
# Cascadia EarthScope Earthquake and Tsunami Education Program
# - CEETEP -

## Breakout Session

## Vertical Evacuation Structures

## 40 minutes

# Vertical Evacuation

* Binder, pg. 267
* Hot off the press – want feedback!
* Multiple aspects and avenues for engagement
  A. Reading – basic concepts about VE and design
  B. Determining appropriate locations
  C. Designing and constructing structure
  D. Presenting and explaining

# Not what we mean . . .

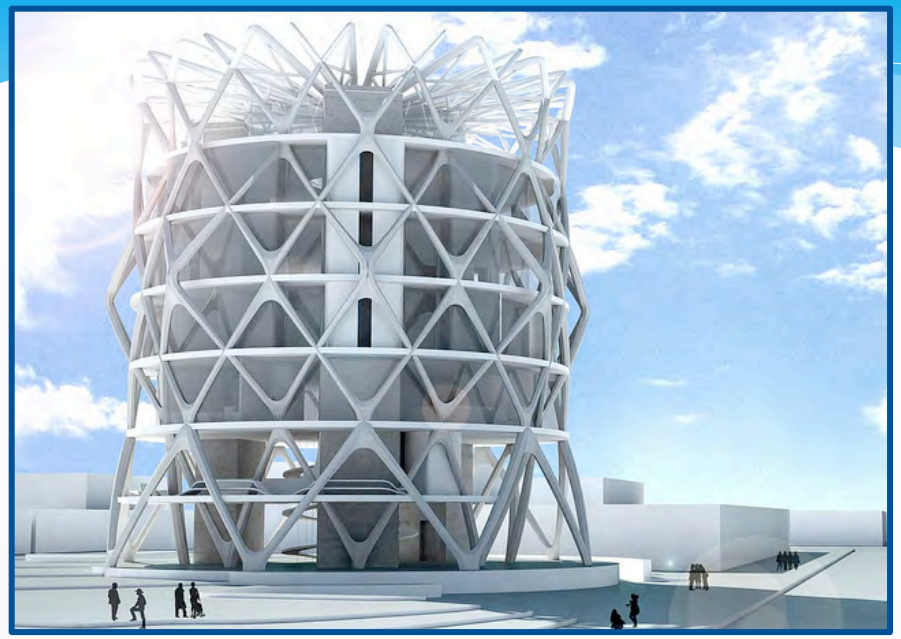
# Tohuku Japan 2010

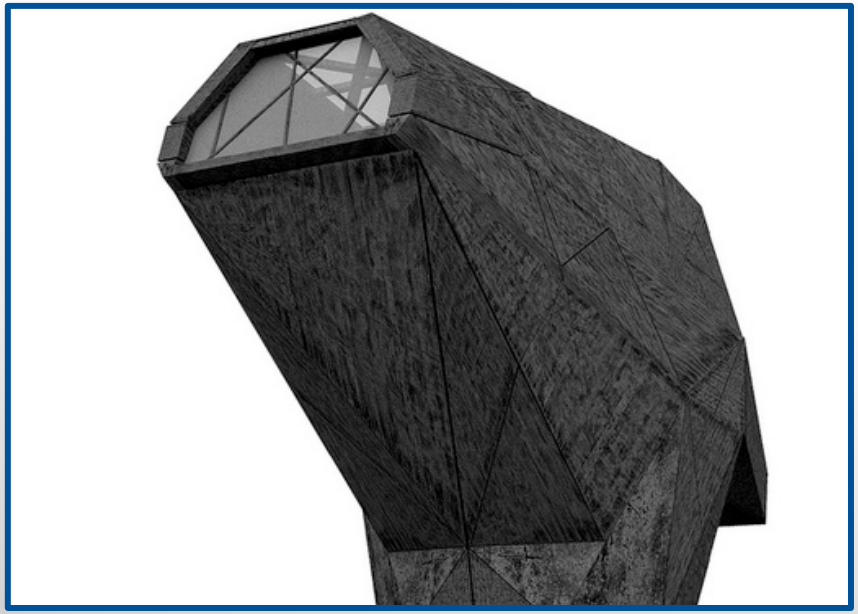
# Vertical Evacuation

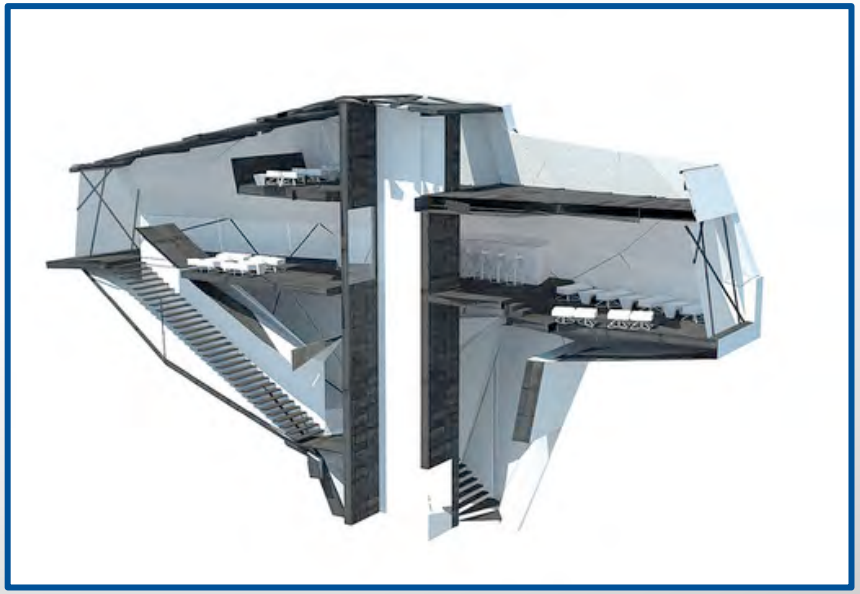
* Brainstorm:
  * What are some design elements to consider?

