

**Acoustical Society of America
Technical Committee on Architectural Acoustics
STUDENT DESIGN COMPETITION - 2001**

December 5, 2000

GENERAL INFORMATION

The Technical Committee on Architectural Acoustics of the Acoustical Society of America and the National Council of Acoustical Consultants are sponsoring a student design competition which will be judged at the 141ST meeting of the Acoustical Society of America in Chicago, Illinois from June 4 through June 8, 2001.

The purpose of this design competition is to encourage students enrolled in Architecture, Architectural Engineering, and other University curriculums that involve building design to express their knowledge of architectural acoustics and building noise control in the schematic design of portions of a building where acoustical considerations are of primary importance.

The submitted designs will be displayed at the Chicago ASA Meeting, and they will be judged by a panel of professional architects and acoustical consultants. An award of \$1,000 will be made to the submitter(s) of the design judged "first honors". Four awards of \$500 each will be made to the submitters of four entries judged "commendation".

Entries may be by individual students or teams of students with a maximum of three members. Building designs shall be presented on no more than two poster or foam core boards each with maximum dimensions of 30 by 42 inches (76 x 107 cm). The boards shall be suitable for wall mounting. The names, addresses, telephone numbers, and school affiliation of the submitters shall be in a visually opaque envelope securely attached to the back of each display board. Display boards shall be wrapped in opaque paper which will not be removed until the boards are delivered to the Chicago ASA Meeting and ready for display and judging. Entries must be received at one of the two addresses that follow no later than May 18, 2001. Please package display boards securely and properly to prevent damage during shipment.

**Prof. Robert C. Coffeen, Interim Chair
Programs in Architectural Engineering
Marvin Hall
University of Kansas
Lawrence KS 66045**

**Dr. Lily M. Wang
Architectural Engineering
University of Nebraska
200B PKI 1110 South 67th Street
Omaha NE 68182**

Additional information may be obtained by contacting Bob Coffeen, Lily Wang, or Robin Glosemeyer by phone, facsimile, or E-mail as follows:

**Bob Coffeen...
Phone: 785-864-4376
Mobile Phone: 913-645-2381
Fax: 785-864-5099
E-mail: coffeen@ukans.edu**

**Lily Wang...
Phone: 402-554-2065
Fax: 402-554-2309
E-mail:
lmwang@unomaha.edu**

**Robin Glosemeyer...
Jaffe Holden Acoustics
Phone: 203-838-4167
Fax: 203-838-4168
E-mail:
rglosemeyer@jhacoustics.com**

Information can also be found on the ASA web site: asa.aip.org

Students intending to enter this competition must make their intentions known by sending E-mail to Bob Coffeen on or before April 16, 2001. Please indicate your name(s), school, faculty advisor, and E-mail address.

Design competition entries should emphasize the general building acoustics design (room acoustics and noise control) and its interaction with the overall architectural design. It is not necessary to prepare architectural building elevations. The exterior appearance of the building is relatively unimportant to this design problem. Rather, the drawings should present acoustical design solutions in schematic or sketch format. In addition to plans, sections, and details, the poster boards may display acoustical descriptions, calculations, acoustical criteria, etc. as necessary to describe and support the design.

Regarding the building air conditioning system, it is not necessary to provide a schematic design for this system. However, system design criteria relating to noise produced by the mechanical system and other design considerations concerning system noise may be included on the poster boards.

DESIGN SCENARIO

A relatively small college, which is well known for its fine arts program, intends to construct a performing arts center on its campus which is located in a major metropolitan area. The center is to primarily serve the college music department, but it will probably be used for other college and community-wide activities.

The site for the center is in a relatively noisy urban area. The site is relatively flat and it is located approximately 200 feet (60 meters) from a major 6-lane roadway.

Following is a portion of the architectural program statement for the performing arts center which defines building spaces desired by the college.

PERFORMING ARTS CENTER SPACE REQUIREMENTS

Performance Hall

Primarily to be used for music including orchestra, chorus, chamber ensembles, music from opera without complete opera stage sets, instrumental and vocal soloists, and jazz. Probably used on occasion for lectures, meetings, multi-media presentations (with portable projection equipment), and other convocation activities. Used occasionally for ballet and other dance.

Approximately 800 seats required.

Performance platform (stage) with area of approximately 1,400 square feet (130 square meters). A stage house with theatrical stage rigging is not required. However, adjustment in the size of the performance platform volume may be provided in order to acoustically accommodate musical ensembles of various sizes and soloists. An orchestra pit is not required. A loading entrance to the platform (stage) is required from the exterior of the building.

Rehearsal Hall

To serve music and dance, and on occasion it will serve as a meeting room. In addition to music and dance rehearsals, it will be used occasionally for music and dance recitals.

Floor area to be approximately 3,000 square feet (280 square meters).

Individual Music Practice Rooms

Four required, each with area of 80 to 100 square feet (7.5 to 9.3 square meters).

Lobby

The lobby is to serve as the entrance space to the performance hall and the rehearsal hall. In addition to serving as a typical lobby, the lobby will also be used on occasion for musical performances, meetings, luncheons and dinners, and receptions.

Mechanical Equipment Room (MER)

The performance/rehearsal space MER will primarily house HVAC units serving the performance hall, rehearsal hall, practice rooms, and lobby. Chilled water and steam are available from a nearby college building. It is estimated that the area required by the MER will be a minimum of 1,000 square feet (93 square meters).

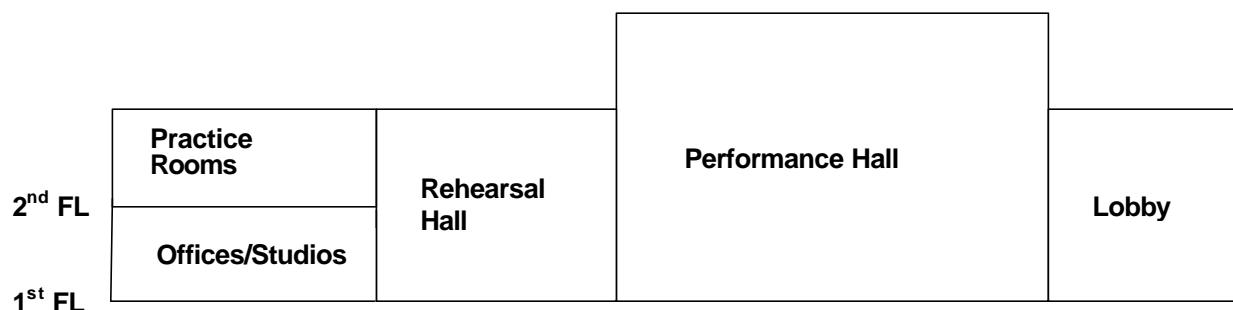
The MER shall be located within the building as dictated by noise control considerations. However, the Owner would like this MER to be in the general vicinity of the building spaces served by the HVAC units located in this MER.

Other Spaces

Other building spaces are required such as dressing rooms, storage rooms, green room, and faculty offices/studios. However, for the purposes of this design competition, it is not necessary to design these spaces from a room acoustics viewpoint. But, because of the potential location of offices in relation to the performance hall, rehearsal hall, and practice rooms, it may be necessary to consider space-to-space architectural noise control. Refer to the general building arrangement section below.

General Building Arrangement

The following functional building section indicates the desires of the project architect in regard to general space arrangements on the two floors of the building:



**FUNCTIONAL BUILDING SECTION
NOT TO SCALE**