AB 835 SINGLE EXIT STAIR WORK GROUP MEETING
Meeting Minutes –Tuesday, October 17, 2025

Crystal Sujeski, CAL FIRE – Office of the State Fire Marshal, Chair (Present)
Robert Marshall, Senior Regulatory Engineer - UL Solutions, Deputy Fire Chief - San Mateo (Retired) - Co-Chair (Present)

Work Group Members
Stoyan Bumbalov, Executive Director, Building Standards Commission (Present)
Irina Brauzman (Alternate), Building Standards Commission (Present)
Kyle Krause, Deputy Director, Housing Community Development (Present)
Mitchel Baker (Alternate), Assistant Deputy Director, Housing Community Development
Stephan Smith, Executive Director, Center for Building in North America (Present)
Jeff Maddox (Alternate), The Fire Consultants
James Dobson, Fire Marshal, California Fire Chiefs (FM Section) (Present)
James Gillespie Fire Marshal (Alternate), California Fire Chiefs (FM Section)
Joe Cavin, Fire Marshal, California Fire Prevention Officers (Present)
Ian Hardage, Fire Marshal (Alternate), California Fire Prevention Officers
Brian Rice, President, California Professional Firefighters
Melissa McDonald, Executive Assistant (Alternate), California Professional Firefighters
Ed Mendoza, MAP Research Associate, California YIMBY (Present)
Brian Hanlon, CEO (Alternate), California YIMBY
Max Dubler, California YIMBY
Robert Raymer, Consultant, California Building Industry Association (Present)
Christopher Ochoa, Senior Council (Alternate), California Building Industry Association
Ali Fattah, Asst Deputy Director, San Diego, Representing California Building Officials (Present)
Matt Wheeler (Alternate), California Building Officials
Faruk Sezer (Alternate), California Building Officials
Tracy Rhine, Senior Policy Advocate, Rural Countries Representatives of California (Present)
Patrick Blacklock (Alternate), Rural Counties Representatives of California
Staci Heaton (Alternate), Rural Counties Representatives of California
Jack Smalley, Legislative Advocate, California State Association of Counties
Mark Neuburger, Legislative (Alternate), California State Association of Counties
Travis Tyler, Director, California State University (CSU) (Present)
Mike Major, (Alternate), California State University (CSU)
Stephen Guarino, Director, University of California (UC) (Present)
Tracy Staiger, (Alternate), University of California (UC)

CAL FIRE Staff
Daniel Berlant – State Fire Marshal
Vickie Sakamoto – Assistant State Fire Marshal
Tim Spears – Assistant Deputy Director (OSFM – CDA)
Jena Garcia, CAL FIRE – Office of the State Fire Marshal

1. **CALLTO ORDER 8:05 AM** **Crystal Sujeski**
   A. Welcome/Introductions
      State Fire Marshal – Daniel Berlant provided opening comments
      Assistant State Fire Marshal- Vickie Sakamoto introduction
      Assistant Deputy Director-Tim Spears introduction
   B. Roll Call/Quorum Established
   C. Agendas/Minutes Review (Motion Required)
      I. Agenda 10/17/2025

Motion: Robert Raymer/James Dobson Action: Approved

      II. Minutes 10/7/2025– Amended with the correct meeting date and updated the professional title for Robert Marshall.

Motion: Joe Cavin/Robert Raymer Action: Approved

2. **OLD BUSINESS** **Robert Marshall**
   A. Voting - Robert Marshall informed the committee that future votes on new business items must follow the Bagley-Keene Act, requiring roll call voting. He noted this change will slightly slow the process but ensures compliance with state requirements.
   B. Timeline – Updates –
      I. Technical writer report status
         a. October 17th Draft report presented to SFM - Ben Fell provided an update on the draft report, noting that most sections are complete, with additional work needed on the egress analysis narrative. He shared that subgroup chairs have contributed input, but some points still require discussion and potential voting. Fell stated the report is in good shape overall and offered to guide the group through the remaining decisions during the meeting.
            1) Robert Marshall-Inquired if the group desired going through the report prior to hearing the sub-group final report outs on the egress analysis and firefighter exercise. The information may have some significant impact on the decisions of the group.
               i. James Dobson – Agreed
               ii. Ali Fattah – Suggested going through report.
            2) Crystal Sujeski- Moved the group into review the sub-group final report outs in new business.

