

**ABSTRACT**

**STRUCTURAL DESIGN OF APARTMENT 20 FLOOR**  
**BANDAR LAMPUNG**

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Bandar Lampung is one of the cities in Indonesia, which is being developed at this time. These developments will affect population and workforce. The flurry will make the work of the public do not have much free time to prepare for daily needs. Condition, situation, and the state of society as this causes them to prefer a place that provides various kinds of necessities of life (one stop service). Therefore, it is necessary to facilitate community building in the limited land that is an apartment. With the establishment of this apartment is expected to meet the needs of employers, workers or the public either as a residence or long-term investment in the future.

This apartment structure design project at the Teluk Betung which consists of 20 floors has 620 rooms with various types and consists of Type A (230 m<sup>2</sup>), Type B (152 m<sup>2</sup>), Type C (135 m<sup>2</sup>), Type D (120 m<sup>2</sup>), Type E (98 m<sup>2</sup>), Type F (73 m<sup>2</sup>) and Type G (54 m<sup>2</sup>). The apartment is also equipped with various facilities such as a cafeteria, mini market, restaurant, fitness room, a mosque and a multipurpose hall.

To analyze the structure, ETABS Non Linear version 9.7.4 software are used to get internal forces and will be used in manually design of reinforce concrete refer to Concrete SNI code 03-2847-2002 and Earthquake code SNI 03-1726-2002. To compare the result Sp Coloum v. 4.81. and RC. Beam Design V.1.0. are used. The calculation obtained 80 x 80 cm coloum with 24 D 25 reinforcement, 35 x 60 cm primary beam and 15 x 30 cm secondary beam. The pile pondation are used for pondation with 9 pile pondation, 60 cm diameter and 18 m depth.

Key words: Structure, ETABS, Pile Pondation