



# GEA CONSULTING ENGINEERS

In The LEED

**A**s one of New York's top engineering firms specializing in the innovative design of mechanical, electrical, plumbing and fire protection systems for some of the city's most well-respected companies, the scope of GEA's work includes everything from large-scale retail, hospitality and commercial, to institutional and high-rise residential projects.

## TRIANGLE PLAZA

In March of 2012, Triangle Equities was selected by the New York City Economic Development Corporation to re-develop a surface parking lot into an 85,000-square foot multi-level retail center with parking at grade. Located at the intersection of E. 149th Street and Brook Ave, the site is at the hub of a major retail corridor that is well served by subway, buses, and easily accessible by automobiles. GEA specifically selected the mechanical equipment at this LEED Silver certified site for increased efficiency, since the lease requirements stipulate that all selected units must meet EERs of at least 17.1 or higher. As the largest factor helping this project realize its goal of providing an energy efficient location for shoppers and workers alike, recent estimates show a 24% energy reduction due to measures taken at this site.

## 345 W 14TH STREET

At 345 West 14th Street, a mid-rise residential building located in the heart of New York's Meatpacking district, a fast-rising neighborhood for millennials and professionals alike, this build-

ing contains nearly 40 high-end luxury units, including five penthouses. GEA paid particular attention in this LEED certified building to its water efficiency. Low-flow toilets, faucets and showerheads contributed to a nearly 40% reduction in water use. Today, kitchen faucets run at 1 gpm, and restroom faucets at 0.5 gpm; less than half of the code allowance. Additionally, the roof contains a Water Hog rainwater collection system designed to lower the irrigation needs by over 80%.

## 211 E 13TH STREET

This building, which incorporates a heat recovery VRF system designed to provide simultaneous heating and cooling at a highly efficient level to building residents, will generate a space cooling savings of at least 50% over the baseline electric usage, with similar reductions in space heating costs. Additionally, this building introduced one of the neighborhood's most expansive green roofs, intended both for resident amenity and to lower the building's heating and cooling load. The green roof incorporates lounges, cabanas and a terrace with a full kitchen, realizing the developer's goal of combining tenant functionality with sustainable urban development.



*Top: 211 East 13th Street  
Bottom: Triangle Plaza  
Right: 345 West 14th Street*



## LIST OF SERVICES

### NEW STAPLETON WATERFRONT

In the fall of 2011, Ironstate Development began to develop a new, sustainable, mixed-use waterfront community at the former Homeport, on the Staten Island waterfront. Located within walking distance of the Stapleton Staten Island Railroad station and not far from the Staten Island Ferry, the City is undertaking major road reconstruction, extension of utilities and the creation of a waterfront esplanade to better incorporate the neighborhood's density. The open space will include walking paths, lawns, and landscaped areas, and will be LEED certified. Among the largest residential LED lighting installations in the Northeast, GEA was able to use super-efficient lighting fixtures to lower the building's cooling load, as well as lower maintenance bills. By lowering the wattage while maintaining the lumen output of these LED fixtures, New Stapleton Waterfront will be able to demonstrate as much as a 70% reduction in electric consumption in common building areas.

### GATEWAY II

As the second phase of an existing shopping center in the Spring Creek section of Brooklyn, GEA completed the first phase approximately 10 years ago, Gateway II is set to include approximately 630,000 square feet of shopping while respecting prior developments in the area for affordable housing and ample parkland. One of the largest suburban-style retail developments in New York, it will offer a multitude of shopping experiences and free parking and, as LEED Silver certified, this building places development emphasis on blending this impressively large structure with the surrounding neighborhoods, including an unobtrusive façade design and heightened noise reduction. GEA was able to use super efficient mechanical equipment to significantly lower the building's carbon footprint.

- Mechanical: Heating, Air Conditioning, Ventilation
- Electrical: Power, Lighting, Distribution
- Plumbing: Hot and Cold Water Distribution, RPZ/Backflow Preventers, Drainage and Waste
- Fire Protection: Sprinklers, Hydraulic Calculations, Fire Standpipe
- Life Safety: Fire Alarm, Smoke Evacuation Systems
- Drawings and Specifications: Preparation of Drawings and Specifications Ready for Bid, Filing and Construction
- Building Condition Reports/Pre-Purchase Inspections
- Building Energy modeling
- Commissioning
- LEED Consulting Services
- Energy Audits
- Energy Efficiency Studies
- Building Information Modeling - BIM
- NYSERDA Multifamily Performance Program (MPP) - Partner