3. **NEW BUSINESS** **Robert Marshall**
   A. Subgroups – Report out (new information)
      I. Cost Impact [Lead Stephen Smith] stephen@centerforbuilding.org (No new information to report out-Complete)

      II. Fire Protection (Active/Passive) [Lead Jeff Maddox] jmaddox@thefireconsultants.com (No new information to report out-Complete)

      III. Code Comparison [Lead Ali Fattah] AFattah@sandiego.gov (No new information to report out)

a. Summary – Ali Fattah reported collaborating with Steven Smith to clean up inconsistencies in the comparison matrix, where some jurisdictions duplicated or omitted requirements. He noted they have agreed on the final version, pending minor edits. Steven Smith added that while small adjustments remain, they are unlikely to affect the overall recommendations.

IV. History / Baseline (US) [Lead Stephen Smith] stephen@centerforbuilding.org (No updates to report out-Complete)

V. Egress Analysis [Lead Joe Cavin] joe.cavin@santamonica.gov

a. Summary- Joe Cavin presented the Egress Modeling Summary report that TERP Consulting completed including an egress analysis using a five-story Seattle building model with 44-inch stairs as the baseline. The study compared evacuation times with and without firefighter counterflow, showing significant delays when firefighters were present, especially around the third floor, where congestion increased. A scissor stair configuration with two 36-inch stairs restored egress times to near-baseline levels, suggesting it could be a promising design solution to mitigate counterflow issues in the future. (Document will be posted to the Work Group webpage.)

b. Comments:

1) Jeff Maddox inquired on how many occupants were assumed on each of the four stories plus the roof and inquired about the square footage of the floors, expressing concern that the model seemed to include a large number of people for such a building size.
   i. Robert Marshall replied that the model assumed 20 occupants per floor.
   ii. Joe Cavin added that TERP used building code occupancy standards and based the model on one of four real Seattle buildings. He noted that the "holiday scenario" simulated full occupancy with every unit hosting a party to test a worst-case situation. Cavin also agreed to obtain and include the specific occupant numbers and floor square footage from TERP in the report.
2) Ali Fattah - There was a number in the upper right, and there's a number on the bottom right. The bottom right has the time clock. I got that, but in the upper right is that the load? It looks like it was 149 or 139 or something like that. It says 26 out of 149, so I'm assuming the maximum occupancy is 149.
   i. Stephen Smith explained that assigning 20 occupants per floor equates to about 4,000 square feet, which aligns with building code standards but is somewhat unrealistic. He clarified that the code assumes one occupant per 200 square feet, though actual occupancy would likely be closer to half that density.
3) Ed Mendoza- asked why a two stair building egress analysis was not conducted in addition to the single-stair and scissor-stair analyses. He noted that two-stair buildings typically have higher occupancy loads and questioned why this more realistic scenario wasn't considered, given that people cannot always be directed to specific exits during emergencies.
   i. Robert Marshall explained that the decision was primarily based on time constraints. Since the study's main focus was on single-stair designs, the available resources were dedicated to that scenario. He added that two-stair buildings would likely show similar evacuation times to the single-

stair model without firefighter counterflow, though with fewer occupants per stair, making a separate two-stair analysis less critical.

