

**FINAL STATEMENT OF REASONS  
FOR PROPOSED BUILDING STANDARDS  
OF THE STATE FIRE MARSHAL  
REGARDING THE 2019 CALIFORNIA FIRE CODE,  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 9  
(SFM)**

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a Final Statement of Reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

**UPDATES TO THE INITIAL STATEMENT OF REASONS:**

Government Code Section 11346.9(a)(1) requires an update of the information contained in the Initial Statement of Reasons. If the update identifies any data or any technical, theoretical or empirical study, report, or similar document on which the state agency is relying that was not identified in the Initial Statement of Reasons, the state agency shall comply with Government Code Section 11347.1.

The following group consists of updates to proposed items, resulting from a 15-day public comment period that SFM held. These comments and rationale appear in addition to the comments and rationale shown below. See section: OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).

**Item: #SFM 04/19-2-22**

**Chapter: 2, Definitions**

**Section: 202, Residential Group R-4**

**Rationale:** The SFM conducted a 15-Day public comment period and received no subsequent comments.

Adjustments to the Group R-4 definition came from a public comment submitted by Kevin Reinertson. The comment was that Occupancy classification for Group R-4. Both Codes have been inconsistent and need to be correlated. The CBC is missing text and the CFC has incorrect text. The 2016 CBC has the correct language. In response to the public comment, the SFM is proposing to correct the error.

In response to the public comment, the SFM is proposing to correct the error.

The 15-Day proposed modification to this section is to correlate the occupancy definition with the California Building Code definition. The section was re-organized to mirror the same format which is proposed for the California Building Code. The reference to classified occupancy conditions, is proposed to be deleted as it creates confusion. There are no classified occupancy conditions, only examples of program types that are listed. This proposal cleans up the language within the regulation.

Community Reentry and correctional centers are now classified as Group R-2.2. The proposal is to delete the examples from the list and correct the conflict.

**Item: #SFM 04/19-7-18**

**Chapter: 9, Fire Protection and Life Safety Systems**

**Section: 909, Smoke Control Systems**

**Rationale:** The SFM conducted a 15-Day public comment period and received no subsequent comments.

The SFM has received a public comment during the 45-day public comment period from John Woestman. The public comments states. "Opposite-swinging doors installed across a corridor in Groups I-2, I-2.1, & R2.1. SFM proposed revisions, Part 2 (CA Building Code) – the sections identified, below, have inconsistencies in the proposed revisions regarding requirements for opposite-swinging doors installed across a corridor in Groups I-2, I-2.1, & R2.1.

1. In Part 9, the SFM has not proposed for the CA Fire Code the SFM proposed revisions in Part 2, 709.5 Exception 1 regarding cross corridor doors
2. Part 9, Section 909.5.3 smoke control systems opening protection for cross corridor door pairs in Groups I-2, I-2.1, and R-2.1, the proposed revisions retain the provisions these doors are not required to be protected per Section 716

BHMA recommends further revisions of the proposals for Part 9 (and Part 2) with the result of consistent requirements for opposite-swinging doors installed across a corridor in Groups I-2, I-2.1, & R2.1.

In response to the public comment the SFM has proposed to correct Exception 3 where the words "not be required" were missed for deletion. The intent and a long-standing California amendment, has been to require the doors be protected per Section 716 of the California Building Code. This proposal is correcting a mistake from the adoption and printing of the 2018 International Building Code model code language in the California Building Code where it should not have been.

**Item: #SFM 04/19-8-8**

**Chapter: 10, Means of Egress**

**Section: 1020, Corridors**

**Rationale:** The SFM conducted a 15-Day public comment period and received no subsequent comments.

The SFM has discovered, during the 45-day public comment period that additional consideration was needed for the corridor width in Group I-2 and I-3 occupancies serving non-ambulatory persons. The purpose of the initial proposal was to clarify that the 96-inch-wide corridor width requirement for occupancy groups I-2 and I-3 was

intended to be for bed movement. The regulation is over restrictive for areas where bed movement is not being used.

