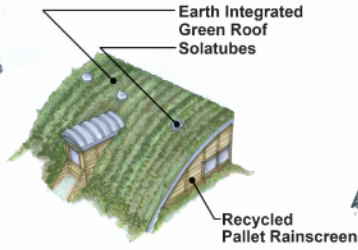
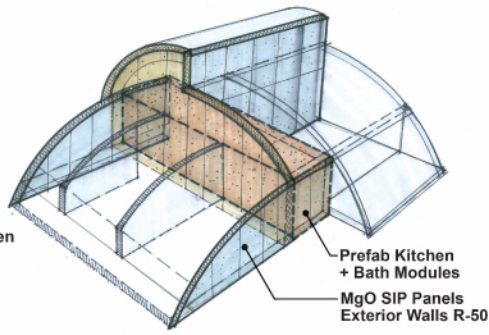


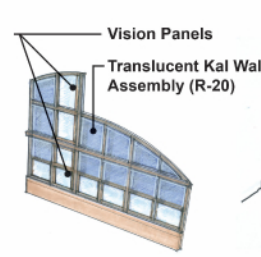
Steel Roofs



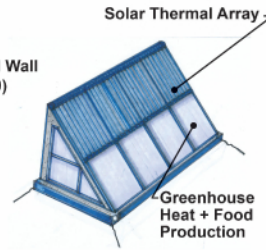
Green Roof



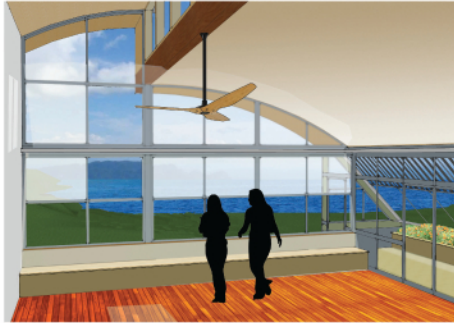
Axonometric



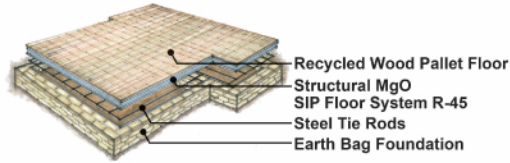
Kal Wall



Greenhouse



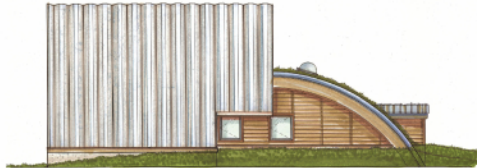
Interior View



Earth Bag Foundation



Exterior View



North Elevation



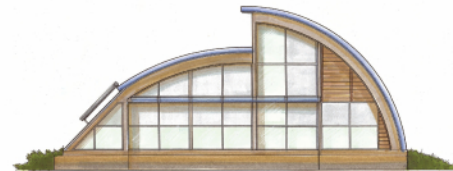
South Elevation



West Elevation



Floor Plan



East Elevation



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 www.JanusWeltonDesignWorks.com

Design Concepts
 Orca House is its own ecosystem, collecting and processing energy and water while optimizing local natural resources. Biomorphic in form and structure, it repels wind, harvests water. The design and materials echo the Unangan barabara, Aleutian history and facilitate Native customs.

Energy

- 100% energy self-sufficient
- Superinsulated building envelope
- Passive solar design
- Arched roofs deflect winds; circulate heat within

Water

- 100% onsite water self-sufficiency
- Innovative peat blackwater filtration system

Materials

- Design avoids heavy materials/shipping costs
- Earth bag foundation is seismically stable
- Materials climate appropriate, non-toxic, durable
- Locally sourced materials where possible
- Recycle shipping pallets as building material

Constructability

- Prefab for replicability
- Easy assembly with local skills + tools
- Flatpack prefab modules ease shipping/assembly

Livability

- Lighting design+technology enhance natural light
- Rat-proof interior hydroponic garden
- Covered deck, "porch" and use of space reinforce Alaska Native ways

