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Center Stage : “Auditorium Design”

by Ellen Kollie

What’s so difficult about designing an auditorium? Plenty of seats, a stage, some overhead lights, and a microphone should do the trick. If only it were that simple. The following list of things to consider when designing an auditorium is certainly not exhaustive, but it does include some critical points. Break a leg on your next auditorium project!

1. Hire a consultant.

“While it sounds self-serving,” says Rose Steele, ASTC, principal consultant for Landry & Bogan, Inc., “I think it’s important to hire a consultant who is expert in the design of auditoriums and to inquire as to that expert’s specific experience. If the architect is willing to engage a consultant, it’s less critical that the architect have done an auditorium previously.” Mountain View, Calif.-based Landry & Bogan is a theater consultant firm.

The school auditorium is perhaps the most visited part of the school. While those in the community may or may not see a typical classroom in a school, they have more than likely visited the auditorium for a community event, school performance or graduation ceremony.

We received too many performing arts projects to showcase but we have highlighted a number of them in this article. Be sure to search our site over the next few days as we will add over 30 auditoriums highlighted in the “Designer Elements” section.

Don’t forget that product information for a variety of products such as auditorium seating , music practice rooms, music equipment, and wheelchair lifts can be found in our “Designer Products” section.

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2. Hire the consultant early.

This ensures that the technology to be installed is coordinated with the design and construction. “The key is to make sure the infrastructure is there to provide for the installation,” says Jeff Brotherston, a consultant with Technology Plus, “because you can’t go back and put it in without great difficulty and expense.” Aurora, Colo.-based Technology Plus helps turn voice, data, and video communications technology into a competitive edge, with the integration of wireless data, audio-visual design, and security design.

Careful planning of the George Gardner Performing Arts Center (A) allowed the facility to reflect the identity of four communities.

3. Consider the facility’s programming.

This sounds painfully obviously, but it’s critical to have an accurate conception of how you plan to use the space before design is begun. For example, if you have a strong drama program and desire a thrust stage, but also have a strong film program, you have a conflict, says Steele. Similarly, if you have a strong music program, but design primarily for drama, you’ll be disappointed with the acoustics.

Russellville High School Performing Arts Center and Science Center (B) will support new band, choir, drama and art spaces.

South Elgin School’s auditorium (C) is designed for community use, as well as school programs and events.

4. Plan now rather than repair later.

“We’ve been called in for peer reviews or remedial work for programs that fall short of expectations,” says Christopher Savereid, acoustics consultant and president of Cambridge, Mass.-based Acentech, a consultant in acoustics, audiovisual, and vibration. “It’s extremely difficult to correct errors. For example, if the space is undersized, it’s difficult to raise the ceiling.”



George Gardner Performing Arts Center. Photo by Carlos Murrieta.



Russellville High School Performing Arts Center and Science Center. Photo by Crafton Tull Sparks.



South Elgin School’s auditorium. Photo by Mike Crews Photography.

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5. Plan for technology needs.

Knowing how the auditorium will be used allows you to maximize equipment and system design. Keep the system design simple for people of all technical skill levels to operate. Consider both simple usage, like a PTA meeting, and elaborate usage, like a theatrical production. Include common-sense design, cheat sheets, automated controls, and training. "Otherwise, you'll have a significant investment that isn't being taken advantage of because people are afraid of the technology," points out Brotherston.

David F. Rittmann Fine Arts Center (D) incorporates spatial and technological flexibility to enable multiple uses.

6. Integrate lighting with the a/v system.

This is a minor point, but an important one. Get the two designers together so that, when a production is taking place, both systems can be operated from one control room.

7. Consider future technology needs.

This sounds like a trick - How can you possibly know your auditorium's long-term future, much less the future of technology? - but it isn't. The solution lies in your consultant, whose job it is to know trends. "Consultants don't sell equipment," says Brotherston, "and we don't make commission on the hardware that's sold. Our goal is to design what is best for the application and make sure the owner's best interests are reflected in the overall design."