The SFM has consulted with the Division of the State Architect (DSA), Executive Director Ida Clare for concurrence with the proposal. DSA is in support with the proposal and confirms that there is no conflict with existing laws or regulation.

The State Fire Marshal's I-3 workgroup intended to provide clarity for the 96-inch corridor width requirement for bed movement, which is in alignment with the model code.

It was a mistake in the initial proposal to strike the corridor width requirement for areas caring for one or more non-ambulatory persons. The California amendment is being proposed to remain, with the change being in the width requirement from 96-inches to 72-inches. The SFM I-3 workgroup agreed that a 72-inch requirement will fulfill the needs of non-ambulatory persons traveling in both directions within a corridor based on the 1991 Federal American with Disabilities Act (ADA).

The 1991 Federal American with Disabilities Act (ADA) states in Section A4.2 Space Allowances Reach Ranges; Subsection A4.2.1 (2) Space Requirements for Use of Walking Aids. Although people who use walking aids can maneuver through clear width openings of 32 in (815 mm), they need 36 in (915 mm) wide passageways and walks for comfortable gaits. Crutch tips, often extending down at a wide angle, are a hazard in narrow passageways where they might not be seen by other pedestrians. Thus, the 36 in (915 mm) width provides a safety allowance both for the person with a disability and for others.

**Item: #SFM 04/19-10-204**

**Chapter: 12, Energy Systems**

**Section: 1206, Electrical Energy Storage Systems (ESS)**

**Rationale:** The SFM conducted a 15-Day public comment period and received additional comments that are addressed in section: OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).

Adjustments to the proposal Section 1206.11 came from two public comments submitted separately from Nick Duvally and Joe Cain.

**Joe Cain's public comments** state, "For Residential Energy Storage Systems, we recommend the SFM modify Section 1206.11 of the California Fire Code to match the technical provisions and language proposed for California Residential Code Section R327. We have prepared a thorough mark-up of the Part 9 language to match the technical requirements and language of Part 2.5.

For any applicant requesting approval of residential ESS, and for any reviewer of residential ESS, the technical requirements for residential ESS in the CFC and

CRC should be the same. If the technical requirements in these two codes are different, then there is an inherent conflict in requirements such that applicants and reviewers are uncertain which technical requirements should be applied”.

**Nick Duvally’s public comments** states, “The proposal of the addition of this exception is in order to accomplish correlation between the California Residential Code, Section R327.1, and the California Fire Code Section 1206.11, both of which address ESS in Group R-3 and R-4 occupancies.

For reference, R327.1, per these Express Terms, will be altered to read:  
R327.1 General. ~~Stationary storage battery system shall comply with the provisions of this section.~~ Energy Storage Systems (ESS) shall comply with the provisions of this section.

Exceptions:

1. ESS listed and labeled in accordance with UL 9540 and marked “For use in residential dwelling units”, where installed in accordance with the manufacturer’s instructions and California Electrical Code.
2. ESS less than 1 kWh (3.6 megajoules).

Exception #2 is not being proposed by this public comment to be carried into Section 1206.11 because it already exists in Section 1206.11.1 (below). This lack of correlation between the CFC and CRC was a mistake due to the fact that CRC Section R327 was a part of the Group B hearings, whereas Section 1206 of the CFC was worked out in the Group A hearings of the ICC code development process; therefore, correlation was lost.

By pairing the addition of this exception with the deletion of the location option #4 of Section 1206.11.3 (see below, just like is being proposed for R327), it is accomplished that ESS that does not meet the safety standard necessary in order to qualify to be listed “For use in residential dwelling units”, is not allowed for use in “Enclosed utility closets, basements, storage or utility spaces within dwelling units with finished or noncombustible walls and ceilings.” However, by the same token, if an ESS is safe enough to qualify for the listing to be used “For use in residential dwelling units”, then it can be placed in “Enclosed utility closets, basements, storage or utility spaces within dwelling units with finished or noncombustible walls and ceilings,” because in that case it is in fact safe to do so. Listings and standards are in effect for a reason. There is no reason to jeopardize safety standards just to allow that every existing R-3 and R-4 can place an ESS in an interior room within the larger envelope of

the dwelling space. And new construction should be designed to accommodate ESS safely. There are 3 other locations available for ESS that do not meet the safety standard of “For use in residential dwelling units”; and there are many more location options for ESS that are safe enough to meet the standard.”

