Irondequoit Bay Seasonal Outlet Bridge

Rochester, NY; 1998

Bridge & Highway

A Galvanized Steel Application Report

Subject

This is a 24-foot-wide, 2-span swing bridge with a 132½-foot main span and a back span of 53 feet. The structure is a galvanized pony truss with all bolted connections and has a five-foot cantilevered walkway along each side. An open grate steel decking was used to reduce the weight of the bridge. Hot-dip galvanizing was specified because a cost analysis showed galvanizing was not only competitive in initial cost, but also superior in long-term costs when compared to the traditional 3-coat paint system.

Environment

Continually wet, marine atmosphere, subject to Great Lakes storms and winter snow, ice, and de-icing salts.

Details

This unique seasonal structure allows winter vehicular access to businesses west of the outlet, summer boating entry to Lake Ontario, and year-round emergency vehicle access. Because its proximity to the water and open-deck drainage result in continuous exposure to moisture, galvanizing was chosen for long-term corrosion protection. Additionally, because the bridge must be available in case of emergency, the maintenance-free galvanized coating was the logical choice. Galvanizing also relieved some fabrication stress, with a resulting increase in the fatigue capacity of the grating. A total of 160 tons of structural steel, 25 tons of reinforcing steel, 4,000 square feet of decking, and traffic and pedestrian accoutrements were galvanized, thus assuring emergency personnel, consumers, and boating enthusiasts will encounter no maintenance delays for many years to come.