ii. Stephen Smith - questioned the lack of a high-occupancy scenario in the analysis, emphasizing that the building code allows up to 500 occupants per floor in a two-stair building. Without showing how such a high-occupancy building performs, he argued, the report lacks context and balance compared to what is currently allowed as “safe.” He also questioned the realism of assuming segregated stair use during evacuations, noting that in non–high-rise buildings there are no notification systems, signage, or mechanisms to direct occupants to specific stairs. He asserted that it is not feasible to control stair use without firefighters present on every floor. Stephen Smith challenged Robert Marshall’s suggestion to compare buildings with equal occupant loads (20 people per floor) across one- and two-stair scenarios. He argued that such a comparison is unrealistic because real-world two-stair buildings typically have much higher occupancy, as the code encourages dense, double-loaded corridor designs for economic reasons. Smith emphasized that understanding the true baseline level of safety—the occupancy levels the code actually allows—is essential, and limiting the analysis to small occupant loads misrepresents real conditions.

iii. Robert Marshall responded that loading a two-stair building with 500 people while comparing it to a single-stair building with only 20 occupants “tips the scales” and doesn’t produce a fair or useful comparison. He maintained that a valid analysis should compare identical occupant loads across configurations (e.g., 20 per floor in both one- and two-stair models) to measure the difference in exit times under equivalent conditions. Marshall added that the focus should remain on understanding how a four-story single-stair building performs compared to existing three-story limits, rather than modeling extreme or inequivalent scenarios.

iv. Jeff Maddox acknowledged both sides of the debate regarding building design, particularly the trade-offs between one-exit and two-exit buildings. He emphasizes the need to establish a baseline for existing structures while recognizing that limiting one-exit buildings to smaller sizes—similar to practices in cities like Seattle, LA, and New York—could be a practical approach. These cities restrict building size based on occupant load, travel distance, or number of stories. He noted that small sites (e.g., quarter- or half-acre lots) often can't accommodate two staircases, which limits development. Therefore, allowing one-exit buildings with size constraints could open up more opportunities. He also revisits the math: with 149 occupants at 200 square feet each, the total area would be around 30,000 square feet. Spread across four or five stories, that results in 7,600 or 6,000 square feet per floor—slightly larger than what he envisioned but still comparable to examples from Seattle and LA.

v. Ali Fattah shared his experience with egress studies, particularly in stadiums, noting that when following prescriptive code—considering travel distances, door widths, occupant loads, and flow rates—egress times typically fall around 15 to 20 minutes. He emphasizes that establishing a baseline for building safety can be effectively done by

relying on existing exit access rules and metrics. This approach, he suggests, would yield results comparable to what Jeff Maddox described. He pointed out that in the prototype building, the lower occupancy and smaller floor plate (just four units) reduce the time needed for occupants to exit via stairs and doors. He appreciates a video that illustrates the flow conflict between people moving up and down, not for its specifics but for highlighting a broader issue worth considering. He emphasizes that the scissors stair design effectively resolves travel distance and horizontal movement concerns by improving flow efficiency and offering a solution to bidirectional movement conflicts.

4) James Dobson explained that in fire department operations, one stairwell is designated for firefighting and the other for occupant egress in buildings over three stories tall—standard practice across California. While it may seem that people can't be excluded from a stairwell, firefighters can direct them to use a different exit. He notes that most people instinctively choose the stairwell they regularly use, often the one closest to where they park, even if another exit is nearer to their unit. This behavior has been observed during actual evacuations, where individuals bypass closer exits in favor of familiar ones. Dobson emphasizes the importance of recognizing this operational reality in planning and discussions.
    i. Stephen Smith raised a concern about the timing and behavior shown in the simulation. He notes that occupants were seen entering stairwells before firefighters arrived to designate which stair should be used for operations versus egress. In buildings with scissor stairs—where stair access alternates between floors—this can lead to confusion, as people may choose whichever stair is closer, potentially using both. His point underscores a gap in coordination during early evacuation stages and questions whether the simulation accurately reflects real-world timing and decision-making.
    ii. James Dobson clarified that during high-rise fire responses, firefighters can direct occupants to use a different stairwell—even if it's farther away—by guiding them across protected corridors, especially when one stairwell is designated for operations. He emphasizes that this is a standard part of their protocol and, if necessary, personnel will be stationed on stairwells to assist with this. He also notes the substantial resources and staffing involved in high-rise responses, reinforcing the feasibility of such coordination.
5) Michael Malinowski expressed support for both sides of the discussion but believes the analysis is missing a key comparison: the difference between three-story and four-story buildings with identical configurations. He suggests that instead of switching to a scissor stair design, a more practical alternative might be to incrementally increase the width of a single stairwell. He notes that wider stairs—such as four feet—are often chosen for convenience and aesthetics, not just code compliance. Malinowski stresses the importance of refining studies to focus on the core issue, echoing Stephen Smith’s concern that current analyses may not fully address the real design challenges. He concludes by representing AIA California and its 11,000 design professionals involved in multi-occupancy building design.

