FIRE READINESS OF HIGH RISE COMMERCIAL BUILDINGS IN SRI LANKA

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CANDIDATE'S DECLARATION

I declare that this is my own work and that, to the best of my knowledge, this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma at any other University or institute of higher learning. Except where acknowledged in the text, I believe it does not contain any previously published or written by another person.

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SUPERVISOR’S DECLARATION

Under my supervision, the aforementioned candidate conducted research for his Master's thesis.

Name of the Supervisor: Chartered Quantity Surveyor Indunil Seneviratne

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Signature of the Supervisor Date

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ABSTRACT

Contemporary cities and enormous skyscrapers have been constructed due to the increasing population in urban areas. Evacuation strategies and the time needed to evacuate from the buildings are the main concerns of governments, construction developers and occupants. As a result, fire readiness is an important factor to consider when it comes to the safety of building occupants. There are a variety of people working in high-rise commercial buildings with varying thought patterns and educational levels. Furthermore, both active and passive safety systems have been installed at all high rise commercial buildings located within the city limits of Colombo, and without a satisfactory level of fire safety systems, the fire service department did not issue the fire clearance certificate for the high rise commercial buildings to operate. Aside from fire extinguishers, hose reel systems, fire alarm master panels, fire detectors, and sprinkler systems, active fire safety systems can be found in all high rise commercial buildings, while passive fire safety systems include emergency staircases, fire doors, and walls. Furthermore, an administrative team was appointed to administer and maintain the system installed in the buildings, and it is their primary responsibility to ensure the smooth operation of the high rise commercial buildings. In order to determine the fire readiness in 10 existing high-rise commercial buildings, questionnaires were given to tenants and management teams. Moreover, suggestions to improve the fire readiness appertain to buildings were identified using the same questionnaire. Total flooding and fire suppression systems do not appear to be a common fire prevention approach in the Sri Lankan context, based on the existing status of high-rise building fire preparation. Additionally, several standards that must be met, like familiarity with the buildings fire safety systems and knowledge of fire safety among the occupants, fall short of the required standard. Additionally, several construction criteria, such the accessibility of evacuation aids for individuals with disabilities and the plans for implementing fire training and awareness campaigns, fall short of expectations.

Keywords: *Fire readiness, Evacuation, High-rise, Buildings, Commercial, Sri Lanka.*

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LIST OF ABBREVIATIONS

AFP	Active Fire Protection
BCA	Building and Construction Authority
UK	United Kingdom
US	United State
VDU	Visual Display Unit

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