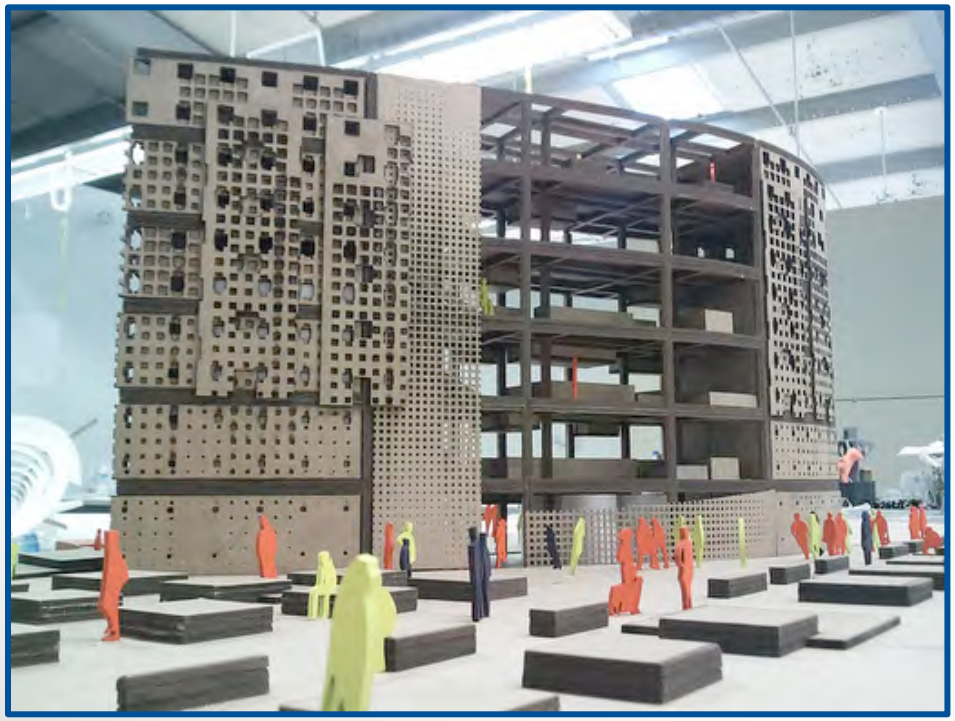
# Vertical Evacuation

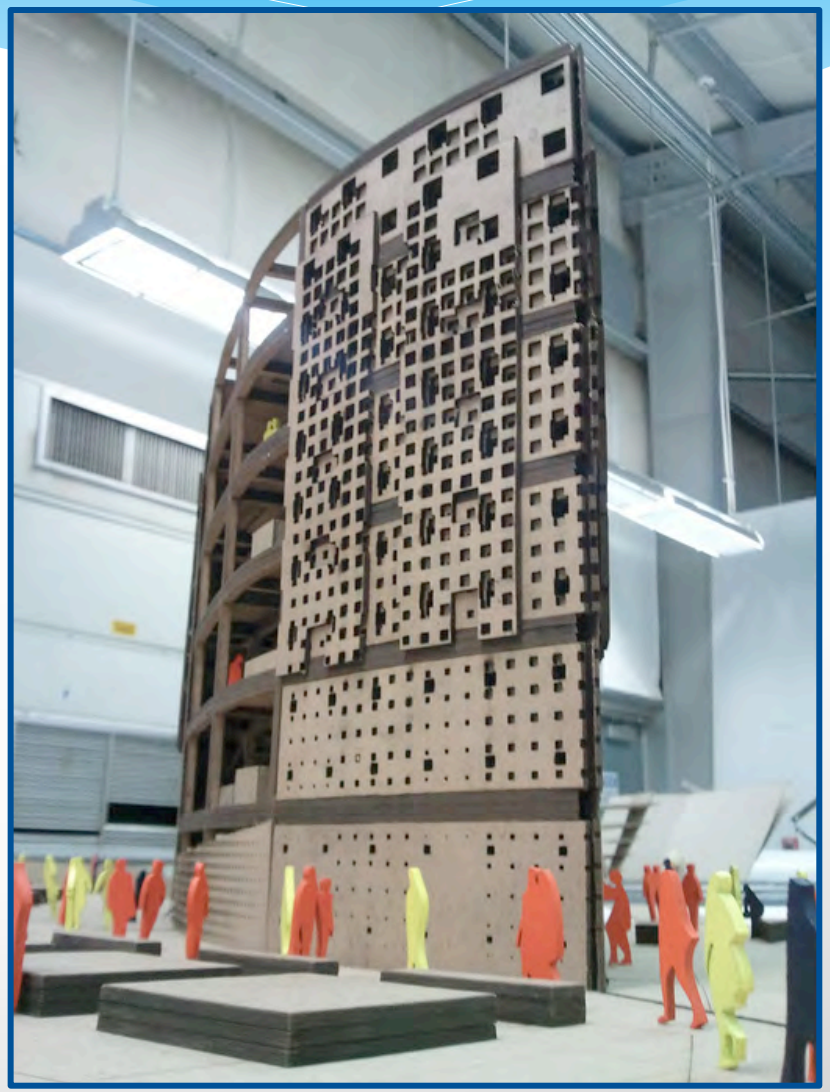
* Pre-existing buildings?  Retrofits?
* Location – where is it needed?  High population centers, where high ground isn't available, touristed areas
* Strong enough to withstand initial shaking and waves
* Accessibility
* Size of building and # of people it can support
* Supplies – island life
* Safety - of people, of supplies
* Communication









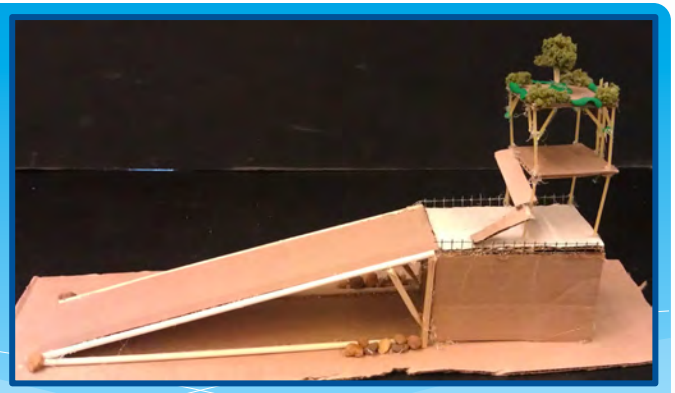


# Vertical Evacuation

* FEMA/ NOAA Video


* Could you use this with your audiences?
* How?

