

POLICY: PLAN SUBMITTAL REQUIREMENTS FOR AUTOMATIC FIRE SPRINKLER SYSTEMS (AFSS)

Division of the State Architect (DSA) documents referenced within this publication are available on the [DSA Forms](#) or [DSA Publications](#) webpages.

PURPOSE

The purpose of this policy is to establish Automatic Fire Sprinkler System (AFSS) submittal requirements and timelines, based on the California Government Code, the currently adopted California Building Code, and applicable adopted NFPA Standards. DSA is the statutory Authority Having Jurisdiction for construction oversight and inspection for K-12 public schools, community colleges, and essential services building projects and herein establishes the submittal requirements for AFSS projects within DSA jurisdiction.

BACKGROUND

Per the California Administrative Code (CAC), the deferral of any plans for any system or component is at the discretion of DSA and not automatic. In the past within DSA, AFSS have been allowed to be routinely deferred.

1. SCOPE

This policy applies to K-12 public schools, community colleges, essential services buildings, and pre-check (PC) designs under the jurisdiction of DSA. The scope of this policy includes all adopted parts of the California Building Code (CBC), California Fire Code (CFC), and the currently adopted editions of the National Fire Protection Association (NFPA) standards 13, 14, 20, and 24 relating to AFSS as adopted and amended in CBC Chapter 35.

2. POLICY

As of July 1, 2010, submittals for projects that are required by Title 24 (California Building/Fire Codes) to have an AFSS shall include a complete AFSS package as part of the initial project submittal. See Section 4 below of this policy for minimum requirements for the AFSS portion of the submittal.

2.1 Projects that are submitted without the required AFSS plans and documentation, or with incomplete AFSS plans and documents, will be deemed by DSA to be an incomplete project submittal and therefore will cause the entire submittal to be rejected.

2.2 Where project timelines or material fabrication and delivery timelines present an impact to the timely design and submittal of AFSS plans and documentation such that a deferral is necessary, the Architect or Record (AOR) or Engineer of Record (EOR) shall submit a written request outlining the reasons for deferring the AFSS submittal to DSA for consideration and approval, prior to initial project submittal.

2.3 Fire Protection Water Tanks and Fire Pumps

2.3.1 Where site conditions are such that a fire protection water tank and or fire pump are necessary, the DSA permits the submittal of plans and documents to be deferred in accordance with the following:

2.3.1.1 Construction and installation cannot be started until the plans and documentation have been reviewed and approved by DSA.

2.3.1.2 Project plans must include on the cover sheet, the items to be deferred. Where projects include increments, each increment scope of work must be clearly defined on the plans.

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2.3.1.3 Project plans must indicate the proposed location for the fire protection water tank(s) and or fire pump.

2.3.1.4 The project specifications must include the design criteria for proposed fire protection water tank(s) and or fire pump.

2.3.1.5 Fire protection water tanks shall be designed in accordance with NFPA 22, and the structural provisions in CBC Chapter 16A.

3. PROCEDURE

3.1 Submittal Requirements

To ensure consistency of the AFSS review, the use by the AOR/EOR and AFSS design professional of *Interpretation of Regulations (IR) A-25, Design, Installation and Maintenance of Automatic Fire Sprinkler Systems*, and *Bulletin (BU) 15-02: Water Supply Tests for Fire Systems* is recommended.

3.2 The AFSS designer shall provide, via the AOR/EOR, all items and documentation. For projects submitted under the 2019 edition of the California Building Code (CBC), plans shall reflect the applicable information outlined in Chapter 23, Sections 23.1 through 23.3.5.6 of the 2016 edition of NFPA 13 as amended. For projects submitted under the 2022 CBC, plans shall reflect the applicable information outlined in Section 4.5.1.1 and Chapter 28, Section 28.1 of the 2022 edition of NFPA 13 as amended including, but not limited to, the following:

3.2.1 Hydraulic calculations, product material data sheets, current water supply information, soils report and any other applicable information.

