



Project Specific Problem Identification

Issue #2

Pre-cast concrete will be used on this project for critical members of the superstructure, i.e. bowl columns, beams and seating risers. After conversing with the Design-Build Entity it was determined that the force guiding this selection is the Chicago union market for concrete construction.

The basic evaluation will be focus on whether the overall cost for using union erectors and non-union manufacturers exceeds cost associated for union installation of cast-in-place concrete.

Project Specific Problem Identification

Issue #3

The FF&E Package is essential to the on time delivery of this facility. Specific attention ought to be given to efficient placement methods of the ice-distribution system and rink construction. It is important to determine when the ice-system consultant ought to be involved, especially since CIMCO is a non-domestic company headquartered in Ontario, CN. What is the typical procurement, and sequence for floor construction/ implementation and system testing, how can this process be "trimmed"?

As a breath study the appropriate size to maximize distribution and minimize system cost has to be determined; what is the minimum size of equipment to maximize system efficiency. "Life-Cycle cost"

Project Specific Problem Identification

Issue #4

In keeping with Value Engineering and Constructability review, a feasibility analysis should be conducted documenting truss loading for future audio and video systems. Several sports arenas have installed new audio systems, LCD displays and truss suspended scoreboard clusters in an effort to draw large scale sports events. Although the Sears Centre is sized for 9,500 patrons this issue may be worth the evaluation since the long term goal of the facility is to house athletic tournaments.

Issue #5

(42) Suites are contain in this facility, since size requirements are similar "SIPS" may be a viable option to schedule compression.

Permission to Evaluate the following for Thesis Proposal.

1. "DB/ DBO" + "FSM" = "DBOM"
2. Union Markets impact on Pre-cast Selection
3. FF&E Rink Construction Procedures – (1) Determining if there is a more cost effective and less time intensive placement method. (2) Evaluating equipment size for maximum use at minimum cost.
4. FF&E Load Truss Evaluation for Scoreboard and Audio upgrade
5. Implementation of "SIPS" for Suite Construction

After careful consideration and Construction Management consultation (4) topics were determined as areas of evaluation for thesis research.

The breakdown is comprised of a (2) component Construction Management Depth Study and (2) additional Project Breadth Analyses.

The following slide will highlight the topics that will be used to frame this year's proposal.

Thesis Topics

Construction Management Depth

1. "DBOM" as the preferred PDS for Arena Projects
2. Recapturing pre-cast manufacturing and procurement cost by using CIP concrete construction in the Chicago Area

Breath Analysis (1)

- ❖ Revising Building Enclosure system with pre-manufactured masonry assemblies

Breath Analysis (2)

- ❖ Analysis of Best Practices for Ice-Rink construction/ installation and maintenance