Design of Three-Storey Reinforced Concrete Cavite State University Medical Center

Undergraduate Design Project
Submitted to the Faculty of
Cavite State University
Indang, Cavite

In partial fulfillment
of the Requirements for the degree of
Bachelor of Science in Civil Engineering

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ABSTRACT

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The design project conducted from June 2004 to March 2005 at Department of Civil Engineering, College of Engineering and Information Technology, Cavite State University, Indang, Cavite. The project aimed to design a three-storey reinforced concrete medical center that includes architectural plan, structural plan, lighting and plumbing lay-out, cost estimate and scaled model of the building. This design project would serve as a future reference for the future construction of the project.

Structural Aided Analysis and Design (STAAD Pro 2003) was used in the analysis of the three-dimensional structural frame. The ultimate moments, shears and axial loads were the basis for manual computation of the design. The guidelines set by the National Structural Code of the Philippines (NSCP), National Building Code of the Philippines and American Concrete Institute (ACI) were followed in design computations. Safety, economy and aesthetic aspects were also considered in conceptualizing the design of the building.

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