

# Urban Space Station at New York University

New York, New York

**Owner/Client**

New York University College of Arts & Sciences

**Architect**

Angel Borrego Cubero

**Completion Date**

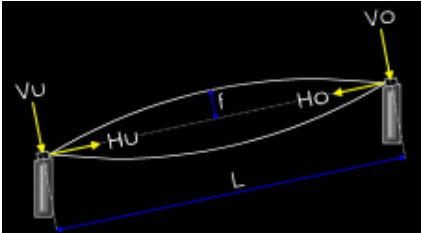
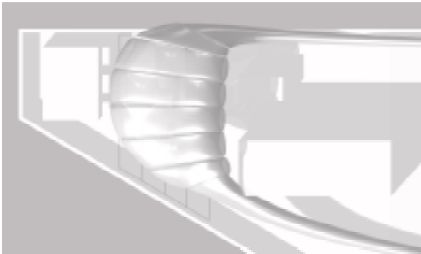
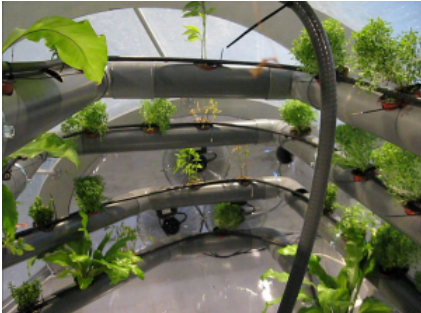
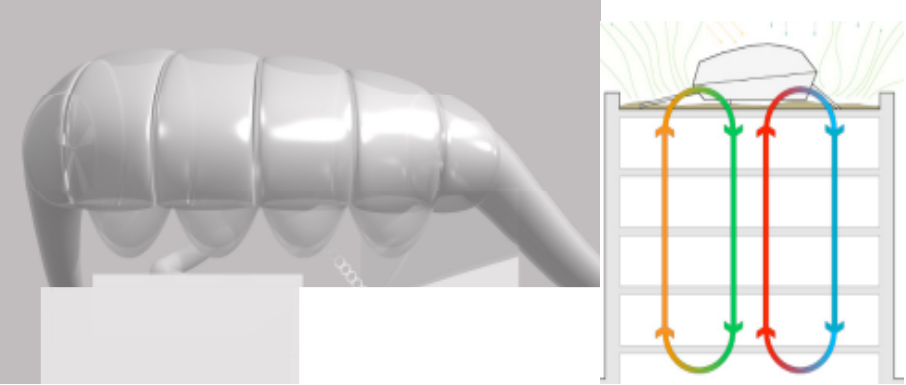
2010

**Total Area**

Approximately 1,500 sf

**Construction Cost**

Approximately \$400,000



Thornton Tomasetti's structural skin development takes place in close cooperation with ETFE specialty contractors, using specialty pneumatic software packages to determine forces and true volumetric shapes of the transparent building envelope striving to be an environmental statement within the Manhattan skyline. ETFE (Ethylene Tetrafluoroethylene) is a fluorocarbon-based polymer, a plastic that can be used as foils, forming an air-tight cushion that carries load as a pneumatic system, supported by conventional steel/aluminum sub-structures.

The Urban Space Station project combines research, art and construction. The idea is to find out whether 'used air' from a university space can be oxygenated by pumping it through an ETFE greenhouse-like space onto the roof of an existing urban building. Research will be carried out to clean water from the building inside the 'bubble.' In addition, this project is seeking LEED certification.

The geometrically flexible ETFE cushions are fixed to a mullion/roof purlin system and allow UV-light to pass through, encouraging the growth of plants that are watered inside the roof space, at the same time keeping the overall weight addition to the existing main structure reasonably small.