**In response to the public comments:** The SFM has proposed to add the Exception to Section 1206.11 to accomplish correlation between the California Residential Code (CRC), Section R327.1, and the California Fire Code (CFC) Section 1206.11. Both codes address Energy Storage Systems for Group R-3 and R-4 occupancies.

Exception #2 of Section R327.1 in the CRC is not being proposed to be carried into Section 1206.11 because it already exists in Section 1206.11.1. This lack of correlation between the CFC and CRC was inadvertent, since CRC Section R327 was a part of the International Code Council (ICC) Group B hearings. Whereas Section 1206 of the CFC was worked out in the ICC Group A hearings of the ICC code development process for the 2021 Edition of the model codes; therefore, correlation was lost.

**Item: #SFM 04/19-15-17**

**Chapter: 80, Referenced Standards**

**Section: UL, 9540A, 9540**

**Rationale:** The SFM conducted a 15-Day public comment period and received additional comments that are addressed in section: OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).

Adjustments to the adoption of reference standards came from a public comment submitted by John Taecker. Jon Tacker’s public comment states, “UL is fully supportive of the SFM’s proposal to bring in the requirements for energy storage systems from the 2021 International Fire Code. It appears one thing was overlooked, which was updating the referenced standard UL 9540. To identically match the update of this standard that was adopted in the 2021 International Fire Code (reference Proposal ADM47-19), UL 9540 should be referenced in Chapter 80 as follows: “9540—2016 Standard for Energy Storage Systems and Equipment”.

In response to the public comment, the SFM is proposing to update the edition of UL 9540 to identically match the update of this standard as it was adopted in the 2021 International Fire Code (reference Proposal ADM47-19). It is needed to address all the other proposed updates to Energy Storage Systems in Chapter 12 of the California Fire Code.

## **MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS**

Pursuant to Government Code Section 11346.9(a)(2), if the determination as to whether the proposed action would impose a mandate, the agency shall state whether the

mandate is reimbursable pursuant to Part 7 of Division 4. If the agency finds that the mandate is not reimbursable, it shall state the reasons for the finding(s).

The State Fire Marshal has determined that the proposed regulatory action would not impose a mandate on local agencies or school districts.

The proposed regulations are minimum standards for the prevention of fire and for the protection of life and property against fire.

The State Fire Marshal finds that the mandate is not reimbursable.

### **OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).**

Government Code Section 11346.9(a)(3) requires a summary of EACH objection or recommendation regarding the specific adoption, amendment, or repeal proposed, and an explanation of how the proposed action was changed to accommodate each objection or recommendation, or the reasons for making no change. This requirement applies only to objections or recommendations specifically directed at the agency's proposed action or to the procedures followed by the agency in proposing or adopting the action, or reasons for making no change. Irrelevant or repetitive comments may be aggregated and summarized as a group.

#### **Regarding Item #SFM 04/19-7-18, Section 909.5.3 of Final Express Terms.**

The proposed change restores CBC requirements for fire rated smoke barrier doors installed across corridors, eliminates confusion regarding requirements for the installation of smoke barrier doors, provides consistent requirements for both swinging doors and horizontal sliding doors and coordinates requirements with similar provisions included in CBC Section 909.5.3, Exception 3. The proposed change preserves exceptions prohibiting a center mullion and permitting the installation of protective plates on swinging doors installed across corridors.

**Commenter(s):** John Woestman, Builders Hardware Manufacturers Association (BHMA)

**Commenter(s) Recommendation:** Opposite-swinging doors installed across a corridor in Groups I-2, I-2.1, & R2.1.

SFM proposed revisions, Part 9 (CA Fire Code) – the sections identified, below, have inconsistencies in the proposed revisions regarding requirements for opposite-swinging doors installed across a corridor in Groups I-2, I-2.1, & R2.1.

