

SECTION 13080

SOUND CONTROL

PART 1 - GENERAL

1.1 PROGRAM DESCRIPTION

A. General: This section addresses acoustical aspects of facilities design to control and contain sound within various types of spaces. These design criteria are derived from various industry standards and professional guidelines for various types of building occupancies. The purpose of this standard is to establish acceptable sound design criteria for facilities design at Stanford. This standard does not address speech and sound transmission through partitions which must be addressed on a project-by-project basis.

1.2 PERFORMANCE CRITERIA

A. Indoor Design Criteria for HVAC Sound Control:

1. The criteria indicated below are for unoccupied spaces, with all systems operating.
2. Criteria should be satisfied at any point in the room five feet (5') above the floor. Criteria for laboratory fume hoods should be satisfied at a distance of three feet (3') perpendicular to the face of the hood.

Type of Area	Range of Sound Levels (dBA)	Range of Noise Criteria (NC) Curves
<u>RESIDENCES</u>		
Private homes (urban)	30-40	25-35
Apartment houses, 2- and 3-family	35-45	30-40
<u>OFFICES</u>		
Conference rooms	30-40	25-35
Executive office	35-45	30-40
General open offices	40-50	35-45
Tabulation and Computation	40-65	40-60

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AUDITORIUMS AND MUSIC HALLS

Concert and opera halls		
Studios for sound reproduction	20-30	15-20
Legitimate theaters, multipurpose halls	30-35	25-30
Movie theaters, TV audience studio		
Semi-outdoor amphitheaters	35-45	40-60
Tabulation and Computation	40-65	30-35
Lecture halls, planetarium		
Lobbies	40-50	35-45

SCHOOLS

Libraries	35-45	30-40
Schools and classrooms	35-45	30-40
Laboratories	40-50	35-45
Recreation halls	40-55	35-50
Corridors and halls	40-55	35-50
Kitchens	45-55	40-50
Public libraries, museums & courts	35-45	30-40
Washrooms & toilets	45-55	40-50
Cafeterias	45-55	40-50

SPORT ACTIVITIES, INDOORS

Coliseums	35-45	30-40
Bowling alleys	40-50	35-45
Gymnasium		
Swimming pools	45-60	40-55

EQUIPMENT

Laboratory fume hood	55	
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B. Outdoor Design Criteria:

Area Types	DbA Level	NC Level	Testing Distance from Sound Source
Air Intake and Discharge Louvers	50-55	45-55	5 feet
Outdoor Equipment	50-55	45-50	5 feet

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION