

The Fairview at Harbour Pointe

Building Acoustics: Party Wall Systems

Introduction

Proper sound insulation can only be achieved through careful attention during design and construction. Walls must be designed to provide the desired acoustical privacy between adjacent rooms within a home, as well as between neighboring units and other areas such as halls, stairwells, elevators, and equipment spaces.

Guidelines and standards have been developed which allow the design of walls to meet certain acoustical performance criteria, which vary according to the type of construction and purpose of the wall.

STC Ratings

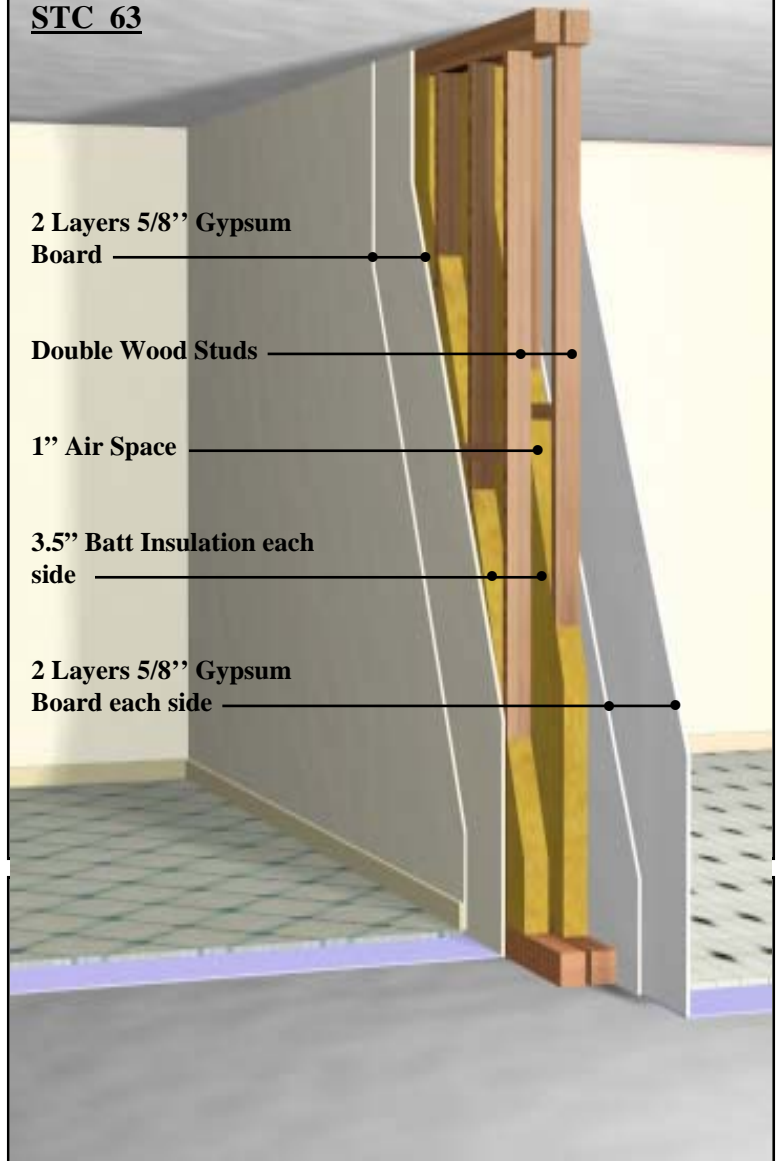
The standard developed by the American Society for Testing and Materials (ASTM) for designating the sound insulation characteristic of a partition is the Sound Transmission Class (STC).

The higher the rating, the better the sound insulation. Typical STC ratings vary from 20 (e.g. a door without seals) to 60 (party wall in a luxury condominium).

The Fairview Wall System Assembly

The performance of the party wall system shown at right, which is typical of walls which separate adjacent units at *The Fairview* was tested in the lab at an STC rating greater than 60.

Typical Party Wall: STC 63



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Introduction

A well-designed floor system must provide adequate insulation against both air-borne sound and impact noise. Standards that have been developed by the American Society for Testing and Materials (ASTM) for measuring these qualities are the Sound Transmission Class (STC) and the Impact Isolation Class (IIC).

The IIC is a single-number rating used to represent the impact sound transmission performance of a floor/ceiling assembly. The higher the number, the better the performance. Recommendations made by the Housing and Urban Development guidelines for IIC ratings of floor/ceiling assemblies considers an IIC 48 minimal, an IIC 52 average, and an IIC 55 a “luxury” rating between spaces of equivalent functions (bedroom/bedroom, or living room/living room, etc.,)

STC Ratings

The STC rating of a partition indicates its sound insulating properties at a mid-range frequency. The higher the rating, the better the sound insulation. Typical STC ratings vary from 20 (e.g. a door without seals) to 60 (party wall in a luxury condominium).

The Fairview’s floor/ceiling assembly is designed to meet and exceed the Building Code Standards

Tile / Hardwood Floor Assembly: (IIC 55-60) (STC 55-60)

Tile / Wood

Pad
underlayment

1-1/4” Gyp-
Crete

Quiet Qurl 60-
040 pad
underlayment

Plywood Sub-
floor

Batt Insulation

Resilient
Channel

2 layers of 5/8”
gypsum board

