

Association of Professional Engineers
of the
Province of Manitoba

Certificate of Engineering Achievement

to

WARDROP ENGINEERING INC. MACLAREN ENGINEERS INC.

The Certificate of Engineering Achievement is awarded to Wardrop • MacLaren for their design of the City of Winnipeg, North End Water Pollution Control Centre Secondary Process Expansion.

In 1982, Wardrop • MacLaren were retained to double the peak hourly treatment capacity of the secondary treatment plant. The work was completed in 1988, after tendering nine contracts at a total cost of approximately \$45,000,000. The operation of the plant has exceeded expectations with the quality of the effluent to the river exceeding the design standards.

This upgrading involved the installation of an oxygen-activated sludge process. This required the construction of a covered, three-compartment, in-ground tank installation to inject high-purity oxygen into the wastewater. The oxygen-based process replaced the earlier air-based secondary treatment.

The changeover required numerous alternative layouts and process evaluations. Alternatives considered included expanding the existing secondary system or the use and reuse of existing infrastructure. The final design concept involved a retrofit to some of the existing clarifiers and modifications to others and realized a project saving of \$15,000,000, over the continued use of the existing system.

Engineering excellence and innovative designs provided by Wardrop • MacLaren on this project have greatly reduced the pollution in the Red River and increased odour control in the plant and the adjacent area.

October 27, 1989