

***What If New York City...***  
***Post-Disaster Provisional Housing Design Competition***

**JURY REPORT**

Prepared for the  
New York City Office of Emergency Management  
by:

Lance Jay Brown, FAIA

February 6, 2008



## **Introduction**

The New York City Office of Emergency Management (OEM) was the sponsor of the competition. The Rockefeller Foundation provided generous financial support and Architecture for Humanity-New York (AFHny) provided consultation and outreach.

## **Background**

The “What If New York City” competition was initiated in order to elicit, from as wide a community of designers as possible, proposals that would respond to the following September, 2007 open invitation from Joseph F. Bruno, Commissioner, New York City Office of Emergency Management.

### **What if New York City were hit by a Category 3 Hurricane?**

*In New York City, over eight million people live on land that has 578 miles of waterfront. By 2030, the population is expected to reach nine million. At the same time, global climate change has put New York City at an increased risk for a severe coastal storm. In recent years, storms have become more intense, occur more frequently, and continue farther north than they have historically. The city would face many challenges during and after such a storm; one of the most difficult is the possibility that hundreds of thousands of people could lose their homes.*

*With financial support from the Rockefeller Foundation and in consultation with Architecture for Humanity-New York, the New York City Office of Emergency Management is sponsoring an open competition to generate solutions for post-disaster provisional housing. "What if New York City..." is a call for innovation and an opportunity for designers and policy-makers to collaborate on one of the biggest challenges facing densely settled urban areas after a disaster: how do we keep people safely and comfortably housed while reconstruction proceeds?*

*A jury of experts in the fields of architecture, design, urbanism, and government will choose ten entrants who will be awarded \$10,000 each and technical support to develop their proposals into workable solutions. These solutions will provide support for New York's most vulnerable communities and be a precedent for dense urban areas all over the world.*

*This design competition will rely on a fictional but realistic New York City neighborhood devastated by a hypothetical Category 3 hurricane. How will residents resume their lives? How can they be provided safe, comfortable living space? How can this housing be quickly deployed and adapted to different site conditions? How can it be reused in subsequent emergencies, environmentally sustainable, and cost effective?*

*I invite you to dedicate your talents to meet these challenges, in hopes that together we can build a more resilient New York City.*

**- Joseph F. Bruno, OEM Commissioner, September 2007**

## **Competition Structure**

All of the required information concerning the competition structure, goals, and legal requirements were described in the official competition brief, presented on a public web site. Such information was also available in a hard copy version upon request. Readers should refer to that document for all details concerning the competition brief.

The competition was designed as a two-phase process. The first phase was an open competition with a formal judging process charged with selecting ten winners and ten honorable mentions. The second phase (the project development period) is the further development of the ten winning solutions supported by the \$10,000 award and with the assistance of technical consultants made available by OEM. After the project development period one or more winners may be selected for prototype construction.

An exhibition of all winners (and selected other entries) is anticipated to be mounted by OEM after the completion of the project development period. An online gallery with all entries will be posted for review by the public when the results of the competition are announced.

The competition was announced in September 2007 and registration opened in October 2007. Submissions were due in January, 2008. The jury reviewed all valid submissions (117 in all) between January 9 and 20, 2008. The full jury deliberated on-site at OEM's Emergency Operations Center on January 21 and 22, 2008.

This was an international open design competition. The table below describes characteristics of registrants and valid submissions.

