

Altieri

American Museum of Natural History

Rose Center for Earth and Space

Architect: Polshek Partnership LLP (now Ennead Architects)

Location: New York, New York

Completed: 2000

Size: 333,500 sf

Services: MEP/FP

Founded in 1869, the American Museum of Natural History is one of the world's preeminent scientific and cultural institutions. It is renowned for its exhibitions and scientific collections, and wide-ranging program of scientific research and education.

The Rose Center is an impressive exhibition, research, and education facility inside a sphere that is housed in a seven-story glass box. The top half of the sphere contains the state-of-the-art "Sky Theater." The bottom half of the sphere contains a second theater in which visitors witness a re-creation of the Big Bang. From here, visitors follow a walkway that tracks 15 billion years of evolutionary events, starting with the first few moments of the universe and ending in the present day.

The project involved new systems and renovations of the existing systems serving the adjacent wings. Also included was replacement of the Museum's north electrical service and redistribution of existing MEP services from the central plant through the new building.

Altieri worked closely with a specialty consultant to create a computational fluid dynamics model of the building "cube" to assist in the design of smoke removal systems and air delivery for HVAC. In addition to these systems, the Rose Center has numerous specialized fire protection systems. Line-type heat detection systems were used along the exposed steel at the top of the cube and elevator core to eliminate the need for exposed fire-proofing. These, in conjunction with an air-aspirating smoke detection system and deluge-type sprinkler systems, provides protection for the exposed steel and interior portions of the cube.



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