More than meets the eye

Understanding the complexities of performing arts centre design. BY MICHAEL NELSON

Performing Arts Centres are generally the most complex building type of all, in that they are the most sculptural of all buildings from an interior and dimensional perspective and must satisfy a much greater set of needs than any other building type. They are special places within their communities, so there is a heightened expectation for design excellence including the use of high-quality materials not normally seen in a building with a less significant role in the community. Patrons must feel that they are coming to an exceptional event and place not replicated in attending a movie or sporting event.

Zeidler believes it's critical to design performing arts centres so that you're anticipating the event from the moment you're in your car and driving to the facility. The role of the lobby must reinforce that anticipation, and it must have fantastic visibility not just from within, but from outside the building. The lobby serves as a billboard announcing each event as it takes place. Passersby see the excitement taking place within, inciting interest in future events.

The placement of the lobby is critical. As well as visibility from outside the building, the lobby itself should be designed to include overlooks where patrons can see each other and a grand stair positioned so that the whole composition becomes a theatre in itself. Eberhard Zeidler calls this the theatre of the people. The lobby should be designed so there's a significant column-free central gathering space that can be used for different events such as dinners, cocktail receptions and other functions.

The auditorium in particular must satisfy a much greater set of needs than any other building type. There are acoustical requirements, sightlines and the need to create a sense of intimacy — fostering the greatest possible connection between audience and performers — which must all be satisfied while meeting a stringent set of code requirements.

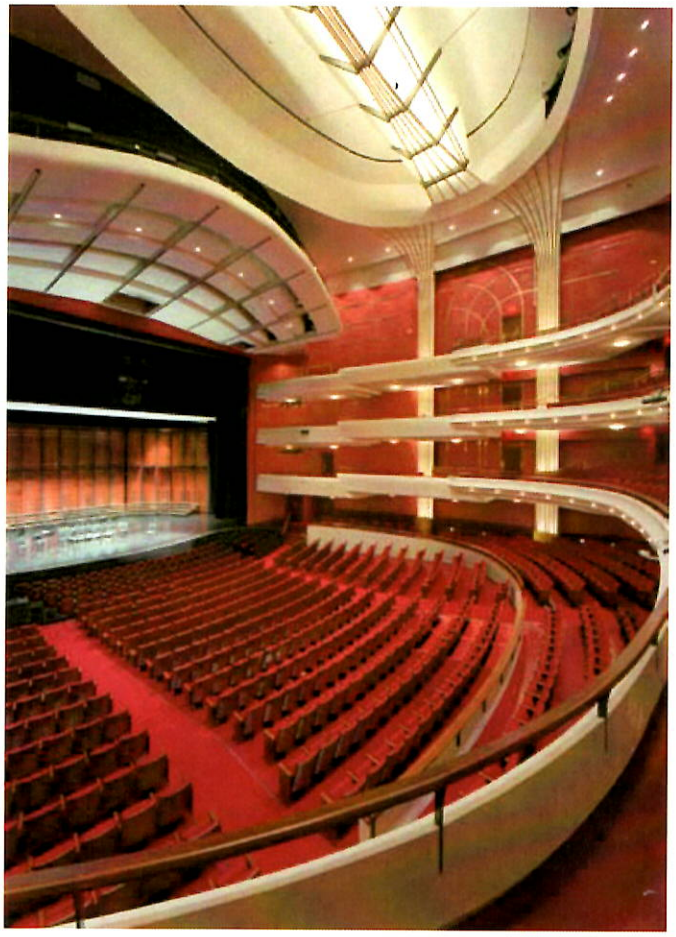
The environmental considerations of the auditorium are incredibly complex. The weaving of oversized duct work required to reduce the velocity of air movement to eliminate background noise is very complicated.

Most auditoriums must have a degree of acoustic flexibility, which can be achieved by introducing curtains or panels to cover wall surfaces or be suspended within the acoustic volume of the audience chamber, enabling the hall's tuning.

In terms of the hall design there's always the question of audience capacity — what is required, what can be funded initially and what will support the mission of the centre in the long run. Once capacity is determined, balconies and side boxes must be considered. It is important that the audience chamber is peopled up so that the performers connect with faces instead of just a sea of seats. For this reason, and from a design perspective, it's better to introduce one or more balconies to keep the audience as close to the stage as possible, providing multiple opportunities and vantage points for viewing the various types of performances.

A critical area is the throat zone — where the audience chamber merges with the performance zone. This typically includes the orchestra pit, which might have moveable lifts or an infill system depending on the need for quick changes, budget and other factors. It is the design team's role to ensure that the pit zone can serve as either an orchestra pit, audience seating or a forestage extension as required to fulfill its mission. There is also an intense amount of lighting required in this area of the building, including vertical box boom positions and catwalks that might have to be introduced into an acoustic canopy while continuing to respect the halls' acoustic and architectural integrity. It is a significant design challenge to merge the acoustical and architectural requirements of the building at all levels.

The stage tower itself is not just a simple box. One of the challenges is to make it appear as more than this. We've done that in a number of instances like the Fox Cities, where one of the required exiting stair towers introduces fritted glass and lighting, which can be seen for miles and serves as a beacon to the community.



Fox Cities Performing Arts Center, Appleton Wisconsin

The stage tower is also an extremely complicated working piece of machinery with multiple line sets and rigging for flying scenery and lighting the stage. Depending on the hall's use, it will likely have an acoustic shell whose ceiling parts will have to be incorporated into the rigging system without negatively impacting the other functions of the stage tower.

The back-of-house support areas must be designed so there's an efficient flow of materials, personnel and props from an amply sized — in footprint and height — loading area through large receiving areas onto the stage. The change rooms, storage and technical offices must be positioned for convenient access to the stage by using what would appear to be dramatically oversized corridors. When a large touring show comes to a venue, these seemingly oversized corridors will be stuffed with costume and prop racks and other necessary items.

Visiting a facility like the Fox Cities, you can't help but appreciate the teams of architects, engineers and specialists who have contributed to the creation of these fantastic performing arts centres for the enjoyment of patrons and the betterment of the surrounding community. CB

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