interfaces, and future replacement or upgrades, should be part of the capital expense planning on a five-to-ten-year schedule for the CAD and associated components.

Other costs that are yet to be fully defined include the addition of approximately 400 law enforcement, commissioned, and newly graduating deputies for outfitting body worn cameras and associated equipment, in-car video cameras and associated equipment to include magnetic holders as example. Note that the WCSO Detention Center had 300 cameras deployed recently. Upkeep and replacement of same will require budgeting annually.

The current cameras are contracted with Axon (formerly Taser). This contract is due for re-negotiation this fiscal year. This means that the coming fiscal year and recurring annual costs are not known.

Non-9-1-1 future budget planning will be impacted as there is a need for human capital/personnel costs associated with camera systems management and evidentiary redaction. **FE** recommends addressing the impact on staff needs and workload as the data gathered via the cameras, voice, and video is an exhaustive avenue for public information. The current practice of assigning one fulltime employee or equivalent (FTE) is not enough to maintain the records, manage access and use, prepare evidentiary packages, redact, and secure data, and manage the ever-growing database.

FE recommends addressing 9-1-1 future budget planning through the completion of a NG Readiness Assessment with options for acquisition and deployment. A NG Plan will define current state of network, equipment, and governance/relationships, and will provide cost projections for same.



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3.4.4 *Enhancement of Phone System*

This section provides high-level budgetary information for the replacement/upgrade of the call handling equipment (CHE). The network components for a regional ESInet and the required next generation core services (NGCS) will be addressed in detail in a planned future NG9-1-1 strategic plan. This future planning effort should serve the region PSAPs with expansion capabilities for adjacent and intra- and inter-state connections as the evolution of 9-1-1 in the state and across the nation progresses.

Note that all systems, network, and equipment, should be reviewed annually for life cycle adjustments, emerging technologies, expansion planning, and associated costs.

Impacts on enhancements to the 9-1-1 phone system include relationship and service changes such as any transition of services to/from the three primary PSAPs of WCSO, Reno, and Sparks. These changes will have an impact from other systems such as CAD.

3.4.4.1 *Funding Impacts*

The recent legislative impact on the revenues and expenditures in NRS 244A have increased the surcharge as previously noted, and opened opportunities for expenditures that include the following:

- Recording devices as legislated
- Improvements to the facilities, systems, and equipment of the PSAPs
- CAD replacement
- CHE replacement
- NG9-1-1 ESInet buildout and interconnectivity
- Radio equipment
- Back-up outfitting
- Life cycle planning for upgrades and replacement of all technology

Much of the costs for these funding needs are not yet known. It is critical to the stewardship of the 9-1-1 revenues that once these initial and maintenance costs are known that the 9-1-1 Committee begin preparing a life cycle plan for each expenditure. None of these are one-time costs as they all require planning for ever changing



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technology, growth and expansion within the user communities, and expectation from the public of the service provided by the public safety agencies. The public expectation will drive much of the technology especially in the data sharing components of NG9-1-1 and recording devices. There is also a human capital expense that must be planned for and provided to support the changing technology, the regional systems and relationships (through governance), and specific human resources necessary to operate the technology, such as storage maintenance of recordings, access, use, provision, and redaction of data from recordings both in the field (body worn cameras, in-car video) and in the PSAPs (logging recorders that incorporate all data associated with an event). This will require an investment in training, transitional and new hires, and additional skilled staff.

3.4.4.2 Current Conditions

The three primary communication centers in the County are using a shared Intrado hosted Viper IP-based call-taking solution. The system was installed in 2012 and the contract for the system is owned and managed by the County.

The equipment is Phase II compliant, capable of rebids, and can display a Wireless Phase II caller's location on the interfaced CAD mapping. The system is interfaced to the system's Verint voice logging recorder that was acquired as part of the procurement. The logger is currently maintained by the County Technical Services and IT staff from the respective jurisdictions. The 9-1-1 answering solution includes Intrado's Power Management Information System (MIS) for telephone statistics.

The 9-1-1 network provider is AT&T, and the Automatic Location Identification (ALI) database is provided by West/Intrado via two redundant ALI circuits. The Centers have switches, that when flipped, automatically transfers their 9-1-1 calls to their respective back-up centers. Since the system is IP-based the software application is mobile and routable with a configuration change.

