SEAN FELTON | STRUCTURAL

AMERICAN ART MUSEUM | NORTHEAST, UNITED STATES

PROJECT TEAM

Owner Representative :	Gardiner & Theobald
General Contractor :	Turner

Engineers/Consultants

Civil :	Philip Habib & Associates
Structural :	Robert Silman Associates
MEP :	Jaros, Baum & Bolles
Lighting :	ARUP

Architects

Executive :	Cooper, Robertson & Partners
Design :	Renzo Piano Building Work Shop

GENERAL INFORMATION

Function :	Museum/Mixed-Use
Size :	220,000 SF
Height :	150 ft
Number of Stories :	9 above, 2 below
Construction :	5/2011—12/2014
Cost :	$266 million
Delivery Method :	Design-Bid-Build (GMP)

N ELEVATION RENDERING

SE CORNER RENDERING

STRUCTURE

- Foundation consists of drilled caissons under pile caps, 36" concrete secant wall, and 24" pressure slab
- Composite floor system 3.25" concrete slab and W-shape beams
- Lateral system works with steel braced frames and specified rigid floors
- Floors supported by combination of columns, trusses, and hangers
- 30' cantilever at level 5 (SE corner)
- Levels 3 and 4 hung from level 5 in several places

MECHANICAL

- 5 architecturally exposed cooling towers
- Mechanical space in cellar, level 2, level 4, and level 9
- Combination of VAV for galleries and CAV for less controlled spaces
- Roof heating/snow melting roof system

LIGHTING/ELECTRICAL

- Lamps and windows specified for optimal color rendering (CRI > 97)
- LEDs, fluorescents
- (4) 4000 A 208Y/120V switchboards serve building

ARCHITECTURE

- Façade and interior module of 3'-4"
- Stainless steel and precast concrete cladding
- Exposed structural steel and MEP systems
- 50,000 SF of interior gallery space
- Step-backs for outdoor gallery space
- Skylight and architectural fabric used in level 8 gallery

CONSTRUCTION

- Secant wall poured in tandem with excavation
- 42" steel tubes used to stabilize secant wall during construction
- Deep wells gather site water before desedimentation, pumped back into sewer system

Turner