

**New York Building Congress
Task Force
On Innovation and Best Practices**

Committee on Construction Site Management

REPORT

Developing a Better Construction Shed

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Chairman**

“The goal of this competition is to leverage the expertise and ingenuity of the building industry to develop preliminary shed design concepts that could meet New York City Department of Buildings requirements while thoughtfully addressing a major quality of life issue for New Yorkers, whose primary interface with the industry is the imposing sheds and other temporary structures which border construction sites.”

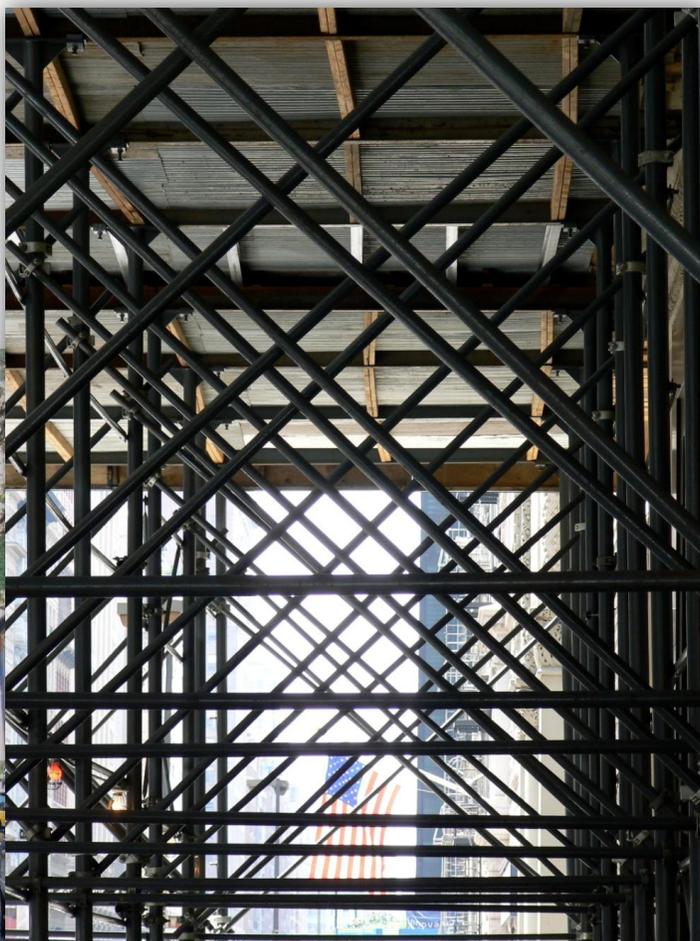
New York Building Foundation Construction Shed Design Competition Call for Ideas

The Problem

In New York City, the proximity of construction activity to businesses, residences, and pedestrians can impact their overall quality of life. Construction site cleanliness, noise and air quality, street- and sidewalk access, the quality of protective structures, and public outreach are all site management issues the industry must consider when building in such an environment. To address these issues, the Task Force created a Committee on Construction Site Management to recommend improved construction site management practices to reduce these impacts.

The industry has not addressed quality of life impacts from its business in a systematic way. A recent Building Foundation effort to promote and encourage a comprehensive quality construction site management program, known as Construction for a Livable City, met limited success, and was not widely adopted.

The Committee chose to look at



improving the standard construction shed design as a single, manageable area that could be addressed discretely, and quickly have an impact throughout the City.

With some limited exceptions, the standard shed in use today is an affordable, adaptable structure used citywide. Construction sheds employ the same basic design, using galvanized piping joined with brackets and corrugated roofs, on projects as diverse as small, outer-borough Local Law 11 masonry repair projects, to high-profile new construction projects in the City's central business districts.



Sheds generally share a number of negative characteristics: they are confining, because the legs and cross bracing create a tunnel that forces pedestrians in one direction and prevents access to the street. They low ceiling heights and abundant cross-bracing blocks ambient light and makes them dark, particularly at night. Nuts, bolts and poorly stacked pieces of wood used to level the structures on uneven sidewalks offer numerous hazards for pedestrians to tear clothes and risk injury.



