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An Application Model to control Floor Area Ratio in Residential Areas

Floor Area Ratio (FAR) is considered to be one of the active and important factors which assist in controlling urban volumes in residential areas due to its effect in building sizing and the impact of this on population size, and hence the measurement of population densities in these residential areas. It became absolutely clear, through practical application of the laws which control urban planning and building in Egypt, either present or past legislations, that conditions which control FAR, the most important of which are that concerning (occupancy rate), and the building heights, resulted in continually increasing building volumes and vastly increased FAR in residential areas. This necessitates reconsidering these conditions, and finding suitable means to control FAR in the residential areas.

This paper aims at proposing an application model which assists each of the decision maker, architect, and planner to control FAR in residential areas, through the control in (occupancy rate) and building heights as well. This proposed model can be used as an assisting tool in decision making systems, with the goal of achieving a limited FAR in the different planning and developmental stages in residential areas, especially in new Arab urban residential communities.

To achieve the research goals, it has been divided into four parts. The first part exposes the research problem, while the second part proposes the suggested model, regarding its definitions, purposes, and its main assumptions. Part three handles the description of this model by explaining the two main stages through which it undergoes. The fourth, and final part, contains the model application and the results of the research. The paper concludes with a summary.