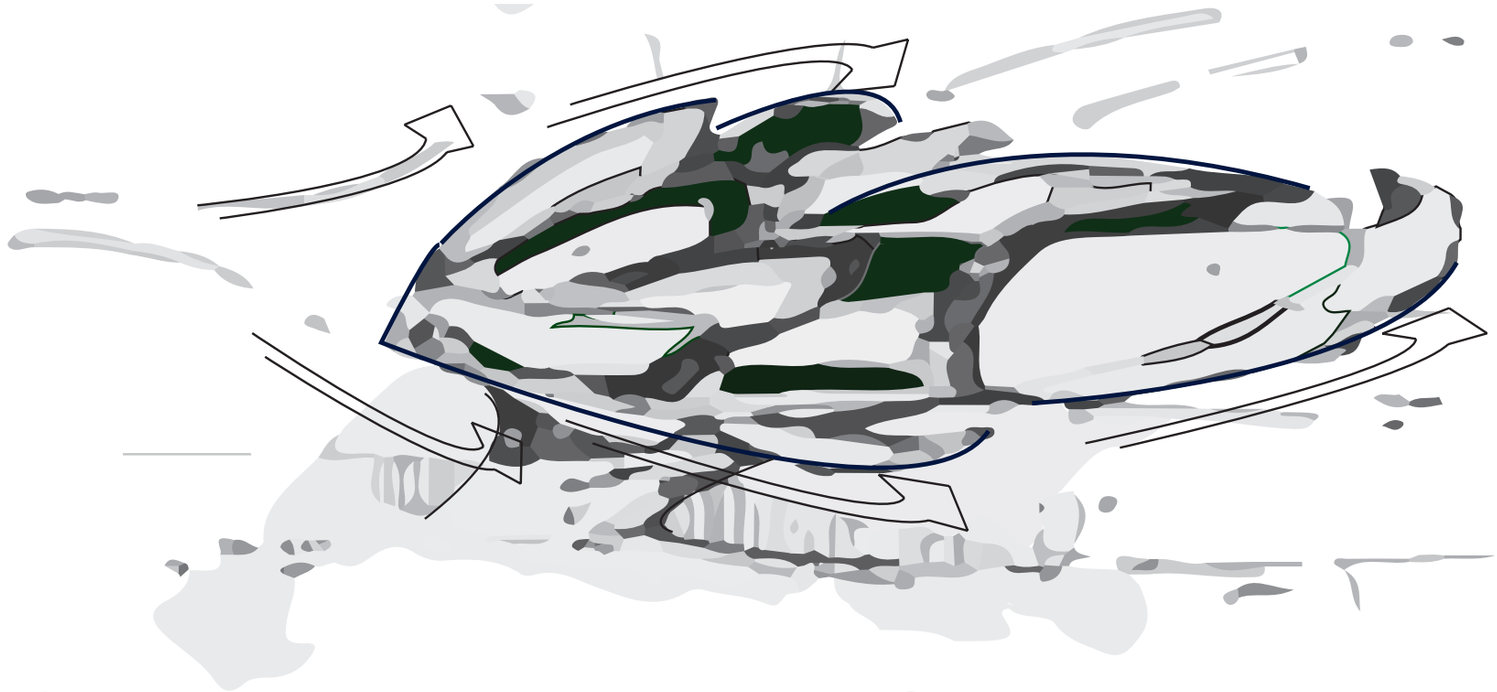
PODUNK MUSEUM OF DESIGN



DESIGNED BY DISASTER

Exhibition Designer Jenna Savage
Exhibition Developer Kimi Wilborn

Schematic Design • The University Of The Arts • MSEM 610 Museum Exhibition Planning and Design • Fall 2013

