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Quelling the Fire: Heliport Safety Regulations Get Beefed Up

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A 2008 rooftop EMS helicopter crash prompted changes to heliport building codes. The revised regulations went into effect on Jan. 3. NTSB Photo.

Heliport regulations are about to get far more stringent.

In response to the May 29, 2008, rooftop emergency medical services helicopter crash in Grand Rapids, Mich., new National Fire Protection Association (NFPA) standards regarding heliports have been issued in a revision to NFPA 418, effective Jan. 3, 2011. (Although there is no requirement for any authority to adopt NFPA 418, it has become a component of building codes in the United States and is the most widely accepted guideline in the nation.)

Under the new revision to NFPA 418: Standard for Heliports, which addresses fire protection for heliports and rooftop hangars, a number of safety items that were previously recommended will now be mandatory under the standard for all heliports, existing and new alike.

In the past, many heliport owners and operators were able to design, build and operate heliports without much regulatory oversight if the facilities were private. Only heliports that received public funds, were open to the public, or were regulated by a state or local municipal code stating as much were required to adhere to the United States Federal Aviation Administration's Heliport Design Advisory Circular (AC 150/5390-2B and its predecessors) and NFPA 418.

In the case of the Grand Rapids heliport, itself a private hospital facility, numerous obstacles both on and around the rooftop provided significant hazards to flight. What's more, once the helicopter, with the pilot and FAA examiner on

board, struck one of those obstacles, the resulting crash and post-crash fire blocked the only entrance and exit from the roof: an elevator and stair tower. Once they escaped the wreckage, the pilot and examiner hid from the heat and flames by climbing down onto an air handling duct just below the rooftop level and remained there until help arrived. Due to the blocked entrance/exit, however, first responders had difficulty accessing the wreckage to put out the fire and rescue the survivors.

These challenges have been addressed in the NFPA 418 revision. NFPA 418, unlike the FAA advisory circular, has regulatory teeth as a component of building codes. The NFPA revision requires all aeronautical components of all new heliports, public and private, to meet FAA heliport design criteria. Additionally, as a part of most building codes, NFPA 418 will now require all heliports, new and existing, to have mandatory normal and emergency response procedures, along with fire protection. Fire suppression equipment, annual training and equipment verification will also be required. And, a fire marshal must now approve all heliport design drawings.

“After the Grand Rapids accident, which got significant industry attention, the NFPA fire protection for heliports committee received a great deal of comments requesting code changes,” explained Raymond A. Syms, chair of the NFPA committee, but speaking as president of Raymond A. Syms & Associates, a heliport consulting firm based in New Jersey. “It’s been apparent for quite some time that the majority of private heliport owners and operators are not adhering to FAA design recommendations and the FAA doesn’t have the regulatory ability to force compliance. However, the NFPA does by virtue of adding it to the building code.

“Disregard of the FAA advisory circular’s safety recommendations puts lives at risk: those in the aircraft, those on or around the heliport, and even the first responders. Through a collaborative effort with colleagues in the industry, we inventoried many thousands of heliports, discovering the vast majority of existing U.S. heliports possess non-conforming hazards of one form or another. I strongly feel this new NFPA revision will help save lives and property.”

While new building codes don’t directly affect current heliport designs, heliports will be required to meet NFPA 418 should the heliport require renovations or additions, which will trigger a review of adherence to current codes. However, it’s important to note that local fire safety officials can, if they desire, apply the FAA design safety guidelines to existing facilities now that the new revision has been issued, regardless of the age of the facility.

The provisions in the 2011 edition of NFPA 418 in respect to training, equipment and emergency planning will apply to all heliports.

“Most of the things that need to be addressed to meet the new codes are fairly simple and relatively inexpensive,” explained Syms. “Relocating a tree, taking down a railing, installing proper fire suppression, etc. costs a fraction of even a minor helicopter accident. I believe many heliport operators truly want to keep their facilities safe, and the recognition of these exposures by the NFPA and a regulatory mechanism for compliance is a very valuable tool to save lives and property.”

For more information on the new regulations, please visit: www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=418, or contact Ray Syms via email ray@raysyms.com or through his company’s website: www.raysyms.com.

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