

REINFORCED CONCRETE DESIGN AND DETAILING FOR A THREE STOREY SHOPS AND OFFICES

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ABSTRACT

This project is concerned with the detailed design of reinforced concrete elements to BS 8110. The different types of design occurring beams, slabs, columns and foundations is given in the calculation sheet. In this project, the limit state design philosophy is used in designing the structure. British Standard Code, BS 8110 for concrete is used mostly in the design of the slabs, beams, column, foundation and stair. On the other hand, BS 6399 is used to determine the dead load and imposed that are acting on the structure's elements.

The designs of the following elements are continuous reinforced beams, slab with simply supported and continuous spanning in one and two directions, biaxial column, square pad foundation and flat roof.

The dimension of my building design is 18000mm (60ft) by 6000mm (20ft). The building comprises of three stories. The whole ground floor composes shop house, and the first and second floors are for office purpose. Every floor can be able to accommodate approximately five office. The whole built-up area per floor is $18 \times 6 \text{ m}^2 = 108 \text{ m}^2$. The whole built-up area for this buildings is $108 \times 4 \text{ m}^2 = 432 \text{ m}^2$.