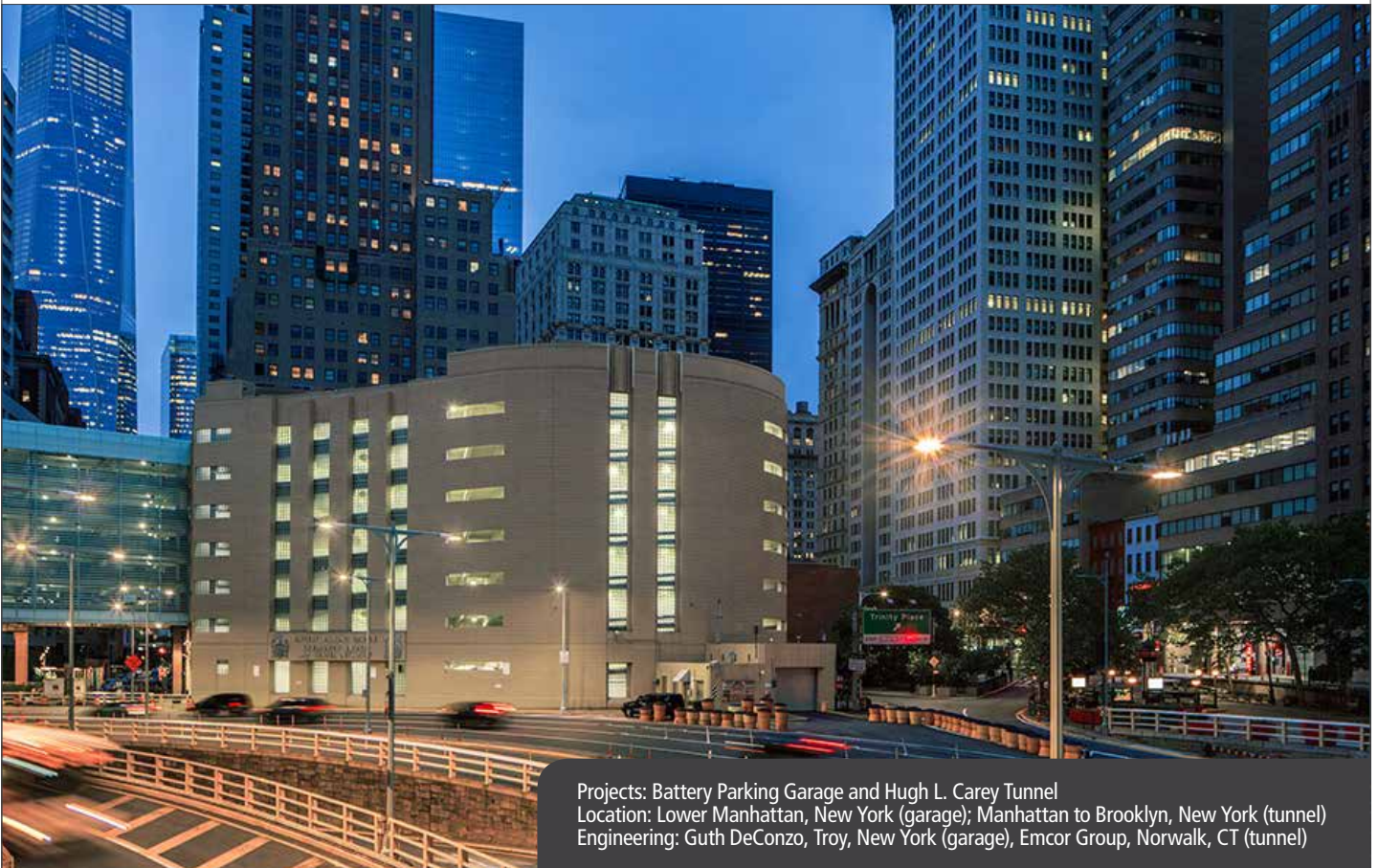


Kenall Helps NYC Garage and Tunnel to be “Better, Stronger and More Resilient” Structures



Projects: Battery Parking Garage and Hugh L. Carey Tunnel
 Location: Lower Manhattan, New York (garage); Manhattan to Brooklyn, New York (tunnel)
 Engineering: Guth DeConzo, Troy, New York (garage), Emcor Group, Norwalk, CT (tunnel)

[Kenall has] the passion, the technical expertise and the commitment to consistently provide top notch service, providing my clients with the best product, at the right price. They remain true to their character and it shows. [Kenall products are] American made, with a midwest mentality, and it's a pleasure to do business with them.

– BouJeloud Reed, LC, Electrical Engineer
 Guth DeConzo, Consulting Engineers, PC



Project Summary: The Battery Parking Garage installed new LED lighting to save on electrical costs and help meet Governor Andrew Cuomo's signature energy policy, "Reforming the Energy Vision (REV)". The Hugh L. Carey Tunnel was repaired after being flooded during Hurricane Sandy in 2012. Both projects were completed in 2018.