### **Characteristics of Competition Participants**

#### **Registrants**

<i>Total</i>	465 registrants
<i>Countries Represented</i>	52 countries

#### **Valid Submissions**

<i>Total</i>	117
<i>Student / Professional</i>	21 / 95
<i>Team / Individual</i>	75 / 41

#### **Professional Discipline**

<i>Architects</i>	105
<i>Industrial Designers</i>	1
<i>Inventors</i>	3
<i>Engineer</i>	4
<i>Other</i>	4

**Age**

<i>25 and under</i>	23
<i>25-50</i>	82
<i>50 and over</i>	12

**Countries**

<i>Total Countries</i>	30
<i>US / International</i>	62 / 55

**Country Count**

<i>Australia</i>	2
<i>Belgium</i>	1
<i>Canada</i>	4
<i>Chile</i>	1
<i>China</i>	2
<i>Denmark</i>	3
<i>Egypt</i>	1
<i>France</i>	1
<i>Georgia</i>	1
<i>Hungary</i>	1
<i>India</i>	2
<i>Iran</i>	1
<i>Ireland</i>	1
<i>Israel</i>	2
<i>Italy</i>	10
<i>Japan</i>	2
<i>Mexico</i>	1
<i>Netherlands</i>	1
<i>New Zealand</i>	1
<i>Peru</i>	1
<i>Portugal</i>	4
<i>Romania</i>	1
<i>Serbia</i>	2
<i>South Korea</i>	2
<i>Spain</i>	2
<i>Sweden</i>	1
<i>Syria</i>	1
<i>Turkey</i>	2
<i>United States</i>	62
<i>Venezuela</i>	1

**Total** 117

## **Competition Criteria**

The competitors were asked to consider the following eleven (11) criteria in their submissions.

The jury was asked to favor designs that demonstrate the following qualities:

<b>Density</b>	Maximize number of housing units per land area
<b>Rapid Deployment</b>	Provide units ready to be occupied as soon as possible
<b>Site Flexibility</b>	Maximize the ability to accommodate as many different sites as possible
<b>Unit Flexibility</b>	Maximize the ability to accommodate as many variable household types and sizes as possible
<b>Reusability</b>	Maximize the potential for reuse of the structures either for future disasters or other purposes
<b>Livability</b>	Maximize the strength, utility, convenience, and comfort of the dwellings
<b>Accessibility</b>	Allow access for people who have limited mobility
<b>Security</b>	Make public space defensible and help people feel safe
<b>Sustainability</b>	Reduce energy costs and the carbon footprint of the dwellings
<b>Identity</b>	Maximize the ability of New Yorkers to feel a sense of identity and even pride in where they live
<b>Cost Efficiency</b>	Maximize the best value for investment

In addition to the above criteria, the jury brought their individual expertise and judgments to the process. It was agreed however that the entire top tier needed to be evaluated against the stated criteria and the winners and honorable mentions were chosen for excelling in addressing certain criteria but not necessarily all of the listed criteria.

## **Competition Jury**

The jury consisted of seven members assisted by a jury facilitator.

**David J. Burney, AIA** (Jury Chair)

Commissioner

New York City Department of Design and Construction (DDC)

**Joseph F. Bruno**

Commissioner

New York City Office of Emergency Management

**Paul Freitag**

Development Studio Director and Senior Project Manager

Jonathan Rose Companies, LLC

**Mary Miss**

Artist

**Guy Nordenson**

Structural Engineer, Guy Nordenson and Associates

Professor, Princeton University School of Architecture

Commissioner, Art Commission of the City of New York.

**Enrique Norten**

Architect

TEN Arquitectos

**Richard Plunz**

Professor

Columbia Graduate School of Architecture, Planning, and Preservation

Facilitator Member, *ex officio*

**Lance Jay Brown, FAIA,**

Lance Jay Brown Architecture + Urban Design

Professor, City College of New York / CUNY

## **Jury Report**

This objective of this report is to document and convey the reasons why and how the jury selected, from among the many submissions, the award winning entries. This report constitutes the official record of proceedings.

It has been reviewed by each member of the jury, and approved by him or her.

## **Jury Process**

The full compliment of competition entries, 117 in all, was delivered digitally to the seven-member jury in advance of the first meeting of the jury. Jury members were required to examine each submission against the eleven competition criteria. The jury convened to review, evaluate, discuss, clarify and deliberate over the submissions. All of the entries in the winning tier, ten in all, were deemed to have fulfilled a sufficient number of the competition criteria to qualify for further development in the project development period.