The centers have an integrated Text-to-9-1-1 solution.

There is a CAD interface to the 9-1-1 answering equipment that allows ANI/ALI data to be transferred for CAD event entry. The interface provides the display of Wireless Phase II data on the CAD map.



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3.4.4.3 Telephony Cost Impacts

FE provides the following cost estimates to the Washoe County 9-1-1 Emergency Response Committee based on knowledge of the industry and routine interaction with all the major 9-1-1 Call Handling vendors in the Public Safety domain. Utilizing Next Generation 9-1-1 terms this equipment is commonly referred to as the Call Handling Functional Element (CHFE) and characterized as the call handling equipment (CHE) in this document. The cost information provided is subject to change based on the state of the economy, geographic proximity for certain vendors and competitive positioning among vendors within the industry. The following costing constitutes a Rough Order of Magnitude (ROM) estimate as requested by the 9-1-1 Emergency Response Committee as a component of their five-year master plan.

This ROM estimate represents current approximations for a similar hosted environment that is in place in the County. To account for pricing that may be offered by vendors that conduct business in different ways, actual cost of the system is given a range of plus or minus 25 (+/-25%) percent. Cost(s) will vary for each system based on local requirements, competition and the status of certain vendors who have existing facilities in the region.

The cost includes the following project components:

- Call Handling Answering Positions including Mapping
- Furnishing and installing new system equipment and ancillary facilities
- Engineering and system design
- Project management
- Software installation and programming
- Training
- System and Acceptance testing
- Cutover plan and execution
- Certification
- Support and Maintenance

The monthly cost for ALI management and a managed IP network is included in the total cost estimate.

Table 8 – Cost Range – 9-1-1 Call Handling System

Cost Range - 9-1-1 Call Handling Replacement		
Low Range	Mid-Range	High End
\$825,000	\$1,100,000	\$1,375,000



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3.4.4.4 Recommendations

- Prior to any procurement of a new call handling system the County should conduct a NG9-1-1 Readiness Assessment. That will provide the County with the status of PSAPs' readiness to transition to NG9-1-1 along with recommendations on how to proceed.
- The Call Handling Functional Element is an integral component of a NG9-1-1 network. Prior to replacing the current call handling existing equipment, the County needs to verify the new solution will be compliant with any current NENA i3 NG9-1-1 standards. This will ensure it is compatible with any future ESInet and Next Generation Core Services (NGCS).
- The County may want to combine the implementation of a NENA i3 compliant ESInet and NGCS with the replacement of the hosted call handling system.

3.4.5 Sources of 9-1-1 Revenues

The sources for revenue for 9-1-1 have shifted over the last decade to wireless surcharge from wireline. Most states' legislation allows for surcharge to attach to pre-paid wireless devices, VoIP, MagicJack (or similar devices), and other communications devices that can reach 9-1-1. Many of these states have transitioned completely to a Universal Service Fee (or similarly named and defined) method of capturing all possible communications devices in the market now and in the foreseeable future.

Most 9-1-1 programs across the nation continue to be funded by access line surcharges, and this is likely to continue. NASNA continues to explore other sources of funding 9-1-1, and strongly supports Federal grant award programs that greatly assist in this regard. See previous discussions regarding the LIFT America Act and the FCC 9-1-1 fee diversion report. The FCC, NASNA, and NENA are aware of the proliferation of 9-1-1 centric applications (apps) that allow users to access 9-1-1 in non-traditional ways. It should be expected that users or providers of these apps will be required to remit some form of fee to 9-1-1.

The funding of 9-1-1 in Washoe County continues to use the traditional wireline and wireless approach; however, there are other sources of revenue that other states have adopted that bear consideration by the County. These include, but are limited to, the following:



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- Prepaid tax on pay-as-you-go phones (e.g., TracFone, Cricket Wireless, etc.).
- Static VoIP providers (e.g., Comcast, Spectrum, etc.), and
- Nomadic VoIP providers (e.g., MagicJack, Zoom Phone, etc.)

Any device that can access 9-1-1 is eligible for the application of a 9-1-1 surcharge.

3.4.6 **Audit**

Some states have initiated line-count (subscriber) audits of their respective telcos. These audits also include a review of all dedicated PSAP circuits that determines whether such circuits exist, whether they or not are still required, and if such circuits are active or dark. Without exception, such audits **FE** has performed in this regard have yielded significant savings to state and PSAP programs.

