

Virginia Fire Services Board

Live Fire Training Policy Subcommittee

November 6, 2025

Department of Fire Programs

1005 Technology Park Drive, Glen Allen, Virginia 23059

10:30 AM

MINUTES

A meeting of the Live Fire Training Policy Subcommittee was held at the Department of Fire Programs in Glen Allen, Virginia. The meeting was called to order by Subcommittee Chair Steven Sites, and a quorum was present.

SUBCOMMITTEE MEMBERS PRESENT

Steven Sites, Chair – Virginia Municipal League

Keith Johnson – Virginia Fire Chiefs' Association

JM Snell II – Virginia Board of Housing and Community Development

Note: Chairman of the Virginia Fire Services Board Keith Johnson replaced James Calvert on the subcommittee per written communication on October 21, 2025.

SUBCOMMITTEE MEMBERS ABSENT

AGENCY MEMBERS PRESENT

Brad Creasy, Executive Director

Theresa Hunter, Chief Administrative Officer

Michael Parris, Deputy Chief of Training and Operations

Spencer Willett, Government Affairs Manager

Greg Cavalli, Policy Analyst

GUESTS PRESENT

Adam Still	Jeff Bailey	Michael Matthews	Kevin Moran	Nicole Pickrell
John Flynn	John Butler	Michael Boisseau	Adam Holloway	Douglas Clevert
Joe Bailey	Jerry Pruden	Brandon Proffitt	Chris Kitchen	Jeremy Beaumont
Buddy Hyde	Chris Kordek			

CHANGES IN THE AGENDA

None reported.

COMMENTS FROM THE SUBCOMMITTEE CHAIR

Chair Sites welcomed everyone and asked that they introduce themselves. He explained that this subcommittee was created by the Chair of the Virginia Fire Service Board (VFSB), Keith

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Johnson, based on discussions from the September Virginia Fire Service Board meetings in Harrisonburg to address the policy for live fire training grants. The policy governing live fire training and the grants awarded by the Department of Fire Programs (VDFP) has been in place for years and the Board felt that it should be examined with the purpose of bringing it up to date and closing gaps the Board identified in the current policy. Chair Sites emphasized that the purpose of this meeting is not to dictate to localities, but rather to examine the requirements for these buildings to be built with grant money, both by the state building code as well as the National Fire Protection Association (NFPA) standards. He also noted the issue of when the requirements move from grants and construction to what is necessary for training certification to conduct training such as Firefighter I/II. Johnson asked that the dialogue in the room be respectful and for the attendees to keep in mind that the foremost priority is the safety of the firefighters in training. He also noted that liability is an important concern. Finally, he stated that codes and standards must also be part of this discussion.

GENERAL PUBLIC COMMENT

Bill Glover, a builder with E.H. Glover Inc., spoke first. He has built live fire training structures since 1996 and sat on the Technical Committee for the National Fire Protection Association (NFPA) 1402 standard for 25 years. He asked how many attendees knew of the accident in Fairfax County from a training burn last October. The investigation identified the cause of the accident and made recommendations to prevent future accidents. He noted that the investigation report identified the causes of the accident and addressed linings, inspections, and how these buildings are used. He stated that this was in line with NFPA's intent with 1403, which was prompted by a firefighter death in training at Pennsylvania's fire academy in the early 2000s. He believes the number of linings used in the building affects how the building can be used.

Mike Matthews of The Structures Group (TSG) said that he was awarded the contract by VDFP to be a consultant for construction of fire training facilities in 2005. He understands the concerns of this group, both regarding safety as well as liability and financial requirements. He noted that, in reference to Johnson's point about liability, his company, should it lose its license, can never have it restored. He spoke about the accident referred to by Glover in Pennsylvania that was a major topic in 2005. At that time, there were changes made to the policy based on that incident. Virginia has adopted the 2021 International Building Code (IBC), but if you go into the IBC there is no reference to NFPA 1402 and 1403. The only way to have these observed is through the VDFP program governing the construction of live fire structures. The guidelines were originally developed for buildings that were two stories and have two burn rooms as a minimum requirement, but many locations have structures beyond the minimum. The problem became

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financing and funding of larger training structures. These types of buildings need to be maintained at a higher level, but many of them were not maintained and required more costly repairs.