In the off-site, digital phase of the jury process, the jurors were asked to rate each entry as one of the following:

- advance to next round
- merits group discussion
- recommended for exhibition only, not an award
- eliminate from further consideration

The votes for “advance” and “merits discussion” were grouped and then ranked. This selection method resulted in 45 entries that had enough votes to advance as finalists. Those advanced included projects that had a combined total of 4 or more votes. Of those 45, seven had 4 votes for “merits discussion” without any votes to “advance”. These were reviewed first and resulted in four projects being eliminated, resulting in 41 projects slated for evaluation at the second round of the jury. Each juror was allowed to exercise one “passion vote” to add an entry that he/she wished to be discussed but had not made it to that round. Exercising this privilege, two jurors added entries, resulting in a total of 43. The jury discussed and deliberated the 43 finalists at great length. At the end of this stage in the deliberations the jury had reduced the number of submissions to be further evaluated and moved to the next stage with 21 remaining entries.

## **Awards Strategy**

As noted earlier, the goal of the competition was to encourage and investigate a wide range of alternatives for post-disaster provisional housing. To this end the competition was organized as a two-phase process. The first phase was the general judging of all entries. The second phase allows for the ten designated winners to further develop their proposals.

Hence, rather than 1st, 2nd, and 3rd prize winners with cascading amounts of prize money, OEM has ten equally-ranked winners all of whom will receive \$10,000 to develop their ideas further. Ten honorable mentions, with a USD \$500 prize, were chosen to recognize worthy submissions.

## **Premiated Projects**

In the final round, 21 entries were reviewed by the full jury in even greater detail than earlier. There were two tiers of projects to be selected by the jury. The first tier would be winners. As designated in the competition brief, there were ten winning solutions. These solutions are unranked, and received equal acknowledgement. The second tier of 10 honorable mentions, as designated in the competition brief, was also unranked and received equal acknowledgement. Thus, in all, the jury selected twenty prize-winning, or premiated, projects.

## **General Discussion**

The competition submissions were individually reviewed by the entire jury. At the end of the first round, when tabulating the results against category rubrics it appeared that the entries fell into obvious categories and/or raised categorical issues. The categories were:

1. Proposals that used stackable steel shipping containers as a basic building block, either available commercially “as is” or modified to some degree..
2. Modular or pre-fabricated units shipped as broken down components or partially packaged modules. Within this category, there was a further division between those entries that stacked one atop the other and those that required a structural armature to enable the stacking.
3. Those that suggested temporary housing that floated offshore in one form or another.
4. Entries that investigated and proposed modules that could be shipped as “flat packs.”
5. Proposals that expanded using some accordion-like technology.
6. Units or modules designed using hexagon geometry. This category was then seen as comprised of a vertical agglomeration or a horizontal agglomeration.
7. Proposals suggesting fabric or elastic materials as tents or soft walls.
8. Proposals that required major foundation work versus those “light on the land”.
9. Proposals that considered vertical circulation versus those that deferred circulation to a later stage of development.
10. Entries that were delivered with all fixtures and furnishings and those that were equipped after being installed (discussed in the more detailed deliberations)
11. Entries that investigated and/or incorporated sustainable considerations, methods, techniques, technologies, and materials. The large majority of entries provided some recognition of incorporating such considerations.



