

CLASS-A OFFICE BUILDING 2121 K STREET NW WASHINGTON D.C.

KEY PARAMETERS

- Type of Facility – Existing (EB)
- Function – Upscale Urban Office Building with Retail, 5-Star Restaurant, Fitness Health Center, Underground Parking
- Area – 11-stories, 190,458 sq. ft.
- Project Completed – (HVAC) 2007

Challenge: Increase property value with “green” and sustainable building design criteria and state-of-the art indoor air quality. The renovation called for adding three floors to an existing eight story office building, replacing the mechanical systems, and doing so without interrupting daily business activities.

Solution: Dynamic V8 Air Cleaning Systems were factory-installed in the 175,000cfm custom air handling unit prior to the entire unit being lifted into place.

Results: The IAQ solution proved to be cost efficient and sustainable. Maintenance costs were reduced dramatically from the previous HVAC system. As of May 2011, media life has exceeded three (3) years (and counting). At full air-flow pressure drop during the first three years has increased only .1” W.G.

Because of the building’s downtown location, additional tests were conducted to measure the system’s effectiveness at capturing black



carbon and ultra-fine particles (UFPs) from vehicle emissions, which were present in outdoor ventilation air being brought in according to the Ventilation Rate Procedure of ASHRAE Standard 62. The tests showed indoor levels of these contaminants were 90% to 99% lower than those in the outside air, demonstrating the need for effective filtration in urban environments. Details about these tests and methodology is available online at <http://archive.constantcontact.com/fs002/1101377850169/archive/1103094920322.html>

TEAM

- Owner – ING Clarion Partners
- Architects – WDG Architecture
- Engineers – Joseph R. Loring and Associates, Inc.
- Mechanical Contractor – W.E. Bowers
- General Contractor – James G Davis Construction Corporation

MECHANICAL SYSTEMS

- HVAC – Trane Custom 600 ton prepackaged chiller plant, 176,000 cfm Trane Custom AHU
- Building Controls – Trane Tracer Summit

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