# Vertical Evacuation



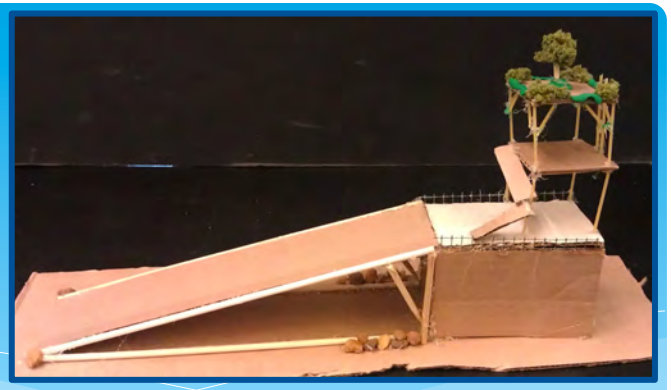
* Part B:  Where to put the thing?
  * Physical Maps
  * GoogleEarth
* Need to know:
  * Ground elevation
  * Predicted wave height

But wait . . .

Does your area need one??

Or can a pre-existing building be used?

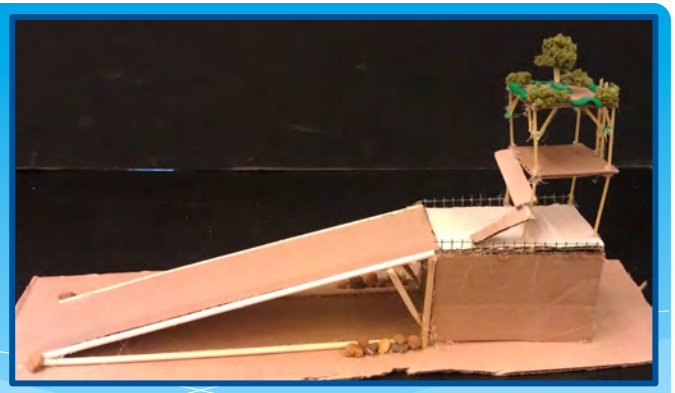
# Vertical Evacuation



* Maps – which ones?

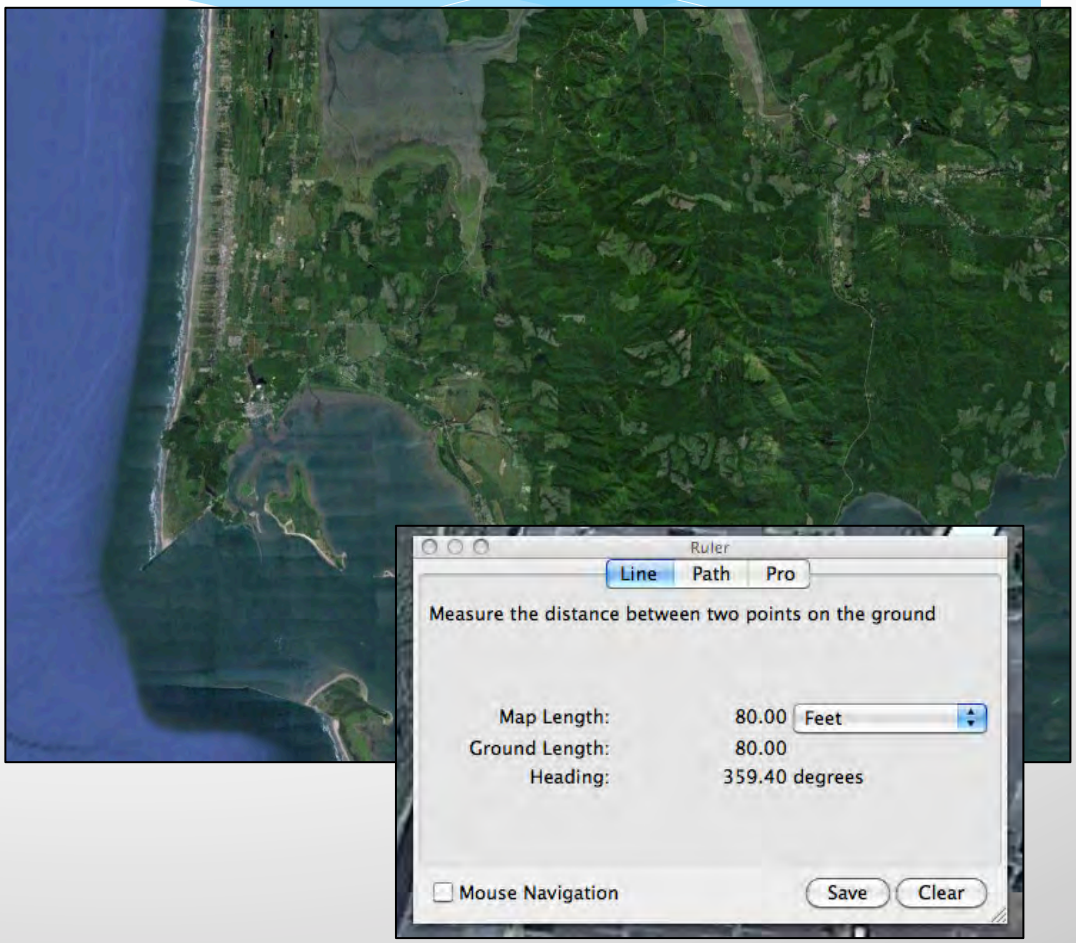
* Tsunami Inundation Zones – in your map roll!
  * Look carefully at wave elevation height info
  * Compare to contour lines on map