6) Kyle Krause emphasizes the importance of adhering to the statutory mandate outlined in Bill 835, which tasks the State Fire Marshal with researching single-stair, single-exit apartment buildings. He stresses that the group's core responsibility is to compare current building code requirements with potential future standards that would allow for just one stair instead of two or more. Krause urges a thorough analysis of how these alternative designs would function under specified conditions, so the findings can effectively inform the State Fire Marshal about the implications of such changes.
7) Jeff Maddox raised a concern that the analysis assumes a worst-case scenario where the fire department arrives exactly as evacuation begins, which doesn't reflect typical response patterns. He notes that fire alarms often trigger before responders arrive, and with average response times around 3 to 5 minutes, occupants may begin evacuating well before firefighters reach the scene.
    i. Robert Marshall acknowledged this point, explaining that while various scenarios were considered, time constraints limited the depth of analysis. He stresses that the current study is just a starting point, and more research is needed to fully understand the implications of allowing single-stair buildings, especially given the irreversible consequences of future fire-related fatalities.
    ii. James Dobson added that in urban areas, rapid response is often realistic—fire stations may be located just across the street. He also highlights human behavior during alarms: people rarely evacuate immediately, often hesitating or attending to personal tasks first. This means that even with fast response times, occupants are typically still evacuating when firefighters arrive, reinforcing the need for nuanced and comprehensive study.
8) Robert Marshall referenced the Cook County Administration Building fire, where six fatalities occurred after the fire department arrived, to highlight the realism of concerns about egress conflicts during emergencies. He supported James Dobson's points and invited further comments, receiving none.

VI. FD Capabilities [Lead James Dobson] james.dobson@sanjoseca.gov (No Report)

a. Summary - James Dobson presented a simulation video demonstrating potential conflicts between firefighter operations and civilian evacuation in a six-story building scenario. The drill involved 20 occupants per floor and highlighted how stairwell space can be significantly compromised, especially when standpipes are charged. Although the standpipe wasn't charged in the video due to safety concerns, the results aligned with prior egress analysis findings. Fire departments across California expressed serious concerns about mixing evacuation with firefighting, especially in rural areas where aerial access is limited and unreliable for mass egress. And, shared post-drill feedback from participants in the simulation video. Occupants reported feeling delayed and unsafe during evacuation due to navigating around hose lines, firefighters in gear, and equipment on stair landings. Firefighters noted that these conditions hindered their ability to perform fire attack and move equipment efficiently, as they had to be cautious not to injure civilians. Dobson concluded by opening the floor for questions. Link to video: https://youtu.be/wPaMImBWvGQ