12. Last but not least, issues of site strategy (urban design, site planning, site design, site layout, site circulation) were discussed repeatedly during the deliberations. Siting ideas and considerations that arose in the jury deliberations included the following:

- *in some solutions the authors suggested that the housing be located alongside existing streets, in others the housing is located above the street on some form of armature;*
- *most located units on land cleared of rubble and in some cases without a strong sense of organization;*
- *entries varied greatly in their density or number of units per acre;*
- *some entries illustrated how their proposal could be built as low or medium-rise buildings served by staircases and others were of a height clearly requiring elevators whether such mechanical features were shown or not..*

### **Jury-Generated Criteria**

In addition to the eleven criteria contained in the competition program, the jurors identified additional aspects of the challenge that were raised by the submissions. These additional issues included:

1. The jury clarified that the solutions should reflect the fact that the scenario was in New York City with New York weather and seasons. The provisional housing should be durable and appropriate to house people and families from between six months and two years.
2. The jury made special comments about the variety of materials and technologies offered by the competitors, often making the case for greater experimentation.
3. The jury noted how the range of proposals spanned ideas that went from concepts with strong creative seeds all the way to highly pragmatic proposals that were made from existing and ‘off the shelf’ components, what might be called the “poetry vs. pragmatics” discussion. Because a relatively large number of entries were to be premiated, examples of both types were expected to be chosen by the jury.
4. Many solutions looked like they could as easily become permanent as well as provisional housing. The jury discussed if this was a desirable feature or not. An ephemeral quality would telegraph the fact that these units were only temporarily in their locations. As many proposals would be, temporarily, on private property suggestions or expectations of permanence could be a drawback. Ephemeral did not mean that the units could not be otherwise attractive places to live.
5. Shipping containers (“pure” vs. radically modified), pre-fabs, pop-ups, kits-of parts, and the overlap or hybridization of these types was discussed periodically.
6. The jury noted that some proposals might offer the possibility for local residents to help erect their temporary housing and discussed the benefits of potential community participation.

7. Many proposals assumed the development of some out-of-town inventory. Although perhaps beyond the purview of the competition, the jury could not help but speculate whether they should there be such a stockpile and where and how many units?

8. Legislative possibilities or barriers to the provision of temporary were seen as a potential issue during the implementation phase of the entries.

## **Voting**

In the final selection most but not all of the entries were decided by a unanimous consensus. Below is a description of the winners and honorable mentions with particular reference to the jury's reasoning for choosing them, i.e., their specific, evocative and / or compelling attributes. In some cases, the jury suggests changes or additions to the design, including the honorable mentions even though they are slated for further development as part of the project development period.

## **Winners**

Ten winners with a prize of USD \$10,000 each were selected by the jury. The ten winners are not ranked. They are discussed below by alphabetical order of the last name of the official registrant. For legal reasons, each entry could have only one official registrant. No inference is made by the competition sponsor or jury concerning the relative contributions to each design proposal by the various listed team members including the official registrant. The entries as reviewed by the jury were marked only with a random registration number, not with any names or other identifiers.

**Registrant: Matthew Francke**  
**Other Team Member: Katya Hristova**  
**East Boston, Massachusetts – United States**

**Title: Mobile Emergency Relief Ports (M.E.R.P.s)**

This submission proposes the delivery of emergency housing by water. It was believed to be the most instant way of providing accommodation for post-disaster provisional housing. The scheme is predicated on the advanced construction of a fully functional six-story complex mounted on ship hulls that would be towed to the site from remote storage locations and ready for immediate occupancy. By joining the hulls upon arrival at the anchorage the assembly provides both living units and communal open space. “This entry is the best of the water-borne entries and provides an instantaneous solution,” noted Mr. Burney. The high density achieved was also noted.

**Registrant: David Hill**  
**Other Team Members: Laura Garofalo, Nelson Tang, Henry Newell, Megan Casanega**  
**Raleigh, North Carolina – United States**

**Title: Threading Water**

This entry proposed using debris to restore the shoreline and wetlands of the devastated area and to locate provisional housing along wetland walkways, leaving the damaged upland free for reconstruction. The jury found the design compelling and thoughtful, putting the by-products of a disaster to beneficial use. Ms. Miss noted how salt marshes are a natural protective buffer for shorefront communities. Mr. Nordenson called the plan “fantastic.” Jury members also found the individual dwelling units to be skillfully developed. The jury suggested reexamining the lengthy circulation route to the units along the threads. The jury thought the fine design of the individual units might work equally well in a land-based setting.

