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Cost analysis format for road structures in Sri Lanka

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The clients who are engaging in civil engineering construction seek financial sound and feasible options forever to achieve their objectives effectively. The cost analysis is one of the best tools that cater number of advantages to high-risk projects in civil engineering. Still there are no more formats to carryon the cost analysis process for roads in Sri Lanka. The aim of this piece of research was introduce a platform for prepare a cost analysis for all classes (A,B,C,D,E) of roads in Sri Lanka. The objectives, which were supported to achieve that utmost goal, seek to provide a clear understanding of what a cost analysis is, how important it is in road construction and to identify what are the available formats used to prepare cost analysis in local and international contexts. The basic methodology that was carried out for conducting this research was comprehensive literature surveys and brainstorming of professional experts in local road sector through interviews and questionnaire surveys. The scope of this research was narrow down into thoroughfares (Trunk roads) in local road network.

This new cost analysis format consisted with 10 critical areas, which will support to guide the users completely. The contents entitled with Principles of Analysis, Instructions to Users, Definitions of Terms, Summary of Elemental Costs, Summary of Group Elemental Costs, Format for Elemental Cost Analysis, and Format for Amplified Cost Analysis, Elemental Definitions, Elemental Specifications and Design Notes, Functional Analysis of Elements. Depending on the depth of data accessibility and availability of time the users can select the suitable format either concise, detailed or amplified to carryon the cost analysis process. The entire format deals with 9 numbers of concise elements, 29 numbers of detailed elements and 34 of sub elements. Additional structures such as bridges, earth-retaining structures etc. that are coming with road construction were kept separately and are again estimated based on the consultant's own cost data.

Inadequacy of the information in the Bill of Quantities and non-applicability of standard methods of measurements such as Civil Engineering Standard Method of Measurement (CESMM) and elemental definitions and demarcations were the major difficulties encountered during the period of developing the cost analysis format for roads in Sri Lankan context. The ultimate use of this standard formats for cost analysis allowed making uniform, consistent and meaningful comparisons between projects on a common basis.

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