3.2.2 Construction documents for projects requiring AFSS shall include all plans, hydraulic calculations, current water flow data (including gauge and flow hydrant locations), specifications, required California State Fire Marshal listings, and any other documentation or plans (water tanks, fire pumps, etc.) required to perform a comprehensive and complete plan review.

3.2.3 A site plan with Local Fire Authority (LFA) review and sign-off on form *DSA 810: Fire & Life Safety Site Conditions Submittal* when a design alternate means associated with water supply is proposed.

3.2.4 Incomplete submittals will be returned to the AOR/EOR.

3.3 Review Process

3.3.1 DSA structural safety section will review the types, details, drawings and connections of the pipe hangers, seismic bracing, and other structural considerations for AFSS piping to the structural members of the building.

3.3.2 DSA fire life safety officers will review proposed designs for compliance with the applicable edition of NFPA 13 as adopted and amended.

3.3.3 The AOR/EOR shall coordinate all corrections, design changes, and requirements with all other design disciplines. Per the CAC, Title 24, Part 1, Section 4-318 (a): "When plans and or specifications require extensive corrections, a corrected set of prints and specifications shall be submitted for review if requested by DSA."

3.3.3.1 AFSS correction notes or requirements not addressed or complied with adequately prior to the back check of the project will be cause for "not approving" the entire project.

3.3.3.2 The AOR/EOR and the AFSS designer must maintain communication and close coordination with the DSA Structural Safety (SS) and Fire Life Safety (FLS) plan reviewers to ensure that all correction requirements are understood and have been addressed adequately before scheduling a back check.

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3.4 Changes

3.4.1 Once an entire project, including the AFSS portion, has been reviewed, back checked, approved, and stamped out by DSA, new designs or revisions of the AFSS must be submitted to DSA for review and approval prior to the beginning of the AFSS installation. Substantial changes may result in additional review time by DSA. Installation of an AFSS will not be allowed to be started without DSA approved and stamped plans (including revisions and changes) on site for installers and project inspectors to utilize. The construction change document (CCD) process may not be used to redesign an AFSS by a Type "A" general contractor or a "C-16" licensed contractor.

3.4.2 Minor changes (such as changes in product type or manufacturer) that do not significantly affect the design characteristics of the system shall be, at the discretion of the DSA field engineer, submitted to DSA for review and approval in accordance with *IR A-6: Construction Change Document Submittal and Approval Process*.

3.4.3 Any substitution of "flexible" type piping in lieu of "rigid" pipe or any change in size, manufacturer, or lengths of "flexible" type piping, requires submittal of piping plans, product data sheets and revised hydraulic calculations to DSA for review and approval.

4. CONTACT INFORMATION

For questions regarding this Policy, contact the regional office manager at the DSA regional office where the project will be assigned, please visit www.dgs.ca.gov/DSA/Contact.

REFERENCES:

California Government Code, Section 14963
2022 Title 24, Part 1, California Administrative Code, Section 4-317, 4-318
2022 Title 24, Part 2, California Building Code (CBC), Sections 106.1.1.1, 903 and Chapter 16A
National Fire Protection Association Standards (NFPA) 13, 14, 20, 22, and 24 as adopted in 2022 CBC
ASCE 7-10

A Division of the State Architect (DSA) Policy is a formally established set of governing statements based on law and code objectives, addressing any aspect of DSA's review and approval of plans and specifications and construction oversight programs that is not clearly addressed by code. A Policy also may specify administrative or technical requirements that are not yet addressed within Title 24 but are deemed important and necessary to fulfill code objectives in advance of adoption into the code.

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APPENDIX 1: FREQUENTLY ASKED QUESTIONS

Q1. Are there anticipated circumstances that would result in DSA allowing the deferral of an AFSS?

A1. NO. It is intended that the project plans include a complete submittal.

Q2. Once an AFSS is submitted and approved by DSA, can a type “A” general contractor, a “C-16” contractor, or other qualified individual change the design as part of, or after, the bidding process?

