

If you build it, they will come?

Design and Space Issues



Considerations in design.

- Who are we designing for ?
- What is the purpose of the design?
- Where will it be built?

These, among many other questions, must be considered in the design of any building.

But rarely do we have to consider, how to get people to use a building?

Designing to encourage use.

When designing a shelter what factor should we consider?

To begin place yourselves in the shoes of a person who just survived an earthquake at the coast. Earthquakes on the coast such as the one you've just experienced means that a tsunami wave could hit the coast in a matter of minutes. Now ask yourself what factors would you consider when finding shelter?

Designing to encourage use.

Here are a few considerations that may come to mind.

- What building or high ground is within range?
- Of the possibilities, what will withstand the force of the waves?
- Can I access this for shelter?
- Will I feel safe there?

These can be summed up with the following categories:

Familiarity, stability, accessibility, and aesthetics.

Design for familiarity:

One of our design goals should be to assure that people are familiar with the building. The best way to accomplish this is through everyday use of the building.

Everyday uses may include these categories:

- Commercial (shopping, dining, entertainment)
- Government (government offices, law enforcement, fire dept)
- Community (community centers, non-profit use)
- Multi-family residential? (apartments)

Design for familiarity:

Multipurpose Buildings

One reason to make sure the shelter is a building people use on a regular basis is so they will remember the building and its location. No matter how well the building is constructed and how inviting it is, people will not use it if they can not remember how to get to it or which building to use.

Design for stability.

Designing the structure to withstand earthquakes and tsunamis isn't the concern. We know how to do that.

To encourage use and preserve the perception of stability of the structure I suggest avoiding materials and features that may fall from the building during an earthquake. Any such materials laying around the base of a building after an earthquake may signal to people that the building is not sturdy enough to be reoccupied and used as shelter from an approaching tsunami.

Design for stability.

Materials and features to possibly avoid are bricks, exposed concrete, awnings, facades, and loose exterior lighting. Visible cracking is also a clue that may signal people the building is unsafe to reoccupy. Even if the damage is only superficial any signs of damage is going to place doubt in peoples minds and may cause them to take unnecessary risks.

On a similar note any type of gas lines in or around the building probably is not advisable.

Design for accessibility.

When I say accessibility I am mainly referring to the ability to get everyone to safety in a quick and efficient manner, and the ability to use the shelter whenever a disaster strikes .

To get everyone to safety signage will be helpful. Structures designed for tsunami shelter should have signs to help designate them as safe areas as well as having signs that point to shelter access points. In conjunction with the signs these shelters should have multiple entrance and egress routes that minimize choke points.

Design for accessibility.

If the roof of the structure is where people must go to get above the water level of the tsunami, it then becomes counterproductive to lock the roof access. Likewise, if the 2nd or 3rd story of the structure is the goal, locking the front door then poses a problem. Unfortunately, disasters don't schedule themselves around our lives. It will not wait for the building owner, supervisor, or local law enforcement to unlock the building before it strikes. It has to be possible for people to occupy the structure any day of the year, day or night.



Planning for aesthetics.

Planning for aesthetics means you want the building to be appealing to those that need to use it. This covers the design and the maintenance.

You want to design a structure that people will feel comfortable and secure using. It must blend in with the surrounding environment. If it sticks out like a sore thumb it will become neglected and will not fulfill it's purpose when you need it to.



Planning for aesthetics.

Jointly, you want to make sure you maintain the aesthetics of the building. If the building falls into disrepair and is left alone once again people will be less likely to use the building.

While you want to keep roof access open in-case of an emergency, you don't want people to trash the roof. If it is covered in graffiti and trash people may seek shelter in less stable buildings.