

## STC Acoustic Sleeper™ on Concrete: (not so different)

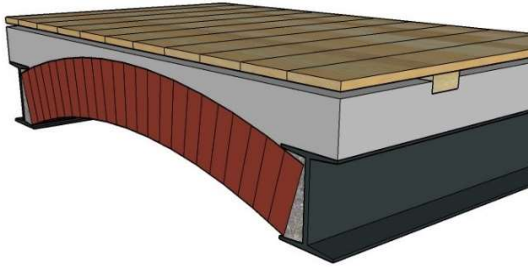


Figure 1: 1870 - Brick Arch

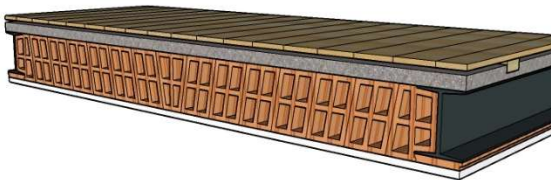


Figure 2: 1890 - Flat Tile Arch

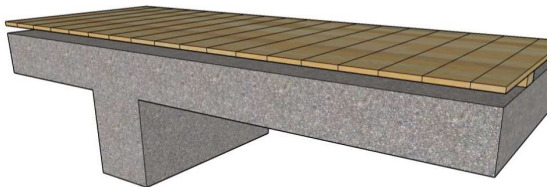


Figure 3: Reinforced monolithic concrete

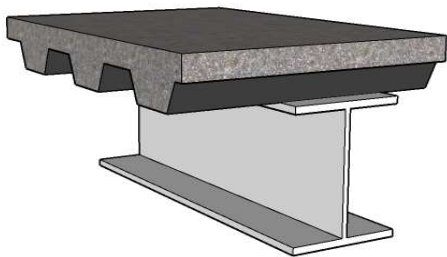


Figure 4: Steel Deck and Concrete

Prior to the late 19<sup>th</sup> century, the most common floor construction system was timber beams with wood plank and wood strips. By 1870, brick arch became the standard for fireproof construction, spanning between cast iron beams, with cinders for ballast (Fig. 1). The flat tile arch was invented in the 1890's for direct-applied plaster ceilings (Fig. 2). Reinforced cast-in-place concrete floors were developed by 1910 (Fig. 3). All of these floor systems typically had **wood sleepers supporting wood plank subfloors** with wood strip finish floors.

By the 1930's, steel beams with steel deck and concrete replaced all these systems (Fig. 4); it is still the standard today. Newer finish floor systems, including VAT and linoleum, were placed directly on the concrete, with limited impact isolation and comfort without the wood sleepers and subfloor common to previous systems.

For the 2020's, the STC Acoustic Sleeper provides the new standard for acoustical isolation and comfort, as well as code compliance. The neoprene pads support a wood panel on top of the steel deck and concrete, allowing for any finish floor system, with high STC and IIC at low cost (Fig. 5). Sleepers and wood subfloor on the structure – not so different.

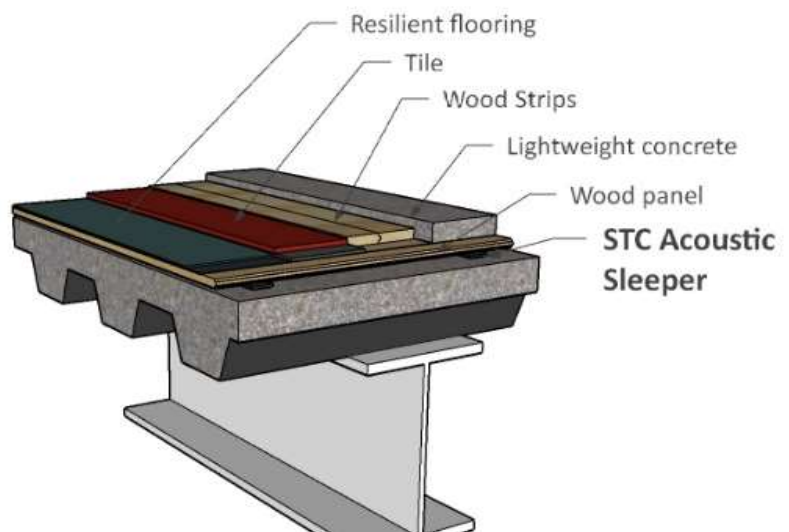


Figure 5: 2020 - STC Acoustic Sleeper and Wood Panel