NRS 244A.7648 Engagement of auditor to analyze or audit surcharge states that a county "...may, as part of its review of the 5-year master plan adopted pursuant to NRS 244A.7643 for the enhancement of the telephone system for reporting emergencies in the county or for the purpose of purchasing and maintaining portable event recording devices and vehicular event recording devices, as applicable, engage a qualified independent auditor to perform an analysis or audit of the surcharges collected by telecommunications providers in the county."

3.4.7 **Recommendations**

FE recommends a review of potential sources of revenue and establish a system of 9-1-1 surcharges applied to any device or system that accesses 9-1-1.

FE recommends that Washoe County consider initiating an in-depth audit of telecommunications subscriber counts, as well as a countywide review of dedicated circuits used in the delivery of 9-1-1 calls and associated data.



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4. Attachments

4.1 Attachment A – Letter from Brian Fontes



NENA

The 9-1-1 Association

1700 Diagonal Road | Suite 500 | Alexandria, VA 22314

April 17, 2017

Honorable David R. Parks
Chairman, Senate Government Affairs Committee
401 S. Carson Street
Carson City, NV 89701-4747

Re: Senate Bill 176

Dear Chairman Parks:

On behalf of the National Emergency Number Association (NENA: The 9-1-1 Association), please accept this letter detailing our concerns with SB 176, which proposes to authorize counties in Nevada to use the proceeds from 9-1-1 fees/surcharges collected from consumers for purposes other than 9-1-1. As explained below, in addition to general public policy concerns regarding use of 9-1-1 fees, we believe the proposed legislation may preclude Nevada from securing millions of dollars in federal grant funding to modernize its 9-1-1 infrastructure.

Decades of government leadership and steady technological progress have provided citizens with a reliable 9-1-1 system that they can trust. Funds the public remits in good faith specifically for 9-1-1 purposes should be used to further 9-1-1's most basic purpose: to ensure that 9-1-1 callers can quickly be located in emergency situations and receive an effective emergency response. Any diversion of 9-1-1 fees not only puts one of the nation's most critical systems in jeopardy, but also risks breaking the trust established with the public, to the extent 9-1-1 monies are used for purposes that differ from what consumers have understood.

9-1-1 surcharges in Nevada currently are used for the enhancement of 9-1-1 emergency systems. SB 176 would authorize counties to use 9-1-1 fees for a purpose other than the support of emergency communications operations, maintenance, or enhancement. While NENA strongly supports the efforts of law enforcement, NENA urges against treating designated 9-1-1 funds as a revenue source available to be diverted for use in non-9-1-1 programs. According to the Federal Communications Commission, thousands of lives are saved every year thanks to America's 9-1-1 systems. A practice of diverting 9-1-1 funds, however, would negatively affect 9-1-1 center resources and slow the transition to new and improved 9-1-1 systems, such as Next Generation 9-1-1 (NG 9-1-1). Efforts are underway in Congress to provide federal funding for the upgrade of our nation's 9-1-1 centers to allow better communications between the public calling 9-1-1 and field responders using the advanced wireless technology of FirstNet. Communities across the country are paying for the operations of legacy 9-1-1 systems, while building the financial reserve to assist in the transition to NG9-1-1 service.

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Please be aware that SB 176 would foreclose Nevada's ability to secure federal grant funding to improve its 9-1-1 infrastructure. In 2004, Congress passed legislation, which was amended in 2012, to authorize federal grants to assist states and local governments in implementing E9-1-1 and NG 9-1-1. In the legislation, the diversion of 9-1-1 funds is specifically addressed, in the respect that applicants for federal grants must certify at the time of their request and annually thereafter that no portion of *any* designated 9-1-1 charges imposed by the state or other taxing jurisdiction is being obligated or expended for any other purpose. (47 U.S.C. § 942(c)(2)).

The federal legislation also precludes states that receive 9-1-1 funds from using the grants for any purpose other than for E9-1-1 or NG 9-1-1 enhancements. If a state awarded federal 9-1-1 funding is found to have misrepresented or misused any 9-1-1 funds, then *all* of the federal grant funds it received must be returned. (47 U.S.C. § 942(c)(3)). At least one state (Arizona) has had to return its federal grant money after it passed legislation that transferred 9-1-1 surcharge funds to the state General Fund.