Their appearance is entirely utilitarian, the materials are of basic quality, transforming the unique character of the street face into a drab, uninviting, and inaccessible barrier that changes the character of a neighborhood for weeks, months, or even years. In 2009, the Department of

Buildings estimated sheds covered nearly 200 miles of New York City sidewalks. Construction sheds pervade every corner of the City.

The Solution

The Committee concluded the most effective way to generate ideas for improved construction shed designs was through an industry-wide design competition. The Building Foundation agreed to support this initiative by underwriting a \$10,000 award for competition winners.

The Committee developed a Call for Ideas that would generate a broad response, define the specific objectives of the competition and discourage designs that were too complex and/or costly.

The Call for Ideas sought conceptual designs rather than more advanced drawings in order to lessen the barrier to entry. The Call explicitly encouraged all sectors to participate as a way to bring interdisciplinary perspectives to the problem.



The Call for Ideas further required designs to consider: the affordability of the new shed; reusing existing inventories of shed equipment to further mitigate new costs and encourage adoption by vendors; and the functionality of the design, i.e. being easy to erect, applicability in a variety of neighborhood settings, and not requiring major technical innovations to construct.

The Competition Jury included a panel of experts from all sectors of the industry:

- Frank Sciamè Jr., Chairman/CEO, Sciamè Construction
- Raymond P. Daddazio, President/CEO, Weidlinger Associates
- George Leventis, Managing Principal/President, Langan Engineering
- James W. Feuerborn Jr., Principal, Thornton Tomasetti

- Jill N. Lerner, Principal, Kohn Pedersen Fox Associates
- Richard Dattner, Principal, Dattner Architects
- Alexander Lamis, Partner, Robert A.M. Stern Architects
- Kevin O’Callahan, President, Universal Builders Supply
- Philip Pitruzzello, Vice President, Columbia University/Manhattanville Capital Projects
- Jonathan Drescher, Senior Vice President of Project Development, The Durst Organization
- Howard Roland, President, EW Howell
- Sean Szatkowski, Vice President – Operations, Skanska USA Building
- Rick Bell, Executive Director, Design and Construction Excellence, New York City Department of Design and Construction

The Jury received thirty three responses and met twice to review the designs and select finalists. Four finalists were selected. All four finalists encompass the basic objectives of the Call for Ideas, but achieve those objectives in different ways.

Next Steps

After Building Congress Board approval, winners will be publicly announced. But the longer-term objective is to see broad implementation of new construction shed designs throughout New York City.

Public Announcement

The public announcement strategy includes:

- Announcement through a media outlet exclusive with a major daily newspaper.
- Announcement on the Building Congress website and email list.
- Announcement at a major Building Congress event.

Design Refinement

- Following the public announcement, the Jury will meet with the finalists for further technical review and refinements to ensure designs are sufficiently progressed for an easy hand off to an owner/contractor team.
- The Building Congress will present the initial ideas to the Buildings Department, in advance of construction documents being submitted, to encourage DOB engagement and support for the program.

Implementation

The Building Congress will pursue implementation of the new shed designs in collaboration with interested owners and contractors.

- The Building Congress has initiated conversations with public and private owners to consider implementing these ideas on their construction projects.
- The Building Congress will expand its outreach to inform as many general contractors and owners as possible of the new shed designs.

- The Building Congress will recruit one or more construction sheds suppliers to work on development of the new shed.
- The Building Congress will actively encourage adoption of new designs and take necessary steps, as needed, to see this happen. This could include:
 - Facilitating meetings with owners, contractors, shed designers and shed supply firms.
 - Liaising with the Department of Buildings.
 - Funding or facilitating further refinements of shed designs to ensure constructability and/or affordability.

Conclusion

The implementation of a new construction shed will face challenges as owners will continue to seek out the most cost effective shed solution. Owners, contractors and shed suppliers all will also have to familiarize themselves with new designs and elect to implement them.

However, the Building Congress will work to ensure that the designs meet the goals set out in the Call for Ideas and that barriers to adoption are lowered. The first step – the selection of four imaginative and innovative shed design concepts – has occurred and offers encouragement for the future.