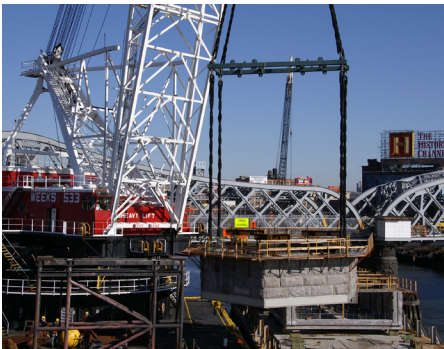


Boroughs of Manhattan & Bronx, New York, NY



Willis Avenue Swing Bridge Over Harlem River



Owner/Client: New York City DOT, New York State DOT

Engineer: Hardesty & Hanover

Year Complete: 2012

Scope of Work: Demolition, Channel Dredging, Construction

Project Cost: \$636 Million

Replacement of the Willis Avenue Bridge over the Harlem River connecting Manhattan to the Bronx, including the reconstruction of Willis Avenue over the Major Deegan Expressway and reconstruction of sections of the Major Deegan Expressway with entrance and exit ramps. Construction included a new 2,400 ton, 363' swing span bridge truss. Extensive planning was required for the completion of the float-in of the new swing span and float-out of two 1100-ton existing trusses. Weeks Marine transported the new swing span 135 nautical miles and through 14 bridges from the erection site to the project site. Project involved 48" and 60" diameter drilled caissons, 940-ton precast concrete cofferdam boxes for the construction of cast-in-place mass concrete bridge piers, large sheet pile walls, 6000 tons of steel tub and plate girder superstructures, 160,000 square feet of cast-in-place concrete decks, submarine power cables, FRP pile and concrete fender systems, precast prestressed box beams, and precast T walls. Temporary construction included sheet pile walls with drilled tiebacks, sheet pile cofferdams with mass tremmie concrete seals, 24" to 48" driven pipe piles, steel jacket platforms, and temporary truss panel bridge erection. Channel dredging and the demolition of the existing bridge approaches, piers, pneumatic caissons, and fender system also included.