Abstract

This project is a redesign of a home for the elderly, the project was built on land in Nablus on Street 16 opposite the elderly house of the Palestinian Red Crescent Society, with a total area of 9250 square meters, and a building area of 3134 square meters. It conforms to international and local standards that allow the elderly to carry out all activities comfortably and smoothly.

The building is designed so that all systems work in an architecturally integrated manner, the building was placed on the ground with a direction commensurate with the movement of the sun to reduce its influence in summer and use it in winter in order to achieve the highest thermal comfort in the building. The building contains 32 bedrooms, which can accommodate 48 elderly people. A medical clinic, public facilities such as a cafeteria, a hall for public use, a special section for employees, and external gardens have been provided. Structurally, a seismic structural design was made so that the system used in the slabs was one-way and two-way systems, and the design and details of the structural elements were made in accordance with the international codes, namely ACI 318-14, ASCE and UBC 97. Environmentally, the building was studied from an environmental point of view. The study has thermal loads, external and internal wind movement, and natural lighting. The building was treated from a thermal aspect through its isolation and the use of suitable shading systems. Mechanically and electrically, the building's sewage and water supply systems are designed, and the central air-conditioning system is also designed to achieve thermal comfort for users and take into account the complementarity in the design so that the systems do not conflict with each other. The electrical systems of the building, which include industrial lighting, design of sound systems, design of sites for electrical sockets and lighting switches, were designed in a manner that depends on the distribution of luggage in the architectural plans. In fire systems, the firefighting system was designed in the building and more than one system were used, including water sprinklers, fire stations and manual extinguishers, and of course fire alarm systems were used, including smoke detector, heat detector and visual alarm, and the presence of an isolated and safe emergency exit was taken into account for the elderly, and it includes An elevator and stairs which are separated from the building. Finally, the quantities and costs required to complete the project were calculated by counting the materials required to complete the work in addition to the cost of the manpower required to complete it.