As part of the SEAS Experiential Learning Program, conceptual designs for a floating classroom were developed. The preliminary classroom concept has been designed to facilitate:

- Exploration for toddlers and preschool children with a view over the water
- Lectures and labs where ecology, environment, and sustainability are central
- Unique events including art shows, where creativity is emphasized.

In addition, the design embraces use of recycled materials in alignment with the university’s vision for sustainability. Campus life and the surrounding community will be enriched with the introduction of a new, unique, and interactive learning environment.

The idea behind the structure was initially proposed in order to satisfy three uses: child care, academic, and community.

Requirements:

- Maximum occupancy of 32
- Remain in Lake LaSalle year round
- Deck space surrounding the structure for outdoor use and added stability
- Fully enclosed classroom space with doorways onto the outer deck space

This classroom is proposed as a demonstration project, aimed to last three years. As a demonstration project, maintenance would be minimal.

Materials for superstructure:

- Glass for windows and doors
- Roof panels
- Wood panels for walls
- Railing surrounding deck space

Materials for substructure:

- Composite wood for decking
- Cylindrical drums for flotation device
- Anchoring system

Cost Estimate: $26/sq. foot = $24,960

All loading calculations were done according to ASCE 7-10

- Withstand winds up to 120 mph
- Withstand snow loads up to 105 psf, which is comparable to 6 ft. of snow
- Accounts for furniture and occupant loads in each different use case

Cost Estimate: $46/sq. foot = $44,160

Cost Estimate: $56/sq. foot = $53,760

In order to proceed with this demonstration project, funding is an essential component. Once funding is obtained, detailed plan sheets with exact measurements of each structural item will be composed.

The New York State Building Code, 2010
The New York State Fire Code, 2010
Minimum Design Loads for Buildings and Other Structures, ASCE 7-10

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References

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