

PREPARATION OF BILLS OF QUANTITIES AND COSTING FOR THE SUB-STRUCTURE WORK EXCLUDING PILING WORKS TO A FACTORY AT MUKIM KLANG, SELANGOR

Prepared by: Haw Yong Yuan

ABSTRACT

Sub-structure is a structural or lower portion of the building which located below the ground level. It is very important part for a building because the role of sub-structure is to sustain or support the structure above ground level of a building. It transmits the loads of the super-structure to the supporting soil. A foundation is therefore that part of the structure which is in direct contact with the ground to which the loads are transmitted. All building started with sub-structure including damp proof course and to transfer safety down to a suitable load bearing layer of ground after receive the loads from the main building. The main part of sub-structure is the foundations. Before the designing stage, the soil of the area will be surveyed and investigated in order to understand the characteristic of the soil, so that the engineer can follow the requirement and condition of the soil to design a suitable and strong foundation. This is very important because unsuitable or weak foundation could lead to building subsiding or even collapsing.

The costing, bills of quantities and elements of sub-structure of a factory will be discussed in every chapters. For this project, it is important to understand the definition of sub-structure and covers bills of quantities such as measurement and cost estimation. After that, this project will make build up rates for excavation, concrete, steel bars and formwork.

The cost of the sub-structure of a factory in Klang will also be included in this project report. With taking off quantities and unit rates that author have researched, bills of quantities will be done completely by using Microsoft Excel. For the quantities, the descriptions are all based on Standard Method of Measurement 2 (SMM2).