1. In Part 9, the SFM has not proposed for the CA Fire Code the SFM proposed revisions in Part 2, 709.5 Exception 1 regarding cross corridor doors.
2. Part 9, Section 909.5.3 smoke control systems opening protection for cross corridor door pairs in Groups I-2, I-2.1, and R-2.1, the proposed revisions retain the provisions these doors are not required to be protected per Section 716

BHMA recommends further revisions of the proposals for Part 9 (and Part 2) with the result of consistent requirements for opposite-swinging doors installed across a corridor in Groups I-2, I-2.1, & R2.1.

**Agency Response:** In response to the public comment the SFM has proposed to correct Exception 3 where the words “not be required” were missed for deletion. The intent and a long-standing California amendment, has been to require the doors be protected per Section 716 of the California Building Code. This proposal is correcting a mistake from the adoption and printing of the 2018 International Building Code model code language in the California Building Code where it should not have been.

**Regarding Item #SFM 04/19-8-4, Section 1010.1.9.7 of Final Express Terms.**

The proposed change provides additional clarification that controlled egress doors are permitted only for restraint or containment of psychiatric and mental health patients. The terms psychiatric and mental health appear elsewhere in the CBC and for clarification, both terms are used in the proposed change. The proposed change deletes CBC 1010.1.9.7, Exception 2. Exception 2 references egress control systems used to reduce the risk of child abduction. In a Group I-2 occupancy, the SFM permits restraint only for psychiatric and mental health patients therefore exception 2 is not applicable. Permitting only smoke detectors and not heat detectors is consistent with previous editions of the CBC and 2019 CFC Sections 907.3.2.1, 907.3.2.2, 907.3.2.3 and 907.3.2.4.

**Commenter(s):** John Woestman, Builders Hardware Manufacturers Association (BHMA)

**Commenter(s) Recommendation:** BHMA recommends further revisions of the proposals for Part 9 (and Part 2) with the result that controlled egress locking systems which are listed for this purpose be permitted in healthcare facilities where child abduction is a recognized risk. The current provisions in the California Building Code (Part 2) have been refined over many years.

Specifically, BHMA recommends the proposed revisions be further revised in Part 9 Section 1010.1.9.7 to include Part 2 Section 1010.1.9.7 Exception 2 (which is proposed to be deleted in that section in Part 2).

If Exception 2 is included in Part 9, the proposed revisions in Section 1010.1.9.7 may need to be further revised.

**Agency Response:** The SFM submitted an addendum to the initial proposed language and corrected the conflict. The proposed amendments identify the intent of the SFM/OSHPD to permit the locking of egress doors in a Group I-2 occupancy only when required to restrain or contain psychiatric or mental health patients. The proposed amendment also specifies that smoke detectors are required when the locking of doors is permitted.

**Regarding Item #SFM 04/19-8-5.1, Section 1010.1.9.8.1 of Final Express Terms.**

The proposed amendment restores a California Building Code requirement modified by the International Building Code.

**Commenter(s):** John Woestman, Builders Hardware Manufacturers Association (BHMA)

**Commenter(s) Recommendation:** The phrase “controlling the lock or lock mechanism” is important in the context of delayed egress locking systems, as that phrase specifically identifies it’s the loss of electrical power controlling the lock or lock mechanism which triggers the requirement for the delay of the delayed egress locking system be deactivated. If the phrase “controlling the lock or lock mechanism” is not included in the provisions for delayed egress locking systems, then any loss of power to or in the building would be within the scope of requiring the delay of the delayed egress locking system to be deactivated, regardless of the presence of standby power, emergency power, and / or battery back-ups to life safety systems.

For these reasons, BHMA recommends approve as amended by inserting the phrase “controlling the lock or lock mechanism” in Part 9, Section 1010.1.9.8.1 Item 2 to be consistent with the current requirements in Part 2.

**Agency Response:** An existing California amendment was missed in the first publication of the California Building Code. The proposal is to maintain the existing amendment and correlate the text language with the California Building Code.

