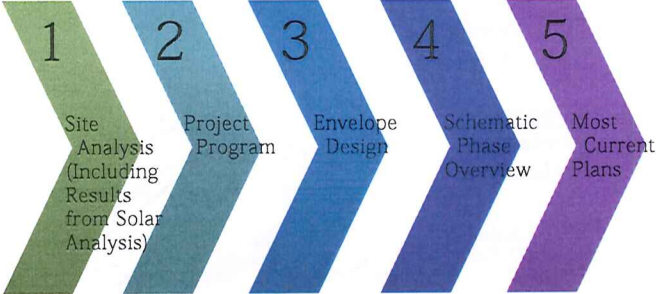


Apricity House Net-Zero Home Design

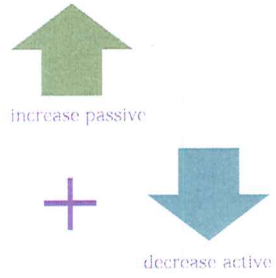
Michael Reuter
CSI, AIA, Principal-in-Charge, Project Architect
&
Melissa Lorenc
AIA, Project Architect, Project Manager

Scope of Presentation



- 1 Site Analysis (Including Results from Solar Analysis)
- 2 Project Program
- 3 Envelope Design
- 4 Schematic Phase Overview
- 5 Most Current Plans

Site/Solar Analysis

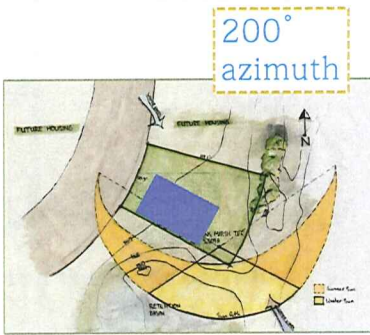


increase passive

+

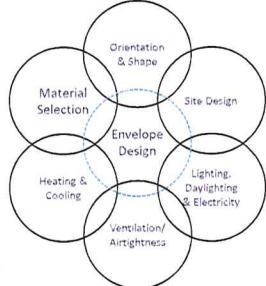

decrease active

This allows us to maintain budget & increase sustainability



200° azimuth

Envelope Design Considerations



- Orientation & Shape
- Site Design
- Lighting, Daylighting & Electricity
- Envelope Design
- Heating & Cooling

Envelope Design Considerations

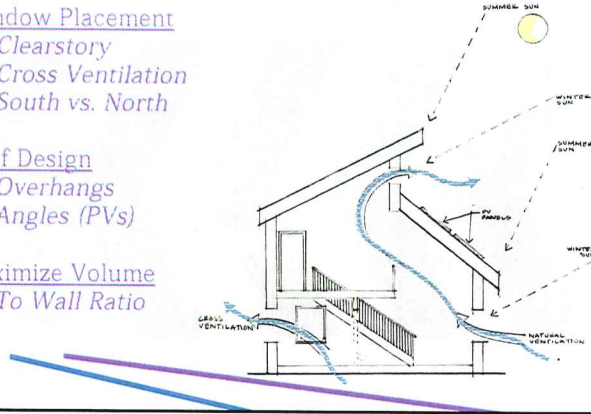
Window Placement

Clearstory
Cross Ventilation
South vs. North

Roof Design

Overhangs
Angles (PVs)

Maximize Volume
To Wall Ratio



Envelope Design Considerations

Thermal Resistance Values

Envelope Component	Passive House Guidelines	Current Status	Current Goal
Roof Assembly	R-90	R-65	R-80
Wall Assembly	R-50	R-50	R-50
Doors	N/A	N/A	*as high R-value that is economically feasible
Windows	U=0.13 SHGC: 50%	U=0.18 SHGC: 44%	U=0.18 SHGC: 44%

Project Program

First Floor

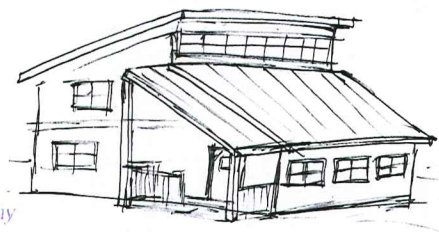
Foyer
Living Room
Bedroom 1
Bathroom 1
Mudroom
Dining Area
Kitchen
Patio

Final Square Footages

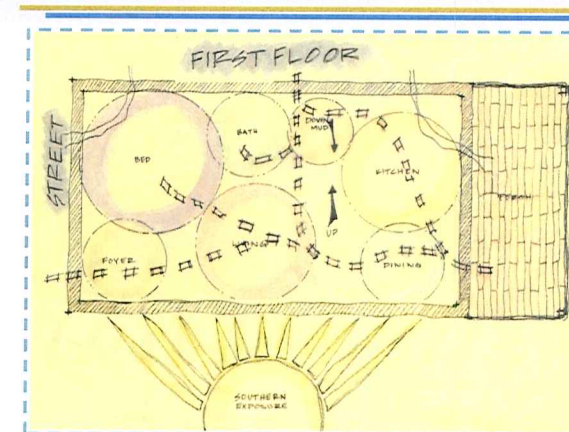
First Floor: 942
Second Floor: 517
Total: 1,459