# Vertical Evacuation



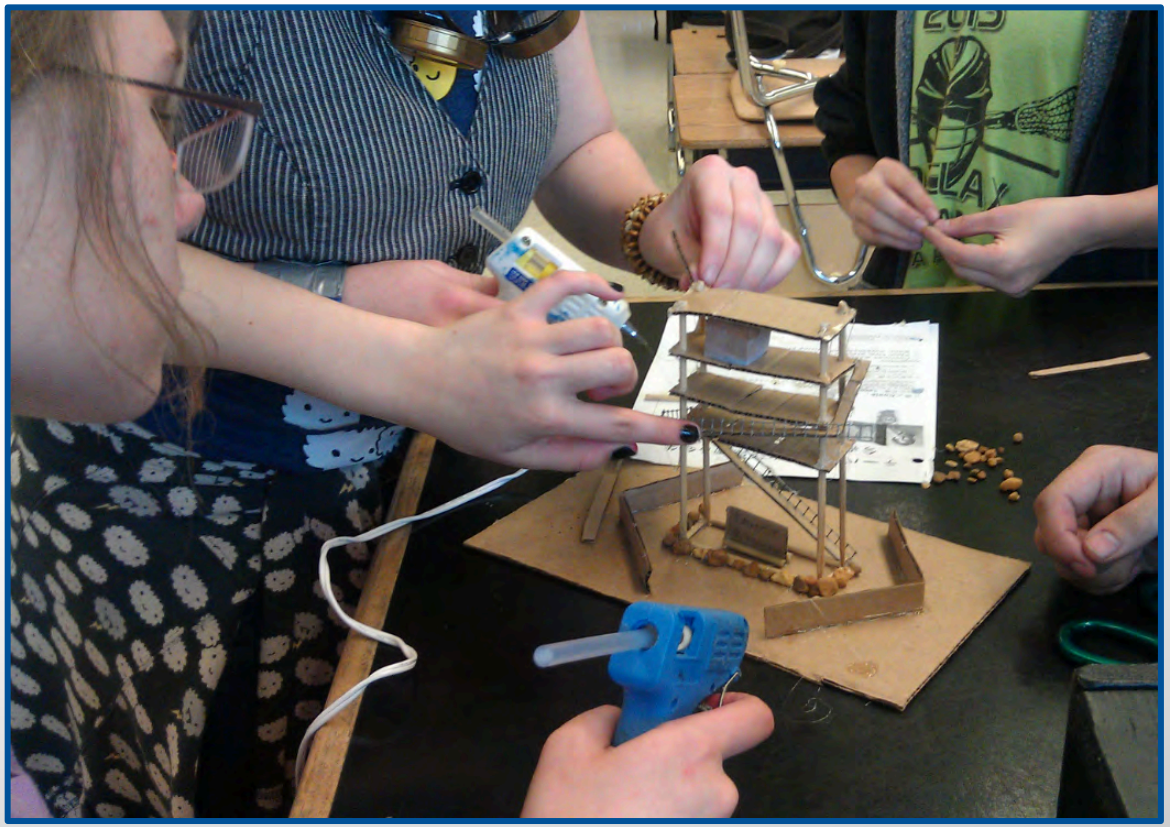
* GoogleEarth

* Best case – get .kmz file of inundation zones to overlay
* Can use Ruler Tool to measure length to determine square footage



# Vertical Evacuation

* Part C: Construction process



* Math considerations:
* 10 $ft^2$ per person

# Vertical Evacuation

* Part D:  Allow me to explain . . .

# Vertical Evacuation

* How could YOU use this?