

Audubon Takes Flight

by STEPHEN SHARPE



PROJECT Trinity River Audubon Center, Dallas

CLIENT City of Dallas Parks & Recreation Department

ARCHITECT BRW Architects in association with Antoine Predock Architect

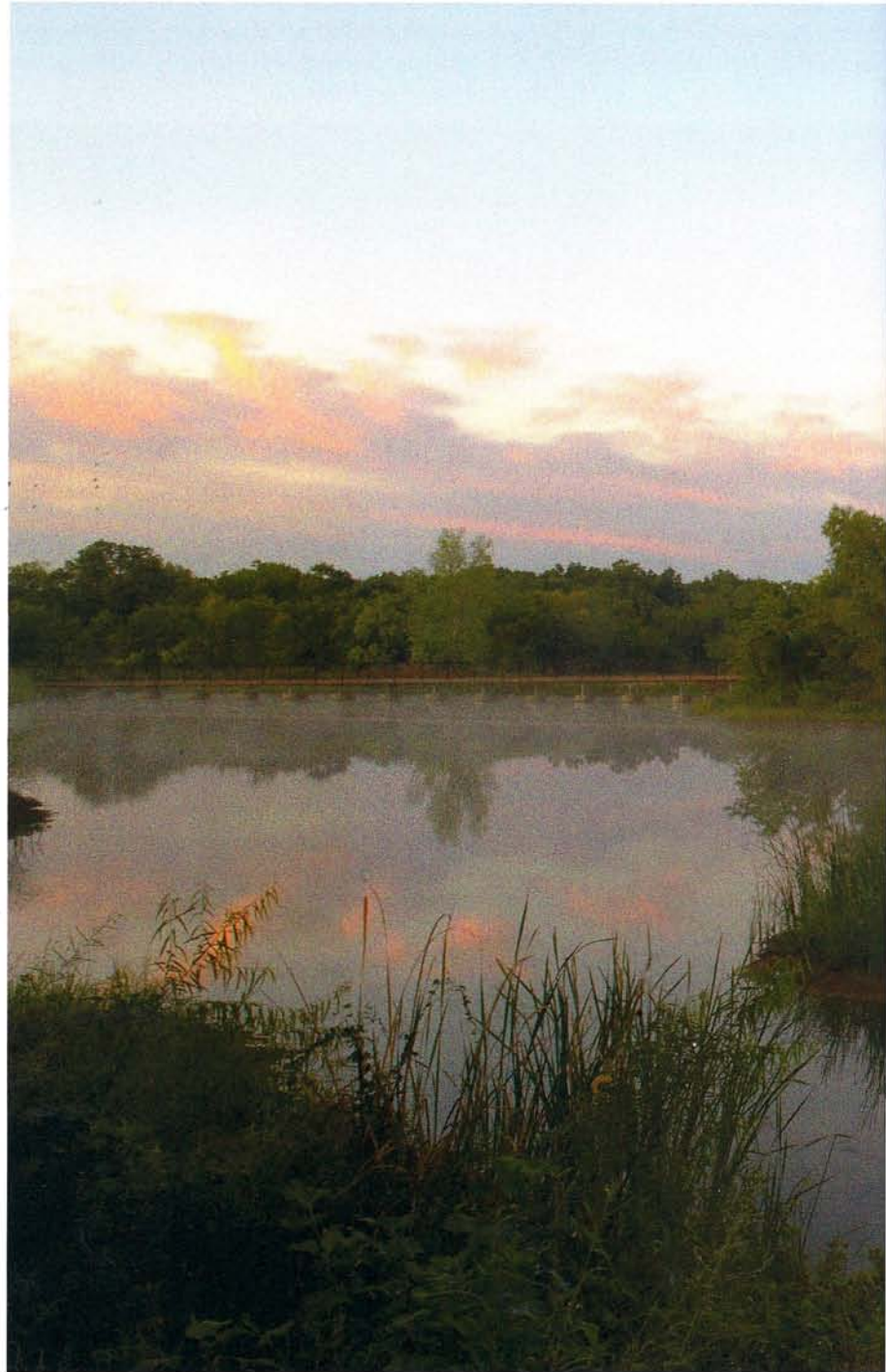
DESIGN TEAM Antoine Predock, FAIA; Craig Reynolds, FAIA; Paul Fehlau; Gary DeVries, AIA; Anne Hildenbrand, AIA; Stephen Hilt

