



211 W 29th Street

Passive House Residential Development

Award:
NYSERDA's Buildings
of Excellence Award 2019

EP Engineering has teamed up with JBS Project Management and ZH Architects on the design for new a high rise mixed use development located on West 29th Street. The 24-story structure consists of 22 rental apartment floors and ground floor retail, totaling 65,000 square feet. The building was designed to achieve Passive House Certification, resulting in an energy efficient building with superior indoor air quality and very low heating and cooling requirements. The MEP systems include high efficiency split system air conditioning units capable of simultaneous heating and cooling, new electrical services, emergency gas generator, condensing type hot water boilers for domestic use for the high and low zone.

LOCATION

211 W 29th Street
New York, NY 10001

BUILDING SIZE

24 story
65,000 SF

CHALLENGES

- Achieving precise balance between supply and exhaust air, due to tight construction associated with Passive House Projects.
- Minimizing floorspace required by MEP systems saving valuable square footage for the residences.
- Providing a central domestic water heating system to serve all the residential floors.

ACHIEVEMENTS

- A Variable Refrigerant Volume (VRV) heat pump system was provided for each tenant. Central Energy Recovery Ventilator (ERV) was provided to exhaust bathrooms, kitchens and utility areas and utilize this air stream to pre-condition the ventilation air entering the building.
- Separating domestic water plants into a high zone & low zone to eliminate the need for water pressure reducing valves within the apartments.
- Horizontal ceiling air handling units were located above the ceiling of each bathroom to maintain the maximum floor area in the apartments.