Congress is currently circulating draft legislation to extend the grant program for NG 9-1-1. Draft versions of the legislation indicate that Congress will retain the statutory language concerning states' uses of 9-1-1 charges. Therefore, the enactment of SB 176 could foreclose Nevada's ability to secure federal grant funding.

The Federal Communications Commission (FCC) is also concerned with states' diversion of 9-1-1 funds. Just last month, FCC Commissioner O'Rielly expressed his strong opinion against the diversion of 9-1-1 funding, calling it "unconscionable." NENA agrees that funding diversions undermine the ability of local public safety emergency call centers to modernize. The practice of diverting 9-1-1 funds has several negative impacts on the 9-1-1 system overall. When states divert funds dedicated to the 9-1-1 system, it becomes difficult for 9-1-1 authorities to pay all of the technical and operational costs of current system, let alone prepare for the modernization of the 9-1-1 system. This makes it difficult to keep up with consumer technologies and public expectations, including the emergency communications needs of individuals with disabilities. Efforts to secure federal grant funds for 9-1-1 systems are also more likely to fail when federal policy makers see that funds available in the states for 9-1-1 are not used for their intended purpose. If the 9-1-1 system is not a state priority, it may not be treated as a federal priority.

While NENA is not opposed to the decision to use public funds for law enforcement body cameras, we believe it is *inappropriate public policy* to impose a surcharge specifically enumerated for the state's emergency telephone system, and then divert or dilute those funds for other uses unrelated to 9-1-1, regardless of the merits of the proposed alternate use.

As background, NENA has a long history of being at the forefront of emergency communications issues. NENA was formed in 1982 as a nonprofit corporation with a

Honorable David R. Parks

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mission to improve 9-1-1 through research, standards development, training, education, outreach, and advocacy. With more than 12,000 members NENA ensures 9-1-1 is prepared to meet the needs of all citizens making requests for assistance by developing standards and resources for 9-1-1 systems and operations; providing education, training and certifications for 9-1-1 professionals; informing policymakers about issues facing 9-1-1; and educating the public about 9-1-1 systems, their importance and their proper uses.

I look forward to discussing these concerns with you and other Nevada policy makers. Thank you again for your interest and consideration of these matters.

Respectfully,

A handwritten signature in black ink, appearing to read "Brian F. Fontes". The signature is fluid and cursive, with a large, stylized "B" and "F".

Brian F. Fontes, CEO

Washoe County Sheriff's Office
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4.2 Attachment B – Senate Bill 12



Senate Bill No. 12–Committee on Government Affairs

CHAPTER.....

AN ACT relating to counties; authorizing a county to use revenue collected from certain telephone surcharges to pay for an analysis or audit of the surcharges collected by a telecommunications provider, certain costs related to a master plan and certain costs for personnel and training associated with portable event recording devices and vehicular event recording devices; providing the conditions under which the audits may be performed; prioritizing the expenditure of the proceeds of certain telephone surcharges; requiring a recipient of money collected from the surcharge to repay or return that money under certain circumstances; and providing other matters properly relating thereto.

Legislative Counsel's Digest:

Existing law authorizes a board of county commissioners to impose a surcharge for the enhancement of the telephone system for reporting an emergency if the board adopts and reviews, at least annually, a 5-year master plan for the enhancement of that system or the purchase and maintenance of certain recording devices. (NRS 244A.7643) If a county imposes such a surcharge, the revenue collected from the surcharge must be deposited in a special revenue fund and used only for certain purposes. (NRS 244A.7645)

Section 1.3 of this bill authorizes the revenue collected from the surcharge to also be used to pay for the costs of an analysis or audit of the surcharges collected by a telecommunications provider. **Section 1** of this bill authorizes the board of county commissioners in a county where a surcharge is imposed to engage an independent auditor to perform such an analysis or audit: (1) as part of the mandatory review of the 5-year master plan; or (2) if a previous analysis or audit revealed evidence of a violation of certain provisions of law with respect to the amount of money a telecommunications provider collected or remitted to the county.

