



## The New Lifting Bridge in Bordeaux, France- Mechanism Design Code Constraints and Freedoms

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### Abstract

While the design creates a visual lightness, the 2720 ton, 117m vertical lift span of the Jacques Chaban-Delmas Bridge in Bordeaux France is designed to carry four lanes of traffic, two sweeping pedestrian and bicycle paths and two light rail tracks. The unique design build process successfully drove a fierce competition resulting in several dramatic designs. This paper will focus on some of the innovative techniques that would not be permitted by North American design standards.

**Keywords:** movable, bridge, lift, machinery, design, sheave, Bordeaux

### 1 Introduction

This new bridge crossing in the City Centre of Bordeaux is the result of nearly a decade of planning, competition, design, and construction.

### 2 The Need

Before the year 2000, the Communauté Urbaine de Bordeaux (City of Bordeaux) had been planning a major expansion of their light rail and highway system, with the intent of improving access to the

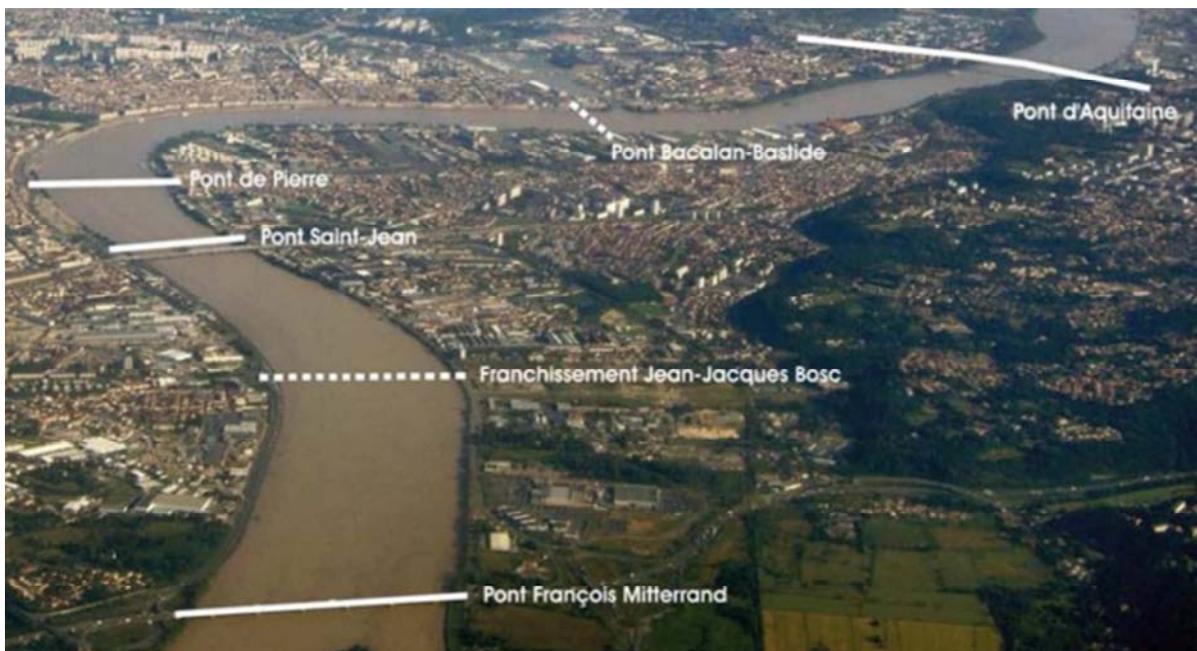


Figure 1. Project Location (Bordeaux City Centre) Crossing the Garonne River)