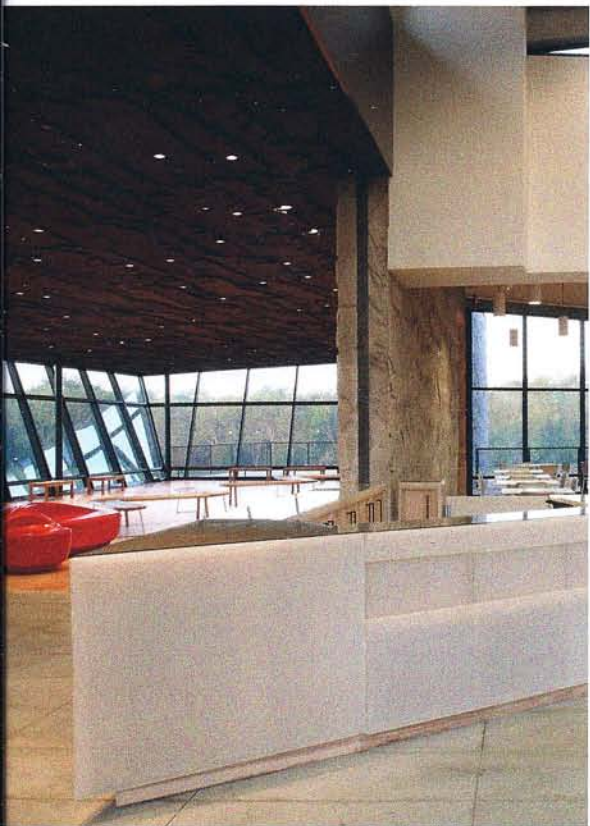
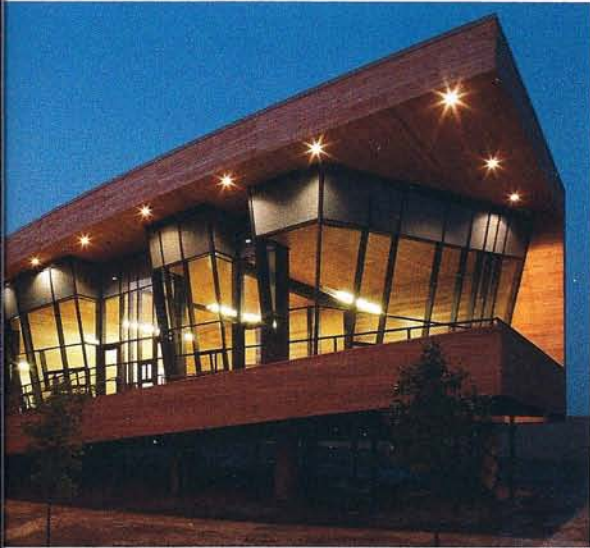
CONTRACTOR Sedalco Construction Services

CONSULTANTS Lyons/Zaremba (exhibit planner); LopezGarciaGroup (environmental, civil, MEP); Geo-Marine (archeology history); Jaster-Quintanilla, Dallas (structural); Hill International (cost); Terracon Consultants (geotechnical); PMK (A/V); Supersymmetry USA (energy modeling); Innovative Water Solutions (rain water harvesting); Sebesta Bloomberg & Associates (commissioning); Rocky Mountain Institute (green development services); Bowman-Melton Associates (trail planning); Peace River Studios (film consultant)

