

## Recommendation of Semi Permanent Buildings for Tsunami Prone Areas

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**Abstract :** Coastal is one area that can be a place to live. Various buildings can be built in the area around the beach. Many Indonesians use beaches as housing and work, but we know that coastal areas are identical to tsunami and wind. Costs incurred due to permanent damage caused by tsunamis and wind disasters in Indonesia can be minimized by replacing permanent buildings into semi-permanent buildings. Semi-permanent buildings can be realized by using cold-formed steel as a building. Thus, the purpose of this research is to provide efficient semi-permanent building recommendations for residents around the coast. The research is done by first designing the building model by using sketch-up software, then the validation phase is done in consultation with the expert consultant of cold form steel structure. Based on the results of the interview there are several revisions on several sides of the building by adding some bracing rods on the roof, walls and floor frame. The result of this research is recommendation of semi-permanent building model, where the nature of the building; easy to disassemble and install (knockdown), tsunami-friendly (continue the tsunami load), cost and time efficient (using cold-formed-steel and prefabricated GRC), zero waste, does not require many workers (less labor). The recommended building design concept also keeps the architecture side in mind thus it remains a comfortable occupancy for the residents.

**Keywords :** construction method, cold-formed steel, efficiency, semi-permanent building, tsunami

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