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Big Idea & Mission

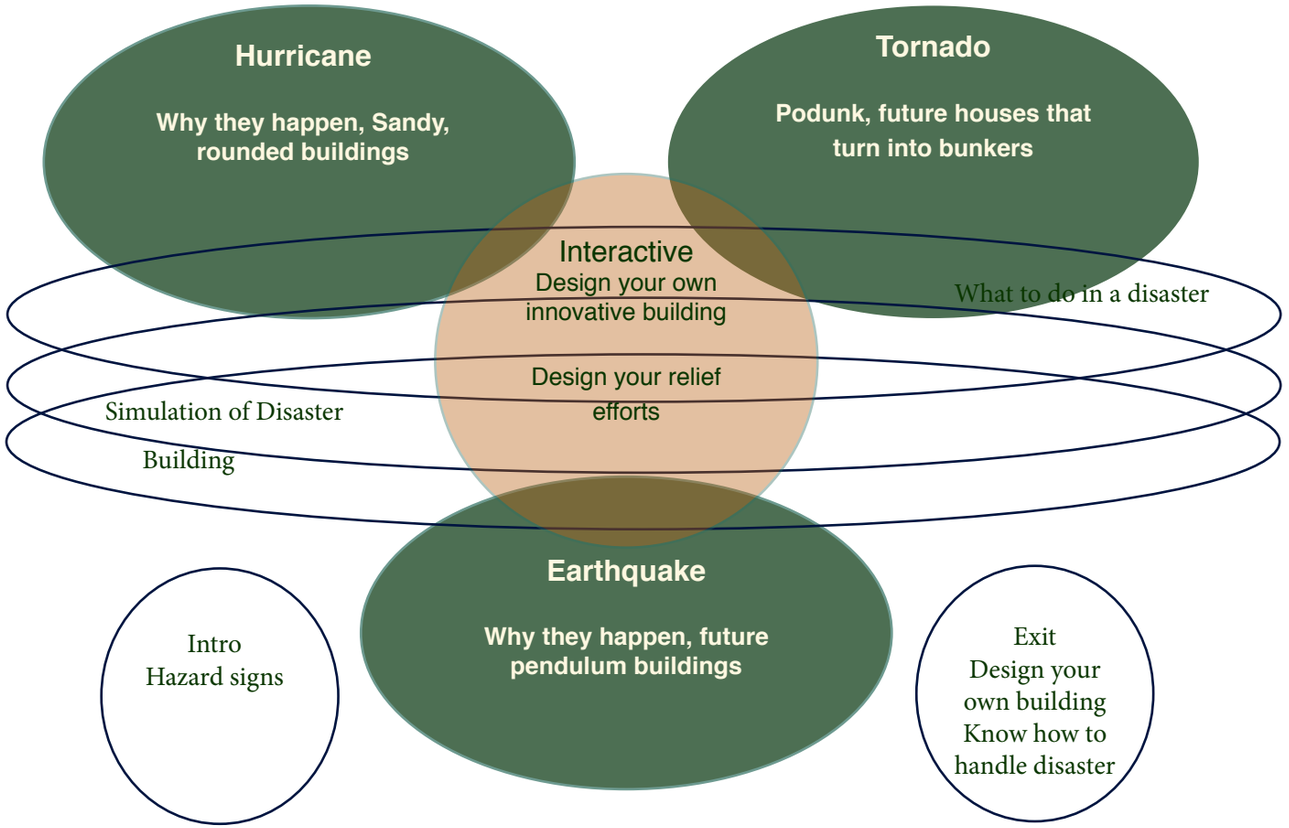
Mission

To educate visitors through a look at the impact of specific natural disasters on regions and how this is influencing modern building designs in innovative and interesting ways.

Big Idea

The effects of past natural disasters are influencing modern building designs in innovative ways.

Bubble Diagram



Objectives, Audience & Goals

Objectives

Visitors will learn about specific disasters that occurred in the United States.

Visitors will experience first hand innovative approaches to natural disasters.

Visitors will understand the science behind these specific natural disasters.

Visitors will experience first hand what it feels like to be in a natural disaster.

Visitors will understand how these innovative designs work when struck by a natural disaster.

Goals

Visitors will be better prepared for natural disasters that may occur in the future.

Visitors will strive to help regions affected by natural disasters.

Visitors will be inspired to create their own innovative solutions to natural disasters.

Audience

Primary
4th - 6th Graders

Secondary
Families of the 4th-6th Graders

Walk Through

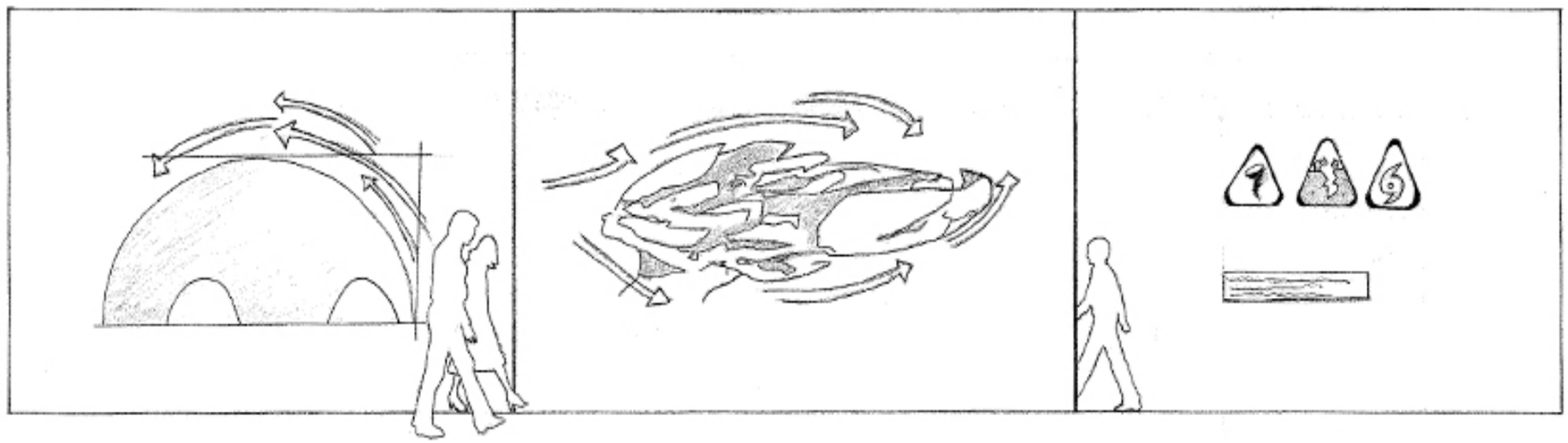
From a distance the young visitor and his friends notice a very large strange drawing wrapping a large exterior wall, resembling a giant robot from the blockbuster film “Transformers,” and are intrigued enough to move towards the exhibition. Once closer a fellow classmate reads aloud the title “Designed By Disaster,” and the group makes their way around the wall and into the exhibition space. As the young visitor starts to follow his friends into the space he notices three large hazard signs on the wall leading them into the active exhibition beyond.

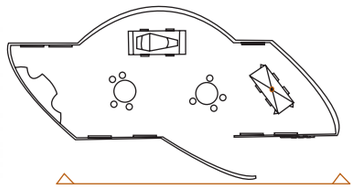
The visitors’ teacher who had not been far behind asks a few of her students to stop and take a brief look at the hazard signs posted outside the exhibition. She takes note of the small disclaimer below the signs and the museum staff member positioned inside the exhibition as she enters. By this time she has lost the majority of her class to the sounds of voices and excitement just beyond the entrance.

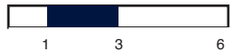
Upon entering the main space the young visitor and his friends see three branching areas all containing large objects resembling buildings and two interactive tables in the center of the room. An interactive screen on the inside of the opening curved wall catches their eye, but they decide to bypass it for now to get into the action. After seeing his fellow classmates dispersing all over the exhibition the visitor heads in the direction of most interest to him, the large screen in the back of the room that is displaying a landscape of his hometown of Podunk.