PHOTOGRAPHER Michael Lyon

RESOURCES POREUS PAVING: Airfield Systems; FENCES, GATES, HARDWARE: Master Halco; RAINWATER HARVESTING: Invisible Structures; CONCRETE MATERIALS: TXI; TILT WALL: World Headquarters; CONCRETE COLOR: Davis Colors; METAL MATERIALS: Nucor (Ironhorse Ironworks); ARCHITECTURAL MILLWORK: Panelite; CYPRESS: North Texas Frameproof (Hogan Hardwoods); WATERPROOFING: Grace Construction Products; BUILDING INSULATION: Bonded Logic; ROOF AND DECK INSULATION: Owens Corning; EXTERIOR INSULATION AND FINISH SYSTEM: Sto Corp. (Synthetic Textures); VAPOR RETARDERS: Stego Industries; MEMBRANE ROOFING: Johns Manville; GREEN ROOF: Siplast; METAL ROOFING: Petersen Aluminum; METAL DOORS AND FRAMES: The Hallgren Company; WOOD DOORS AND FRAMES: Marshfield DoorSystems (The Hallgren Company); ACCESS DOORS AND PANELS, GLAZED CURTAINWALL: United States Aluminum; FINISH HARDWARE: ASSA ABLOY (The Hallgren Company); TILE: Daltile; WOOD CEILING: 9WOOD; ATHLETIC SURFACING: Eco Surfaces; WOOD FLOORING: Teragren Synergy; ACOUSTICAL TREATMENTS: Johns Manville; WALL TREATMENTS: Acoustical Surfaces; PAINT: Sherwin Williams; MURAL WALL SYSTEMS: Split Rock Studios





Just eight miles southeast of downtown Dallas, another world exists far removed from the city's shimmering high-rises and labyrinthine expressways. This world is known as the Great Trinity Forest, the largest urban bottomland hardwood forest in North America. Its 6,000 acres support a widely diverse community of plants and animals that thrives in this unique ecosystem where three distinct biomes – timberland, wetlands, and prairie – converge.

The Great Trinity Forest is in turn nourished by the Trinity River that for decades was written off by city dwellers as irreversibly spoiled by industrial pollution and runoff made toxic by pesticides and herbicides. However, in 1998, Dallas voters approved the first public funds to create the Trinity River Corridor, a complex urban development that will transform a 20-mile stretch of the river along its serpentine path just west and south of the downtown.

The \$10.7 million Trinity River Audubon Center is the first major project to be completed as part of the Trinity River Corridor. Opened to the public in mid-October, the new Audubon facility was built by the City of Dallas as an interpretive center for visitors to learn about the natural world that teems with innumerable species of wildlife at the city's edge.

Design architect Antoine Predock, FAIA, working in association with BRW Architects of Dallas, celebrates this flourishing riparian world with a building that simultaneously appears to dissolve into the bottomland while also emerging from the alluvial muck. In plan, Predock's concept metaphorically takes flight, with the literal expression of a bird spreading its wings. But seen from the ground, his elemental abstractions tie the tripartite building to its context with trajectories toward land and water.

