

Association of Professional Engineers and Geoscientists  
of the  
Province of Manitoba

# Achievement Award

Presented to

THE CITY OF WINNIPEG  
AND WARDROP ENGINEERING INC.

for the

## ESPLANADE RIEL (PROVENCHER) BRIDGE

The Certificate of Engineering Achievement is awarded to The City of Winnipeg and Wardrop Engineering Inc. for the Esplanade Riel (Provencher) Pedestrian Bridge, Winnipeg's first cable-stayed bridge. Esplanade Riel is a 5 metre wide, 200 metre long asymmetric dedicated pedestrian bridge with a main span of 110 metres. The bridge's signature feature is its transversely inclined single support pylon that serves as the anchoring point for the cable stays. The focal point of the bridge is the 370 square metre semi-circular enclosed centre plaza surrounding the southern portion of the base of the pylon. The centre plaza will house a restaurant, offering sweeping vistas of the Red River and surrounding community.

Beginning in 1998, The City, Wardrop and community stakeholders partnered in a comprehensive public consultation process that considered repair / replace alternatives for the aging Provencher Bridge, circa 1916. Guiding the process were requirements that the new vision for the bridge be: technically sound; cost-effective; environmentally responsible; reflect the needs of the adjacent communities and the city at large; and be understood and accepted by most of those affected. Public consultation partners unanimously recommended a New Paired Bridges alternative featuring a new vehicular bridge and a separate pedestrian bridge linking St. Boniface with The Forks.

Design requirements that Esplanade Riel be a meeting and gathering place for potentially thousands of people and incorporating the enclosed centre plaza were fundamental challenges during the analytical study to determine the most appropriate cross-section for the walkway girder. Over 20 different cross sections were considered, until the best combination of mass and flexural and torsional stiffness properties, meeting design goals and objectives was obtained. Working with a specialist sub consultant, the final cross section dimensions were developed. A 1:60 scale model of the bridge structure was built and wind tunnel tested to ensure acceptable aerodynamic behaviour.

Detailed design of the Esplanade Riel began early in 2002 and construction commenced in fall of 2002. Working together with the contractor, the City and Wardrop overcame significant challenges during construction to ensure the project was completed on schedule in fall of 2003.

A world class addition to Winnipeg's skyline, Esplanade Riel reestablishes the alignment of the city's historic grand boulevard – Provencher on the east and Broadway on the west. The city's new landmark is a demonstration of world-class engineering performed by Manitoba-trained engineers and is a tribute to the quality of the education and professionalism of all the engineers involved. The Association is pleased to award this Award of Engineering Achievement to the City of Winnipeg and Wardrop Engineering Inc. for the Esplanade Riel Project

1 March 2005