The 300,000 square foot mixed-use tower is located in Hunts Point, New York City, a heavily industrialized and low-income area of the Bronx. Although home to the world’s largest wholesale food distribution center, the neighborhood is threatened by high rates of asthma and other diseases to serve its low-income population. This tower, in addition to being carbon neutral, serves as a community hub for local area residents with large urban gardens, community gathering spaces, and other amenities for both the residents of the building and the larger neighborhood, including a child-care center, urban gardens, community gathering spaces, and low-income area of the Bronx. Although home to the world’s largest wholesale food distribution center, the neighborhood is threatened by high rates of asthma and other diseases.

Building Type: Mixed Use
Conference and Gathering Opportunities and Vistas

Two sky-gardens “puncture” the building, providing energy through vibration from trains passing by. The curtain wall extends beyond the available space to provide additional solar panels and energy generation.

- Vertical brick “fins” on the southwest facade provide heat for the building.
- A heavy-timber structure greatly reduces footing requirements and provides a low-carbon alternative to steel or concrete.

- The southeast curtain wall and structure extends an additional large area for solar panels.
- Green roofs on the podium greatly reduce the urban heat island effect and reduce runoff through rain absorption.
- An open-air atrium and double-duty as both energy collectors and reduce cooling loads.
- Solar panels are integrated as horizontal light shelves in warehouse windows, doing double duty as both energy collectors and solar twapers. The panels are repeatable and prefabricated, providing an economy of construction and scale in the facade.
- The curtain wall extends beyond the available space to provide additional solar panels and energy generation.
- Narrow floor plates allow for deep light penetration, while expose arched windows on both sides of residential units providing cross-ventilation and reduce cooling loads.

- Mechanical spaces and battery storage are located on the second floor, putting them above the 500 year flood plan to allow for continued operation during a catastrophic flooding event.
- A large, public urban garden offers unique construction and scale in the facade.
- Structural steel or concrete.

ENERGY SAVING STRATEGIES
- Extensive parametric modeling in Grasshopper and Excel regenred a building meaning that - through A virtual simulation and geometry - allows for significant energy savings.
- Extremely narrow residential floor plates with an open-air circulation core and deep light penetration and cross-ventilation for natural ventilation.
- Horizontal solar panels on the southeast facade bring in a greater amount of light into rooms and provide enough energy to make the building carbon neutral.

Roof top community gardens

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TEAM
Team Sustainability Specialist / Team Captain Elizabeth LeRiche
- Michael Hare
- Ethan Fogle
- Graham Linn
- Manuel McDuff
- Leighton Deer
- Ana Lazo

ASHRAE LowDown Showdown

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