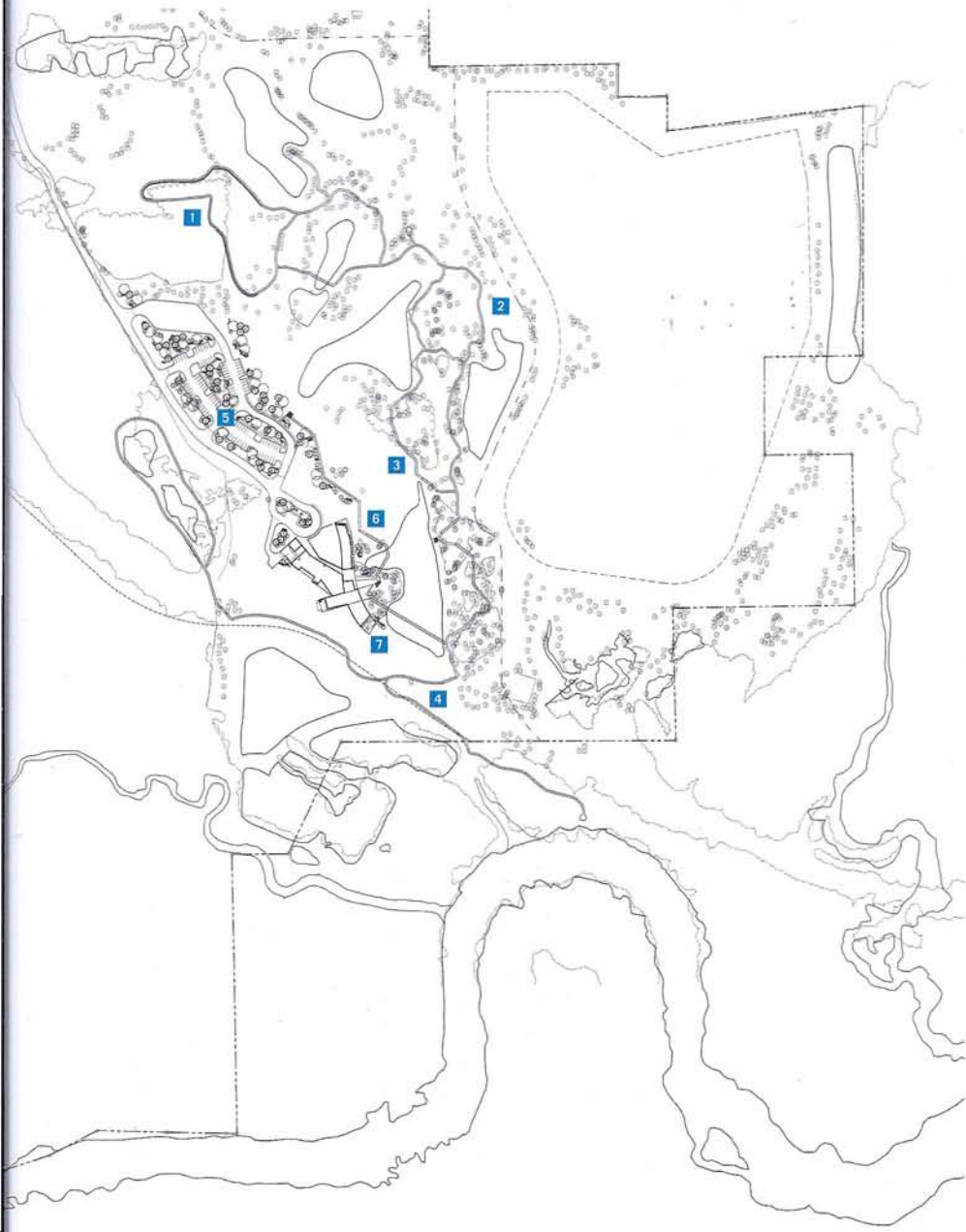
Predock intuits these connections through surface textures that simulate both nature and humankind's precarious attempts for domination over it. He juxtaposes industrial materials with earthy elements, wielding mottled steel panels as homage to "Corps of Engineers vernacular" and cypress siding to evoke the woodland's essence. Grassland figuratively overtakes the building's administration wing, rising as a built-up slope of engineered soil sown with native grasses long banished from this stretch of the Blackland Prairie by farmers who made cotton king. By next year, when the switchgrass, bluestem, wildrye, and other perennials carpet the north end of the site, a green roof will partially envelop the administration wing already anchored to the ground with exterior walls of board-formed concrete. Buried beneath the simulated grassland is a sophisticated drainage system that feeds into a large underground reservoir used for on-site irrigation.

Predock describes an initial sketch as depicting the Audubon Center "dancing with the site," engaging the adjacent forest and the river that flows just 100 yards away to the south. The Albuquerque-based Predock is well known for his idiosyncratic approach to architecture that responds to the geology and geography of a site, a determined pursuit of design solutions recognized with the 2006 AIA Gold Medal.