Threshold Experience

Elevation





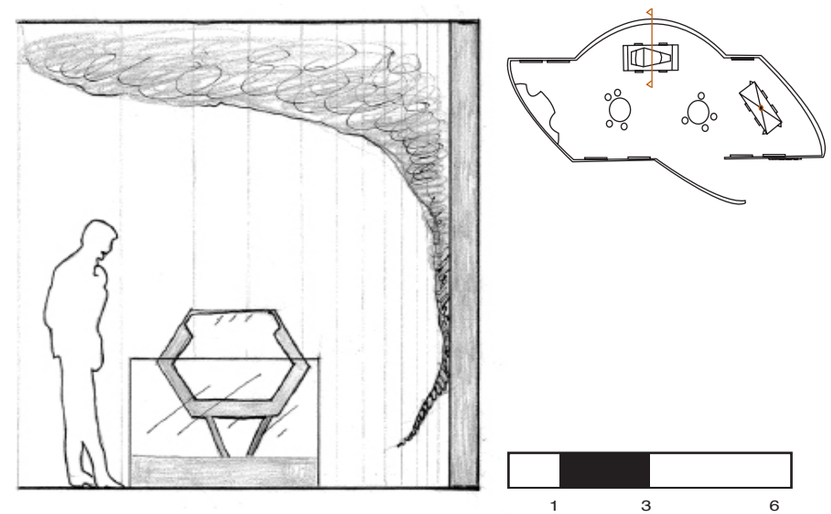


In this area he takes note of an odd-looking structure that is surrounded by glass and mounted into ground layers below. At the moment he entered the space the structure was up above ground but he soon sees it slowly start to move down into the glass box. The young visitor bends down to observe more closely, realizing it is a model house in the shape of the design they had seen on the outside wall; he watches it slide completely "underground" into a clear encasement. In a sudden state of awe he asks himself, "how and why would a house move underground like this?" In an effort to answer these questions he reads the panels lining the house's plexiglass encasement, and learns this is a new model home designed to slide into the ground, making it capable of avoiding the destruction of an incoming tornado.[1]

Having experienced many tornadoes in Podunk himself, he connects personally to this exhibition. His fellow classmate suddenly calls over to him and asks for him to read a nearby panel. His classmate describes with excitement that the panel explains why tornadoes happen in Podunk and methods of surviving one. They start discussing their personal experiences with tornadoes; he then relays the information he just read about the new homes that are being designed to avoid tornadoes.

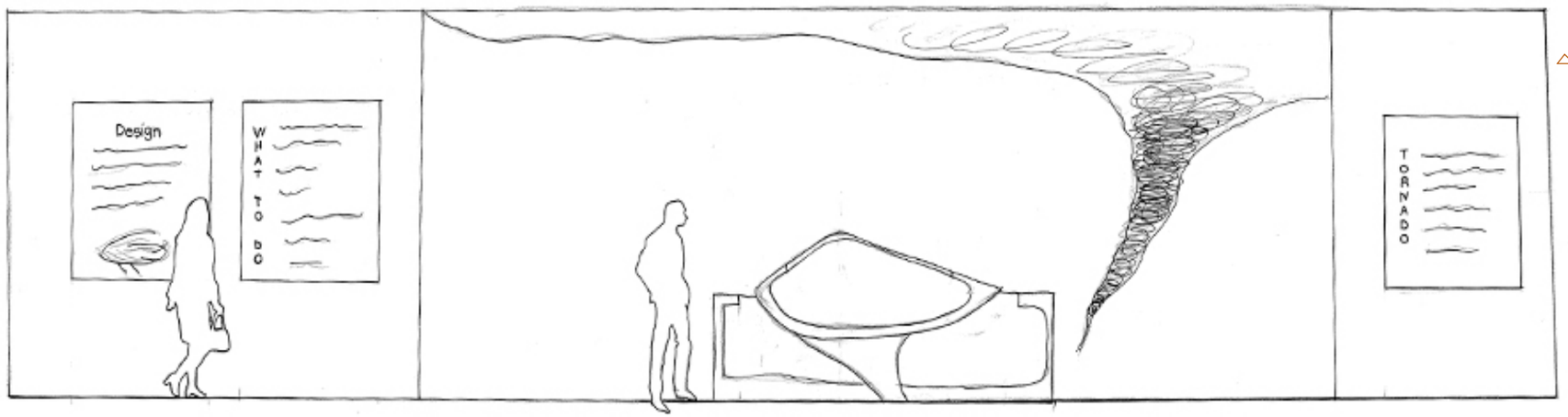
The visitor and his friend are suddenly excited by their classmates going in and out of the nearby model dome building, and decide to go investigate. As he moves into this curved area he notices a screen behind the domed building shows a different landscape than Podunk; palm trees and the ocean shore have replaced the flat plains and grass.

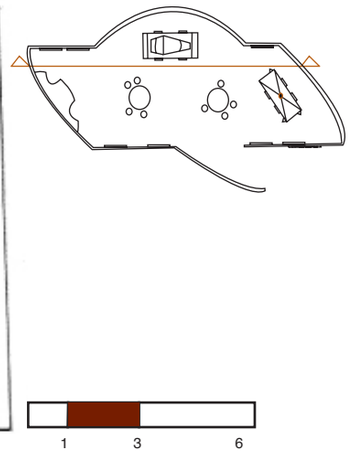
Section



1 Academic Standards for Science and Technology and Engineering Education "Demonstrate how new technologies are developed based on people's needs, wants, values, and/ or interest."

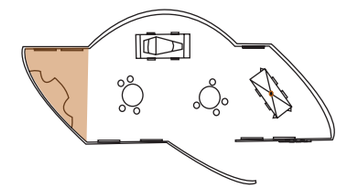
Elevation





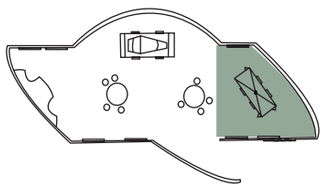
As the visitor and his friend move inside the building they see that the shape is very purposefully rounded. Curious in why the walls are rounded, the visitor reads a wall panel located outside the building that homes designed like this can withstand hurricanes, and how the dome shape actually allows strong winds and waves to pass over the building without inflicting as much damage. The panel on the wall next to this building is of similar design to the one that explaining tornado survival tips. The visitor similarly is very interested in practical hurricane survival skills. After reading a bit more about where hurricanes happen and why, he is drawn into the center of the room where the majority of his classmates have been spending the bulk of their time. The visitor finds that all his friends are engrossed in a computer game that is taking place on a large circular table screen.