**Registrant: Carsten Laursen**  
**Other Team Member: Morten Norup Fassov**  
**Copenhagen -- Denmark**

**Title: Untitled**

The hexagon geometry's ability to work around site obstacles, or "fill the gaps" with great flexibility, impressed the jury. Because of its built-in components, this solution is ready to go when it arrives on site. The promise of a complete, lightweight, and ready-to-occupy solution was also deemed worthy of recognition. In regard to its form, Mr. Burney noted: "This is similar to a very nice Middle Eastern hillside village." The potential of successfully using hull construction technology was seen as a worthwhile investigation. The jury wondered if this might work on water as well.

**Registrant: Murphy Burnham & Buttrick Architects LLP**  
**Team Members: Mary Burnham, Jeffrey Murphy, Joseph Lengeling, Jason Hill, Seung Yup Baek, Youngjoo Kahng**  
**New York, New York – United States**

**Title: Community Provisional Residence (CPR)**

The jury liked the author's design for this hybrid-strategy ready-deployment proposal and that the residences, comprised of a set of four "compressed" modules, would be stockpiled around the country for delivery to disaster sites as needed. The proposal is for an elegant and green "kit-of-parts" with kitchen and bathroom modules ready to "plug-in" to the panel erected unit. The fact that the units had window openings on four sides would allow for a wide range of options in stacking and placement. The plan was deemed quite elegant and compact. The jury questioned the checkerboard stacking and agglomeration pattern. It is hoped that a greater density, a more refined layout, and options for vertical circulation will be developed in the next phase. They thought this was, as Mr. Norten noted, "elegant, a great idea to explore".

**Registrant: Jay Lim**  
**Other Team Members: Erick Gregory, Christopher Reynolds**  
**Toronto, Ontario – Canada**

**Title: S.C.A.F.FOLD**

This proposal was recognized for its creativity and the ingenious way it disposed the living units along the streets without disturbing the flow of traffic. The use of the truck bed as an unfolding structural armature intrigued the jury. The use of this gantry-like technology allows for an "air-rights" proposal to leave the ground level free for clearing debris and the reconstruction of damaged sites. Ms. Miss hailed the idea of taking the space above the streets for housing. Mr. Bruno also found this to be a "very creative" use of the street. In addition, by creating a new deck that incorporates green space above the street this proposal reconstitutes and recaptures communal open space, a huge gain, for use during the post-disaster reconstruction. The High Line project in Manhattan was cited as a precedent. The jury encourages the authors to increase the density of the proposal during the development phase.

**Registrant: Darrell Mayer**  
**Other Team Member: Elizabeth Kolepp-Mayer**  
**Raleigh, North Carolina – United States**

**Title: Container Living Apparatus (CLA)**

This proposal uses a modified shipping container as its primary unit for post-disaster housing. The jury thought it was, with its extensions, a very skillful manipulation of the basic steel container. They thought it was attractive in appearance. The proposed locations, especially in parking spaces along appropriate streets, enhanced the sense of place in a potentially placeless post-disaster environment. This approach was deemed socially conscious and sensitive meeting the criteria of identity and livability. It created the most compelling streetscape. Mr. Burney noted that this entry was “believable.” Mr. Plunz commented that the proposal “looked good enough to be permanent,” although the intent is not for it to be. The renderings were considered quite nicely done. This entry begged the issue of the viability and economy of adapting shipping containers for alternative uses or if they should be seen more as metaphors in terms of efficiency and cost. While it is an elegant two-story solution, with a duplex option, the jury hopes that more height and a greater density can be achieved in the development phase.

