

George Campbell Award

La Salle Causeway Bridge

When one bridge is critical to transportation for the surrounding area, a watchful public can be just as big of an obstacle as weather and lead paint. Such was the case with the La Salle Causeway Bridge. Once the center of three rivet construction bridges over the Rideau Canal, it became the center of attention (and traffic) as the only one still remaining.

Originally built in 1917, the bridge is a Strauss trunnion bascule lift bridge that carries only one lane of traffic in each direction and is the only crossing point for the downtown area of Kingston. Specifications required the bridge to remain open to vehicle and pedestrian traffic with single lane closures permitted at night and one full closure allowed to coat the bearings and front structure. Scaffold access and environmental enclosures for all areas of the bridge were erected, in addition to a temporary tunnel hoarding and overhead roadway protection system.

Extensive specifications for the blasting and coating of 60,000 square feet of steel were prepared by McCormick Rankin Corporation, Consulting Engineers. Surface preparation required blasting to Near-White, SSPC SP-10, and the application of a Ministry of Transportation of Ontario-approved coating system. Previous coatings contained lead, which had to be fully removed.

The coating system consisted of an inorganic zinc primer suitable for application at low temperatures, an organic zinc primer in selected areas, an epoxy mid-coat, and an aliphatic polyurethane topcoat. Canadian winter conditions included temperatures as low as 14 F at night and 20 F during the day.

The project was divided into three phases: the underside of the bridge over water section, the upper structure above the roadway, and the counter weight structure. Project com-

pletion by deadline was crucial because hundreds of private craft and commercial vessels are stored in the harbor until weather permits the bridge to reopen, typically around mid-May. Failure to complete the project on time would have been costly to the contractor, who would have to remove all equipment from the site and remobilize the following year.

Location: Southern end of the Rideau Canal in the City of Kingston, Ontario, Canada

Structure Owner: Public Works and Government Services Canada (PWGSC)

Contractor/Applicator: Harrison-Muir, Inc., Ajax, Ontario, Canada

Coating Material Supplier: Carboline Canada

Start Date: November 2009

Completion Date: May 2010



(l-r) Bill Mogavero, VP of Operations, Harrison Muir, Inc.; Abbas Khan, Senior Civil Engineer, Public Works and Government Services Canada (PWGSC); Pedro Escudero, B. Eng., MBA, PCS Coating Specialist, Carboline Canada; Dan Orrett, PE, President, Harrison Muir.; and Jack Mills, PE Secretary and Chief Estimator, Harrison Muir, Inc. Photo courtesy of SSPC.