



# Building Energy NYC 15

October 15<sup>th</sup>, 2015

# Javits Center Mission

- Located on 11<sup>th</sup> Ave between 34<sup>th</sup> and 40<sup>th</sup> streets, the facility opened in 1986 and is operated by the New York Convention Center Operating Corporation (NYCCOC). The New York Convention Center Development Corporation (NYCCDC), a separate entity, is responsible for capital projects.
- The Javits Center is considered the busiest convention center in the United States. The 4-level convention center on Manhattan's West Side was named in honor of Jacob K. Javits, a former U.S. Congressman, New York State Attorney General, and U.S. Senator.
- The primary mission of NYCCOC is to maximize the Center's positive impact on the economy of the City and the State.
- As a secondary goal, NYCCOC strives to operate the facility and to manage its funds in such a way as to be self-supporting.



# By the Numbers

- **Size:** 2.1 million square feet of total space; 840,000 square feet of exhibition space
- **Activity:** Host between 150 and 200 trade shows, public shows and special events a year
- **Employment:** 3,300 – including carpenters, cleaners, electricians, plumbers and administrative staff
- **Occupancy:** 70% occupancy level compared to national facility average of below 50%
- **Attendance:** 2.5 million visitors a year and 35,000 exhibiting companies
- **Impact:** Up to \$1.5 billion in annual economic activity generated for New York
- **Job Creation:** More than 14,000 jobs for New Yorkers supported each year
- **Tourism:** 400,000 hotel room nights generated each year



# The Old Javits Center



# The New Javits Center



# Renovation of Javits Center

- Completed top-to-bottom, \$463 million renovation in 2014, including new glass façade, flooring, mechanical, sustainability and telecommunications systems
- State-of-the-art renovation has transformed the 2.1 million square-foot facility including features such as:
  - Temporary exhibition hall with 80,000 square feet of exhibition space which allowed the facility to remain open during the renovation.
  - More than 300,000 square feet of new terrazzo floor
  - More than 6,000 high-performance, fritted glass panels along façade and roof
  - More than 100 energy-efficient HVAC units tracked by a single monitoring station
  - A 6.75-acre green roof – the second largest of its kind in the United States
  - Flood gates
- Renovation project has earned the Javits Center honors from New York City Audubon and Building Owner and Managers Association of Greater New York

***“[The Javits Center] is notably rich in eco-friendly innovations that deserve emulation as the city builds and rebuilds itself into the future.”  
—The New York Times***



# Sustainability at Javits Center

- **New mission.** Created a mission of sustainability – To go above and beyond government mandates and become a leader and educator in the sustainability movement by creating a paradigm shift in which sustainability is the normal behavior and thinking
- **New leaders.** Created a position of Sustainability Manager and developed mission, goals and a sustainability master plan under the NYS Executive Order 4
- **New partners.** Joined as a member of the Green Meetings Industry Council, NYC&CO Sustainable Tourism Committee, Green Roofs for Healthy Cities and partnered with NYC Audubon Society, Drexel University, Cooper Union, Fordham University, Northeast Sustainable Energy Association
- **New goals.** Created new sustainability goals such as:
  - Reduce the energy consumption by 20% by 2020
  - Reduce water usage by 20% by 2020
  - Reduce the waste stream by 10% annually

# Sustainability Efforts

- **Energy Dashboard.** Cutting-edge energy dashboard that allows designated engineers and employees to monitor consumption levels for electric, gas and water.
- **Bird-Friendly Glass.** Fritted glass panels designed to prevent birds from sustaining injury by accentuating the structure in front of them. Since installation, the number of bird collisions has dropped 90%, creating a healthier environment
- **Green Roof.** Comprised of sedum mats grown in Syracuse, the 6.75-acre green roof contains an underground drip irrigation. The New York City Audubon and Fordham University found 524 birds from 11 species utilized the roof as a habitat in 2014.