Brotherston cites an example where a lot of schools still use 4-to-3 aspect ratio projectors, and an administrator may ask for that because it is what he is familiar with. However, consultants know that there is a trend toward wide screen, and would recommend that newer technology. Two or three years down the road, the administrator will either find himself wishing he knew to ask for widescreen or being appreciative of the consultant's advice.

8. Budget early on.

Accurate budgeting done early ensures you buy the best products you can afford and make informed decisions about what to cut. This is especially true in terms of technology. "Most administrators underestimate the real cost of technology," says Wayne Cornell, a supervisory consultant for audiovisual and information technologies with Acentech, "and end up with sticker shock."



David F. Rittmann Fine Arts Center. Photo by Tim Griffith.

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9. Be careful where you make cuts.

Cutting to stay within budget isn't fun, but it is a fact of life. Listen to the advice of your architect and consultant in order to make sensible cuts. Some things you can cut back on now and upgrade later, like draperies. Some things are less flexible, like the HVAC system. For the sake of acoustics, choose a system that operates efficiently and quietly. It's better to spend a little more here for a high-quality product because it's more difficult to upgrade later.

The auditorium at Bridgewater-Raynham Regional High School (E) uses duct sizing, duct silencers, vibration isolation mounts, and building constructions to reduce HVAC noise transmission.

10. Consider acoustics.

Speaking of acoustics, if they're not good, no investment in audio equipment will leverage the problem. "Technology can't fix bad acoustics," Brotherston says succinctly.

Dassel-Cokato High School Performing Arts Center (F) was designed for high-quality acoustics.

Oxford High School Auditorium (G) features acoustical surfaces of overlapped skin layers of varied angled and shaped walls of acoustic shells, clouds, and walls.

Buffalo Academy's Performing Art Center (H) is outfitted with a "tunable acoustic system."

Westbourne Grammar's James Mitchell Centre Theatre (I) boasts tuned acoustics that allow for lectures to be delivered without microphones.



Bridgewater-Raynham Regional High School. Photo by Jason Martinez



Dassel-Cokato High School Performing Arts Center.



Oxford High School Auditorium. Photo by Steve Lakatos.



Westbourne Grammar's James Mitchell Centre Theatre.



Buffalo Academy's Performing Art Center. Photo by David Lamb.

11. Plan to meet ADA early on.

Meeting ADA requirements simply can't be tacked on at the end of design. There's much to consider, says Steele. For example, how are you going to get physically challenged patrons from the lobby to the seating to the stage? Also, the control room and dressing rooms have to be accessible. Physically challenged performers have to be able to move from the dressing rooms to the stage.

12. Keep it simple.

Every space is a teaching space, and the auditorium should be about the students. Therefore, don't spend money on lobby fixtures that could be used to upgrade the stage lighting. Don't make the space bigger than it needs to be and thereby cut money from the acoustics budget.

13. Consider peripheral space.

Of course, you're going to plan on a stage and seating. But there's so much more. As Steele says, the performing arts is 90 percent rehearsal and 10 percent performance. Consider that when designing wing space; the adjacent band room, drama room, and choir room; and the scene shop, costume shop, and green room.

Jerry Durrant Auditorium (J) includes a number of peripheral spaces, including, but not limited to, a scenery shop, rehearsal hall, band hall, and choir hall.

Clovis Performing Arts Center (K) provides convenient access to the Box Office, snack-bar, and toilets directly from the lobby.

Some peripheral space - including classrooms, practice and performance space for drama, choral, and orchestra curriculum - for Woodside Priory School's Performing Arts Center (L) is located in nearby buildings.

Keep the above points in mind when designing your next project, and everyone - students, teachers, and guests - will give you a standing ovation. Maybe they'll even put you in the spotlight on center stage!



Jerry Durrant Auditorium.



Clovis Performing Arts Center. Photo by Mullins Studio Gallery.



Woodside Priory School's Performing Arts Center. Photo by Jacob Elliott.

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