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GEA CONSULTING ENGINEERS

...INNOVATIVE DESIGN, CLIENT FOCUSED



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By Jan Wilson

"Every one of our projects gets principal attention from beginning to end," says Carlos Burbano, Principal, GEA Consulting Engineers. "Our understanding of new technology coupled with our knowledge of various trades means that we can answer questions quickly and accurately."



GEA Principals (from left to right): Juan C. Toro, Andrea Mullins, Carlos Burbano, David Glickman, Trevor Mahabir and Michael C. Jordan

Established in 1996, Glickman Engineering Associates, which is currently rebranding as GEA Consulting Engineers, can attribute its recent rebound from the recession to three key hires in the last few years as well as a focus on several new markets that align with trends towards increasing energy efficiency in buildings.

"We are positioning our firm for greater success by hiring individuals who strive for technical excellence and understand how to deliver superior customer service," says David Glickman, P.E., Principal.

Among the new hires is Associate Principal and Director of Engineering, Juan C. Toro, P.E., who was recently named one of Engineering News Record's Top 20 engineers under 40 and Consulting-Specifying Engineer's Top 40 Under 40 engi-

neers. Juan also is a professor at New York University's School of Continuing Education and teaches a course on HVAC design and a seminar on the NYC Energy Code.

The firm's new Director of Marketing and Finance is Andrea Mullins, who focuses on client development, financial management and business growth. Michael C. Jordan, LEED AP, recently joined the firm as its Director of Sustainable Services and manages recently awarded contracts for LEED and New York State Energy Research and Development Association (NYSERDA) projects.

These new staffers join a firm that is so collaborative that its partners even share an office. "When Carlos joined in 2005 he brought a tremendous portfolio with him, and we committed ourselves to being able to take care of all of our clients'

"We show clients how well we understand the science behind what we are recommending so that they can feel confident that our solution will perform better than other methods with which they are familiar."

David Glickman, Principal, GEA Consulting Engineers

“GEA Consulting Engineers is our first choice MEP firm. We believe they are at the forefront of performance, delivery, efficiency and quality of work. Their market knowledge, experience and ability to work with our project teams is world-class.”

Scott Shnay, SK Development

needs by being fully versed in all aspects of each other’s projects,” says Glickman. “We can step in for each other whenever a client has a question or a concern.”

NEW TRENDS IN TECHNOLOGY

GEA Consulting Engineers are innovators who help their clients solve challenging mechanical systems issues in their buildings. Glickman says that when pioneering a different way of doing things, clients seek out a firm they trust. “They have to balance risk against science,” he says. “We invest our time in researching new equipment and methods so when we recommend a new product or technique we have inspected the factories ourselves, talked to the designers and have seen installations to assure that the systems perform as promised. We demonstrate an understanding of the science behind what we are recommending so that our clients can feel confident that our solution will perform better than other methods with which they are more familiar.”

The firm has been at the forefront of recommending several effective technologies and consulting services to

its clients including:

- **Variable Refrigeration Flow units**—Also known as split systems, these allow a single large condensing unit to be used with multiple small indoor fan coil units. “This system is incredibly efficient and performs well in energy modeling,” says Burbano. GEA has traveled to both Japan and Korea, as guests of Mitsubishi and LG, to see the technologies being developed and also provides expertise to these companies so they can better tailor their products to the U.S. market.
- **Constant Airflow Regulators**—These non-electric dampers are an inexpensive solution to the common imbalance problem of having too much air exhausted on the top floor of a building and too little air being exhausted at the bottom.
- **Modular Chillers**—These small compressors sequenced together can provide the same capacity as larger compressors without requiring a full time operating engineer. This is a highly efficient approach that solves various design and cost problems and reduces labor costs.
- **Energy Modeling**—This is a computerized building simulation of the energy usage performed to determine the best combinations to meet the owners’ cost goals; to ensure that the building meets energy efficiency guidelines and to seek LEED compliance or for use in obtaining NYSERDA grants.
- **Commissioning**—This is required for buildings seeking LEED certification and to make sure that systems operate according to the design intentions.

