

General Contractor efficiency, significant cost savings, shorter schedules and completely prefabricated system components are all characteristics of the SSE-EPS Solution. Work with your architect and builder to install the most efficient and cost effective solution on the market.

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The newest technology for the construction of tiered stadium seating involves the use of Expanded Polystyrene (EPS) Geofoam as a base fill material. EPS blocks are assembled in each auditorium, faced with 16 gauge metal riser plates and topped with 4" of concrete offering a lightweight, economical and flexible alternative to traditional methods. *The traditional systems include:*

Poured-in-Place Concrete - Traditional concrete platform construction involves contractors forming and pouring full concrete platforms from the back of the auditorium forward to the handicap cross-aisle and then excavating the front of the auditorium in a stair stepping platforms to achieve tiered seating platforms in front of the handicap cross aisle. In addition to being very time consuming and inefficient, this method eliminates the ability to utilize space under the platforms for ancillary uses such as concessions or restrooms.

Steel Stringers - This method involves the use of heavy steel stringers attached to the back wall of the auditorium and descending forward to the handicap cross aisle. These allow for the attachment of a secondary steel structure including riser plate steel and pans for the concrete topping slab. Like the poured-in-place method, this system is only applicable for new construction, as the heavy steel stringers must be brought into the auditorium before the exterior walls are erected or craned into the auditorium through the open roof.

Steel Stud—Traditionally many theatre owners and designers use lightweight steel (steel-stud) construction for stadium platforms. Although not as restrictive as poured-in-place or heavy steel, the use of lightweight steel framing still has limitations and disadvantages including higher cost, less flexibility, longer construction times and a more complicated installation process.



SSE has taken proven technology originally developed for civil engineering applications and adapted it to stadium seating platforms system. The EPS Foam System is very low cost, fast and easy to install and highly flexible to address any criteria of floor slope, riser height, or platform depth.

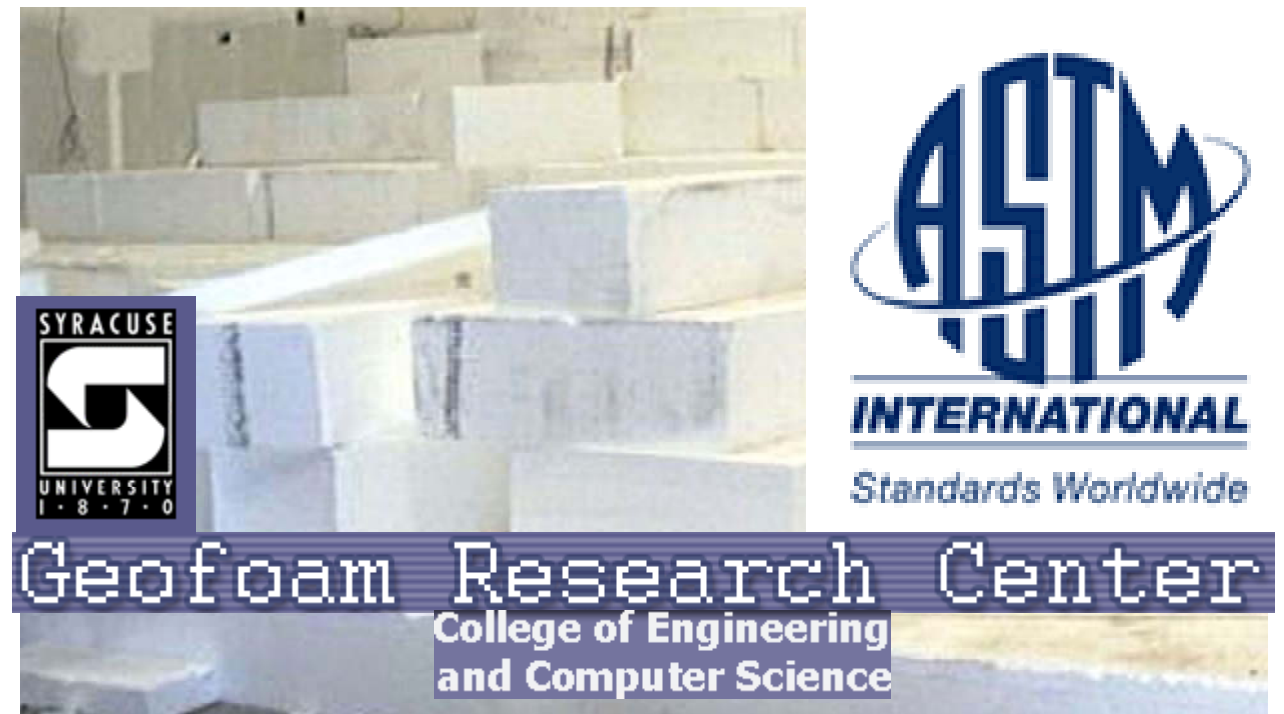
Using the SSE Foam System, modular blocks are typically manufactured to the each auditorium's specifications and shipped to the project site for installation. The blocks are stacked on the auditorium floor between the demising wall and the vomitory wall according to the installations drawings.

The face of each platform is finished with 16 gauge metal riser plates that are anchored to each other and adjacent rows by metal straps embedded into the Geofoam and attached to the adjacent riser plate..

Four inches of concrete is then poured onto the horizontal surface of the platform serving as the deck onto-which the auditorium seating is attached. Using this system, each auditorium can be stacked and ready for concrete decking in approximately one day..

Although relatively new to movie theatre construction, EPS Foam is a product whose use is traced back to the 1960s. In the early 1990s Prof. John S. Horvath, Ph.D., P.E. established its current generic definition as a category of geosynthetic materials and products consisting of any closed-cell foam material, created by an expansion process.

The foam materials most commonly used for "Geofoam "were invented circa 1950 and have actually been used in Geofoam applications since at least the 1960s.



ASTM Research— Designation C578-04

The ASTM specifications identify minimum product density, compressive resistance measured at 1%, 5%, and 10% strain, minimum flexural strength, and minimum oxygen index as fire rating for EPS Geofoam.

The EPS Molders Association (EPSMA) is a non-profit industry trade organization representing more than 50 manufacturers of expanded polystyrene (EPS), a product used in the manufacture of Geofoam worldwide.

Working within ASTM guidelines, EPSMA coordinated a stringent round robin test program for two-inch cube samples of EPS Geofoam product in accordance with ASTM D1621 guidelines. The results of the test program were used to determine the compressive resistance values to be included in the newly published ASTM 6817 product specification.

The Geofoam Research Center—Dr. Dawitt Negussey, head of the Geofoam Research Center at Syracuse University and a member of the ASTM International Committee D35 noted, "The collaborative effort that resulted in the development of D6817 will advance Geofoam applications around the world. Now that we have an ASTM Specification standard, practitioners will be more confident in specifying the material."

From a commonly used lightweight fill material for civil engineering applications, the use of EPS Geofoam for interior fill material, has made the design and construction of tiered stadium seating faster, more efficient and economical than any other system on the market today.