Resilience in Buildings: Engel House Tel Aviv

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Natural and human-related calamities cause significant destruction of properties and loss of life. In Israel, stakeholders, including designers and architects, develop structures that can withstand extreme weather conditions to mitigate the destruction of properties. The element of resiliency is considered during architectural planning to foster the long-term sustainability of a building. Among the resilient buildings constructed in Israel is Engel House situated in Rothschild Street in Tel Aviv. This structure adopts quality engineering to withstand fluctuating local weather patterns, such as higher temperatures and wind. Resilient structures of this type are easily sustainable and can recover from serious calamities, including earthquakes, strong winds, and floods (Takewaki, et al., 2019). In essence, Engel House in Tel Aviv integrates quality engineering to uphold resiliency against the probable occurrence of natural and human-related calamities in the region.

Engel House adopts type-H building design to distribute and withstand external pressure. This structure is constructed in full adherence to the mechanical requirements for the type-H models. The house has a strong base with strong reinforcement on vertical alignments. These features ensure the building withstands wind and earthquakes. The structure is also developed using the L-shape plan to facilitate easy entry and exit. The building can be accessed in different directions since it contains a complex configuration that elevates its robustness (Sever, et al. 2015). Specifically, the planners employed exotic architecture to incorporate different structural features, including a strong foundation to increase the level of resilience against earthquakes (Bardzinska-Bonenberg, 2010). Notably, the house is constructed with a flat top. This architectural design is borrowed from parts of New York and Rome to improve on the quality and resilience of the building (Bardzinska-Bonenberg, 2010). As a result, Engel House integrates

diverse structural requirements that increase its resiliency and sustainability towards external pressure that emanate from natural and human-made occurrences.

References

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