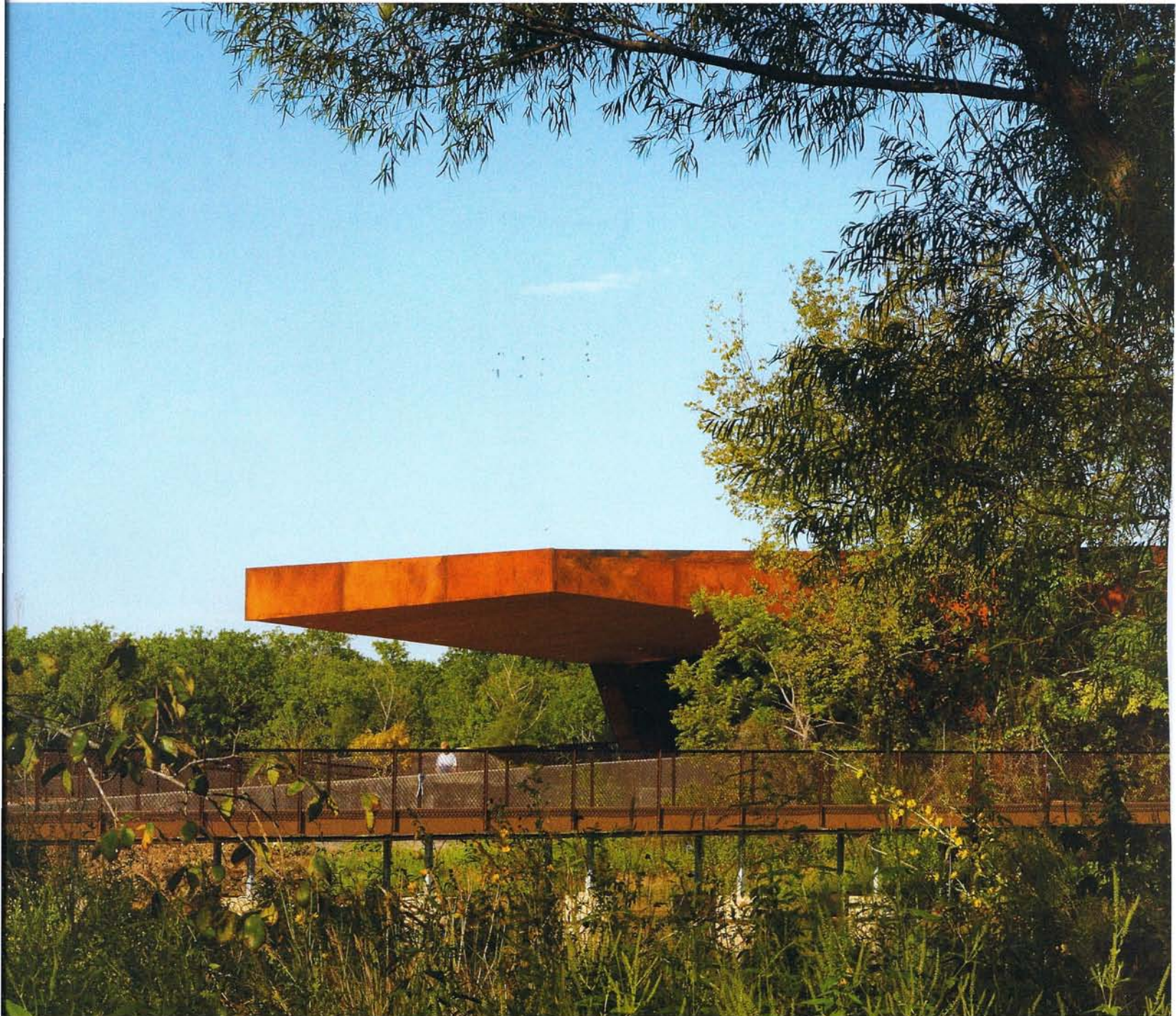
Located between Loop 12 and the LBJ Freeway, the Trinity River Audubon Center sits on a 120-acre nature preserve, a tract reclaimed by the City of Dallas after the closing of a landfill where more than 1.5 million tons of construction debris was illegally dumped. After the material was determined to be safe, it was removed and used as infill to sculpt rolling hills as envisioned in the master plan devised by Craig Reynolds, FAIA, of BRW Architects. Additional earthwork created a series of clay-lined pools that channels runoff through gentle cascades, filtering the flow to replenish a large retention pond along the building's east side, then eventually coursing downstream into two other pools before emptying into