John Butler stated that he has 25 years of fire service and training structure construction experience. He noted that some of these buildings have sacrificial walls that are starting to collapse due to deterioration as they have not been protected. He said that a building cannot be made firefighter-proof. The NFPA 1403 Standard provides guidelines on how to conduct safe fire training. A low cost of ownership is necessary for these buildings so that they may be repaired as needed. He noted the need for proper maintenance and repair to ensure a safe training environment. Funding will be an issue to continually repair these walls. He has done work on buildings in Pennsylvania that have non-load bearing sacrificial walls and has found that they can last a long time if they are only used occasionally, but facilities being used multiple times per day on a regular basis deteriorate much more quickly.

CONSENT AGENDA

UNFINISHED BUSINESS

NEW BUSINESS

a. Review of the Thermal Linings Workgroup Report

Chair Sites asked if everyone present has been able to review this report. The recommendations were shown on the screen for the group to observe. A workgroup was established and met five times. He stated that there were five recommendations that came out of these meetings. Compliance with the newer edition NFPA 1403 will be needed to participate in VDFP programs. That compliance must be maintained to conduct Firefighter I/II training. Johnson spoke about how this subject came up, talking about his time as System Chief in Loudoun County. He received a recommendation from VDFP to reline their burn buildings with thermal linings. This would cost a considerable amount of money, and there were questions about why this was needed when it was not required at the time that the building was constructed. The debate over this topic then was taken up by the Board, which led to the creation of the workgroup. He noted that funding is an issue, and that there was difference of opinions among professional engineers that needed to be examined.

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Chair Sites noted that the original Thermal Lining Workgroup's question was whether thermal linings should be required on structural components of live training structures, and what components of the structure would be structural or load bearing. The group further examined if the VFSB live fire training structure grant program required this and discovered that there is conflict among engineers on this topic. The group examined NFPA 1402 and 1403. They also looked at the topic of retroactivity of these requirements as NFPA 1402 specifically mentions the retroactivity of the thermal linings' requirement.

The first recommendation stated the original plans of the structure should be reviewed to determine the load bearing or structural components. Every building in the Commonwealth has plans which must be approved by a building official, and these structures also must be approved by VDFP through its review process. If the originally approved plans and the registered design professional plans are not available, the locality must hire a registered design official to create such plans. Load bearing or structural components should be thermally lined as prescribed in 1402 to remain compliant with VFSB policy.

The second recommendation says the VFSB should establish a procedure to outline a process when the locality's primary engineer and the VDFP's contracted engineer disagree on any component of NFPA 1402 or 1403. The procedure should include a third, independent engineer to render an opinion.

The third recommendation is for the VFSB, working with the VDFP, to cease conducting 5-year inspections. VDFP would stop employing design professionals to do inspections, but the inspections would continue to be required as a responsibility of the locality.

The fourth recommendation addresses one of the concerns found upon a review of this program. The Chair of the VFSB should create the subcommittee under the Live Fire Structures Committee to conduct a complete review of the rules and grants requirements for the live training program. From this review, a standard operating procedure (SOP) will be developed that outlines the rules and responsibilities of the VDFP, VFSB, the locality, and the contracted engineer for the VDFP. Within the SOP, the VDFP will establish two distinct paths related to live fire training structures. One will be for localities wishing to receive grant funds from the VFSB for the construction or repair of a live fire training structure. setting a clear timeline to ensure that the structure would

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remain in the program subject to the grant requirements. Chair Sites used the Assistance to Firefighters (AFG) grants as an example of a grant program which has a review period as a condition of keeping the grant. The other path is to certify that Firefighter 1/II training remains accredited, by meeting the minimum standards in NFPA 1402 and 1403. The accreditation is maintained by third parties, and this is needed for safety.

The fifth recommendation is for the VFSB and VDFP to provide extensions for localities that have been sent letters in the past six months telling them to cease conducting training in structures that did not have adequate thermal linings, giving them time to submit a plan within 90 days that outlines how the building will be brought up to standard.

JM Snell stated that the Board discussed these issues in September. He said he feels recommendation 1 is completely acceptable as something is either load bearing or it is not, and load bearing components must have a thermal lining. This is a very clear requirement and that is why the Board approved it. Recommendations 2, 3, and 4 are more complicated. The Board solicited feedback from a wide range of people and felt that asking NFPA for an interpretation was not necessary as the written standards are very clear. Recommendation 5 ensures that localities will be responsive to changes in the policy, giving 90 days to provide a plan to remedy the issues.

