



Session 3C:

Mega Warehouse Incident – Case Study, Plainfield, IN

On March 16, 2022, a 1.4 million ft² distribution warehouse in Plainfield, IN was destroyed in a massive fire. The loss included the entire structure and all of its contents, which included massive quantities of retail goods. The facility was designed to efficiently process and ship orders to on-line customers in a large geographic area.

The modern warehouse was protected by state-of-the art automatic sprinkler systems with on-site water storage and both electric and diesel fire pumps. A sophisticated smoke detection system provided early warning and remote monitoring provided rapid notification of the fire department. The building was divided into two sections by a 4-hour rated fire wall.

The building was in full operation with more than 500 employees working inside when the fire occurred. When firefighters arrived, the fire appeared to have been effectively controlled by the sprinklers and they extinguished the residual combustion in the area of origin with a hose line. There were no indications of fire extension before conditions changed very suddenly and radically. The firefighters barely escaped from the building as the fire took possession of the entire building within minutes.

The analysis was directed at the obvious questions of what went wrong and what lessons can be taken from this exceptional event. Hundreds of similar facilities have been constructed in large and small communities. The potential for similar occurrences must be very seriously considered by fire protection engineers, by the fire service, and by the many other parties that share the responsibility for protecting lives and property .

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J. Gordon Routley is a registered professional engineer in Québec and a fellow of both the Society of Fire Protection Engineers and the Institution of Fire Engineers. He studied civil engineering at McGill University and fire protection engineering at the University of Maryland. He also obtained a Master of Public Administration degree (*summa cum laude*) from Arizona State University and received a fellowship from the National Fire Academy to attend the John F. Kennedy School of Government at Harvard University.

His active fire service spanned 55 years career in the United States and Canada. He retired in 2023 from the position of Assistant Director of the Montréal Fire Department, where he was assigned to the office of the Fire Chief. He previously served as Assistant to the Fire Chief in Phoenix, Arizona; Fire Chief in Shreveport, Louisiana; and Safety Officer in Prince George's County, Maryland