b. Comments-
    1) Jeff Maddox - proposed that in fully sprinklered buildings with only one exit, fire departments might consider delaying hose deployment to allow faster civilian egress. He acknowledged this challenges traditional firefighting tactics but suggested it could be a reasonable adjustment given the reduced fire risk in sprinklered buildings.
        i. James Dobson -responded that while he understands the suggestion to delay hose deployment in sprinklered buildings, fire departments are trained to act aggressively to eliminate hazards quickly. He emphasized that modern fire risks, such as toxic gases and lithium-ion battery fires, often require immediate suppression regardless of sprinkler systems.
    2) Ali Fattah - In scissor stair configurations, would there be only one standpipe connection or both, since entry points vary?
        i. James Dobson - confirmed that typically there would be one, referencing a San Jose building with such a setup. He notes that design may limit access to one stairwell, which could influence standpipe placement.
        ii. Ali Fattah confirmed understanding, stating the standpipe would be placed at the entry point.
    3) Stephen Smith- How do 36-inch stairs affect operations in buildings with occupant loads under 50?
        i. James Dobson -responded that narrow stairs present operational challenges and delays. He notes the simulation used a 47-inch stairwell due to availability, which is wider than typical 44-inch stairs.
        ii. Stephen Smith - Has anyone ever proposed removing the 36-inch stair exception in code development?
        iii. Robert Marshall and Crystal Sujeski – Confirm they have never heard of such proposal.

B. Draft Technical Report – Presented by Ben Fell (Technical Writer)

I. Ben Fell requested guidance on how to address comments in the draft report.
    a. Robert Marshall suggested reviewing each section in detail, as changes would affect both the executive summary and recommendations.
        1) Kyle Krause and Bob Raymer raised concerns about not receiving the draft materials in advance and emphasized the need for time to review before making decisions.
        2) Crystal Sujeski clarified that the current discussion is to gather input on specific comments, not to finalize the report, and confirmed there would be a follow-up meeting for a formal vote on the final draft.

II. Draft report comments were reviewed and open for discussion for input in order to make revisions.
    a. Crystal Sujeski clarified that if there is any objection to the revisions to address the comments, the item will be open to member voting to move the revision.
    b. No objections were made during the review of the comments.

III. Robert Marshall-Format Questions to the Work Group members – Do we want to have recommendations in each of the individual sections, or do we want to keep recommendations to the recommendation portion of the document?
    a. Ed Mendoza- keeping them in the sections would keep it most relevant.
    b. Bob Raymer- is it possible to do both?
        1) Robert Marshall-Certainly.
    c. Ali Fattah-Prefers to have it in the executive summary.

d. Joe Cavin-Agrees with Robert Marshall to remove it from the subsections and having one recommendation section.
e. Robert Marshall-Requested a motion to keep the recommendations in each individual section.

Motion: Jeff Maddox/Ed Mendoza	Action: Disapproved

1) Recommendations will be moved to an individual recommendations section. And the list in each section will be identified as considerations.

f. Ben Fell-Expressed he understood the direction to complete the report and just needs to get the egress analysis portion added.
g. The final draft report will be posted and emailed directly to work group members.

C. Chief Berlant provided a closing statement, thanked the group for their work and acknowledged the challenge of balancing California's need for affordable housing with public safety. He emphasized the importance of staying focused on the legislative intent of the report and ensuring that the final document answers the specific task assigned. While the official deadline to submit the report is in January, he noted that internal agency reviews require the draft to be completed much sooner. Berlant appreciated the discussion and visuals shared and confirmed that further input may be needed from the committee as the process continues.

4. ROUNDTABLE - None **Robert Marshall**

5. PUBLIC COMMENT - None **Robert Marshall**

6. UPCOMING MEETING DATE FOR 2025 **Robert Marshall**

A. The first Tuesday of each month starts at 8 AM and ends at 10 AM.
I. Next Meeting – November 4, 2025, 8-10 AM PDT

7. MEETING ADJOURNED (Motion Required) **10:00AM** **Robert Marshall**

Motion: Bob Raymer/James Dobson	Action: Approved

If you would like to watch the recording of this meeting, please visit the link below:

https://youtu.be/BIaY-jYKWFQ