Challenge: Because of significant challenges facing the state and city of New York due to rising sea levels, New York City municipal projects must meet certain energy reduction goals and be, according to Governor Cuomo, "better, stronger and more resilient!"

Solution: *Garage:* TekDek™ TD17; Millenium MLHA8, MR13 and MOS18; High Bay Max HBMA
Tunnel: LuxTran LTSIU, KB5

Kenall LED Luminaires Help New York Meet Executive Order 88 Energy Goals

Battery Parking Garage

The Battery Parking Garage is an historic, 2,126-space parking garage owned by the New York Metropolitan Transit Authority. Located adjacent to the Hugh L. Carey Tunnel (aka Brooklyn Battery Tunnel), it serves lower Manhattan and is commonly used by visitors of many important sites, including the 9/11 Memorial & Museum, the Financial District and Battery Park. The garage also hosts the annual *Tribute in Light* art installation, 88 searchlights placed on the roof to create two vertical columns of light representing the Twin Towers, in remembrance of the September 11, 2001 attacks.

In 2015, Governor Andrew Cuomo initiated the state's signature energy policy, Executive Order 88, also titled **Reforming the Energy Vision (REV)**, which mandates:

- 40% reduction in greenhouse gas emissions from 1990 levels
- 50% electricity to come from renewable energy resources
- 600 trillion Btu increase in statewide energy efficiency

Engineering firm Guth DeConzo was responsible for specifying new, energy-efficient lighting in the garage, and New York City Transit recommended Kenall be one of three manufacturers included in a trial mockup. "I was aware of Kenall, but I wasn't sure it would meet the economics, efficiencies and parameters, due to its reputation of specializing in high abuse applications and being more concerned with luminaire quality, vs. budget and efficiency," said Boujeloud Reed, LC, the electrical engineer for the project.

However, Reed, found exactly what he needed for the bustling parking facility. He worked extensively with Kenall staff to tailor solutions that fit the needs of the garage, including lighting and controls for drive lanes, parking spaces, stairwells, elevator landings and the underside of the garage, over Joseph P. Ward and Washington Streets. "With these

projects, cost vs. energy savings is always a leading concern... you need to gain advantage of kWh savings everywhere you can, especially if you are going to use a higher-end product. This is where the customized controls solutions shine, but again — the price needs to stay within reason. Kenall's engineering group provided personalized input and support like no other manufacturer I have ever dealt with. At the end of the day, they stepped up and made sure the economics worked as well, without having to value engineer all of the high-tech add-ons," Reed said.

The garage installation included 1,130 TekDek™ TD17 luminaires, plus 130 other fixtures, including Millenium Rounds, Millenium Stretch, MOS and High Bay Max in/near stairwells, elevator landings and exit doors.

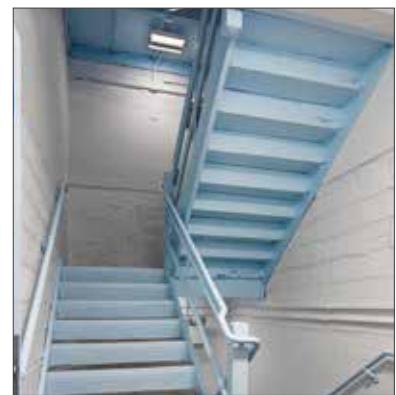
Reed estimates the benefits to MTA as follows:

- Approximate Kilowatt Savings: 1,335,000
- Approximate Annual Dollar Savings: \$160,000
- Approximate Simple Payback: 6.7 years

The Hugh L. Carey Tunnel

In 2012, the nearby Hugh L. Carey (aka Brooklyn Battery) Tunnel, part of I-478, flooded with 86 million gallons of seawater after Hurricane Sandy. A complete, 6-year overhaul was undertaken to restore and improve the critical structure, which is the longest, continuous, underwater vehicular tunnel in North America.

The tunnel was relamped with 1,210 Kenall LuxTran LTSIU luminaires and more than 300 LuxTran KB5 beacon lights, which Governor Cuomo's office described as, "new energy efficient LED lighting that will improve public safety²." In another statement, the MTA stated that, "832 lights at the Brooklyn-Battery Tunnel were replaced with high-efficiency lighting, saving 500,000 kilowatts per year or \$55,000 annually³."



Millenium Round and MOS fixtures in the Brooklyn Battery Garage

The results of these two intertwined lighting projects is that the MTA will be able to save over \$200,000 per year in energy costs and reduce kilowatt consumption to acceptable levels, in accordance with Executive Order 88. The MTA will also have high-quality, sealed, certified fixtures that will last for decades — far beyond the point of payback.

1, 2 <https://www.governor.ny.gov/news/governor-cuomo-announces-completion-superstorm-sandy-restoration-work-hugh-l-carey-queens>

2 <http://www.mta.info/press-release/mta-headquarters/each-trip-mta-keeps-more-10-pounds-carbon-out-air>

For more information, please visit us on the web at www.kenall.com



www.kenall.com

P: 800-4-Kenall

F: 262-891-9701

10200 55th Street Kenosha, Wisconsin 53144

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