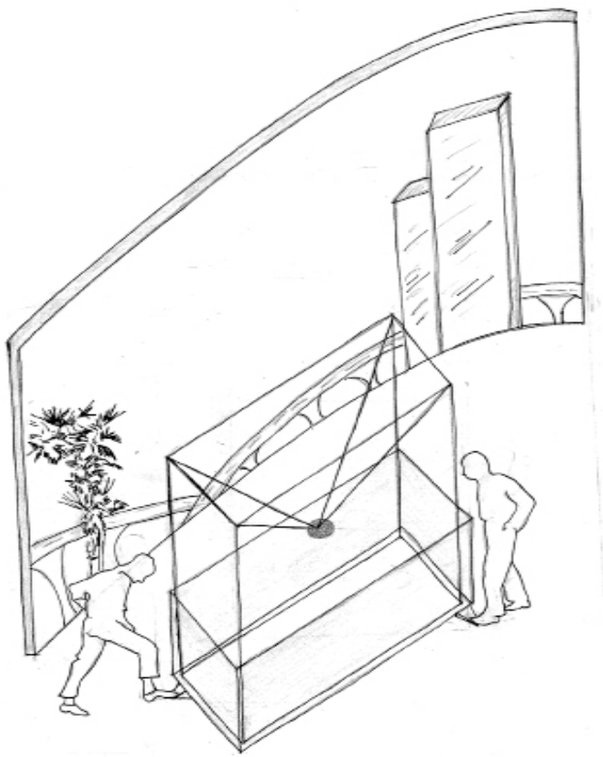
By looking over a friend's shoulder he discovers that the game is an interactive where one chooses a disaster, then watches how it builds and destroys his on-screen environment, then how the player is prompted to design his or her own relief effort using different aid from all over the world. A classmate gets up to pursue a more physical interaction with the domed building, and the young visitor takes the free seat. He plays the game for some time, designing different systems of relief effort, each with quicker and more effective relief than the last, learning the main priorities in different disaster situations.[1] The visitor gains an understanding of how important relief is to areas hit by natural disasters and the effort it takes to rebuild them. He starts to think about what he can do to help after natural disasters happen and starts to see the connected nature of relief and how it truly comes from all over the world. After playing for some time he gives up his spot at the table and gets up to investigate the earthquake-proof building he heard his teacher commenting on.



1 Academic Standards for Science and Technology and Engineering Education " Understand that systems have parts and components that work together."

Earthquake





From there he is drawn to a large model of a building with a pendulum inside that reaches roughly five feet over his head. He moves closer with a little hesitation because he can see some of his classmates actively trying to move the building by manipulating its base with their feet. He is very surprised to find that they can't break the building and as he moves closer he can see why. The visitor discovers that the large pendulum located in the framework of the building is helping to correct the imbalance that his classmates are causing in the ground. Suddenly, just as he is taking this all in and even considering taking his turn at trying to quake the large structure, a red light goes on overhead and a loud warning sounds. He notices some of his classmates and a few older visitors exit the exhibition.

Two minutes later a wind starts to pick up and slight rain starts to fall, the visitor sees all of the screens change in the space to the palm tree and ocean scape he saw in the hurricane section, but this time its not calm but stormy and with large waves building. Recalling what he read about staying inside or lying on the floor under a table or sturdy object, he quickly climbs under the game table that allows for ample space and waits it out, from there he sees the majority of his fellow classmates headed for the dome building. The strong winds and slight rain only last a minute before the lights come back on and the screens return to their picturesque landscapes. The young visitor is excited and empowered during this event, he was able to recall what he had read about hurricane survival and use that knowledge to get to a place of safety quickly and efficiently.

Walk Through

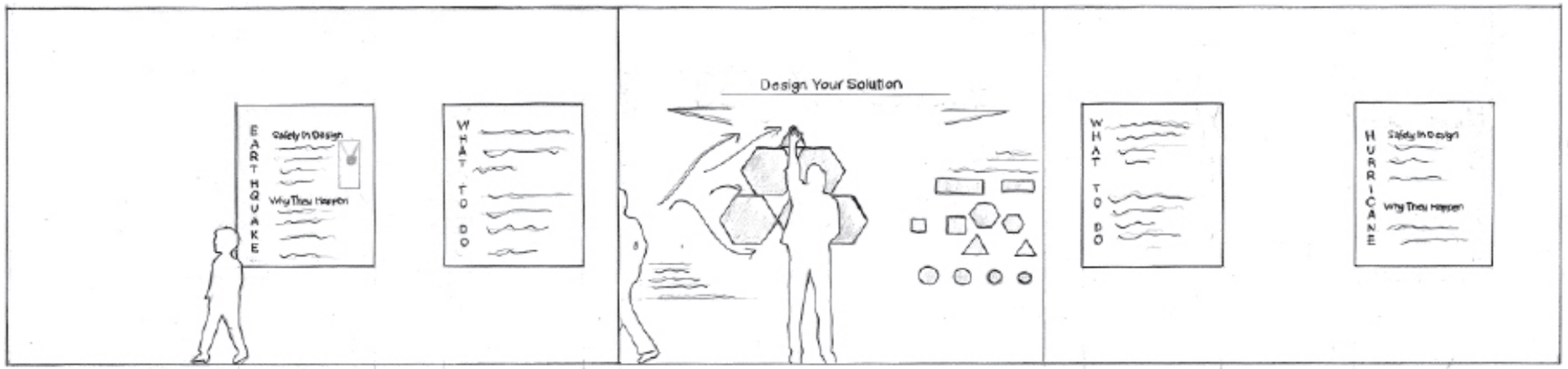
After getting up and talking excitedly with his fellow classmates about what had just happened, the visitor is enticed to go back to the earthquake area and quickly read over what to do if he is ever caught in one, making sure he is ready for any of the three disasters if they should occur. After spending a bit more time trying to bring down the large earthquake-proof building the visitor is called over to a screen near the entrance by his teacher.