**Registrant: Otto Ruano**  
**Other Team Members: Robert Wrazen, David Mans**  
**Brooklyn, New York – United States**

**Title: SCALE: Sustainable Contemporary Adaptable Living Environment**

The jury was intrigued by this flat-pack proposal that used a scissor-hinged extension system to expand top and bottom planes. The proposed sidewall system, with an armadillo-like skin, and using car-manufacturing technology, was deemed unique in its approach to overall enclosure and ease of shipment. The three-story design can be used on various types of sites including parking lots, sidewalks, and highway underpasses. It was deemed the best of the fast, integral-structure, expandable solutions. It is likely the most rapidly deployable of all. The jury looked forward to further development of the individual unit.

**Registrant: Joao Sequeira**  
**Other Team Members: Ana Figueiredo, Marta Moreira, Pedro Ferreira**  
**Lisbon -- Portugal**

**Title: Untitled**

This entry proposed locating provisional housing on or flanking roadways, in-between the destroyed/damaged areas, leaving the damaged sites free for reconstruction while at the same time maintaining community cohesion. Units are shown stackable from two to five levels making density variable. Including duplexes at the third level increases density without additional exterior staircases. “Access to the units was well thought out and not unpleasant,” noted Mr. Burney. The units are pre-fabricated and modular in design with material finishes that avoid the appearance of container proposals. The unit plans, as is the whole proposal, are good, simple and elegant. The jury was unclear on how the modules related to the structure and would like to see more development of the proposal’s structural integrity.

**Registrant: Michael Tom**  
**Other Team Member: Adam Alter**  
**Brooklyn, New York – United States**

**Title: Untitled**

This solution proposes the use of standard construction scaffolding and off-the-shelf modular enclosures. First and foremost the jury appreciated the rapid deployment possibilities offered by this extremely pragmatic entry. The possibility that this ensemble could be erected with community participation, actually allowing the residents of the storm damaged area to work on the erection of their temporary housing, almost as an “IKEA” experience, was seen as a major advantage. The alternative site arrangement options were also cited as creatively pragmatic. This entry met a large number of the competition criteria. It was deemed a very smart system. However, the jury was concerned about the overall appearance of both the scaffold and the interior shelters and encouraged a reevaluation of the proposal’s aesthetics. Wrapping the exterior should also be considered.

**Registrant: James Vira**  
**Other Team Members: Jason Cadorette, Dominic Cullen, Ethan Cotton, Lanson Cosh**  
**New York, New York – United States**

**Title: Rapidly Deployable inflatable Containers (RDIC)**

The jury found this to be a very well thought-out proposal. The design used a modified version of the standard shipping container that allowed units to be fully equipped, compressed for transport, and then expanded upon arrival making them both rapidly deployable and saving valuable space in the transport process. The use of inflatable fabric for unit expansion added an appreciated soft aesthetic to the module using technical innovation. Although the unit plans were deemed only adequate, the overall achievable unit density was considered to be excellent. Mr. Nordenson noted that entry is “believable as a high-rise”. The proposal confirmed its site flexibility, illustrating many variations and options for unit agglomeration and access. This solution was deemed adaptable to a wide variety of locations. The jury suggests further development of the infrastructure including circulation and mechanical systems.

## **Honorable Mentions**

Ten honorable mentions with a prize of USD \$500 each were selected by the jury. The ten honorable mentions are not ranked. They are discussed below by alphabetical order of the last name of the official registrant. For legal reasons, each entry could have only one official registrant. No inference is made by the competition sponsor or jury concerning the relative contributions to each design proposal by the various listed team members including the official registrant. The entries as reviewed by the jury were marked only with a random registration number, not with any names or other identifiers.

**Registrant: Kili Akua**  
**Halifax, Nova Scotia – Canada**

**Title: PLUG**

PLUG is system of prefabricated parts intended for easy, quick, off-grid provisional housing. It has a living module, a utility core, and a waste treatment and storage module. The jury especially appreciated the storage capacity for use by displaced persons. The proposal has well-organized plans and good unit flexibility. Providing separate wet and dry components was noted as well thought-out. The jury felt that better site planning, for example joining two or more of the cruciform agglomerations, would improve this design.