A2. NO. The DSA-approved AFSS plan must be constructed as approved by DSA unless a construction change document (CCD-A) is initiated and submitted by the AOR/EOR (see section 4.3 above and Q3 and A3 below).

Q3. Will a field change document be required for minor changes?

A3. Required submittals to DSA of Construction Change Documents (CCD) for the AFSS are at the discretion of the field engineer, but are recommended.

Q4. Are “permanent” portable buildings required to have an AFSS?

A4. YES, where required by the California Building and or Fire Code.

Q5. Are temporary portable buildings constructed with state funds required to have an AFSS?

A5. NO. CBC Section 903.2.19.1 directs the code user to Section 903.2.20 which states that temporary portable buildings sited on a campus for less than three years on a temporary foundation, are not required to have AFSS installed at the time of installation on a campus.

Portable buildings: The school administration shall provide for the installation of all requirements of a permanent building at the end of the permitted three-year period,

OR:

The portable building shall be removed (from the campus)

OR:

The school administration may submit a request (with justification included) to the State Allocation Board for an extension pursuant to Education Code Section 17074.54(a) and (b).

Q5a. Will a temporary portable building, used as a science classroom or science laboratory, be required to have an AFSS when the chemicals used in the classroom or laboratory will be under the exempt amounts allowed by CBC Table 307.1(1)?

A5a. YES. If a temporary portable building is to be used as an area with “special hazards or processes,” exemption of AFSS requirements will not be allowed. Special hazards and processes are described in CBC 903.2.2 item 4. A temporary portable building, by definition, will be placed on a campus for three years or less. Auto shops, science labs, and other areas with hazardous materials or processes must be protected during that time. The investment required for these types of facilities may not justify the use of a temporary portable building.

Appropriate planning of the site and building locations will help to alleviate problems associated with the use of temporary portable buildings.

Q6. If a project requires a “partial” AFSS system, can it be deferred?

A6. NO. All AFSS shall be submitted as part of the initial project submittal, unless a significant project impact is present, and the AOR has submitted a written request to defer the AFSS which has been approved by the DSA.

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Q7. Can a general “A” licensed contractor or a C-16 contractor design an AFSS?

A7. Since the design must be submitted prior to bidding and letting of the construction contract, neither a general type “A” licensed contractor nor a “C-16” contractor may design the system. The general type “A” contractor or “C-16” contractor must build the system to the design approved by DSA. Please see DSA *IR A-25: Design, Installation and Maintenance of Automatic Fire Sprinkler Systems*.

Q8. Can “Incremental Submittals” include the AFSS as a separate increment?

A8. NO. “Incremental Submittals” of plans and specifications that include buildings that require an AFSS shall have the AFSS submitted as part of the associated increment for each building or group of buildings.

Q9. Can underground fire line piping be submitted as a separate increment?

A9. YES.

1. When the construction plan is submitted for the first building that requires an AFSS, the underground fire service piping plan for the entire scope of the project shall be submitted in order to verify the hydraulic calculations and locations of test hydrants associated with water flow (supply) data.
2. When the underground fire service piping plans are initiated and submitted prior to the submittal of the building construction plans, they will be reviewed and approved based upon the face value of the design. A copy of the DSA-approved underground plans shall be included for reference with each applicable incremental submittal to ensure deviations have not been made and to ensure the hydraulic calculations have accounted for all underground piping and appurtenances.

Q10. Can a water tank or fire pump be deferred?

A10. DSA approval for the deferral of any item is not automatic. Water flow (supply) data must be provided at the time of the AFSS submittal. Where it is anticipated that a water tank or fire pump will be required and the submittal deferred, the initial plan submittal must indicate proposed locations and the project specifications must include the design criteria.,

Q11. How is the Local Fire Authority (LFA) involved in AFSS project plan reviews?

A11. The LFA is not directly involved with the review of AFSS designs, but is requested to review and sign off on form *DSA 810: Fire & Life Safety Site Conditions Submittal* which includes water supply information for building fire protection. The completed form is to be imaged on the fire access site plan.