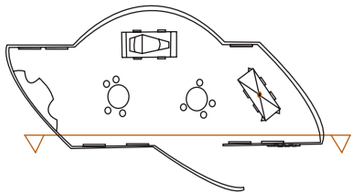
When he arrives at the screen his teacher proceeds to tell her class that this large interactive is where they can design their own architectural solutions. They will be given different disasters and building materials to work with. His teacher goes on to say that this would be helpful to try out now because in the coming week of class they will be designing and building model tornado homes. She also points out on the side of the screen is a looping video of many different people who work on building disaster-resistant homes, including architects, designers, and engineers, explaining their individual paths to their occupations.

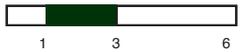
After waiting briefly for a few classmates to test out the screen the young visitor is able to approach. He uses his understanding about how disasters work that he gained from the interactive table game and his readings on the different buildings inside to design a half domed sunken house that can withstand hurricanes and tornadoes. He can then test his design against natural disasters of his choosing and re-design if it is destroyed.[1] He is able to gain a better understanding of just how critical the design and engineering of these efforts are. The visitor starts to wonder if he can design a building to withstand any natural force. Unfortunately, he his told soon after by his teacher that lunch is next and they have to make their way to the museums cafeteria. On his way out his friend and he decided that if there's free time after lunch they are going to come back to the space and see if they can experience an earthquake.

1 Academic Standards for Science and Technology and Engineering Education "Understand that tools, materials, and skills are used to make things and carry out tasks.

