

# Sarens Champlain Bridge Project Features on The Cover Page of The Cranes Today Magazine

Sarens Champlain bridge Project features on the cover page of the Cranes Today magazine October issue as Job of the Month. Read through page 3, 6-7 of the magazine available through this link. <http://viewer.zmags.com/publication/54cb11a3>



## Fleet of foot

Sarens's specially designed Floating Foundation Installer (FFI) is being utilised to install 38 footings for the New Champlain Bridge, Canada.

The New Champlain Bridge Corridor Project involves the replacement of the existing Champlain Bridge over the St. Lawrence River in Quebec. The existing structure is one of the heaviest crossings in the country for about 40 to 60 million tons, trucks and buses a year.

SISC (Signature srl in Saint Laurent), a joint venture company between SNC Lavalin, Dragages, Fluor and others – assigned this task to Sarens.

The bridge will be made up of 74 footings, 26 of which will be prefabricated at the job, while the rest will be made by pouring concrete directly into foundations in the riverbed.

Each footing is 11m by 2m and comes with a pier structure giving the overall assembly a weight of up to 34m. The weight of a single footing (not counting the pier) is 1300t. The lifting suspension has a turntable, allowing for a 360° rotation of the pier.

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The FFI consists of two S463 barges equipped with eight cranes, 10 winches, four spuds, two S467 towers with gantry beams and rotation engines and eight 600t closed jacks.

The footings were first moved to the end of the pier into the floating dock, using a supertransporter built for the project. From the end, the footing assembly was then lifted on the FFI with steel cables. Once the assembly was secured, the FFI moved off to the designated location in the river.

The FFI was then stabilised in front of the footing position with a powerful anchoring system comprising of eight anchor winches. The winches were equipped to reap the footing cables during final placing.

An advanced GPS system was used to position the FFI and the footing accurately. Additional requirements were made using the FFI's turntable, which allowed workers to rotate the pier when necessary. The pier was lowered and put into place with hydraulic cables and gantry systems and hydraulic jacks. Final positioning photos were made with the GPS and precision jacks, located on each footing. The FFI then returned to the dock and supported the entire operation with the next footing.

