

February 8, 2016

The Honorable Caddy McKeown, Chair
House Committee on Transportation and Economic Development
900 Court St. NE
HE-478
Salem, Oregon 97301

Re: House Bill 4089

The Honorable Caddy McKeown, Chair,

I am a building and fire code consultant that has been involved in the fire safety aspect of pallet use and handling for the past decade. I currently consult for Brambles-Chep, an industry leader in wood pallet manufacturing, for the purpose of addressing code development activities that provide for pallet storage fire safety. I am writing in regards to House Bill 4089, a bill that would specify the use of corrugated pallets when a state agency procures goods under public contract.

I have taken the time to review the draft bill, testimony submittals, and the posted video record of the committee hearing on the bill. In doing so I find that none of submitted positions of testimony offered addresses the potential impact of corrugated pallets in regards to the fire safety of facilities. I believe state government incentives to favor the use of corrugated pallets would have unintended, negative impacts on fire safety and the codes designed to protect public safety.

The relationship between the presence of pallets and fire occurrence impacts has been in the spotlight of fire service organizations and code writing organizations for decades. The impact includes storage both within and exterior to a building. Codes and standards such as NFPA 1 Fire Code, the International Fire Code, and NFPA 13 Standard for the Installation of Sprinkler Systems all have language that specifically address both the presence of and the type of material pallets are made of. Currently there are proposals for new language addressing the outside storage of idle pallets before both the NFPA 1 Fire Code Technical Committee and International Code Council's International Fire Code Committee.

In simple terms, the type of material a pallet is made of and the manner in which it is assembled can have an impact on the pallets' contribution to a fire occurrence and ultimately the fire safety of a building and/or exterior premise. Buildings protected by automatic sprinkler systems should include the presence of and type of pallet called for in the design and installation of the system. The majority of building automatic fire sprinkler systems are designed for the presence of wood pallets which the standard for installation, "NFPA 13 Standard for the Installation of Sprinkler Systems, 2013 edition", defines as follows:

“3.9.1.27 Wood Pallet. A pallet constructed entirely of wood with metal fasteners.”

This definition is important because any introduction of a non-wood material such as plastic into the construction of the pallet, including the fastening method, would negate the pallet from being considered a “wood” pallet for design, installation and maintenance purposes unless that specific pallet has been laboratory tested for its fire performance in comparison to a standard wood pallet.

NFPA 13 also defines what a plastic pallet is:

“3.9.1.21 Plastic Pallet. A pallet having any portion of its construction consisting of a plastic material.”

This is an important qualifier. If a pallet otherwise constructed of wood products incorporates a plastic material, even the use of a resin as a fastening means, the pallet would be defined as a “plastic pallet” under NFPA 13. This has considerable impact on the design of the fire sprinkler system. Introduction of a pallet type other than that defined as all wood or metal into a building not designed for that product would require a significant upgrade of the capabilities of that existing system to remain in compliance for the codes and standards the system was installed under.

This is not a new issue relative to new and existing fire sprinkler systems. It is basic code application the manufacturers of wood pallets have followed and complied with, including having pallets incorporating wood composite materials tested for equivalency to wood to ensure they would not have a negative impact on the capability of fire sprinkler systems.

Corrugated pallets are a wood product that has been processed and is held together incorporating the use of resins. By definition of NFPA 13 it is not a “wood”: pallet due to the use of the resins and must be treated as a “plastic” pallet. A recent search of Underwriters Laboratory’s certifications listings did not identify any corrugated pallets as having been tested for equivalency to wood for fire performance. As a result, the introduction of corrugated pallets to an existing building protected by an automatic fire sprinkler system has the possibility of putting that building in violation of the building and fire codes unless a significant upgrade of the fire sprinkler system occurs.

Fire safety issues regarding pallets are not limited to the presence of automatic sprinkler systems. The amount, configuration and type of pallet involved in general storage practices can have a fire occurrence and intensity potential whether inside or outside a building. The current practice under codes and standards is to limit any inside storage of idle pallets even in sprinklered buildings, and encouraging exterior storage.

This is an important factor to be weighed in relation to House Bill 4089. Corrugated pallets are basically a one-way pallet not to be reused as compared to modern wood pallets. Whereas wood pallets frequently leave a site on one of the trucks that made a delivery so they can be reused, the corrugated pallets are not intended for that activity. That means they will remain on the site until they are recycled or disposed of.