Section 1.3 further authorizes the revenue collected from the surcharge to also be used for personnel and training associated with: (1) maintaining, updating and operating the equipment, hardware and software of portable event recording devices and vehicular event recording devices; and (2) the maintenance, retention and redaction of audio and video events recorded on portable event recording devices and vehicular event recording devices.

Section 1.3 establishes the order of priority that revenue collected from the surcharge may be expended.

Section 1.3 also requires a recipient to: (1) return money not used within 6 months for an approved purpose; (2) repay any money that is not used for an approved purpose; and (3) repay any amount to which the recipient was not entitled to receive.

EXPLANATION – Matter in *bolded italics* is new; matter between brackets [omitted material] is material to be omitted.



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THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN
SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. Chapter 244A of NRS is hereby amended by adding thereto a new section to read as follows:

1. Except as otherwise provided in subsection 3, if a surcharge is imposed in a county pursuant to NRS 244A.7643, the board of county commissioners of that county may, as part of its review of the 5-year master plan adopted pursuant to NRS 244A.7643 for the enhancement of the telephone system for reporting emergencies in the county or for the purpose of purchasing and maintaining portable event recording devices and vehicular event recording devices, as applicable, engage a qualified independent auditor to perform an analysis or audit of the surcharges collected by telecommunications providers in the county.

2. An auditor that performs an analysis or audit pursuant to this section:

(a) Shall not charge a fee exceeding the actual costs of performing the analysis or audit.

(b) Shall submit a report of his or her findings to the advisory committee of the county established pursuant to NRS 244A.7645.

3. If an auditor performing an analysis or audit of the surcharges collected by telecommunications providers finds in the course of conducting the analysis or audit evidence of a violation of the provisions of NRS 244A.7643, with respect to the amount of money collected or remitted to the county treasurer by a telecommunications provider, the board of county commissioners may engage a qualified independent auditor to perform an additional analysis or audit of the surcharges collected by the telecommunications provider before the next review of the 5-year master plan is conducted.

Sec. 1.3. NRS 244A.7645 is hereby amended to read as follows:

244A.7645 1. If a surcharge is imposed pursuant to NRS 244A.7643 in a county whose population is 100,000 or more, the board of county commissioners of that county shall establish by ordinance an advisory committee to develop a plan to enhance the telephone system for reporting an emergency in that county and to oversee any money allocated for that purpose. The advisory committee must:

(a) Consist of not less than five members who:

(1) Are residents of the county;



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(2) Possess knowledge concerning telephone systems for reporting emergencies; and

(3) Are not elected public officers.

(b) Subject to the provisions of subparagraph (3) of paragraph (a), include the chief law enforcement officer or his or her designee from each office of the county sheriff, metropolitan police department, police department of an incorporated city within the county and department, division or municipal court of a city or town that employs marshals within the county, as applicable.

2. If a surcharge is imposed pursuant to NRS 244A.7643 in a county whose population is less than 100,000, the board of county commissioners of that county shall establish by ordinance an advisory committee to develop a plan to enhance or improve the telephone system for reporting an emergency in that county and to oversee any money allocated for that purpose. The advisory committee must:

(a) Consist of not less than five members who:

(1) Are residents of the county;

(2) Possess knowledge concerning telephone systems for reporting emergencies; and

(3) Are not elected public officers.

(b) Include a representative of an incumbent local exchange carrier which provides service to persons in that county. As used in this paragraph, “incumbent local exchange carrier” has the meaning ascribed to it in 47 U.S.C. § 251(h)(1), as that section existed on October 1, 1999, and includes a local exchange carrier that is treated as an incumbent local exchange carrier pursuant to that section.

(c) Subject to the provisions of subparagraph (3) of paragraph (a), include the chief law enforcement officer or his or her designee from each office of the county sheriff, metropolitan police department, police department of an incorporated city within the county and department, division or municipal court of a city or town that employs marshals within the county, as applicable.

