

How to Begin an Ice Arena Project (Or Bust!)

So, you've decided to build an Ice Rink. All the excitement, success and glory stand in front of you. There's nothing in your way. Thousands of families, children, excitement and fun will be seen everywhere. The cash will roll in and you'll smile every time you walk in the door. It's possible, but, not without a strong foundation.

That foundation is built upon a few blocks: **Client, Time, Program, Expertise and Need**. You will find that these keys are all interrelated, relying on the success of the others. You cannot build a facility \$3 million over budget - you cannot overcharge your hourly rates nor can you operate for 32 hours a day.

As an architect, I am surprised by how many forget or have a narrowed view of who the client is. The client is kids, families, hockey skaters, public skaters, figure skaters, churches, schools, old, young, new and novice skaters – not just one client but many clients. Any project which focuses on one client is far short of its potential. Diversification is a key to any business's success. Design a facility which will serve all your potential clients.

When you schedule your ice, you pay attention to daily, weekly and yearly needs. You must do the same with the construction of your project. You cannot have a successful first year if you open mid February. It must be noted that your schedule is the most important factor affecting not only design, but your abilities to meet commitments.

- ? Open your facility between May and November
- ? Don't typically open a facility between "Spring Break" and the beginning of summer.
- ? Early summer means profit but a lighter schedule to open a facility.
- ? Early fall means the highest profits but a hectic learning curve.

The beginning of your business plan, through the opening of the doors, takes time. Don't short change your design and construction process as it will cost you money and create havoc with your opening schedule. Design alone, can take as much as a year if you look at national averages. Reduce this time by not "redesigning the wheel." Enlist an architect who has experience with Arenas and can give you suggestions and guidance rather than relying on you for all the answers. This can cut your design time in half.

- ? The National Average for the Design of an Ice Arena ranges from 8-12 months.
- ? With an experienced Architect this can be reduced to 4-6 months or less.

Enlist a construction team which understands your deadlines and why they are important. A contractor needs 7-12 months to build most Skating facilities. A

poor design can not only increase the time of construction but also increase the costs.

- ? A Typical Single Ice Rinks takes 7 months to construct.
- ? A Typical dual to triple Ice Arena takes 9 months to construct

Understand your program. An arena which serves all the possible clients does not mean “five clients – five times the size”. Many times you may add a small detail to an existing space to make it serve more than one usage. An example would be a Party Room which is also a dressing room for competitions, a meeting room for the Lion’s Club, serves more than one area of the facility, is flexible in seating arrangements, etc. Little cost but big benefits though an understanding of “who your client is”.

- ? If your building is flexible in design you can serve everyone or a single client.
- ? If your building ignores potential clients you cannot respond to demand and increase profits.

Remember that the facility must make a profit. (For a municipality, this profit may not be in dollars but the number of patrons.) To make a profit you must know the largest areas of expense. Control these and you prompt success.

1. Your mortgage
2. Personnel
3. Energy Usage
4. Maintenance Today
5. Maintenance Tomorrow

There are many key factors is the programming of your facility and they do not stand alone affecting other areas. Some factors which stand out are:

- ✍ Most facilities have two NHL 85x200 sheets of Ice in lieu of one. This increases profit potential three fold while only increasing typical construction costs 30-50%.
- ✍ The Olympic is not always recommended because it is does not typically increase income, nor does it typically improve the ability to host regional and national events. (Add the size only if it adds to your profit.)
- ✍ The floor space can be rigid seating or expandable to allow for surrounding expansion. The number of seating varies depending upon your needs.
500 seats are for typical High School Level Hockey
1200 seats for State and Regional events
4000 seats for National Caliber events
4000-6000 seats for Minor league Hockey
9000 seats and up - for Major League Hockey
- ✍ If the main arena is to become a multipurpose facility then Air conditioning will be a must.
- ✍ Dehumidification is one of the most important aspects of designing this facility. If not done properly you can stand to lost thousands of dollars in

energy waste, hundreds of thousands in building correction, and millions with exposed liability. With proper design this can actually save you money during construction, save energy and reduce liability. Dehumidification is not just a mechanical piece of equipment. It is also the walls, windows, and details of the building's construction.

- ✍ It is too easy to forget the skater for which this facility is designed. After major state, regional and national skating events the participants will be asked to review the facility to help assess possible future participation. If you were to review the questionnaires, you would see the questions would relate to Ice quality, comfort, dressing rooms, concessions, pro shop capabilities, viewability of events, etc.
- ✍ You not only provide a service to your community, but you provide revenue far beyond the monies you give directly to their revenue department. Remember that the community and municipality are active parts of your project. They will benefit from your facility through youth activities, tax benefits, tourism, etc.