Second Floor

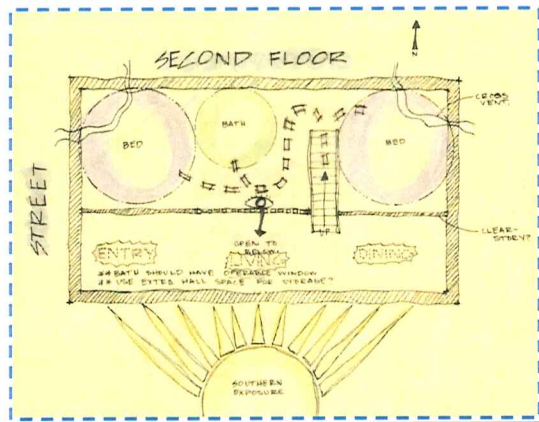
Bedroom 2
Bedroom 3
Bathroom 2
Hallway/Balcony



Schematic Phase Overview



Schematic Phase Overview



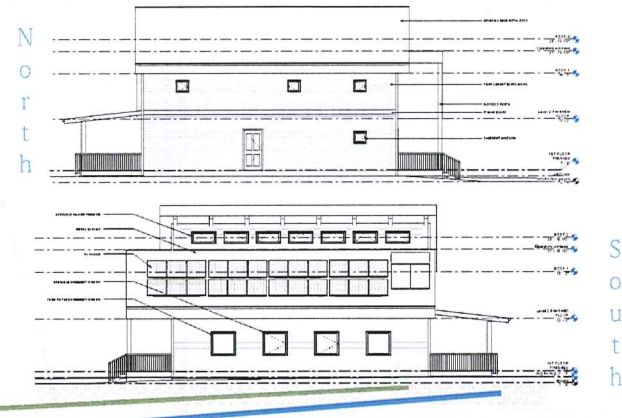
Finished First Floor Plan

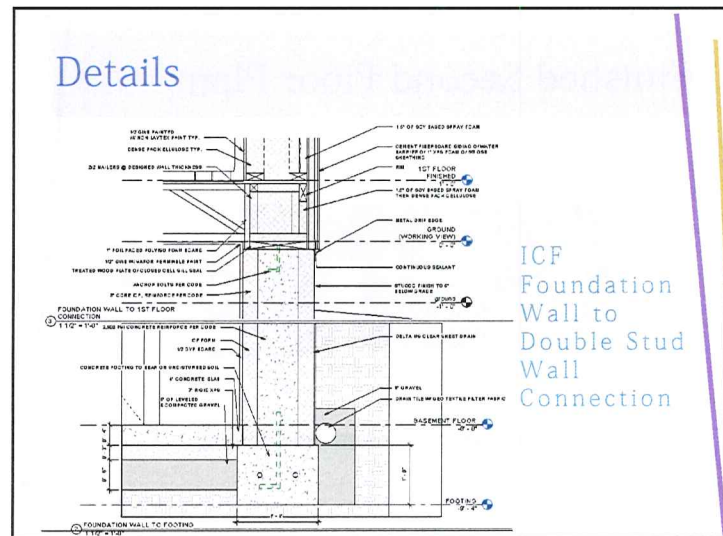
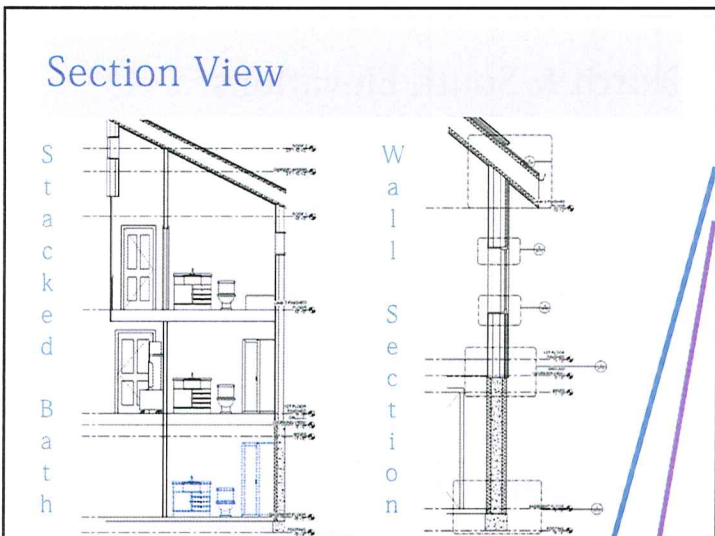
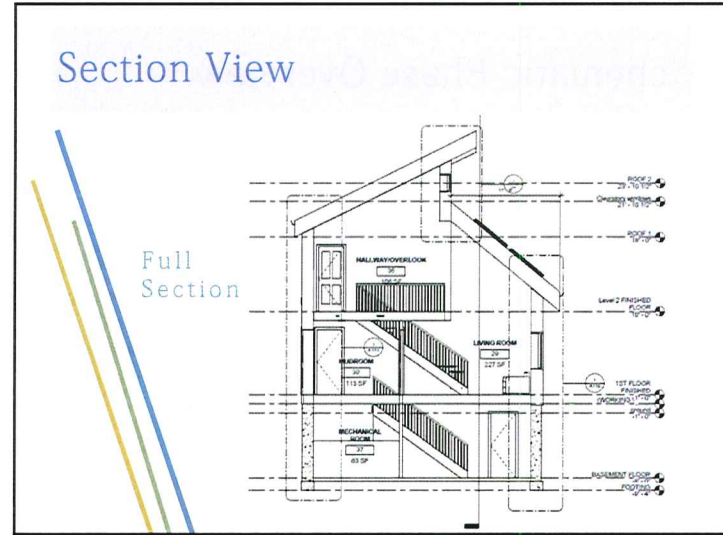
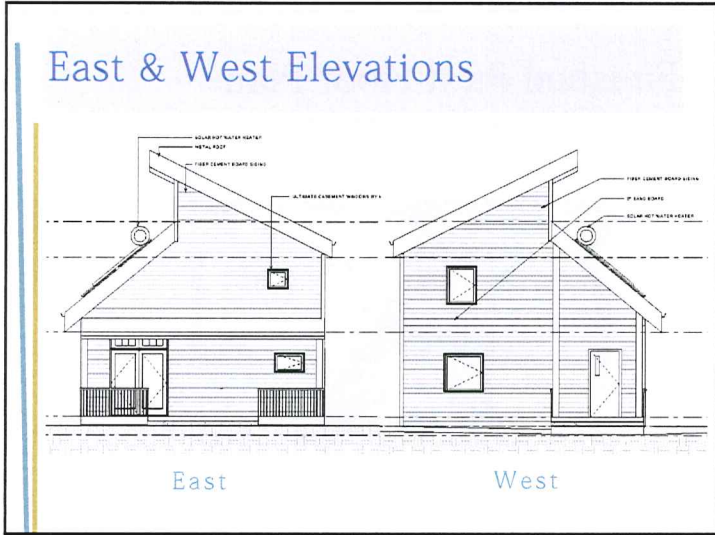