RESIDENTIAL AND HOTEL EXPERTISE

One Fulton Square, a 320,000 SF development in Flushing, includes condominiums, medical offices, a hotel and retail space. “The challenging part of this project is the 22 restaurants in the base. For us, that is an almost unheard of quantity of separately owned restaurants where each kitchen hood must be exhausted individually,” says Glickman. In addition, the termination of these kitchen hood exhausts is on a roof that includes a finished hotel pool area, thus requiring proper separation of exhaust fumes from occupied areas. Not only was GEA able to coordinate the threading of 22 separate kitchen hood exhausts through a hotel tower and 22 termination points for them but the firm also devised a method in which kitchen hood exhaust shafts also could be used as smoke purge shafts.

Ironstate Development’s 900-unit **Stapleton Waterfront** in Staten Island is a sustainable project that will participate in the new LEED for Neighborhood Development (LEED-ND) certification and in the NYSERDA Multifamily program. “Iron-



CLOCKWISE FROM TOP LEFT: Marriott Hotel; One Fulton Square; Stapleton Waterfront

state typically provides electric heat for tenants, but we explained that electric rates in New York don't favor this approach," says Burbano. After thorough energy modeling and HVAC option analysis, the developer chose to provide gas heat. "We provided an alternate that meets both the developer's construction budget and LEED and NYSERDA standards," he says.

For a **Marriott Hotel** at 461 W. 34th Street, ownership wanted a clear roof and that, combined with the small footprint for the 28-story 213,000 SF building, left no room for all the HVAC equipment required to service the guest rooms and public areas. "We also had to lower the loss of square footage due to vertical risers and duct space," says Toro. GEA's solution was an intermediate mechanical floor on the 15th floor that allowed the corridor and bathroom exhaust to flow up from the lower floors and down from the upper floors. "They even ended up with extra storage space which they use for housekeeping," says Toro.

The **Bay Plaza Mall** in the Bronx is the first retail development of its kind in New York City in almost 40 years. GEA designed high efficiency HVAC systems that consists of a 1,500-ton electric chiller located on the main roof and a 14 MBTUs gas-fired condensing boiler plant in a mechanical penthouse.

"Here we pushed the envelope with an HVAC system with algorithms that will run all of the equipment efficiently," says Toro. "It will determine the number of boilers and the exact firing rate that will provide the highest thermal efficiency of the plant as a single unit. The chiller plant has a similar program." The building also is designed with a state-of-the-art, fully automated, lighting control system which would allow for maximum efficiency and versatility. The project opened in August 2014.

Bronx Terminal Market Retail Center was the largest retail development to receive a LEED Silver Award Certification in 2010. "This is a development where sustainability, energy and efficiency optimization and state-of-the-art automated control



LEFT: Bronx Terminal Market Center; RIGHT: Bay Plaza Mall

GEA also has been working with more than a dozen new high end condominium buildings to help them analyze emergency generator options in the wake of Hurricane Sandy. "Many buildings want their emergency generators to meet all of the electricity needs that their residents have but it is hard to do that in a way that is cost effective," says Glickman. "We proposed an installation of a single dedicated 20 amp circuit per apartment that would only be powered during an emergency. This means less wiring, only one panel per apartment, one large transfer switch for the whole building and happy residents who can plug in their refrigerators, lamps and electronic devices during an emergency. The developers have overwhelmingly embraced this idea."

A RETAIL SPECIALIST

GEA recently secured several new retail commissions, including a 200,000 SF retail center in Brooklyn that will include Whole Foods, a 50,000 SF single tenant building at 529 Broadway in lower Manhattan and a 75,000 SF single tenant retail building in the Meatpacking District space formerly occupied by Pastis.

systems constitute the building's basis of design," says Glickman. GEA was instrumental in establishing its general design criteria, which involved a hybrid system design for the mechanical/HVAC systems and a high-rise oriented system design for the other MEP/FP trades, complete with common risers, wet stacks and distribution systems. Electronic sub-metering is provided through the building's central BMS system.

EYE ON THE FUTURE

GEA seeks to maintain a collaborative work environment while expanding into new markets and territories. "We will strive for high standards in energy efficiency as well as other technical innovations that will move the industry forward and be useful to our clients," says Glickman.

"We understand a consulting firm is only as good as its last project and achieving our clients' goals will lead to our greater growth and profitability," he adds. ■

Contact Us:

For more information, please contact us at www.gea-llc.com