Understand how to serve your program. Balance what you build. To do this you must understand why ice rinks have been built in such a large range of \$45 to \$160 per square foot. Our firm has place Ice Arenas in three major categories. Quonset Hut or Warehouse Arenas, Civic Centers and IcePlex's.

1. **The Quonset Hut or Warehouse Arena: (start \$48.00 / sf - typically 35,000 sf)**

This is the cheapest type of facility. It is very typical of facilities of the past. They, in a large part have served their purpose and are being replaced with newer more profitable facilities. They compare to skating in a cave. They lacked aesthetics, comfort and efficiency, yet provided a "spring board" for skating for many years.

2. **The Civic Center: (as high as \$165.00 / sf)**

This is a facility typically designed as a "Monument to the Architect" not as an asset to the community. The function is typically lost to design 'ideas'. Most are seating areas with "ice thrown on the slab". This is why most Civic Centers are considered poor Ice Skating facilities. Recent closures in many arenas can be attributed to this approach in design. *"Everything we design must be focused around the skater, not the lobby, entry, pro shop, rental, etc."*

3. **The IcePlex: (the national average \$74.00 / sf) typical 75,000-85,000 sf.**

The typical facility is two sheets of ice with from 300 - 6000 seats. Good Design considers.

- ✍ **Space** - No Wasted Space results in a tighter and more efficient floor plan. "At \$55.00 or a national average of \$74.00 / sf we cannot afford to waste thousands of square feet in floor area."
- ✍ **Tough** - A facility that is built as tough as a prison but with aesthetics far above the average.

- ✍ **Aesthetics** - Built as an asset to the community not as a “monument to the architect”. “You cannot afford to design with ‘gold guilt” every aesthetic decision must serve several purposes.”
- ✍ **Budget** - A client’s budget must be met. The client must be apprised constantly of items which could effect the budget and how to control those items
- ✍ **Function** - The building must function to help control costs. From wasted space and how that effects energy costs, to how a concessionaire is affected by proper ingress and egress. This will also help control personnel - personnel are your second greatest expense.
- ✍ **Maintenance** - The facility must withstand heavy abuse. Kids walking with a stick and blades on their feet... accidents happen. If I placed a child in a typical school, with ‘plastic painted concrete block’, you would already be on a down hill slope with vandalism. We provide material that is inexpensive yet provides a cleaner and more appealing environment. This reduces vandalism and carelessness. The materials we choose in public areas are also more durable, are maintained less, do not show damage easily, and are cost effective.
- ✍ **Energy Efficiency** - With design options, from Monolithic structures to innovative energy solutions, we are achieving less energy consumption than many new facilities. This must be done carefully, so not to negatively impact items such as dehumidification and controlling moisture in the building.
- ✍ **Code Compliance** - A majority of the newest arenas being constructed today do not meet code. That does not mean they will not appear to operate correctly, it means that you will become liable. The building official’s approval of your design does not eliminate your liability. Nor does it stop the chance of a new inspector shutting down your facility, until the building is brought into code. You and your Architect are responsible for meeting the code, not the city or its officials. This facility will face a myriad of codes, irregardless of where it is located in the United States and Canada.
- ✍ **Expertise** – Hire a designer who has knowledge of how the arena will operate and all facets of Arena Design. This knowledge of the functioning of the rink manager, concessionaire, figure skater, hockey coach, etc. allows them to provide you a quality design. Don’t rely on input to the architect guaranteeing the building success, rely on experience.

It would be easy to right a book on the proper way to design a skating and recreation facility. Whether your facility takes advantage of multipurpose opportunities or fully utilizes skating possibilities these are only some of the decisions you must make. Profit is sometimes dollars and sometimes the number of people that walk through the door, but it is always a gauge of success. I know that the information provided above is only the beginning of a fast and furious journey.

Eric Milberger is the President and CEO of M2Architects, Inc. Since 1961 M2Architects has served the public and families with the quality design of over 2000 projects. Eric joined the firm in 1986 and immediately began the design of his first recreation facility with a 3000 seat Basketball Arena. In 1988 he designed his first IcePlex, a dual NHL Arena. Because of proper design and solid research, he is now completing his tenth Skating Arena and has many more in the wings. He has worked with more than 500 groups trying to build a facility and has projects from New Jersey to Washington. He has been recognized nationally, receiving design awards on arena projects in New Jersey, Alabama and Arizona.

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