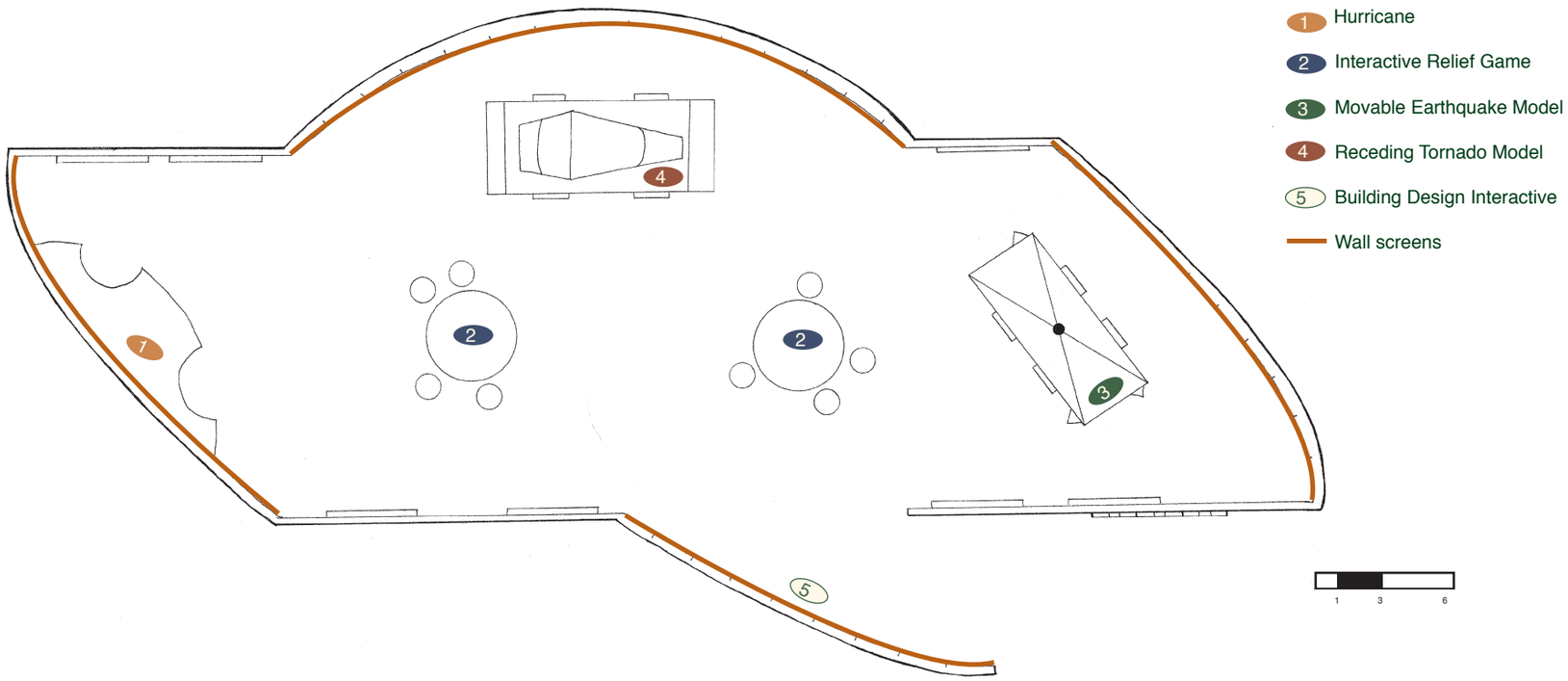
Elevation





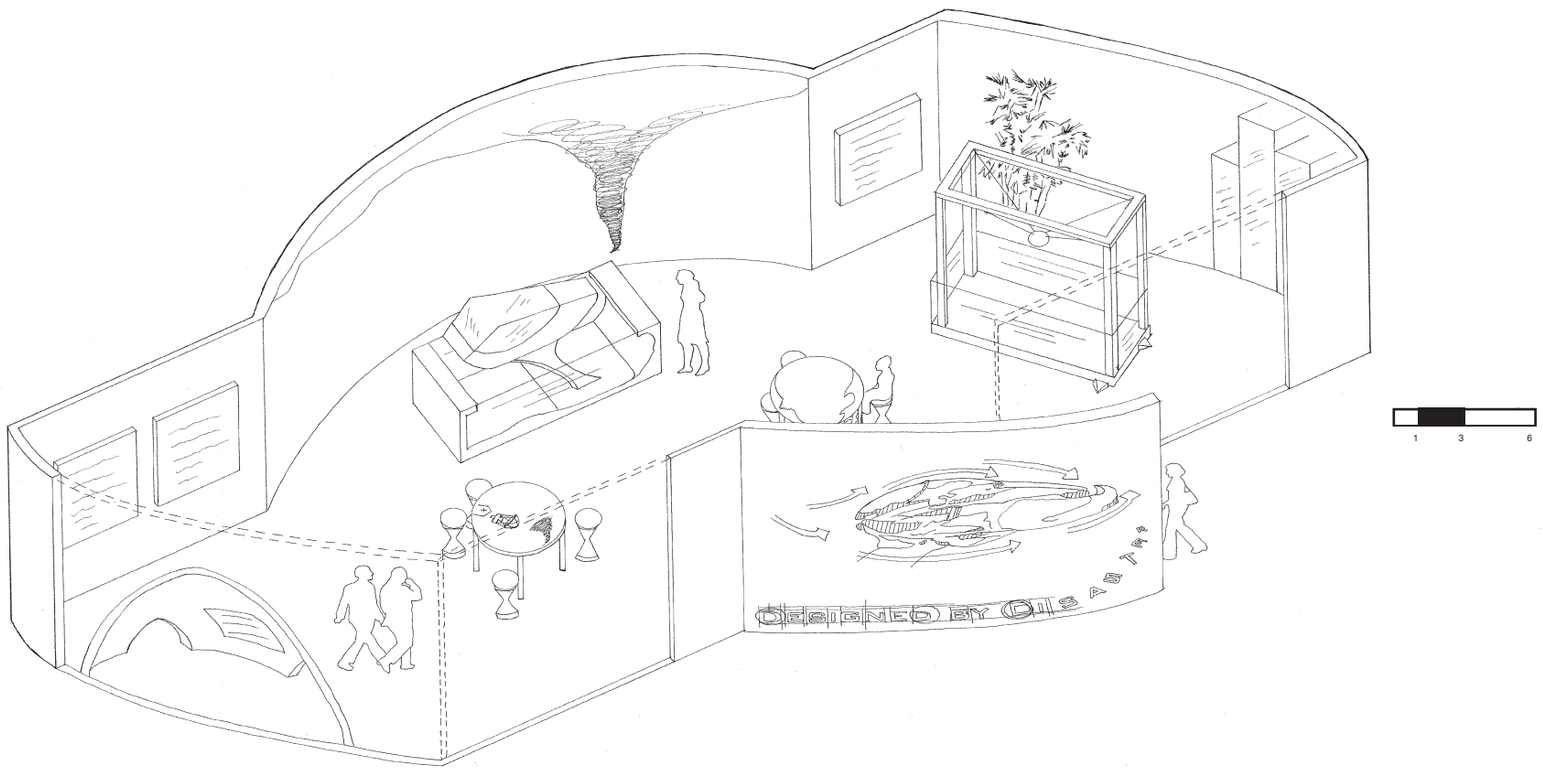


Floor Plan



1 Hurricane
2 Interactive Relief Game
3 Movable Earthquake Model
4 Receding Tornado Model
5 Building Design Interactive
Wall screens

Axonometric



Gestalt, Visitor Affect,Look & Feel

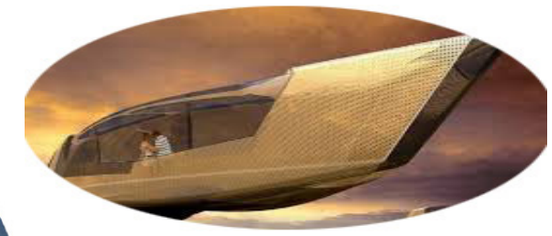
Gestalt

The visitor enters the exhibit to find a bright and inviting environment. There will be architectural drawings and examples of the design process throughout. The room is split into several different sections, each one seeming to encompass a different geographical location. Each area's landscape screen will initially show calm weather, and will highlight the innovative design placed before it. Three minutes after the warning alarm is sounded the friendly room turns into a disaster zone simulating one of the three disasters represented; hurricane, earthquake, or tornado.
The visitor will experience winds whipping through, light rain, the earth shaking, and a cone forming, respectively. The exhibition will have gone from inviting, bright and calm to active, shaking and ominous.

Visitor Affect

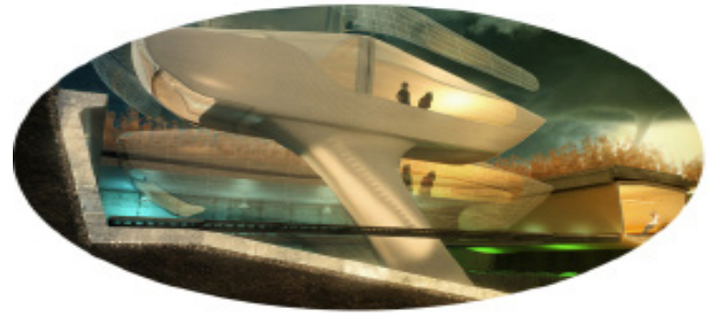
The exhibition should take on an informed friend voice. The narratives and interactives will touch on specifics of each disaster, with an emphasis on the designs being developed to withstand them. The experience should leave the visitor with the knowledge that each innovative design is an attempt to reduce the devastating effects of natural disasters and empower visitors to become part of the solution.