**Regarding Item #SFM 04/19-10-204, Section 1206.11 of Final Express Terms.**

The proposals in Chapter 12 were developed by a large industry and code official work group. The proposals more effectively protect ESS installations based on knowledge gained since last code cycle. It provides protection customized for the types of installations that are being deployed today, instead of using the “one size fits all” type of protection in the 2018 code.

**Commenter(s):** Nick Duvally, Fire Marshal Assistant Chief, Los Angeles Fire Department

**Commenter(s) Recommendation:** The proposal of the addition of an exception; is to accomplish correlation between the California Residential Code, Section R327.1, and the California Fire Code Section 1206.11, both of which address ESS in Group R-3 and R-4 occupancies.

**Agency Response:** The SFM has proposed to add the Exception to Section 1206.11 to accomplish correlation between the California Residential Code (CRC), Section R327.1, and the California Fire Code (CFC) Section 1206.11. Both codes address Energy Storage Systems for Group R-3 and R-4 occupancies.

**Regarding Item #SFM 04/19-10-204, Section 1206.11 of Final Express Terms.**

The proposals in Chapter 12 were developed by a large industry and code official work group. The proposals more effectively protect ESS installations based on knowledge gained since last code cycle. It provides protection customized for the types of



installations that are being deployed today, instead of using the “one size fits all” type of protection in the 2018 code.

**Commenter(s):** Joe Cain, P.E., Solar Energy Industries Association (SEIA)

**Commenter(s) Recommendation:** For Residential Energy Storage Systems, we recommend the SFM modify Section 1206.11 of the California Fire Code to match the technical provisions and language proposed for California Residential Code Section R327. We have prepared a thorough mark-up of the Part 9 language to match the technical requirements and language of Part 2.5.

For any applicant requesting approval of residential ESS, and for any reviewer of residential ESS, the technical requirements for residential ESS in the CFC and CRC should be the same. If the technical requirements in these two codes are different, then there is an inherent conflict in requirements such that applicants and reviewers are uncertain which technical requirements should be applied.

**Agency Response:** During the 15-Day the SFM proposed to add the Exception to Section 1206.11 to accomplish correlation between the California Residential Code (CRC), Section R327.1, and the California Fire Code (CFC) Section 1206.11. Both codes address Energy Storage Systems for Group R-3 and R-4 occupancies.

**Regarding Item #SFM 04/19-10-208, Section 1206.11.3 of Final Express Terms.**

The proposals in Chapter 12 were developed by a large industry and code official work group. The proposals more effectively protect ESS installations based on knowledge gained since last code cycle. It provides protection customized for the types of installations that are being deployed today, instead of using the “one size fits all” type of protection in the 2018 code.

**Commenter(s):** Nick Duvally, Fire Marshal Assistant Chief, Los Angeles Fire Department

**Commenter(s) Recommendation:** Delete item 4 of Section 1206.11.3 (and correspondingly to CRC R327.4) Battery Energy Storage Systems (ESS) that fail to meet the standard necessary to be listed as “For use in residential dwelling units” are being allowed to be installed exactly there, in residential dwelling units, precisely the location for which they are not safe enough to be listed for use.

**Agency Response:** The SFM has not incorporated the requested recommendation for this rulemaking. The SFM proposed code change brings in regulations that have been vetted through the national ICC model code rulemaking process. The early adoption is for industry use. The energy storage industry is evolving faster than the codes can keep up. The SFM is proposing the early adoption of these regulations to improve on the current regulations.

**Regarding Item #SFM 04/19-10-211, Section 1206.11.6 of Final Express Terms.**

The proposals in Chapter 12 were developed by a large industry and code official work group. The proposals more effectively protect ESS installations based on knowledge gained since last code cycle. It provides protection customized for the types of installations that are being deployed today, instead of using the “one size fits all” type of protection in the 2018 code.