Chair Sites spoke on the second recommendation. The third party would be considered a tiebreaker, but that rendered opinion would still have to be presented to either this subcommittee or the Board for a final determination. Johnson noted that 7.2.1 of NFPA 1402 specifies that the structural integrity of live fire training facilities will be evaluated and documented by the owner/operator or authority-having-jurisdiction (AHJ). He said that they have found that some localities are not doing that, and that needs to be fixed. He pointed out that NFPA 1402 does not say “structural engineer”. If visible defects are found, then a follow-up inspection should be conducted by structural engineers or other qualified professionals. He believes most inspections will find some kind of defect on an annual basis. When it comes to the 5-year inspection, The Structures Group (TSG) reports may differ from the annual inspections the departments have conducted. Johnson asked for a show of hands for attendees that have faced this problem, and many hands were raised. Snell added that those annual inspections are necessary, and structural issues are not always load bearing issues. The disagreements over 5-year reports often rest with this tension between structural and load bearing. Unless the Board changes the

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policy to remove NFPA 1402 from consideration, Johnson said the program must abide by its requirements.

Chair Sites asked VDFP Deputy Chief of Training and Operations Michael Parris if the current accreditation standard requires the most current edition of NFPA 1402. He answered that as the agency is re-accredited to the newest standard of NFPA 1001 training, it must also update to the associated standards. This is found in the reference documents. Some may be current, some may be in revision, and some may be updated, and it's a constant cycle. Chair Sites pointed out that the grant policy references 2019 NFPA 1402, and this would need to be updated periodically with re-accreditation. Matthews noted that NFPA is currently working on combining NFPA 1402, NFPA 1403, and others into one master document, NFPA 1400. This will be completed in 2026. Parris stated that, once the standard is changed, there is an 18-month grace period in which to adopt the new standard to remain accredited.

Chair Sites pointed out that just because the NFPA updates a standard to a new edition does not mean it automatically happens.

Jerry Pruden asked to clarify the third recommendation that the Board will no longer conduct a 5-year inspection. Chair Sites said that is because the localities should be doing those as they are doing the annual inspections in the four years prior. Johnson said this discussion is focused on policy and not funding, and that the Board was not saying that there would be no funding for inspections. The change would be that VDFP would no longer contract for inspections. Pruden asked where the conflict would come from if his locality was hiring the inspectors. Chair Sites affirmed that adopting recommendation 3 would eliminate the need for recommendation 2 because that opinion is rendered by the locality's own engineer. He added that when a locality applies for funding for the construction or repair of a building, the plans are submitted to VDFP, but they are also reviewed by a contracted design professional, as well as a local building official.

Matthews said that the five-year review by VDFP is not just a structural review but also ensures conformity with the guidelines of the policy. Some localities, he said, do not have a design professional. Chair Sites said that, as a building official, he is required to ensure that the plans have a stamp from a design professional, and that he is also required to approve that stamp. Matthews continued to discuss the stamp issue.

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Kevin Moran asked, regarding design professionals, why would he not rely on the builder or engineering firm's expertise, as he would not have the background or expertise to disagree. Chair Sites said that there are some manufactured plans that are stamped as such. When it comes to the site plan and building plan, however, they have more information that must be stamped by a design professional.

Pruden said some organizations pay to have the 5-year inspections done now. He says Matthews may have concerns about the designer of the building also being the inspector, but that the designer holds the liability for the building which should ensure that there is no conflict of interest. Hiring a third party who may not be familiar with that type of construction would not make sense. Chair Sites noted that it will need to be examined what the qualifications of the design professional should be. Pruden said that when Glover was building schools, he would not want him to inspect burn buildings because at that time he wouldn't have had the expertise. It is of utmost importance to have qualified inspectors. Johnson pointed out that the language for the 5-year period is very similar to the annual inspection.

Nicole Pickrell asked about the difference of opinion issue, noting that the locality gets stuck between the opposing engineers and doesn't know how to break the tie and move forward. Chair Sites noted that he believes the work done by this subcommittee will need to be presented to the Board in December. If the recommendation at that point is to proceed with recommendation 3, that problem should go away. Moran questioned the issue of life safety. Chair Sites said that the bigger piece is the thermal lining. Conflicts beyond that should be examined to determine if it's truly about life safety as that represents a significant liability.

Snell said that the extension is only for issues relating to thermal linings. Life safety is an issue everyone is aware of. Some localities will not have access to engineers that have all the needed credentials but can hire multiple who together can meet the inspection requirements. The 5-year inspection is not optional; it must be done.

