

OPTIMIZED ROOF TOP TOWER DESIGN

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A Thesis submitted to the Department of Civil Engineering for the Degree of Master of
Engineering in Structural Engineering Design



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preface

Erection of Telecommunication towers has become one of the key elements in any network expansion project in telecommunication industry at present days. Roof top towers play a dominant role in this context especially in urban and suburban areas since the possibility of erecting green field towers is limited in these areas due to factors like scarcity of lands, social factors, economic factors, etc.

But, a proper scientific research on rooftop towers or effects that are caused by the tower installation on existing buildings has not been carried out yet in Sri Lanka. Even in world context, a very few researches have been done in this regard.

Hence, this topic was selected for my MEng(structural) research with the main objective of find ways to optimizing cost for roof top towers and identification or structural effects on existing structures on which roof top towers are installed.

A comprehensive scientific study was carried out within the scope of this work and finally it has reached to some important conclusions that can be practically adopted for the betterment of this roof top tower design and construction field.

Also, I hope this report will be a motivator to the practicing engineers in this field to carry out more and more research in this field for the betterment of the industry.

Acknowledgement

I take this opportunity to express my gratitude to all the persons who contributed immensely in bringing this research to life.

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