

Houses of Worship



Houses of worship require that the delivery of the spoken word be clear and intelligible and that the devotional music envelop and involve both the singers and congregation. The acoustical environment must provide support for both needs...



Acoustical Design for Houses of Worship

For more than 35 years, BKL Consultants Ltd. has provided complete acoustical design services for all denominations of houses of worship. All aspects of room acoustics, noise isolation, and mechanical noise control are brought together as an integrated package. Our design team has the multi-disciplinary expertise to provide the best possible acoustical design package for new construction or renovation of your house of worship.

The Importance of Acoustics

Few buildings have more demanding requirements for excellent acoustical performance than a house of worship. The delivery of the spoken word and the offering of devotional music is the primary reason that the building exists. The acoustics of the space must support both of these elements.

The Spoken Word

Hearing the spoken word or, in acoustical terms, the speech intelligibility of a worship space is critically important for the comfort and participation of the worshippers. The acoustical design for speech intelligibility involves the room shape, finishes and mechanical services, and is as important to the success of the room as the heating and lighting.

Devotional Music

Devotional music may take several forms, from traditional acoustic instruments and singing, to fully amplified electronic music ensembles. The acoustical design of the worship space must support the music and worship style. The acoustical design criteria for a space to support a pipe organ and large choir will be substantially different from those for amplified music. We provide the acoustical design that will support the musicians or singers for any style of devotional music, and provide a musical experience that will involve the worshippers.

Participation

The congregation must be involved in the service, and the acoustical design can help enhance the participation of the congregation. Congregational singing creates a powerful bond, and the acoustical design must help make that connection throughout the space, even under balconies. Careful design of wall shapes, and tailoring of the reverberation time, can provide that connection without compromising the speech intelligibility.

Noise Control

Background noise from air conditioning, traffic or other sources can distract the occupants and degrade the speech intelligibility of a worship space. The control of background noise is crucial for the success of a worship space. We have the knowledge and experience to provide acoustical design for heating and ventilation systems, as well as details for wall and roof design, for the prevention of noise from other sources.

The Acoustical Consultant's Role

We will meet with the building committee and the architect to establish the acoustical requirements based on your worship style. We will work with the architect to integrate the acoustical design details with the architectural design elements to help ensure a harmonious design.

We can provide acoustical design services for both new construction and renovations. For new construction projects, we can evaluate room designs during the concept design stage and identify potential acoustical problems and propose solutions well before construction. Acoustical problems can plague a building through its life, as some problems cannot be economically remedied after construction. Our involvement at an early stage of design can prevent costly flaws in room shape and finish. For building renovations, we can make accurate acoustical measurements on-site using top-of-the-line Type 1 analysers to identify acoustical and sound system problems. BKL Consultants Ltd. will provide detailed recommendations for remedial acoustical treatment refits.