**Commenter(s):** Mark Rodriguez, Sunrun, CALSSA

**Commenter(s) Recommendation:** The SFM proposal for California Fire code 1206.11.6 conflicts with CRC section R314.4 for the interconnection of smoke and heat alarms. None of the exceptions listed in R314.4 have been incorporated into the new language creating a situation that is costly and onerous to comply. New homes are not built with this circuit in mind.

**Agency Response:** The SFM has removed the requirement for interconnection of heat detectors to smoke alarms. The Residential code does not require interconnection.

#### **Regarding Item #SFM 04/19-15-17, Section UL 9540 of Final Express Terms.**

**Commenter(s):** John Taecker, UL LLC

**Commenter(s) Recommendation:** UL is fully supportive of the SFM's proposal to bring in the requirements for energy storage systems from the 2021 International Fire Code. It appears one thing was overlooked, which was updating the referenced standard UL 9540. To identically match the update of this standard that was adopted in the 2021 International Fire Code (reference Proposal ADM47-19), UL 9540 should be referenced in Chapter 80 as follows: "9540—2016 Standard for Energy Storage Systems and Equipment".

**Agency Response:** In response to the public comment, the SFM is proposing to update the edition of UL 9540 to identically match the update of this standard as it was adopted in the 2021 International Fire Code (reference Proposal ADM47-19). It is needed to address all the other proposed updates to Energy Storage Systems in Chapter 12 of the California Fire Code.

#### **Regarding Item #SFM 04/19-15-17, Section UL 9540 of Final Express Terms.**

**Commenter(s):** Nick Duvally and Josh Costello, Los Angeles Fire Department

**Commenter(s) Recommendation:** It is our opinion that for the sake of safety, especially safety regarding large potentially hazardous products being allowed to be installed within utility or storage spaces that can open directly to the habitable spaces of dwellings, or even within the livable spaces themselves (for those that meet the listing/marketing requirements “For use in residential dwelling units”), that the 2020 edition of the UL 9540 standard is necessary to be referenced.

**Agency Response:** The SFM did not incorporate the requested recommendation in this rulemaking. The SFM may consider the updated edition of the standard for the next triennial rulemaking. The early adoption of the latest standard will require a cost

analysis for potential industry impact.

**Regarding Item #SFM 04/19-15-17, Section UL 9540 of Final Express Terms.**

**Commenter(s):** Matt D. Paiss, Pacific Northwest National Laboratory

**Commenter(s) Recommendation:** Update the edition of UL 9540 to the 2020 edition. The UL 9540-2016 standard will be leaving a significant safety gap for residential installations by not requiring the UL9540a fire testing as part of the overall 9540 certifications. The requirement in the 2020 edition for large scale fire testing under UL 9540a for residential batteries fills a gap from the UL9540-2016 standard where this testing is not required.

Given the Fire Code will be allowing ESS into dwelling basements, utility, and storage closets, the behavior of products in failure is critical to the safety of residential occupants and this latest edition should be utilized in the listing requirements. Many utility spaces open to hallway spaces, bathrooms, and other living areas.

ESS placed in these locations must ensure that flammable or toxic gasses are not emitted placing residents at potential risk, as cited in the exterior requirements limiting placement close to doors or windows. Under the 2016 edition of 9540, there is no fire testing requirement for ESS.

**Agency Response:** The SFM did not incorporate the requested recommendation in this rulemaking. The same change is requested for The Residential Code Part 2.5. The SFM may consider the updated edition of the standard for the next triennial rulemaking. The early adoption of the latest standard will require a cost analysis for potential industry impact.

**DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS**

Government Code Section 11346.9(a)(4) requires a determination with supporting information that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, or would be as effective and less burdensome to affected private persons than the adopted regulation, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

The SFM has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective as and less burdensome to affected private persons than the proposed adoption by reference with SFM amendments. Therefore, there are no alternatives available to the SFM regarding the proposed adoption and amendment of this code.

**REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES:**

Government Code Section 11346.9(a)(5) requires an explanation setting forth the reasons for rejecting any proposed alternatives that would lessen the adverse economic impact on small businesses, including the benefits of the proposed regulation per 11346.5(a)(3).

n/a