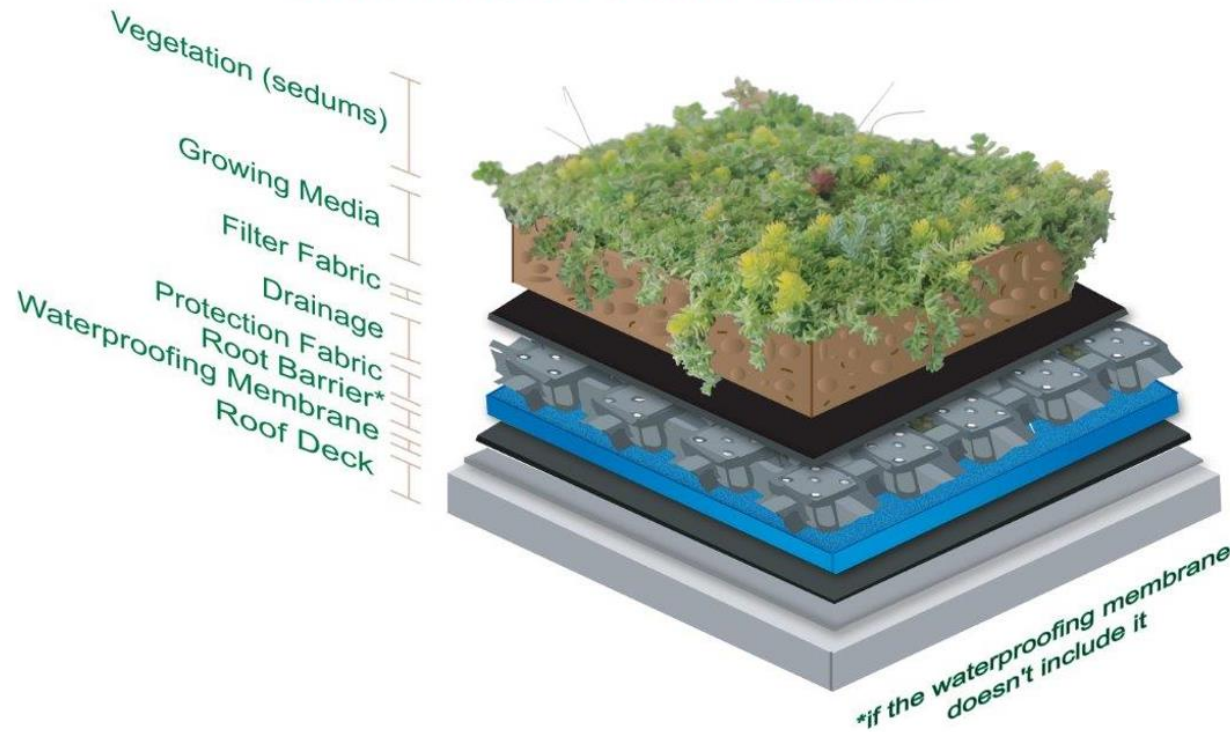


# Javits Center Green Roof



# What is the green roof made of?

## GREEN ROOF COMPONENTS







**CBS** THIS  
MORNING



# Sustainability Efforts

- **Recycling.** Implemented recycling and composting programs to reduce waste. In Fiscal Year 2014, 1,177.3 tons of waste was diverted from landfills and recycled.
- **Variable air volume boxes.** Installed digital variable air volume (VAV) boxes are placed in the ducts of the HVAC system to maximize efficiency and adjust the amount of outside air coming inside based on ambient air temperatures, reducing need for heating or cooling.
- **Tracking Show Sustainability.** Offers event organizers the ability to track sustainability of their own events at the Javits Center by monitoring a show's consumption of water, gas and electric, as well as rates of diversion, recycling and composting.



# Javits Center Energy Dashboard



JAVITS CENTER

ENTIRE PORTFOLIO

Oct 13 - Sep 14



## Energy Usage

Electric 45,034,472 kWh  
 Water 24,617,026 gal  
 Gas 22,265 thm



## Energy Cost

Electric \$7,110,898  
 Water \$311,441  
 Gas \$26,324



## Carbon Footprint

12,502 tonnes-CO<sub>2</sub>e

Usage & Cost



Cost vs. Prev Yr.



# Sustainability Metrics

- 2013-2014 electrical consumption reduced by 2,438,334 kWh
- 2013-2014 Gas consumption increased by 1,804 therms
- 2013-2014 Water consumption decreased by 2,971,828 gallons
- Waste diversion for 2014 was 1467.53 tons
  - 954.60 tons attributed to construction and demolition debris diverted from landfill
  - 326.82 tons of mixed recycling
  - 50.3 tons of compost
  - The rest can be attributed to lighting, hazardous waste, air walls and donations
- Savings were achieved with a 8.34% increase in gross square footage and a 4% increase in heating degree days
- Gas increase can be attributed to a new kitchen and the addition of Starbucks

# Ongoing Sustainability Initiatives

- Full building lighting retrofit
- Improve efficiency of roof top units through variable frequency drives
- Variable Air Volume occupancy controls
- Continue to monitor consumption in real time
- Consult with event managers about the sustainability of their events and encourage the use of our infrastructure to reduce consumption and waste to minimize impact of events
- Monitoring bee hives on the roof
- Continue with Drexel and Audubon studies
- Improve recycling efforts and increase the diversion rate







Thank you!  
Contact [rmarshall@javitscenter.com](mailto:rmarshall@javitscenter.com)  
with any questions.

