

September 23, 2020

DAS/BDA Systems Designers, Installers, and Maintenance Firms
[Distributed by email]

Re: Message from Seattle Fire Marshal Regarding New Regional Fire Code Provisions and Reporting Forms, and Preliminary Information Regarding the Transition to PSERN

Dear DAS/BDA Systems Designers, Installers, and Maintenance Firms,

An Advisory Group consisting of representatives from Fire Departments, Radio System Operators and industry including engineering/radio design and installation firms met in 2018 and 2019 with the goal of providing clarity and consistency in fire code requirements for emergency responder radio communication systems across jurisdictions in the region.

The group developed modifications to Section 510 of the 2018 International Fire Code (2018) concerning emergency responder radio communication systems (see Attachment 1). These provisions achieve the equivalent fire and life safety benefits as the 2015 Seattle Fire Code and 2018 International Fire Code however provide additional clarity on construction and maintenance provisions that are anticipated to benefit building owners and those who design, install, and maintain the systems. In Seattle, the Fire Marshal is allowing early use of the 2018 SFC provisions in Section 510. In other jurisdictions, the provisions will take effect in February 2021 along with the adoption of the 2018 Fire Code in Washington State. For a list of participating jurisdictions that will use the standardized code and forms, see Attach 4.

Highlights of Section 510 of the Proposed 2018 Seattle Fire Code

1. **Scoping provisions** – the International Fire Code (IFC) requires that all buildings are required to have in-building radio systems except buildings that have a wired communication system (firefighter telephones) or when the *fire code official* determines that radio coverage is not need. Our recommendation provides specific criteria when in-building radio systems are required that balance risk and need and provide predictability for developers.
2. **BDA** – the IFC allows either a broadband or channelized BDA. PSERN will only allow channelized BDA's. The proposed changes will only allow for channelized BDA's unless specifically approved by PSERN.
3. **Enclosures** – where the IFC requires certain equipment to be enclosed by NEMA rated enclosures, the proposed changes allows for equivalent alternatives.
4. **Grid squares** – where the IFC specifies the division of building floor plate into 20 equal grid squares, the proposed changes limits the size of a grid square to 6,400 s.f.
5. **Documentation** – the IFC does not require that any documentation of the system be maintained on site which has proved to be a costly issue for ongoing testing. The proposed change requires that documentation of the system be maintained on site.
6. **Protection of wiring** – the IFC does not require protection of any of the wiring. The proposed change requires that the “backbone” wiring be protected to the same level as required for interior stairs or shafts.
7. **Signage** – there is no signage requirement in the IFC. The proposed changes require signage to identify the building is equipped with an in-building radio system, and where the control equipment is located.
8. **Streamlined annunciation requirements** for the BDA system on the fire alarm panel.
9. **Confidence Testing** – the IFC requires annual confidence testing to be performed exactly the same as the original commissioning testing. The proposed change provides an alternate testing path when documentation exists that would substantially reduce the cost without sacrificing verification
10. **Delivered Audio Quality (DAQ)** – this measure is introduced with the 2018 International Fire Code.
11. **Coverage requirements for the grid square test** are 90% for non-critical areas in Seattle and 99% for critical areas.

For Your Awareness: How to Report Commissioning and Annual Testing to SFD

In Seattle, the Fire Code requires building owners to test and maintain BDAs annually. The code also requires companies performing commissioning and/or annual testing to report those tests to the Seattle Fire Department timely.

- **Annual testing and maintenance reports – updated form**

Continue to use our 3rd party vendor [The Compliance Engine \(TCE\)](#). Test results must be entered into TCE within 7 days of the date of the inspection/repairs. Pdf version showing questions that make up the TCE webform:

<https://www.seattle.gov/fire/business-services/systems-testing#systemstestingforms>

- **Acceptance/commission report – new form (optional until 3/31/2021, mandatory starting 4/1/2021)**

Between October 1, 2020 and March 31, 2021, companies will be allowed to pilot the new DAS/BDA **commissioning test** form and SFD will waive the \$30 test submittal fee for commissioning tests, also called acceptance tests. It is SFD's intention to provide a transition period for companies to become familiar with the new commissioning form.

If you choose to use the form, please submit it in TCE prior to scheduling your SFD inspection. Use of the form will become mandatory in February 2021. One benefit of adding the BDA into TCE is that all information required for subsequent annual testing will be readily available the following year. Pdf version showing questions that make up the TCE webform:

<https://www.seattle.gov/fire/business-services/systems-testing#systemstestingforms>

- **Coordinate testing with City of Seattle Radio Shop** Please call about one week prior to testing at 206-386-1213 to arrange to borrow portable public safety radios and to schedule a time to measure signal level received as part of testing.

Early Tentative Information Re PSERN Transition and In-Building Coverage

The existing public safety radio network has reached the end of its supported life and will be replaced by the Puget Sound Emergency Radio Network (PSERN), funded by a property tax levy approved by King County voters in April 2015. Implementation is expected to be complete in 2023. Building owners will need to ensure their DAS are retuned and older systems may need to be upgraded to meet PSERN minimum requirements. <https://psern.org/requirements/> PSERN has provided early tentative information regarding timing: Building owners and technical companies may be able to learn coordinates for retuning at the end of 2020 and, beginning in January 2021 or thereabouts, building owners may wish to receive bids from contractors and initiate budgeting. It is expected that system retuning/replacement will be **required to occur on or around Q4 2021**. Please work with your customers to share this preliminary timing and requirement. A letter with more detailed information is expected from PSERN to building owners soon.

Additional Information

If you have questions, please see our collection of resources for building owners and DAS installers/maintenance companies: <https://www.seattle.gov/fire/business-services/systems-testing#bdadasemergencyradiocommunications>. You may also email us at sfd_fmo_systemstesting@seattle.gov.

We are grateful for the partnership with building owners and DAS/BDA designers, installers and maintenance professionals related to provision of in-building radio coverage for first responders. On behalf of SFD, thank you and have a safe day.

Respectfully,



Assistant Chief Timothy J. Munnis, Fire Marshal
Seattle Fire Department

TJM:kg

Attachment 1: Proposed 2018 Seattle Fire Code Section 510,

Attachment 2: New BDA/DAS Acceptance Test Form for Use During SFD Inspection at Time of Commissioning,

Attachment 3: Updated BDA/DAS Annual Test Form for Reporting on Required Annual Inspections, Testing and Repairs,

Attachment 4: Participating Jurisdictions