3. If a surcharge is imposed in a county pursuant to NRS 244A.7643, the board of county commissioners of that county shall create a special revenue fund of the county for the deposit of the money collected pursuant to NRS 244A.7643. The money in the fund must be used only:

(a) *To pay the costs of adopting and reviewing the 5-year master plan for the enhancement of the telephone system for reporting emergencies in the county that is required pursuant to NRS 244A.7643.*



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(b) With respect to the telephone system for reporting an emergency:

(1) In a county whose population is 45,000 or more, to enhance the telephone system for reporting an emergency, including only:

(I) Paying recurring and nonrecurring charges for telecommunication services necessary for the operation of the enhanced telephone system;

(II) Paying costs for personnel and training associated with the routine maintenance and updating of the database for the system;

(III) Purchasing, leasing or renting the equipment and software necessary to operate the enhanced telephone system, including, without limitation, equipment and software that identify the number or location from which a call is made; and

(IV) Paying costs associated with any maintenance, upgrade and replacement of equipment and software necessary for the operation of the enhanced telephone system.

(2) In a county whose population is less than 45,000, to improve the telephone system for reporting an emergency in the county.

~~[(b)]~~ (c) With respect to purchasing and maintaining portable event recording devices and vehicular event recording devices, ~~[paying]~~:

(1) *Paying* costs associated with the acquisition, maintenance, storage of data, upgrade and replacement of equipment and software necessary for the operation of portable event recording devices and vehicular event recording devices or systems that consist of both portable event recording devices and vehicular event recording devices ~~[(1)]~~;

(2) *Paying costs for personnel and training associated with maintaining, updating and operating the equipment, hardware and software necessary for portable event recording devices and vehicular event recording devices or systems that consist of both portable event recording devices and vehicular event recording devices; and*

(3) *Paying costs for personnel and training associated with the maintenance, retention and redaction of audio and video events recorded on portable event recording devices and vehicular event recording devices or systems that consist of both portable event recording devices and vehicular event recording devices.*



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(d) To pay any costs associated with performing an analysis or audit pursuant to section 1 of this act of the surcharges collected by telecommunications providers.

4. For the purposes described in subsection 3, money in the fund must be expended in the following order of priority:

(a) Paying the costs authorized pursuant to paragraph (a) of subsection 3 to adopt and review the 5-year master plan.

(b) If the county performs an analysis or audit described in section 1 of this act, paying the costs associated authorized pursuant to paragraph (d) of subsection 3.

(c) Paying the costs authorized pursuant to paragraph (b) of subsection 3.

(d) If the county has imposed a portion of the surcharge for purposes of purchasing and maintaining portable event recording devices and vehicular event recording devices:

(1) Paying the costs authorized pursuant to paragraph (c) of subsection 3 other than costs related to personnel and training.

(2) Paying the costs authorized pursuant to paragraph (c) of subsection 3 related to personnel.

(3) Paying the costs authorized pursuant to paragraph (c) of subsection 3 related to training.

5. If money in the fund is distributed to a recipient and:

(a) The recipient has not used the money for any purpose authorized pursuant to subsection 3 within 6 months, the recipient must:

(1) Notify the board of county commissioners and the advisory committee; and

(2) Return the unused money.

(b) The recipient used any portion of the money for a purpose that is not authorized pursuant to subsection 3, the recipient must:

(1) Notify the board of county commissioners and the advisory committee; and

(2) Repay the portion of the money that was used for a purpose not authorized pursuant to subsection 3.

(c) The recipient was not entitled to receive all or a portion of the money, the recipient must:

(1) Notify the board of county commissioners and the advisory committee; and

(2) Repay all money to which the recipient was not entitled to receive.

6. If the balance in the fund created in a county whose population is 100,000 or more pursuant to subsection 3 which has not been committed for expenditure exceeds \$5,000,000 at the end



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of any fiscal year, the board of county commissioners shall reduce the amount of the surcharge imposed during the next fiscal year by the amount necessary to ensure that the unencumbered balance in the fund at the end of the next fiscal year does not exceed \$5,000,000.

~~[5-]~~ 7. If the balance in the fund created in a county whose population is 45,000 or more but less than 100,000 pursuant to subsection 3 which has not been committed for expenditure exceeds \$1,000,000 at the end of any fiscal year, the board of county commissioners shall reduce the amount of the surcharge imposed during the next fiscal year by the amount necessary to ensure that the unencumbered balance in the fund at the end of the next fiscal year does not exceed \$1,000,000.

~~[6-]~~ 8. If the balance in the fund created in a county whose population is less than 45,000 pursuant to subsection 3 which has not been committed for expenditure exceeds \$500,000 at the end of any fiscal year, the board of county commissioners shall reduce the amount of the surcharge imposed during the next fiscal year by the amount necessary to ensure that the unencumbered balance in the fund at the end of the next fiscal year does not exceed \$500,000.