Look & Feel



Objects

Large scale earthquake-resistant pendulum building model



Receding tornado bunker model

Scale example of egg-shaped hurricane house, large enough for visitors to walk through

Design interactives for relief efforts, natural disasters and architectural building

Museum Identity

PODUNK
MUSEUM OF
SIGN

PODUNK
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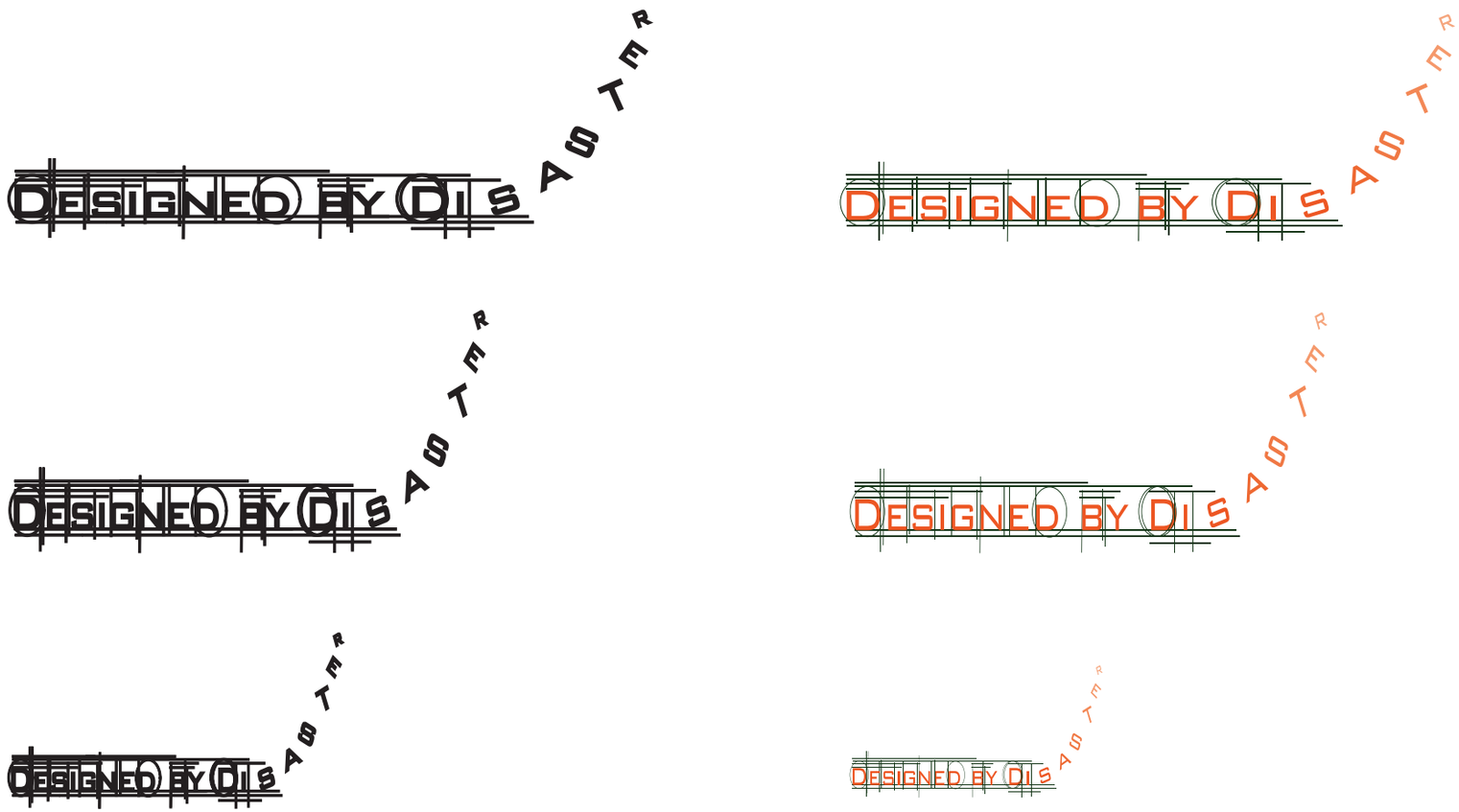
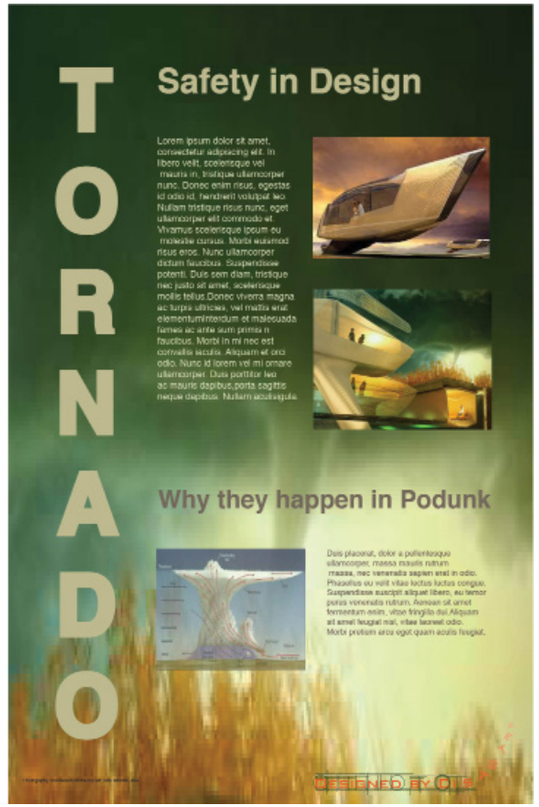
Exhibition Identity



