

The Important Consideration of “LOAD” In Construction Design

Ultimately, the load in all structures is transferred to the foundation that supports it and then to the ground below. All walls, post, and columns, that serve to transfer this load from the roof to the foundation are considered to be “Load Bearing”. Walls that are not load bearing are considered either “Non Load Bearing” exterior walls, or “Partition” interior walls.

Internal Loads

All structures have two types of internal loads that always must be considered: “Dead Loads” & “Live Loads”

Dead Load - the weight of all permanent construction components in a structure to include: walls, floors, roofs, ceiling, stairways, etc. Fixed service equipment like furnaces & water heaters also are considered part of the total “dead load”.

Live Load - a weight imposed by the use and/ or occupancy of the building to include: furniture, portable appliances, human and animal loads, etc.

External Loads

Structures must be designed to withstand temporary external loads that might occur in the location where the building is being constructed.

“External Loads” include:

Wind Load - load superimposed on a building as a result of storm activity

Seismic Load - force superimposed on a building or structure during earthquake or volcanic eruption

Snow Load - load superimposed on a building as a result of the accumulation of snow and/ or ice.

Rain Load - load superimposed on a structure as a result of heavy or torrential rain fall.

Storm or Flood Surges - loads superimposed on a structure that results from high and surging tides and or as the result of flooding and storm water run off.

Mud/ Earth Loads - loads superimposed on a structure that result from mud or earth slides