Sec. 1.7. 1. Notwithstanding the provisions of section 1 of this act, the board of county commissioners of a county where a surcharge is imposed pursuant to NRS 244A.7643 may, between July 1, 2019, and July 1, 2020, engage an independent auditor to perform an analysis or audit of the surcharges collected by telecommunications providers.

2. An auditor that performs an analysis or audit pursuant to this section:

(a) Shall not charge a fee exceeding the actual costs of performing the analysis or audit.

(b) Shall submit a report of his or her findings to the advisory committee of the county established pursuant to NRS 244A.7645.

3. If a board of county commissioners has an analysis or audit performed pursuant to this section, the board may use money in the special revenue fund created pursuant to NRS 244A.7645, as amended by section 1.3 of this act, to pay the costs of performing the analysis or audit.

Sec. 2. This act becomes effective on July 1, 2019.



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***4.3 Attachment C – FCC Final Rules on Acceptable
Expenditures of 9-1-1 Surcharge Revenues***



APPENDIX A**Final Rules**

For the reasons described in the preamble, the Federal Communications Commission amends 47 CFR part 9 as follows:

PART 9 – 911 Requirements

1. The authority citation for part 9 is revised to read as follows: Authority: 47 U.S.C. 151–154, 152(a), 155(c), 157, 160, 201, 202, 208, 210, 214, 218, 219, 222, 225, 251(e), 255, 301, 302, 303, 307, 308, 309, 310, 316, 319, 332, 403, 405, 605, 610, 615, 615 note, 615a, 615b, 615c, 615a-1, 616, 620, 621, 623, 623 note, 721, and 1471, and Section 902 of Title IX, Division FF, Pub. L. 116–260, 134 Stat. 1182, unless otherwise noted.

2. Add subpart I, consisting of §§ 9.21 through 9.26, to read as follows:

Subpart I – 911 Fees

Sec.

9.21 Applicability.

9.22 Definitions.

9.23 Designation of acceptable obligations or expenditures for purposes of section 902 of Consolidated Appropriations Act, 2021, Pub. L. No. 116-260, Division FF, Title IX, section 902(c)(1)(C).

9.24 Petition regarding additional purposes and functions.

9.25 Participation in annual fee report data collection.

9.26 Advisory committee participation.

§ 9.21 Applicability.

The rules in this subpart apply to States or taxing jurisdictions that collect 911 fees or charges (as defined in this subpart) from commercial mobile services, IP-enabled voice services, and other emergency communications services.

§ 9.22 Definitions.

For purposes of this subpart, the terms in this section have the following meanings set forth below. Furthermore, where the Commission uses the term “acceptable” in this subpart, it is for purposes of Consolidated Appropriations Act, 2021, Pub. L. No. 116-260, Division FF, Title IX, section 902(c)(1)(C).

911 fee or charge. A fee or charge applicable to commercial mobile services, IP-enabled voice services, or other emergency communications services specifically designated by a State or taxing jurisdiction for the support or implementation of 911 services. A 911 fee or charge shall also include a fee or charge designated for the support of public safety, emergency services, or similar purposes if the purposes or allowable uses of such fee or charge include the support or implementation of 911 services.

Diversion. The obligation or expenditure of a 911 fee or charge for a purpose or function other than the purposes and functions designated by the Commission as acceptable pursuant to § 9.23. Diversion also includes distribution of 911 fees to a political subdivision that obligates or expends such fees for a purpose or function other than those designated as acceptable by the Commission pursuant to § 9.23.

Other emergency communications services. The provision of emergency information to a public safety answering point via wire or radio communications, and may include 911 and E911 service.

State. Any of the several States, the District of Columbia, or any territory or possession of the United States.

State or taxing jurisdiction. A State, political subdivision thereof, Indian Tribe, or village or regional corporation serving a region established pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 *et seq.*).

§ 9.23 Designation of acceptable obligations or expenditures for purposes of section 902 of Consolidated Appropriations Act, 2021, Pub. L. No. 116-260, Division FF, Title IX, section 902(c)(1)(C).