Topic Graphic



Topic Graphic Specimen

T Helvetica Bold 227 pt/ 272.4 pt lead

T Helvetica Bold 93 pt/ 111.6 pt lead

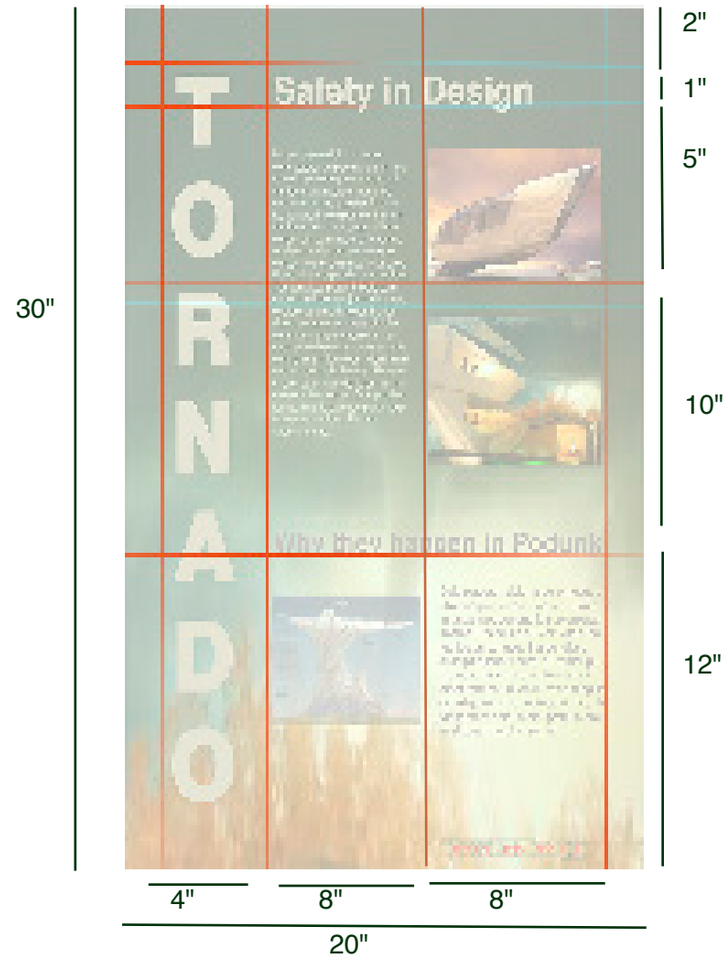
T Helvetica 25 pt/ 30 pt lead

Topic Graphic Grid

Topic Graphic Specimen

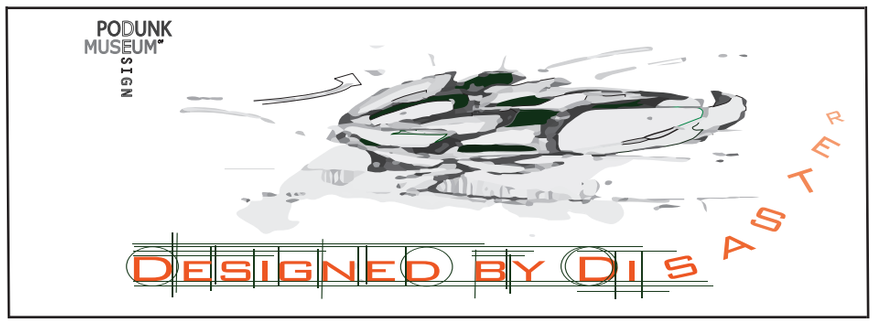
T Helvetica Bold 68 pt/ 85 pt lead

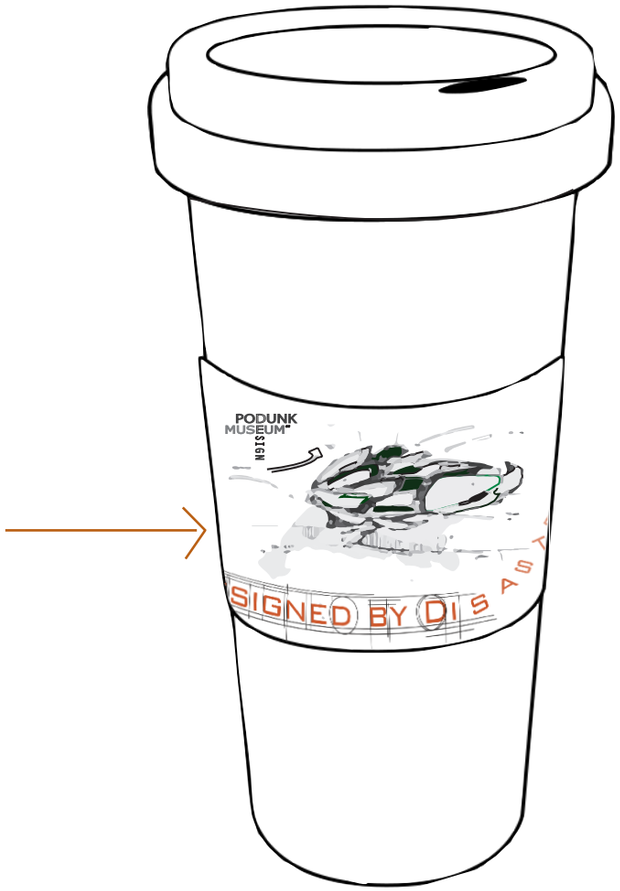
T Helvetica Bold 22 pt/ 22 pt lead



Support Graphic

This support graphic will be utilized on a coffee slip with the exhibition title and main architectural image. It will also include the name of the museum and the duration of the exhibition. This support graphic targets the parents of our primary audience (4th-6th graders), and will be distributed to local coffee shops for advertising.





Exhibition Color Palette

C = 85
M = 28
Y = 100
K = 77

C = 100
M = 56
Y = 0
K = 80

C = 0
M = 2
Y = 43
K = 0

C = 0
M = 62
Y = 100
K = 28

C = 0
M = 85
Y = 100
K = 62

Research, Sources & Bibliography

Earthquake

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Tornado

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Hurricane

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Education Standards

Pennsylvania Department of Education, Academic Standards for Science and Technology and Engineering Education (Grades 3,5,6,8)

Other

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Photography Credit

Look and Feel

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Cover

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http://geoffcampbell.net/2010/10/hello-world/

Banner

http://wallpapersus.com/storm-heavy-rain-bad-weather-landscape/

Topic Graphic

http://thecreatorsproject.vice.com/blog/tornado-proof-homes-are-like-organisms-that-retract-into-the-ground-when-a-storm-approaches

http://www.st-andrews.ac.uk/~dib2/climate/thunders.html

Support Graphic

http://www.picstopin.com/875/coloring-page-coffee-maker-img-19091/http:%7C%7Cwww*edupics*com%7Coloring-page-coffee-maker-dl19091*jpg/

Objects

http://thecreatorsproject.vice.com/blog/tornado-proof-homes-are-like-organisms-that-retract-into-the-ground-when-a-storm-approaches

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