

SOUNDCELL® Specifications

Suggested Specifications: Provide SOUNDCELL® Acoustical Masonry Units each with two concealed slots, and two skewed (angled), and sloped impressed surfaces to provide sound absorption and diffusion. SOUNDCELL® units shall conform to current ASTM C-90 or ASTM C-129 requirements as appropriate and have two factory-installed noise attenuating fibrous fillers.

04200 Unit Masonry

-220 Concrete Unit Masonry

Sound Absorbing Concrete Unit Masonry

Scope: SOUNDCELL® sound absorptive concrete masonry units shall be used to construct exterior and interior walls or partitions as shown on the plans and/or indicated in the Schedule of Finishes. Units are to be installed in all typical load-bearing Concrete Masonry Unit locations where improved sound quality is desired.

Materials: All sound absorptive masonry units shall be SOUNDCELL® made on standard block machines using molds furnished or approved by The Proudfoot Company, Inc., Monroe, Connecticut. Units shall be made of carefully prepared aggregates and shall meet the current ASTM C-90 or ASTM C-129 requirements as appropriate. Slots and edges shall be straight and clean. Units shall utilize a combined skewed and sloped surface, edged by two 90° linear profiles. Filler elements shall be supplied by The Proudfoot Company, Inc. and installed in the cavities of the blocks at the block plant. The fillers shall be of specially fabricated incombustible fibrous material, cut accurately to size and installed as recommended.

Performance: SOUNDCELL® units shall utilize a combined skewed and sloped face surface forming an impressed relief in order to provide sound absorption, sound diffusion and reduction of flutter echo annoyance. The SAA (Sound Absorption Average) shall be .70 for 12” units and .74 for 8” units. The NRC (Noise Reduction Coefficient) shall be .70 for 12” units and .75 for 8” units, when left unpainted. The NRC for painted units shall be .70 for 8” units and .65 for 12” units.

Sizes and Types: SOUNDCELL® units shall be 8” x 16” nominal face size and available in 8” and 12” thickness.

Installation: SOUNDCELL® units shall be laid in stack bond only with 3/8” mortar joints. Mortar joints shall be struck flush, filled and dressed on the face-side of the units, and shall be tooled, brushed, and finished-tooled on the backside of the units. The slots shall be exposed to the area where the sound absorption is desired as indicated on the plans. Units shall be laid consistent with the best concrete masonry practices, including: full face shell mortar bedding, control joints and wire reinforcing (utilize 10” wire for 12” units, 6” wire for 8” units).

Solid Top, Bond Beam or Thickened Face-Shell units shall be utilized as a course separating the SoundCell units from the regular utility CMU's in order to insure correct face shell alignment. (See critical wall section detail and review with Engineer and Mason Contractor.) Care shall be taken to ensure that the slots are kept free of mortar or debris above the mortar joints. Lines shall be straight and true and the SoundCell workmanship shall otherwise conform to all requirements of the General Specifications for masonry work.

Storage & Handling: SoundCell units shall be kept dry and installed by the General Contractor (or Masonry Contractor), using only mechanics skilled in the laying of masonry blocks. Contractor shall store units on level ground with no double stacking of pallet containers. Units are to be handled to protect faces and edges from chipping. No chipped or broken blocks shall be used. Necessary cutting on the job site shall be performed with power tools in such a manner as to provide straight and true edges.

Painting: SoundCell units may be spray painted without significant reduction in sound absorption. Due to the positioning of the insert (back-and-away) from the aperture, with normal spray painting techniques, there should be no problem with the inserts becoming "acoustically clogged" with paint. Lightweight SoundCell units left unpainted have increased sound absorption. Walls of acoustical masonry units made of lightweight porous aggregates must be heavily painted with cement base or other sealing type paint on the non-slotted side to prevent porous sound transmission where maximum sound transmission loss is desired. Such painting is also required on ordinary hollow concrete masonry units of lightweight, porous aggregates to prevent porous sound transmission.