- (a) Acceptable purposes and functions for the obligation or expenditure of 911 fees or charges for purposes of section 902 are limited to:
 - (1) Support and implementation of 911 services provided by or in the State or taxing jurisdiction imposing the fee or charge; and
 - (2) Operational expenses of public safety answering points within such State or taxing jurisdiction.
- (b) Examples of acceptable purposes and functions include, but are not limited to, the following, provided that the State or taxing jurisdiction can adequately document that it has obligated or spent the fees or charges in question for these purposes and functions:
 - (1) PSAP operating costs, including lease, purchase, maintenance, replacement, and upgrade of customer premises equipment (CPE) (hardware and software), computer aided dispatch (CAD) equipment (hardware and software), and the PSAP building/facility and including NG911, cybersecurity, pre-arrival instructions, and emergency notification systems (ENS). PSAP operating costs include technological innovation that supports 911;
 - (2) PSAP personnel costs, including telecommunicators' salaries and training;
 - (3) PSAP administration, including costs for administration of 911 services and travel expenses associated with the provision of 911 services;
 - (4) Integrating public safety/first responder dispatch and 911 systems, including lease, purchase, maintenance, and upgrade of CAD hardware and software to support integrated 911 and public safety dispatch operations; and
 - (5) Providing for the interoperability of 911 systems with one another and with public safety/first responder radio systems.
- (c) Examples of purposes and functions that are not acceptable for the obligation or expenditure of 911 fees or charges for purposes of section 902 include, but are not limited to, the following:
 - (1) Transfer of 911 fees into a State or other jurisdiction's general fund or other fund for non-911 purposes;
 - (2) Equipment or infrastructure for constructing or expanding non-public safety communications networks (e.g., commercial cellular networks); and
 - (3) Equipment or infrastructure for law enforcement, firefighters, and other public safety/first responder entities that does not directly support providing 911 services.

- (d) If a State or taxing jurisdiction collects fees or charges designated for “public safety,” “emergency services,” or similar purposes that include the support or implementation of 911 services, the obligation or expenditure of such fees or charges shall not constitute diversion provided that the State or taxing jurisdiction:
 - (1) Specifies the amount or percentage of such fees or charges that is dedicated to 911 services;
 - (2) Ensures that the 911 portion of such fees or charges is segregated and not commingled with any other funds; and
 - (3) Obligates or expends the 911 portion of such fees or charges for acceptable purposes and functions as defined under this section.

§ 9.24 Petition regarding additional purposes and functions.

- (a) A State or taxing jurisdiction may petition the Commission for a determination that an obligation or expenditure of 911 fees or charges for a purpose or function other than the purposes or functions designated as acceptable in § 9.23 should be treated as an acceptable purpose or function. Such a petition must meet the requirements applicable to a petition for declaratory ruling under § 1.2 of this chapter.
- (b) The Commission shall grant the petition if the State or taxing jurisdiction provides sufficient documentation to demonstrate that the purpose or function:
 - (1) Supports public safety answering point functions or operations; or
 - (2) Has a direct impact on the ability of a public safety answering point to:
 - (i) Receive or respond to 911 calls; or
 - (ii) Dispatch emergency responders.

§ 9.25 Participation in annual fee report data collection.

- (a) If a State or taxing jurisdiction receives a grant under section 158 of the National Telecommunications and Information Administration Organization Act (47 U.S.C. 942) after December 27, 2020, such State or taxing jurisdiction shall provide the information requested by the Commission to prepare the report required under section 6(f)(2) of the Wireless Communications and Public Safety Act of 1999, as amended (47 U.S.C. 615a-1(f)(2)).
- (b) Each state or taxing jurisdiction subject to paragraph (a) of this section must file the information requested by the Commission and in the form specified by the Public Safety and Homeland Security Bureau.
- (c) Paragraph (b) of this section contains information collection and recordkeeping requirements. Compliance will not be required until after approval by the Office of Management and Budget. The Commission will publish a document in the *Federal Register* announcing that compliance date and revising this paragraph accordingly.

§ 9.26 Advisory committee participation.

Notwithstanding any other provision of law, any State or taxing jurisdiction identified by the Commission in the report required under section 6(f)(2) of the Wireless Communications and Public Safety Act of 1999, as amended (47 U.S.C. 615a-1(f)(2)), as engaging in diversion of 911 fees or charges shall be ineligible to participate or send a representative to serve on any advisory committee established by the Commission.