**Registrant: Carlos Azolas**  
**Other Team Member: Adrienne Enfield**  
**Brooklyn, New York – United States**

**Title: Untitled**

Ms. Miss was intrigued by many of the entries designed around the ideas of unfolding and also the use of fabrics. The jury found this collapsible solution to be among the most poetic submissions in this regard. The light and delicate folding armature, or frame, when opened, received a folded flat and hinged prefabricated unit made of SIPs (structural insulated panels). When assembled the entire agglomeration is sheathed in a Mylar tent for protection from the weather. The three-story ensemble is shown in infill, roadway, and block site strategies. Mr. Nordenson raised pointed questions about the operability of the origami type frame, e.g., what is the functionality of the multiplicity of hinges and what machinery might be required to unfold the frame?

**Registrant: Federico Celoni**  
**Other Team Member: Stefano Landi**  
**Viterbo – Italy**

**Title: Untitled**

This honeycomb-inspired solution is shown deployed on both land and water and in low and high-rise configurations. Units are made of aluminum-faced honeycomb panels with hinged accordion expandable end walls. The vertical stacked pattern uses a spiral stair for access. When stacked, the units form a hexagonal pattern. The jury particularly liked this proposal's prefabricated modules, ease of shipping, and ease of deployment. The project drawings are excellent. No interior plans were presented and the unit would require further information on how it would be outfitted.

**Registrant: Traian Cimpeanu**  
**Other Team Members: Magnus Nirin, Gabriella Johansson**  
**Goteborg – Sweden**

**Title: Untitled**

These units approximate the size and shape of shipping containers without the perceived stigma with which some may view the latter. They are stackable and were thought to be the best-looking of all such proposals. They allowed for a mix of uses and incorporated a shared courtyard component. The jury thought that the design may convey too much the idea of permanent housing. While generally the look of permanence was not what the jury and the competition criteria were seeking, all agreed that this proposal was one of the most handsome. The individual living units were well developed but the infrastructure needs further investigation, a common issue.

**Registrant: David Gagliano**  
**New York, New York – United States**

**Title: Containerized Disaster Relief**

This proposal adapts the standard universal shipping container as the basic building block for multi-story (shown as seven stories) provisional housing. The base is double-height and can be used for commercial, community, or relief purposes. Vertical and horizontal circulation allows for ease of movement and a number of sustainability strategies, including roof mounted turbine wind generators, are incorporated. Jury deliberations over both site location and agglomeration strategies as well as the use of shipping containers were often focused on this proposal.



**Registrant: Dimitrios Gourdoukis**  
**Clayton, Missouri – United States**

**Title: Untitled**

This proposal for a dense pack environment of hexagon-shaped residences employed an innovative and interesting technology for the unit walls. The frame-built hexagons, joined by rectangular modular service cores, have walls made of inflatable rubber that slide into the frames before inflation. This configuration is possible due to the rhombi-tri-hexagonal tiling of the design. Unit interiors are shown with standard furnishings. The units, shown stacked up to three stories, sit on decks and allow for multiple site strategies. Ms. Miss noted how the design allows for it to fit in a variety of types of spaces.

**Registrant: Sayem Khan, Eric Vencer**  
**Boston, Massachusetts – United States**

**Title: Vertical Village**

This proposal uses off-the-shelf scaffolding to build a multi-story tent village. The jury liked the spirit and technology of the inflatable tent. It was deemed the most rapidly deployable high-density system but only for a limited time period and with minimal occupancy standards and communal facilities. Mr. Norton suggested that it may not be a New York solution, but perhaps a world solution.

**Registrant: Kirsten Olson**  
**Other Team Member: Christine Novoselich**  
**Ann Arbor, Michigan – United States**

**Title: Untitled**

Mr. Bruno felt that this stacked shipping container proposal was possibly the most successful of all in achieving one of the main goals of the competition - high density. The units were also notable for their design to be delivered fully outfitted and equipped. The jury particularly noted the innovative staircase units within container which would be stacked in the same deployment procedure as the living areas. A primary drawback was the overall detailing and appearance of the proposal for unit agglomeration.

