

DESIGN A SINGLE STOREY FACTORY WITH MEZZANINE FLOOR

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ABSTRACT

The title of this project is design a single storey factory with mezzanine floor. In this designed based on dimension, building character, cost, material resources, scope for future and requirement. Besides, several factors also are considered such as safety, economic and comfortable.

I selected to use reinforced concrete to design structural frame, metal deck roof, how steel trusses, aluminum suspended gypsum ceiling board, brickwall, reinforced concrete staircase, roller shutter doors and timber flush doors and aluminum and timber frame with glasses for windows.

This single storey factory with mezzanine floor is used for light industry purpose. The total area of landscape is (60 X 110 square feet) and the structural dimension is (40 X 80 square feet). This factory can be extended for future use.

The structural of this factory are designed by the ultimate limit state and checked for the serviceability limit state. In limit state design, the design load is the product of the characteristic load and relevant to partial safety factor for loads. There are 1.4 for dead load and 1.6 for imposed loads.

The design structural of this building consist of steel roof trusses, purlins, reinforcement beams, slabs, columns, foundations, staircase and brick walls.