



**OWNER  
LOCATION**

City of Toledo  
Toledo, Ohio



An existing 80-year-old rolling bascule bridge spanning the Maumee River was renovated by the City of Toledo, Ohio. One component of this renovation project was the removal and disassembling off-site of the four existing bascule leaves, and replacing them with four new bascule leaves pre-assembled off-site.

As transporting and floating a total of eight 180-foot, 1100-ton, bascule leaves in and out of the project site was an arduous task, Genesis Structures was retained to assist the contractor with the stability analysis and selection of the barge, assist in developing the demolition and erection sequences for the removal of the old bascule spans and installation of the new bascule spans, design the ballasting sequence required to roll the bridges on and off the barges, analyze the new and existing bascule girders for temporary support conditions while being mobilized on the transports, develop all mooring details for the barge, design gantries for the staging yard, design cribbing and temporary distribution mats to support the bridge during pre-assembly and prepare final balance calculations.

To complete the services, Genesis Structures was on-site during all critical move while transporting the new and existing structures including load transfer between ground based erection cribbing and the SPMT's, roll-on/roll-off of the SPMT transports onto the barges and load transfer between the barges and abutment foundations.

- ▲ Erection Manual Preparation
- ▲ Barge Stability Analysis
- ▲ Balance Calculations
- ▲ Demolition/ Erection Sequencing
- ▲ Falsework/Mooring/Gantry Design
- ▲ Ballasting/Pumping Sequences
- ▲ On-Site Construction Services