**Registrant: Laurent Troost**  
**Brussels – Belgium**

**Title: Untitled**

The jury appreciated the image of this highly imaginative floating “boat village” – possibly the most striking image of all of the entries. The suggestion was to use the water as an alternative site while post-disaster reconstruction was undertaken. This modular boat-like village was seen as a unique proposal deserving of merit. The application of boat-building technology for redeployable facilities impressed the jury as well. It was suggested that the one-story solution could be doubled, significantly increasing the density. With entrance staircases to the individual units stepping down from a public pier (in effect), the jury had some concerns over the idea of overhead circulation. Yet the provision of a new public pier was seen by the jury as true community asset that would be clearly appreciated in otherwise devastated neighborhoods.

**Registrant: Francis Zarate**  
**San Antonio, Texas – United States**

**Title: Untitled**

This one-story solution suggests the delivery of a unit with a pre-fabricated compact core flanked by living areas collapsed to reduce shipping volume. Mr. Freitag compared the design to a “hard tent.” Four cores can fit on a truck that would normally carry one standard shipping container. While nicely compact for delivery and deployment the jury felt that the one-story solution would not generate sufficient density for the competition context, but might be useful for lower-density contexts such as New Orleans.

## **Next Steps**

Following the public announcement of the jury results, OEM will initiate the project development period for the ten winners.

In this period, the winners will review the jury's comments and considerations. OEM will also convene a technical advisory panel to make assessments of the winning designs. Structural integrity and support, fire safety and egress, viability and safety of proposed materials, legal issues, zoning issues, and programmatic issues will be addressed. Because the first phase did not require the level of detail which may be needed for a comprehensive assessment, the panel may only be able to make broad assessments or recommendations.

The winners will present more detailed plans within three months. The project development is not competitive. The ten winners will remain unranked. One or more of these more-developed proposals may be selected by OEM to move on to the stage where a prototype is developed.

**Jury Report Approval**

The preceding report is accepted by the members of the competition jury on February 6, 2008.

David Burney, AIA, Chair

Members:

Joseph F. Bruno

Paul Freitag

Mary Miss

Guy Nordenson

Enrique Norten

Richard Plunz

Confirmed by:

Lance Jay Brown, FAIA

## New York City Office of Emergency Management (OEM)

### *Project Credits*

James McConnell, *Sponsor Administrator*  
Thomas Pollman, *Project Manager*  
Carlin Andrus, *Project Coordinator*  
E. Thaddeus Pawlowski, *Former Project Manager*

### *Executive:*

Joseph F. Bruno, *Commissioner*  
Calvin Drayton, *First Deputy Commissioner*  
Seth Cummins, *Chief of Staff*

### *Geographic Information Systems (GIS):*

Emily Levy, *jury scribe*  
Eleftheria Zagoreos, *jury scribe*  
Matthew Toonkel

### *Information Technology:*

Henry Jackson, *Deputy Commissioner*  
Timothy Kane, *Director*  
Mark Frankel  
Onofrio DeMattia

### *External Affairs:*

Christina Farrell, *Assistant Commissioner*  
Judith Graham Kane, *Director*  
Lisa Schulman

### *Legal:*

Stella Guarna, *Deputy Commissioner, General Counsel*  
Corey Acri

### *Planning / Preparedness:*

Kelly McKinney, *Deputy Commissioner*  
Dina Maniotis, *Director*  
Benjamin Whitfield  
William Anderson

### *Administration/Finance/Policy:*

Rachel Stein Dickinson, *Deputy Commissioner*  
Stacy Rosenfeld, *Director*  
Mariel Diaz, *Deputy Director for Grants*  
Nicole Wallen  
George Hartridge  
Latoya Williams