

# NATIONAL MUSEUM OF AFRICAN AMERICAN HISTORY & CULTURE WASHINGTON D.C.

## KEY PARAMETERS

- Type of Facility – New Construction (NC)  
Function – Museum
- Area – 5-story, 350,000 sf
- Project Completion – 2015

**Challenge:** Maximum indoor air quality, meeting the GSA requirement for minimum MERV13 filtration, and sustainable design to achieve LEED® Gold certification. Located on the national mall, the National Museum of African American History and Culture (NMAAHC) is situated prominently between the National Museum of American History and 15th Street, next to the Washington Monument. The museum is a centerpiece venue for ceremonies and performances, as well as a primary exhibition space for African American history and culture.



**Solution:** Dynamic V8 Air Cleaning Systems were selected in lieu of passive filtration due to their ability to deliver to remove ultrafine particles present in urban environments which harm museum artifacts. In addition, the low static pressure resistance inherent in the Dynamic V8 means a significant reduction in fan horsepower and a reduction in ongoing energy costs. And with filter change-out intervals measured in *years*, instead of *months*, the system will dramatically reduce ongoing maintenance costs.

**Results:** The Dynamic V8 Air Cleaning System delivers MERV15+ performance or four (4) times that of MERV13 passive filters. Its low pressure resistance translates to 67% lower energy consumption than MERV13 passives. And in the majority of Dynamic V8 installations, the initial filter change-out has been over four (4) years from the start-up date.



Also of paramount importance to building owners were mechanical system space considerations. The combination of Dynamic V8s with VRV systems allowed designers to reduce HVAC system footprints, thereby increasing the amount of rentable floor space.

## TEAM

- Client – Smithsonian Institution
- Construction – Clark/Smoot/Russell
- Architects – Freelon Adjaye Bond and SmithGroup
- Mechanical – Southland Industries
- Engineers – WSP Group / Flack & Kurtz
- HVAC – Ventrol Air Handling Systems

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