Where on the site will the corrugated pallets be stored? Will each government facility have the means to shred and bale corrugated pallets? Does the proper space exist within each government facility for necessary shredding equipment, baling equipment and storage of the

bales of shredded corrugate awaiting sufficient accumulation for pickup? Baled corrugated material presents its own unique fire hazards including being more readily ignited and having a faster surface fire spread than wood pallets, will the proper fire protection levels exist at each government site?

I am aware of Ikea's introduction of corrugated pallets into their supply line. However, I believe it is important to recognize the economy of scale. Ikea manufactures, packages, ships and distributes. They control start to finish including the end point when putting the infrastructure in place to ensure use, handling, disposal and ultimately recycling pickup occurs in bulk. The construction, operation and maintenance of their facilities all meet the same corporate policies and procedure requirements. They are in a position and of a size that their economy of scale works to their benefit. Without an assessment of each of Oregon's State facilities this proposed law would apply to, including the procurement process such as are the orders in bulk of a scale that fits the goals of the proposal; and the physical facility impact to ensure fire safety is addressed, consideration of a bill mandating that corrugated pallets be demanded from suppliers would appear to be premature.

I thank you for your consideration of these concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Davidson', with a long horizontal flourish extending to the right.

Robert J Davidson
Fire & Life Safety Consultant.

CC: Mike Mullin, Director, Government Affairs-Americas Brambles-Chep

Robert Davidson – rjd@davidsoncodeconcepts.com

The Managing Partner of Davidson Code Concepts, LLC, Mr. Davidson has more than thirty three years of experience in both the volunteer and career fire service. With over 25 years as a code enforcer he retired as Fire Marshal in charge of the Fire Safety Division of the South Brunswick Township Code Enforcement Department with responsibilities including enforcement of the NJ Uniform Fire Code and managing the Office of Emergency Management. He has experience teaching a variety of subjects involving health, safety and code enforcement for the International Association of Fire Fighters; the International Code Council; Rutgers, The State University of New Jersey; The NJ University of Medicine and Dentistry; Middlesex County College, Middlesex County NJ Fire Academy, University of North Carolina School of Architecture, Charlotte Campus and University of Texas-Arlington Campus. He has been a speaker at numerous NFPA World Safety Conferences.

He gained national recognition as the Chair of the International Code Council's International Fire Code Development Committee and he currently chairs the Subchapter III, (Fire Prevention Code), subcommittee for the NJ Fire Safety Commission's Code Advisory Committee.

In September of 2006 he was the recipient of the International Code Council's annual 'ICC Fire Service Award' which is presented in recognition of untiring support of and dedication to professional code enforcement and the fire protection profession and in 2011 he was awarded with an ICC Honorary Membership which is granted to an individual who has been recognized as having rendered outstanding service to the International Code Council.

He currently serves on the:

- NJ State Fire Safety Commission, Codes Advisory Council
- ICC Building Code Action Committee
- NFPA 1 Fire Code Committee,
- USDOE Biomass Industry Panel on Codes and Standards
- FCHEA/NREL Hydrogen Code Improvement Team

He also has served on the:

- New York City Fire Department's "2011 Fire Code Revision Project Advisory Committee",
- ICC Fire Code Committee, including serving as Chair
- ICC IBC-Fire Safety Committee,
- ICC IRC Building Committee,
- ICC Northeast Regional Fire Code Committee,
- ICC Joint Fire Service Review Committee,
- ICC/NFPA/USDOE Hydrogen Industry Panel on Codes,
- ICC Fire Code Interpretations Committee,
- BOCA Building Code Interpretations Committee, and the
- NFPA 232 Guide for Protection of Records

He served on various workgroups for the ICC International Green Construction Code, the ICC Adhoc Healthcare Committee and the ICC Code Technology Committee.

In addition to his heavy involvement in drafting, submitting and testifying on the provisions in the International Code Council's series of codes addressing the use of hydrogen as a fuel, (under contract to the National Renewable Energy Laboratory this last cycle), and Biomass to Ethanol conversions, (under contract to the Oakridge National Laboratory), Mr. Davidson has conducted hydrogen energy and biomass code official workshops throughout the United States including workshops targeting building and fire code officials in New Jersey, New York State and New York City.