



# Bronx Zoo Monorail Rehabilitation

The Bronx, New York



*AS A COST-EFFECTIVE ALTERNATIVE TO REPLACING THE ZOO'S AGING MONORAIL FLEET WITH A NEW SYSTEM, SDI IS PERFORMING A COMPREHENSIVE REPAIR AND RENOVATION PROGRAM TO BRING THE EXISTING SYSTEM UP TO TODAY'S APM CODES AND STANDARDS. IN ADDITION TO GREATLY IMPROVING SYSTEM'S RIDE QUALITY, APPEARANCE AND PASSENGER SAFETY, THE RENOVATION WILL EXTEND THE SERVICE LIFE OF THE MONORAIL TRAINS FOR DECADES TO COME.*

# BRONX ZOO MONORAIL SYSTEM RENOVATION



SDI IS CURRENTLY PERFORMING A \$4.75 MILLION contract for an extensive overhaul and rehabilitation of the Bronx Zoo Monorail trains in New York. Originally commissioned in 1977, the system features six 9-car trains that travel in a loop configuration on an elevated, 1.6-mile steel beam guideway. Although the DC-powered Rohr Monorail had performed reliably for most of its 28 years, it was clearly in need of rehabilitation. The system was exhibiting significant wear and tear of the propulsion system, suspension assemblies and the train cabins. Additionally, the manual control system and the DC drives were outdated and inadequate.

The owner knew that in order to provide continued transportation services for zoo visitors and to comply with today's applicable people mover standards and

codes, the monorail needed repair, replacement or refurbishment of nearly all mechanical, electrical and electronic subsystems. The zoo's engineering staff subsequently prepared an RFP and invited bids from several U.S. transit system refurbishment firms. After inspecting the system SDI submitted a proposal that clearly identified the scope of work along with a plan for keeping the system in service while the project was underway. SDI was the low bidder and was awarded the contract.

The system refurbishment project includes replacing the propulsion system's DC drive motors with variable-frequency AC drives, upgrading the differentials and service brakes, integrating an all-new touch-screen computer control system and adding a new, fail-safe emergency braking system. Additionally SDI is performing numerous structural and cosmetic improvements to the 54 aging and deteriorating fiberglass cabins. This work includes door repairs, fiberglass body repairs, new floor coverings, seat repair and reconditioning, window replacement, the addition of code-conforming fall protection railings and all-new paint for the chassis, vehicle interiors and exteriors. Normal passenger service is maintained by refurbishing and re-installing two trains at a time while four trains remain in operation. Completion is scheduled for the spring of 2007.



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