

North Carolina Museum of Art West Building Architecture and Construction

Building Structure and Systems

- Size: 127,000 sq. ft. steel-frame building is built on a 26 ft. structural grid
- Public space is on an elevated slab with basement below galleries
- Loading dock and East Building collections storage are connected via a service tunnel
- Pre-cast insulated panels form building's weather envelope beneath metal panels
- Basement level energy-efficient mechanical system supplies conditioned air to galleries through 1" slot at top art walls – return through 1" slot at bottom of walls

Building Exterior

- Fixed aluminum louvers, above linear skylights, direct north light into galleries
- 230 overlapping anodized aluminum skin panels, with reflective stainless steel infill
- Glass curtain-walls define five courtyards.
- 50% of exterior building envelope is glass

Building Interior

- 65,000 sq ft galleries increased NCMA's Permanent Collection space by 54%
- Open space plan: no gallery has four corners
- 11,500 sq. ft. central sculpture hall organizes primary visitor circulation
- 16 ft-high fixed and 12 ft-high movable art wall systems
- Continuous white oak flooring: sprung-floor system for physical and acoustic comfort
- 360 cast fiberglass ceiling coffers
- Prismatic and fabric filters diffuse daylight into galleries

Gallery Lighting

- Designed to view art with full-spectrum light, meeting conservation standards
- Light levels allowed to vary with season, weather and time of day
- Lighting calculated to meet cumulative annual "light budget" for artwork
- 360 skylights with diffusers and fabric filters control for quantity of light
- Frit pattern (3/16" lines) on all glass walls reduces light into galleries by 50%
- Mechanized shade system prevent direct sunlight penetration into galleries
- Fabric curtain system, with various densities control light levels through glass walls
- Two-circuit computer-controlled track lighting is coordinated with daylight levels

Interior Design

- Exhibition Cases and Mounts: NCMA Design and Production
- Graphics: Pentagram, New York with NCMA Graphic Design

- Track Lighting: LiteLab, New York
- Curtains: Mary Bright Studio, New York
- Walls: Benjamin Moore "Super White"

- Gallery Benches: Thomas Phifer design, made in North Carolina
- Café: Tables and Chairs by Fritz Hansen
- Lobby: Chairs by Fritz Hansen; Tables by Eero Saarinen
- Information Desk: Chairs by Ray and Charles Eames

Green Design

- Heating and cooling systems perform at 45% over ASHRAE (engineering) standards

- Daylighting reduces consumption and heat-load on mechanical systems
- Insulated windows and skylights with low-emissivity coating reduce heat penetration during the summer and heat loss in winter
- Water collected from the building's roof, bio-cell gardens, and roads is stored in a 90,000-gallon cistern used to irrigate gardens and replenish pools
- Cistern is tied to a comprehensive stormwater management system – connected to the renovated Museum Pond which filters pollutants entering the Neuse River basin.
- West Building is registered for Silver LEED Certification

164-Acre Museum Campus

- Three miles of recreational and site-specific sculptures in Museum Park, built on site of former state prison.
- Commissioned artists' project in the Park include Bill and Mary Buchen, Chris Drury, Martha Jackson-Jarvis, Barbara Kruger, Ledelle Moe, Roxy Paine, Thomas Sayre, Vollis Simpson, Steed Taylor, Ursula von Rydingsvard, and Tim Purus
- 650 ft. pedestrian bridge connects museum's Greenway to regional trail system
- Park environment managed in partnership with N.C. State University, through the Partnership for Art and Ecology

Building Credits

Owner:	North Carolina Department of Cultural Resources North Carolina Museum of Art
Design Architect:	Thomas Phifer and Partners–New York, N.Y.
Architect of Record:	Pierce Brinkley Cease + Lee Architects-Raleigh, N.C.
General Contractor:	Balfour Beatty Construction Barnhill Contracting Company
Landscape Architect:	Lappas + Havener, PA–Durham, N.C.
MEP Engineers:	Altieri Sebor Wieber, New York, N.Y. Stanford White Associates
Structural Engineers:	SOM–Chicago, I.L. Lassiter Hopkins, Raleigh, N.C.
Electrical Lighting:	Fisher Marantz Stone–New York, N.Y.
Daylighting Design:	Arup–London, England and New York, N.Y.
Civil Engineers:	Kimley Horn, Raleigh, N.C. ArtifexED, Inc., Denver, C.O.