- FLOOR PLAN**
 1 EDUCATION WING
 2 ADMINISTRATION WING
 3 CAFE/STORE
 4 GREAT HALL
 5 EXHIBITS



- SITE PLAN**
 1 HIGH POINT OVERLOOK TRAIL
 2 PRAIRIE TRAIL
 3 WETLANDS TRAIL
 4 FOREST TRAIL
 5 PARKING
 6 ENTRY BOARDWALK
 7 DISCOVERY GARDEN





the Trinity. The retention pond, wreathed with native grasses and brush to attract wildlife, is spanned by an elevated footbridge that leads visitors through the forest along 2.5 miles of improved ground trails. The path eventually brings them to an observation point about 20 feet above an oxbow in the river. Such intimate contact with nature, especially its seasonally changing population of migratory birds, led the National Audubon Society into a contract with the City of Dallas to manage the facility and house its state organization within the new building. It's no surprise then to see Predock's avian motif with patterns of layered feathers on the entry's soffit, the ceilings of the Exhibit Room and the Great Hall, and in the surface of tilt-wall concrete that bisects the central part of the building.

Above the entry, the canopy cantilevers 50 feet out from the glass-enclosed foyer. The canopy terminates in two points, resembling a swallowtail's distinctive feathers (and recalls Predock's fanciful "stinger" that extends from the north end of his Austin City Hall in a similarly gravity-defying gesture). Upon entering the Audubon Center, visitors are invited to study various exhibits that interpret the natural world that gurgles, buzzes, flits, and slithers just beyond the walls. Exhibits, designed by Lyons/Zaremba of Boston, also explain the historical significance of the Great Trinity Forest, the Trinity River, and the Blackland Prairie, and the impact human activity has on them.

Canted glass curtainwall provides visitors with broad views of the forest and wetlands from within the air-conditioned comfort of the Exhibit Room and the Great Hall, a large open space programmed to accommodate public and private activities. Windows in these two volumes are sloped at 20 degrees, a measure designed to prevent injuries to birds. "If birds see a reflection of the sky, they can't tell the difference," explains Craig Reynolds, FAIA, the principal in charge of the project for BRW, adding, "Wherever we have glass on the building, its either under a deep canopy or canted." Angled panes of glass also sheathe the east elevation of the education wing at the building's north end. Here Predock articulated the curtainwall with, in his words, "glass chunks" that thrust out from the classrooms' inset doorways. The education wing—a term doubly fitting for this metaphorical avian forelimb as seen in plan—curves as it extends from the central part of the building and gradually rises to a height of 10 feet above grade. With the structure supported by concrete piers, the sweep of prairie grasses will eventually cover the ground underneath.

At the opposite end of the building, at the southern tip of the other curving "wing," Predock encased the Exhibit Room with pre-patinated steel pierced with small openings to minimize the solar exposure while helping to illuminate the interior. Predock likens his use of rusty "Corps of Engineers vernacular" to "that notion of erosion and returning to the earth, anchoring in the earth in terms of materiality and oxidation."

The public project cost \$325 per square foot (excluding site work and exhibits), a reasonable figure considering Predock's international stature and its expected LEED Gold rating. As noted by Willis Winters, FAIA, who led the project team for the City of Dallas, "The building is a marvel that will demonstrate to a new generation of Texans the enduring values of sustainability, as well as Dallas' commitment to the environmental and spiritual renewal of the Trinity River corridor. We think we have an extraordinary new facility here, achieved at a great value to the city."

Stephen Sharpe is the editor of *Texas Architect*.