



The LiRo Group

**Client:**

MTA - Bridges and Tunnels  
(TBTA)  
Robert Moses Building  
New York, NY 10085

**Reference:**

Rocco D'Angelo  
Deputy Chief Engineer

**Total Project Cost:**

\$272,000,000

**Completion Date:** 2008

**Project Overview:**

*This project is the TBTA's largest bridge project to date and involves the reconstruction of the Wards/Randall's Island Viaduct, painting the Triborough main span, bearing replacement on the Queen's Approach and Bronx Truss, and access road construction on Randall's Island. LiRo is the prime consultant on this project. (MTA-TBTA, \$272M)*

## Triborough Bridge Deck Replacement on the Wards and Randall's Island Viaduct (TB-64B)

Queens, NY

This project, valued at \$272 million, is the TBTA's largest bridge project to date and involves the reconstruction of the Wards/Randall's Island Viaduct, new coatings, bearing replacement on the Queen's Approach and Bronx Truss, construction of new ramps, access road construction on Randall's Island and widening of the Queens to Manhattan Ramp. LiRo is the prime consultant on this joint venture project.

**Ward's / Randall's Island Viaducts** - The existing deck (over 480,000 SF) will be replaced with composite units of structural steel cross beams and post tensioned precast concrete. The Ward's/Randall's Island Viaducts will receive new armored joints, rospphalt overlay, side and median barrier, improved storm drainage and new steel and cast in place (post-tensioned) brackets and stringers for the widening of the existing roadway.



**Ramp Construction** - Two new on and off ramps will be constructed in conjunction with a 5000 LF surface road on Ward's Island. The majority of the ramps are elevated and a portion will be built with new retaining walls. Ramps construction will include new foundations on piles, new columns, new steel girders, reinforced cast in place deck slabs, and new side barriers.

The existing pedestrian walkways will be eliminated and replaced by one new pedestrian ramp. A portion of the ramp will be cantilevered with cast in place concrete brackets and a steel grid concrete deck. The remaining portion will be built with retaining walls and concrete walkway down to grade level. In addition a new stair tower will be constructed on the pedestrian walkway with new piers and columns.

The Queens to Manhattan Ramp will be widened to allow for three lanes to access Manhattan. A portion of the existing roadway deck will be removed and construction of new foundations on piles, new columns, new girders, and reinforced cast in place deck slab constructed.



The LiRo Group

**Bearing Replacement** - Approximately 740 bearings will be replaced on the Queens Viaduct, Ward's / Randall's Island Viaducts, Queens to Manhattan Ramp and the Bronx Truss.

**Coatings** - Over 2 million square feet of existing steel will receive a new protective coating on the Queens & Ward's Island Anchorage, Triborough Bridge Main Span and the Ward's / Randall's Island Viaducts

Additional work includes new lighting, electrical upgrades and archeological monitoring of footing excavations.

