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Title of the Session: Fire Safety and Evacuation Measures in Buildings

Date: 23/04/2018 to 06/05/2018

Summary

We are only made aware of the inefficiencies, lack of preparedness and the poor taught in the design and layout of buildings, as they relate to fire safety and evacuations measures, until the occurrence of a fire in such structures.

In most cases, occupants within such buildings, die from the smoke and not the actual fire, while trying to exit the building. Panic and confusion, added with a lack of knowledge about exits and evacuations measures within a building when under fire, will prove challenging to escape in a timely manner.

Context

- **Kemerovo Siberia, MOSCOW:** Russia's Mall Fire, 64 died, 41 were children; March 25, 2018.
- **Grenfell Tower fire, London:** 71 persons died; June 14, 2017,
- **Santa Maria, Brazil:** The Kiss Night Club Fire, 232 persons died; January 27, 2013
- **Ashulia, Dhaka:** The Tazreen Fashion Factory Fire, 110 persons died: November 24 - 25, 2012
- **Karachi, Pakistan:** An underwear factory in a five-storeyed building, 289 persons died: September 12, 2012
- **Boston Massachusetts:** Cocoanut Grove fire, 490 persons died: November 1942

These are a few of the recorded cases in history, where the outbreak of fires in such buildings had taken the lives of many occupants who were present in the buildings. In all fires identified above, the commonalities were that evacuations out of the said buildings were challenging, based on a single or a combinations of factors such as;

- ✓ Exits doors nonexistent, locked or inaccessible
- ✓ Poor evacuation plans
- ✓ Lack of knowledge of fire safety and evacuation measures
- ✓ Unpreparedness
- ✓ Inadequate signs and directions within the buildings

Consider the irresponsibility of the management of the Kiss Night club in Brazil, when the capacity of the club was 690 persons, while on the night of the fire, it had more than 1,000 patrons within the building; almost twice its capacity. Established regulations and references, states a specific number of persons within a given space, while for every complete floor area, exit doors should be proportional.

It is therefore better to be pro-active than reactive as it relates to evacuation measures in buildings. A common occurrence and practice within many buildings would reveal exit doors locked with chains or padlocks, or where the main entrances to the building is actually the only exit out of the building or where fire alarm systems were never used, outdated or all together non-functional. In the Coconut Grove fire, a few of the staffers were able to exit the building after the fire had started because they knew, where and which window/s could have been used as an exit. Predominantly in the Caribbean, most windows and doors within buildings are grilles as a means of added security. A case is therefore presented for designers, homeowners and building owners, to choose between safety and security of the structure.

Preventative measures and preparedness are necessary to save lives in the event of fires within buildings. However, it is acknowledged that the preparation for evacuation measures in buildings to allow for timely exits, has financial implications. This added financial inputs, may be the very constraint preventing the design, installation and application of such safety measures within the building, to protect the visiting public and its occupants.