Finished Second Floor Plan

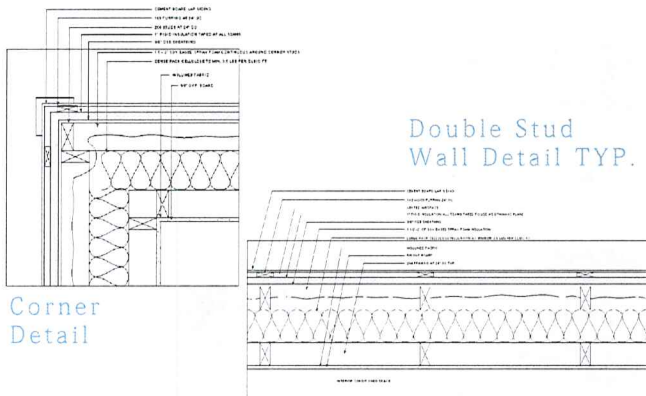


North & South Elevations

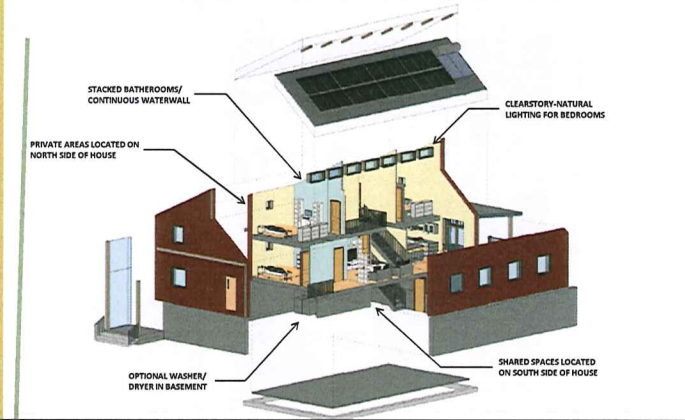




Details



Exploded Axonometric View



Exterior 3D Views



Southeast View - Rear of House

Exterior 3D Views



Southwest View - Front of House

Interior 3D Views



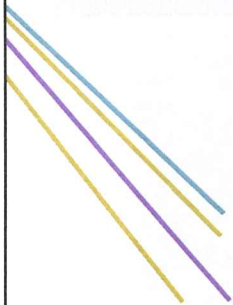
Entry Way - Looking into Living

Interior 3D Views



Living Room - From Master Door

Interior 3D Views



Balcony - From Base Of Stairs

Interior 3D Views



Kitchen - From Dining Area

Where Do We Go From Here?

- *Complete Construction Details*
- *Discuss Modularity with Construction Team*
- *Include Specified Fixtures into Model*
- *Verify involvement of potential material providers*
- *Finalize Construction Documents*

Questions? Comments? Concerns?