

DEVELOPMENT OF A 46 STOREY APARTMENT BUILDING IN RAJAGIRIYA

GROUP 2



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PREFACE

Colombo city is the business capital in Sri Lanka. The growth of businesses in the city is increasing day by day. As a result of this situation, many urban dwellers those living outside the capital are attracted to the city. The traffic conditions, environmental pollution around Colombo district is getting higher due to these unavoidable movements of vehicles, etc. Solutions for the situation are being implemented as part of the master plan for development of the city. Most of the suburban population who travel to Colombo daily cannot afford to build their own houses within city limits as the cost of land and cost of construction are not within their means. Purchasing an apartment on payment in instalments is an ideal alternative especially to private sector executives who travel to Colombo daily with their whole family as most such children attend prestigious schools in Colombo. The Sky Residencies high-rise building project was planned to cater to this sector of population with availability of state of the art apartments priced reasonably leading to improvement of quality of life.

The Sky Residencies will be located in Buthgamuwa road Rajagiriya very close to the city of Colombo. The land area is approximately 180 perches. Sky Residencies is planned for a height of 165m and consist of 46 stories including 5 parking floors, 40 apartment floors and a recreational floor. This is designed to facilitate 160 apartments with the choice of 2 bedroom and 3 bedroom apartment. Sky Residencies is designed according to the green concept to achieve sustainable development. It will become one of the most sustainable buildings in Sri Lanka and will be unique in its architecture and structural features. Facilitation of obtaining a soft loan from a reputed bank to the purchaser is planned to attract buyers.

According to the Sri Lanka real estate market brief, KPMG condominium property developments are having average pre construction sale ratio of around 50% while high more prestige development like empire emperor lumiere and trillium tend to have about 80% preconstruction sale ratio. Therefore there is a huge condominium market in Colombo. Sky residencies will be at the top of the market when it's initiated because of its unique features.

There are eleven Chapters in this report. This final report is prepared to give the reader a detail and complete intuition to the Project. Project. Vision, mission, objectives and goals of the project were described here. Feasibility study, Competitive advantage of this project and detail design of this project is described in this report.

Social, financial and technical feasibility studies were also considered. Since some environmental issues can arise due to this project, it is very important to do an Initial Environment Examination (IEE). On the other hand a Traffic Impact Assessment (TIA) is needed in order to visualize the traffic impact to the surrounding area due to this project. Therefore a detailed IEE and a detailed TIA were included in this report.. The architectural design was done to accommodate topographical variations. The services arrangement for lift, supply water, waste treatment methods are included in this project. The computer analysis for the building was done by using SAP 2000 software. Different load cases dead, imposed and dynamic loads such as wind were also considered. As stipulate in government requirement for new buildings in Sri Lanka safety against earthquakes is also designed. In addition to that thermal comfort was assessed by using DEROB LTH .Main Items of the BOQ are included together with the Details. At the end of the report further detail & architectural drawings were given in the annex. All the design parts were done in accordance with a code of practice and guidelines. This report will give a detail description about the project objectives, challenges we faced and how we overcome them to the reader.

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Contribution: The main 11 tasks given in the TOR were assigned to each member to act as the leader for the task. All 11 team members contributed to the leader of the main topic in the design process. The equal dedication of all team members are the pillars of success of this project.



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