

Project 2: Palouse Ice Arena/IFPC Competition

Arch 354, Manrique, Armpriest, Carman – Spring 2019

The Structure

“The principle of structure has moved in a curious way over this century [20th] from being “structural honesty” to “expression of structure” and finally to “structural expressionism.” In my opinion, it is a potent and lasting principle and I would never want to get very far away from it. Here, just as in the principle of function, the degree to which structure becomes expressive depends to a large extent on the problem. The expression of structure is not an end in itself, it is only when structure can contribute to the total and to the other principles that it becomes important. The Yale Hockey Ring and the TWA terminal are examples of this.”
- Eero Saarinen

IFPC Competition (Idaho Forest Products Commission Awards Program)

The studio is sponsored by the Idaho Forest Products Commission (IFPC), and includes a design competition, sponsored events and activities. The purpose of the IFPC awards program is to encourage, recognize and support the creative and innovative use of Idaho wood in architectural design as outlined in the goals below:

- To provide hands-on opportunities for Idaho architects and University of Idaho architecture students to learn about Idaho forests, sustainable forest management, wood products and manufacturing.
- To foster learning experiences about the structural, energy efficiency (life cycle analysis) and environmental benefits of wood.
- To recognize excellence in architectural design using Idaho wood to both professional Idaho architects and University of Idaho architecture students.

Required activities include a tour of the Idaho Forest Group Mill in Lewiston, a field trip to the University of Idaho experimental forest and Frank Pitkin Forest Nursery Building, and the IFPC Awards Luncheon.

The Palouse Ice Rink

The Palouse Ice Rink (PIR)¹ was built in 2001 and now operates at full capacity with demand for more activities and space. The Rink facility ice sheet is about $\frac{3}{4}$ the size of a regulation size, with temporary offices, storage, 2 very small locker rooms, served by a port-a potty. The temporary enclosure is at the end of its useful life.

The Palouse Ice Rink is a non-profit organization and in partnership with the Hamilton Fund of the City of Moscow is raising funds to build a permanent new arena. It will include a “full size ice sheet, locker rooms, spectator seating, indoor plumbing and heating, classroom, and storage, mechanical and other support spaces, all enclosed by an energy efficient and soundproof permanent structure”¹. (See program below)

Project

In this project students are asked to conceptualize the future needs and aspirations for the new Palouse Ice Arena and explore the best use of Idaho wood for the diverse project needs outlined in the building program below. The program is based on PIR planning and fundraising documents and you are also encouraged to think critically and creatively as you consider elements that might enhance the development of the spaces and site.

Learning Outcomes

As a result of the work on this project, each student should demonstrate:

1. the ability to develop a project that includes a portion of unobstructed space requiring an expressive structure in wood.
2. an understanding of the Ice Rink facility as a building type that creates a lively and active facility that exceeds the community expectations.
3. the ability to apply basic organizational, spatial, structural and constructional principles to the conception and development of an Arena project, and discover its poetic potential.
4. the ability to select, configure and detail wood components and assemblies to support and express the Arena design concept.
5. the ability to engage the natural systems and processes and historical and cultural aspects of the site in the project design.
6. an understanding of universal design and accessibility requirements, and regulations for a public building and site of this type.

¹ <https://palouseicerink.com/>

Site Location

The site is located on the Latah County Fairgrounds. Additional information will be provided in class and during our field trip.

Building Program

The primary elements of this community ice skating venue are listed below. Activities will include youth and adult hockey, figure skating, curling and broomball with aspirations to include sled hockey, wheelchair curling and other sports for people with disabilities. Science on Ice is a community education program that requires a classroom that can double as a meeting space. <http://www.scienceonice.org/>. The arena will be used for skating 10 months per year and rented out for summer activities.

ICE RINK		Sq.Ft.
Technically, an ice rink is a sheet of ice surrounded by a low wall and used for ice skating.	Must meet dimensional standards for ice hockey. https://sportsknowhow.com/hockey/dimensions/hockey-rink-dimensions.html	17,000
Circulation and ice access	Approx. 5' access area surround rink	3,000
ARENA SUPPORT SPACES		
Airlock entry		
Concourse (hall) with visitor seating	Seating for skaters and other visitors. May include viewing platform	1,000
Spectator seating	300 – 350 spectators	600
Food		300
Skate rental		300
Skate storage and sharpening	Acoustic separation from all sides	150
Managers office		250
Staff lockers		100
Public restrooms	Women - 8 wc/6 sinks), Men - 2 wc/3 urinals/2 sinks, Family (1)	800
Classroom/Meeting Room	750 sf	750
ATHLETE'S SPACES (limited public access)		
Locker rooms.	Six locker rooms including 2 dedicated to the use of women.@ 600 sf each Lockers, shower, wc/sink	3,600
Referee changing room	With shower, wc, sink	140
Penalty boxes, scoring box, player benches	See ice rink link a above	
Storage Areas: equipment for various sports and activities		400
Club storage	Curling, figure skating	200
SUPPORT SPACES (no public access)		
Ice resurfacers space, storage and ice access (Zamboni, ice edger, etc.)	Exterior access and direct access to ice required. https://zamboni.com	500
Mechanical (chiller for ice, heat for support spaces), plumbing	Exterior access required	740
Electrical room	Exterior access required	75
Communications		75
NET SQUARE FEET		30,080
13% allowance for mechanical, structure and additional circulation		3,920
GROSS SQUARE FEET		34,000
SITE		
Covered entry and waiting area		
Parking	68 vehicles with room for expansion	

Competition Requirements

Two (2) 24 x 36 boards oriented vertically. Building models as specified in final submission guidelines. To maintain anonymity, students will use the same number used for the ICMA competition on the boards submitted for this competition. Name & class information will be on the back of each board. LATE PROJECTS ARE NOT ELIGIBLE FOR THE COMPETITION, but must be submitted before critiques.

Studio Submission Requirements

The submission for the competition deadline includes two (2) boards described above and the models. An *additional board* is required for the final reviews. This will provide additional information including design process, additional diagrams site and precedent analysis. Additional detailed information will be provided about final requirements, but final boards will include:

- Design process (parti and process diagrams; site and precedent analyses)
- Site Plan
- Building Floor Plans, Elevations & Sections
- Wall Section & Details of wood components
- 3D Drawings/ Renderings (Perspectives; Isometrics)
- Building physical models (project in site; structure/construction)

Judging will be conducted by an invited jury and will take place on Monday April 29th. Awards will be made at the IFPC Luncheon the same day.

Schedule

Mon, March 4	Kick-off lecture; Project Introduction.
Wed, March 6 – Fri, March 1	Field Trip (Seattle, WA)
Mon, March 11 – Fri, March 15	No Class (Spring Recess)
Mon, March 18	Site Visit (TBD)
Wed, March 20	Field Trip Idaho Forest Group Mill (Lewiston, ID)
Fri, March 22	IFPC Forest Tour – UI Experimental Forest
Wed, April 3 – Fri, April 5	P2-IFPC Mid-review
Fri, April 26	P2-IFPC Final competition submission
Mon, April 29	IFPC Judging and Awards Luncheon (TBD)
Wed, May 1 – Fri, May 3	P2-IFPC Final reviews (TBD)

¹ Palouse Ice Rink marketing brochure, 2014.