Executive Director Brad Creasy asked if anyone at the meeting represented Smith, Scott, Carroll, or Wise counties. He stated there were fifty burn buildings across the commonwealth and only 15-20% are likely inspected annually by professional engineers. He stated that these annual inspections are important, while also noting that the expense of maintaining them makes it difficult for many of these localities to conduct them.

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VDFP bears much of the liability burden when conducting training in those buildings. VDFP is willing to help with the burden of repairs, but the structures must remain compliant. The guidance is that 5-year inspections must be done, but localities should use firms that are familiar with live fire structures. Johnson pointed out that the Board always considers the difficulties being faced by rural localities. Regardless of who does the 5-year inspections, he hopes VDFP can provide funding for them. His goal is to help both with repairs as well as inspections. Director Creasey stated that some localities may not know where to find an engineer to conduct these sorts of inspections, so he believes there needs to be guidance in the process. Johnson said that providing a list of qualified firms and allowing the locality to choose should be sufficient, saying that is how hazmat mitigation works. Parris said that, being from a rural part of the state, he understands. The only time the training facility is used in Scott County is when there is periodic training involving live burns.

Chair Sites wants to focus on ensuring there is an accountability provision for Training and Operations to ensure that the training buildings are compliant, as they have liability if training is conducted at facilities that haven't been inspected on an annual or five-year basis. Parris said that even non-funded training relies on VDFP accreditation, and the agency will always have some level of liability. Chair Sites said the director of VDFP from that time, Buddy Hyde, was at the meeting. Hyde then spoke on the history of this issue. Some places are using engineers of varying qualities, and not all of them will have the qualifications to do these inspections. Johnson asked when VDFP started hiring engineers to do the 5-year inspections. Glover said it was in the mid-1990s. The concrete wall design came out of that period, with the first one in South Boston.

Glover said if you address recommendation 3 first, then the second doesn't matter, and to let localities hire their own engineer. This eliminates third party engineers and alleviates the liability issue, and then the lining issue is up to the AHJ and their engineer. Address recommendation 3 first and the other issues may go away.

Motion: Recess for lunch

Motion: Sites **Second:** Snell

Discussion on the Motion: None

Vote: Unanimous

Action: The subcommittee recessed for lunch.

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When the group reconvened, Chair Sites noted that the work on the policy will not be concluded today and will continue into the next meeting. Regarding the workgroup, he believes that there will always be some level of disagreement among professionals.

Focusing on recommendation 3, Sites specified that the agency would stop employing a third-party company to conduct inspections and return the responsibility to the localities. It is not to eliminate the need for 5-year inspections. VDFP can compile a list of vendors that can conduct these inspections. Johnson said that he cannot see how to move forward without resolving the thermal lining issue. He asked to hear from the group about load bearing versus non load bearing and lining or no lining.

Chair Sites cited the NFPA standard that stated load bearing structural elements, whether in or out of burn rooms, should be treated with a lining to keep temperatures no higher than 300 degrees. Drawings will show the elements that are load bearing, and whether they were designed with linings or not, they require linings under this section. To maximize useful life of the structure, the linings allow the training to happen at a reasonable rate of fire and to be put out quickly. He pointed out that there are often multiple burns per day when Firefighter I/II training is conducted. He also noted that the section refers to thermal lining or other thermal protection. Butler said that any kind of thermal protection can be designed to protect the concrete. Not everything will need refractory lining to protect the concrete depending on the distance from the flames. He stated that you cannot keep the concrete completely cool. The designs incorporating sacrificial walls allow for the concrete to move. There are less expensive options than refractory tiles.

Sites asked Glover if he could tell the subcommittee what the NFPA technical committee's purpose was in including 7.1.4. Glover stated that everything exposed to heat needs to be designed to withstand heat and water. The intent is for these components to have a reasonable life expectancy, not to never be damaged. Glover went on to say load-bearing components are protected to avoid reaching 350 degrees. Loudoun County, for example, has a temperature monitoring system, getting highest temperature readings in the burn room to ensure thermal protection is happening as designed. Load bearing language was taken from the IBC, and he provided copies of these. He believes that there are too many codes. NFPA 5000 states the same things as IBC but adds the term lateral load. Chair Sites pointed that nothing in this policy will say that Virginia is enforcing NFPA 5000, and he asked Glover if there is any rationale from those sections regarding

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the life of the building as opposed to preventing the structure from collapse. Glover stated the structure would not collapse. Chair Sites clarified that his question is only whether collapse is a concern. Snell added that the language specifies “structural elements” instead of just walls. NFPA included a qualifier that the IBC does not, and Snell asked what else would be considered structural.

