Specify To Reduce Sound Transmission

Meeting a client’s unexpressed needs translates to surprise and delight. In contrast, not meeting his or her basic needs results in lost business. Now let’s apply that to acoustical performance in a building design.

Reducing sound transmission between rooms is more critical than ever, whether you’re designing a hotel, business center, hospital or multi-family housing unit. Minimizing and buffering noise—from people talking, office equipment or televisions running, pets barking—can make or break your building.

### ICC G2-2010 Guideline for Acoustics

<table>
<thead>
<tr>
<th>Laboratory Sound Rating</th>
<th>Acceptable Performance (Grade B)</th>
<th>Preferred Performance (Grade A)</th>
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<tbody>
<tr>
<td>Airborne Sound</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>(STC per ASTM E 90)</td>
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<th>Field Acoustical Performance</th>
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To achieve the Sound Transmission Class (STC) rating you need, you should specify an acoustical wall partition with a number that is 3 to 5 points higher than your target. Although the field test may come close to what was achieved in a laboratory setting, close does not “get the cigar.”

Incorporating a product like National Gypsum’s Gold Bond® BRAND SoundBreak® XP® Gypsum Board into your project produces high STC wall assemblies that are thinner, cost effective and more reliable than traditional methods for constructing these types of assemblies. It hangs and installs like regular drywall, but retards the transmission of airborne sound. To further ramp up sound-damping capabilities, consider also the types of acoustical sealants and putty pads you specify. Ultimately, the devil is in the details when it comes to creating a superior sound-absorbing assembly and environment.

For specifying reference, look at the International Code Council (ICC) Guidelines above (figure 1). To meet the minimum expectations for sound insulation, specify a wall partition with an STC rating of 55. As you can see, an STC rating of 60 offers a preferred performance.

“It’s really important to remember that STC testing is done in a laboratory. The actual field performance of an assembly can be as many as 5 STC points lower than what was tested in the lab.”

—Scott Hughes

“Any contractor will do his best to replicate the system built in the laboratory, but site conditions are not always perfect. Buildings move with weather conditions and wind loads, and the best constructed sound system can be compromised in small ways due to these effects, so it behooves an architect to specify a little above what he wants to assure the owner gets his desired sound performance.”

—Thad Goodman

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Please stay in touch!
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