

## The Impact of Immersive Design on Mental Health

Janet Wilmoth interviews Architect Paul Erickson, FAIA, LeMay Erickson Willcox Architects, about the concept of immersive design and how it can impact firefighter mental health.

JANET A. WILMOTH MARCH 25, 2019



The renovated District of Columbia Engine Co. 16 features a training conference center that has wood cabinets and furniture, a renovated skylight, and interior glass panels that allow views through adjacent spaces to the outside. This strategy also allows daylight to penetrate deeply inside the building to create an uplifting work environment.

*LEMAY ERICKSON WILLCOX ARCHITECTS*

When we first heard that immersive design could help first responders with post-traumatic stress disorder (PTSD) and other mental health issues, the immediate question was, “But what *is* ‘immersive design’?”

The article [“Ten Things We’ve Learned About Immersive Design”](#) describes the concept in two ways: “Immersive Design spans the spectrum, from technology surrogating sensory reality to simply just imaginary play” and “Immersive design is a form of storytelling, including an external narrative to the participants’ experience and a meta-narrative about the participants experience over time.” Put another way, immersive design incorporates design elements that encourage physical, emotional and mental healing through strategies like increased attention to circadian rhythms, daylight, color, views of natural settings, and selection of materials.

Architect Paul Erickson, FAIA, [LeMay Erickson Willcox Architects](#), will present “Immersive Design for Reduction of PTSD and Suicide” at [Firehouse’s 2019 Station Design Conference](#), May 14–16, in Rosemont, IL. Erickson first introduced the concept of Hot Zone designs 5 years ago at the Station Design Conference in Baltimore. The Hot Zone design has rapidly impacted how fire departments are dealing with cancer-causing carcinogens in their fire stations.

I interviewed Erickson about his latest research and immersive design.

**Wilmoth:** From the Hot Zone concept, how did you come up with immersive design helping with mental health of first responders?

**Erickson:** I’ve just been very interested and concerned about the health and well-being of firefighters for years now. I’ve read the fire publications and I’m watching the trends in health and well-being and seeing beyond cancer, which now has captured leadership’s attention as well as members’ attention, and active steps are being taken by departments across the nation to address that. I’ve just become aware that mental health and well-being is also challenged. There are many articles, including one you wrote a couple years ago, [“Trouble in Mind,”](#) about the high incidence of PTSD and suicide in the field.

I’ve tried to do additional research and connected with the [Firefighter Behavioral Health Alliance \(FBHA\)](#) and found it really is a crisis—a quiet crisis that needs more attention. As an architect committed to designing buildings that rise above functionality to create a healing and healthy environment, I felt obligated to develop and translate strategies from the healthcare field to fire and rescue facilities to improve the mental and emotional well-being of first responders.

**Wilmoth:** You’ve worked with the fire service for many years and you know the “macho culture” we dealt with in the 80s and 90s. The Hot Zone concept of isolating contaminants in stations was a big eye-opener, but was picked up very quickly. With the immersive design and mental health awareness you are talking about, how do you think that will be received in fire and law enforcement?

**Erickson:** I expect that it will be received with traction and gain traction. There are those who believe that the statistics are overstated and maybe sensationalized. The first time I talked on this subject, some of the feedback was that my case was alarmist and overblown. But I also received a lot of positive feedback that it was very thoughtful and it was progressive and the basis to support the kind of recommendations I was making. A lot of the architects heard that presentation and came up and thanked me for bringing it forward as a topic.

As you suggested, departmental culture is going to be essential as a component to address it comprehensively and effectively. Just designing a building by itself is not going to be the silver bullet that changes the health and well-being of the firefighters. The departments need to create a culture that this is not a sign of weakness, that having emotional trauma is a very human result to the kind of scenes and circumstances to which they are regularly exposed. People need to be encouraged to support one another and to seek the resources that are available to assist with

emotional and mental well-being—counseling, consultation, an environment where people can get things off their chest. There's got to be a change in the way that the issue is perceived from one of weakness to one of a natural human response to trauma.

**Wilmoth:** I think the fire service has made huge step up in mental health awareness. Not only that, but I also think a lot of the younger firefighters these days are used to going to a doctor if something is wrong, counselors and maybe even therapists. I agree and I think it is going to be accepted.

**Erickson:** It's an injury. I think it needs to be viewed as a mental and emotional injury. It's not as physical as a cut or broken arm. You can touch that, you can apply medicine directly to it, it's very tangible in that sense. But mental capability and emotional well-being are more elusive, but just as real when it comes to the injuries that inflicted by the experiences which first responders are under.

**Wilmoth:** Are you going to be able to demonstrate examples of immersive design in your talk?

**Erickson:** We will have tangible examples in our presentations and at our booth. We are excited to be presenting this with Jennifer Cramer of the FBHA outreach team, and I know that FBHA founder Jeff Dill is going around the country talking to people about these subjects, so I think there's a lot of discussion that is going on between our company and that organization on ways to shine a light on them and ways to address them.

**Wilmoth:** I spoke with a local police sergeant interested in your talk because the number of police suicides, particularly in Chicago, is escalating.

**Erickson:** Many of these immersive design strategies can translate very easily between those building types. The use of the structures is a little bit different, but certainly the trauma that is inflicted is common and a lot of these techniques can apply to both law enforcement and fire/rescue facilities.

**Wilmoth:** How affordable is it going to be to retrofit the immersive designs?

**Erickson:** Retrofits are always a little bit of a challenge because as have limitations based on existing conditions. For instance, we were trying to use nature and if the space doesn't have a window, you could cut a hole in the wall and install a window, or you might apply other techniques, like images of nature through photographs, paintings and such. I think there are affordable options for renovations and additions, and certainly if these strategies are incorporated in the beginning, I don't think there is any real cost implications.

Natural materials bring the warmth of the exterior world back into the built environment inside the station and daylight into the structure, infused to the outside, allow for enforcement of the circadian rhythms and the connection to the exterior world that is so beneficial to the emotional well-being. Glass is an expensive material, but if strategically located, you can borrow spaces as we will indicate in our presentation, I think there is minimal cost increase to implementing these strategies.

**Wilmoth:** Any last thoughts?

**Erickson:** I think it's a shift in thinking that we're advocating. The built environment needs to include whatever we've learned about healthcare and healing environments to translate those lessons to this new building type. It's a matter of work that's already been done in a related field. We're standing on the shoulders of those who have done this before us and transferring it to a sector that desperately needs it. I think the tools are at hand and it is time for the work to begin.

Paul Erickson will present "Immersive Design for Reduction of PTSD and Suicide" during the 2019 Station Design Conference, May 14–16, 2019. Learn more or register at [www.fhstationdesign.com](http://www.fhstationdesign.com). And watch for Erickson's article "Embracing Immersive Design" in Firehouse's May Station Design Supplement.

---