Adam Still asked about the components outside of the burn rooms, and if the concern was only lining these rooms or other areas impacted by heat. He then asked who tested the buildings to determine where temps are hitting 350 degrees. Glover said the group will have to address not just 350 degrees but also for how long it remains at this temperature. He questioned whether it should be a sustained temperature of 350 degrees. Still said his department’s first floor won’t reach 350 degrees but the upstairs will during a burn.

Glover said adding lining to all the walls of a building will totally change the performance of that building. It creates a different environment. NFPA 1403 puts the onus on the fire service to experiment with the building room by room to determine what can be done safely, and it also sets limits on burns within a period of time. Matthews said that NFPA states that departments shall have a burn matrix for that reason. Glover wrote a letter in 2002 saying VDFP should stop putting temperature monitoring systems in burn buildings. He implied these systems were ineffective.

John Flynn stated, regarding temperature monitoring, that Fairfax County developed a burn matrix with assistance from George Mason University to determine temperatures based on how burning was conducted in each room.

Snell asked Glover why the NFPA authors chose words “structural elements” when they could have said “wall”. Glover said these elements could be columns, beams, slabs, etc., and they wanted to address all those things rather than just walls. He stated the structure is carried by the frame and not the walls. Components are part of the wall but not bearing loads themselves.

Matthews said adding exterior walls creates a structural element because it’s exterior, meaning that wind and other outside forces act on it. The code addresses that for interior walls. He is concerned that the group is forgetting about life safety of the firefighters and reiterated that the wall is a structural element. As Butler said, there are other ways to protect walls from the heat.

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Chair Sites said he understands this, but the walls are tied together. Glover says the engineer who wrote this sees walls as a component of the building but not carrying load. It does take load and transfer the load to the building. When talking about inspections, he said, there are four. Every day, there should be a pre-burn and post-burn inspection, and changes observed should be reported. Every year, the jurisdiction takes the last report by the professional engineer, and they look for anything not previously noted. Every five years, there is a professional structural engineer inspection. He would put the onus on the AHJ and require them to hire an engineer and provide VDFP with the report. Johnson said if these walls are cracked or misaligned, it needs to be corrected.

Glover asked if you want to put forth a compliance effort for NFPA 1403, why ask a structural engineer to do it. They are not qualified to review NFPA 1403. Enforcing NFPA 1403 should be someone else's responsibility. Using Chesterfield as an example, the report for one building alone is over 450 pages, with 311 of them being structural surveys.

Johnson asked Hunter if there is a checklist for the annual inspection. Hunter said there is a guideline on the website.

Hyde said from a local government perspective, Chief Lee Williams has his 5-year report in Blackstone. Absence of thermal panels cost \$42,000 while the rest of the building was still in good working order. Sacrificial walls are in most of the buildings. The biggest problem they originally faced was to keep smoke in the building, but 20 years ago it was accepted that when it becomes compromised, you just replace that section of wall. Cost tradeoffs between that and thermal tiles are the consideration, especially with the walls distant from the fire. Glover said thermal lining costs \$80 to \$100 per square foot.

Snell said the primary issue presented today is interpretation of the document the Board is beholden to, NFPA 1402. He felt frustration at reading the language, which to him is clear, and having someone else have a different opinion. He asked how VDFP has authority on this issue? Why is it the responsibility of the Board to demand localities adhere to NFPA 1402 and 1403? Chair Sites answered that VDFP is responsible for ensuring accreditation is met for training and for proper distribution of grant funds. This should be better separated in the future. Johnson said VDFP and VFSB should not be the final authority to enforce NFPA 1402, and that it should fall to the authority having

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jurisdiction. Parris suggested the program might have gone off track when the state began contracting to do 5-year inspections, but had the localities contract for the annual inspections.

Board Clerk Willett noted that VFSB lost regulatory authority in 1997. The Board's authority rests in policy for grant funding. If the agency needs accreditation, it has a vested interest in the proper maintenance of those training facilities.

Chair Sites informed the group that the next meeting will be virtual on November 12. No policy will be finalized until the February VFSB meeting, and there may be a third meeting of this group in December if necessary. Snell suggested the Board would not be acting until February to allow time for the Board to discuss this at their December meeting.

ADJOURNMENT

Clerk of the Committee
Spencer Willett

Minutes completed by Greg Cavalli

Documents related to this meeting of the Virginia Fire Services Board may be requested by contacting the Government Affairs Division by emailing PolicyOffice@vdfp.virginia.gov