SOUND SEAL® | CASE HISTORY NO. 3

# ACOUSTICAL CURTAIN PANELS

## SOUND SEAL QUIETS "THE BIG DIG"







Central Artery & Harbor Tunnel Project | Boston, Massachusetts

It's called "The Big Dig". Boston's Central Artery and Harbor Tunnel project is the largest highway construction job ever undertaken in the United States — at a cost over $11 billion dollars!

One sensitive issue of such a significant project is how construction noise will impact local businesses and residences. Quincy Marketplace, a unique, open-air collection of restaurants, shops and offices, is located adjacent to a section of the project requiring working underneath an overhead highway, while a densely populated residential area is located on the opposite side. Thus, the noise impact upon the Marketplace and residences is even greater from the direct construction noise as well as the reflected noise off the deck.

Neva Associates, the local Sound Seal distributor, working in conjunction with the Noise Control Division of the Central Artery Commission, determined that Sound Seal BBC-13-2" Acoustical Curtain Panels would offer the required noise reduction. BBC-13-2" Acoustical Curtain Panels are a combination of a 2" thick vinyl-faced Quilted Fiberglass Sound Absorber and a 1lb PSF reinforced loaded vinyl noise barrier. Modular panels are constructed with grommets for attaching to the framework as well as exterior grade hook and loop fasteners for joining adjacent panels together.

Sound Seal manufactured and shipped over 400 such panels within a three-week period. According to Eric Thailheimer, Project Manager of the Noise Control Division of the Central Artery Commission, "We are very pleased with the performance of the noise curtains. They arrived on time and as designed. Although there are still some more gaps we need to fill, we've done some preliminary

comparative sound level readings and we are seeing a 9 to 10 dB(A) reduction. This is just what we promised and the community is very pleased."

Many other sections of the massive project have also utilized the Sound Seal Curtain Panels with even better results because they were not located below a sound reflective overpass. A common treatment is to have the Sound Seal Curtains installed on fence posts inserted in the pre-cast concrete highway barriers. This allows for the noise reduction treatment to easily be relocated along with the highway barriers.

In conjunction with the Noise Barrier/Sound Absorption Walls, Sound Seal has also manufactured a number of portable "Hoistable Curtain Enclosures". The BBC-13-2" Acoustical Curtain Panels are installed on heavy duty structural steel frames to drop-over jackhammer operations during that phase of construction. The jackhammer operator works inside the three-sided roofed enclosure to screen that very loud operation from the neighbors. The enclosure is then lifted by crane and dropped onto the next section they are working on.

By combining a sound absorber with a noise barrier at construction projects such as these, the Sound Seal Acoustical Curtain Panels offer noise reduction for construction workers as well as serving the primary purpose of keeping noise levels at a minimum in the neighborhood.

These are just a few examples of how Sound Seal Acoustical Products quiet "THE BIG DIG".

## ACOUSTICAL PERFORMANCE

| **SOUND TRANSMISSION LOSS**<br>(dB) Octave Band Center Frequencies (Hz) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Curtain Product** | **125** | **250** | **500** | **1000** | **2000** | **4000** | **STC** |
| BBC-13-2" | 13 | 20 | 29 | 40 | 50 | 55 | 32 |

Per ASTM E-90

| **SOUND ABSORPTION DATA**<br>Octave Band Center Frequencies (Hz) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Curtain Product** | **125** | **250** | **500** | **1000** | **2000** | **4000** | **NRC** |
| BBC-13-2" | 0.07 | 0.27 | 0.96 | 1.13 | 1.08 | 0.99 | 0.85 |

Per ASTM C-423

SOUND CURTAINS | SOUND SEAL®

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