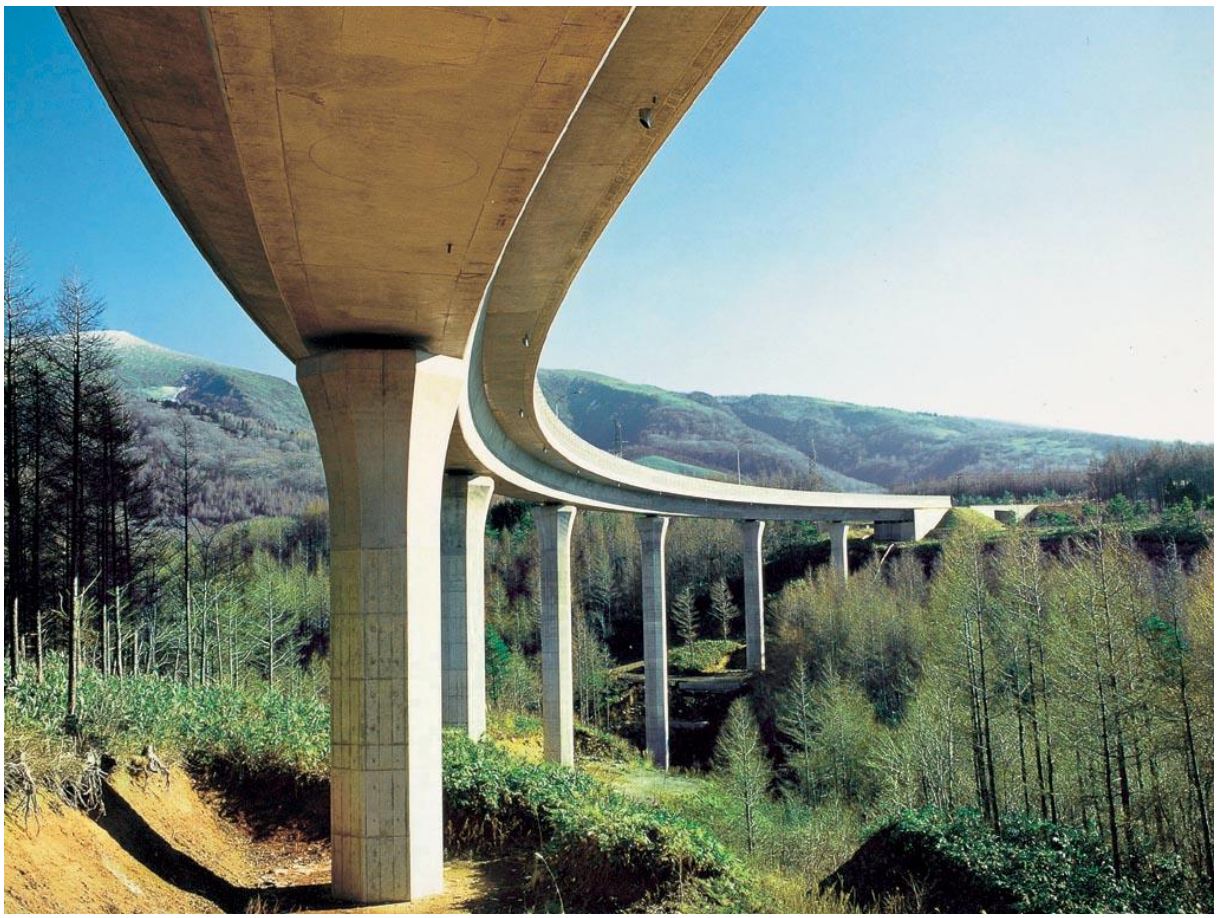
Yokomuki Bridge

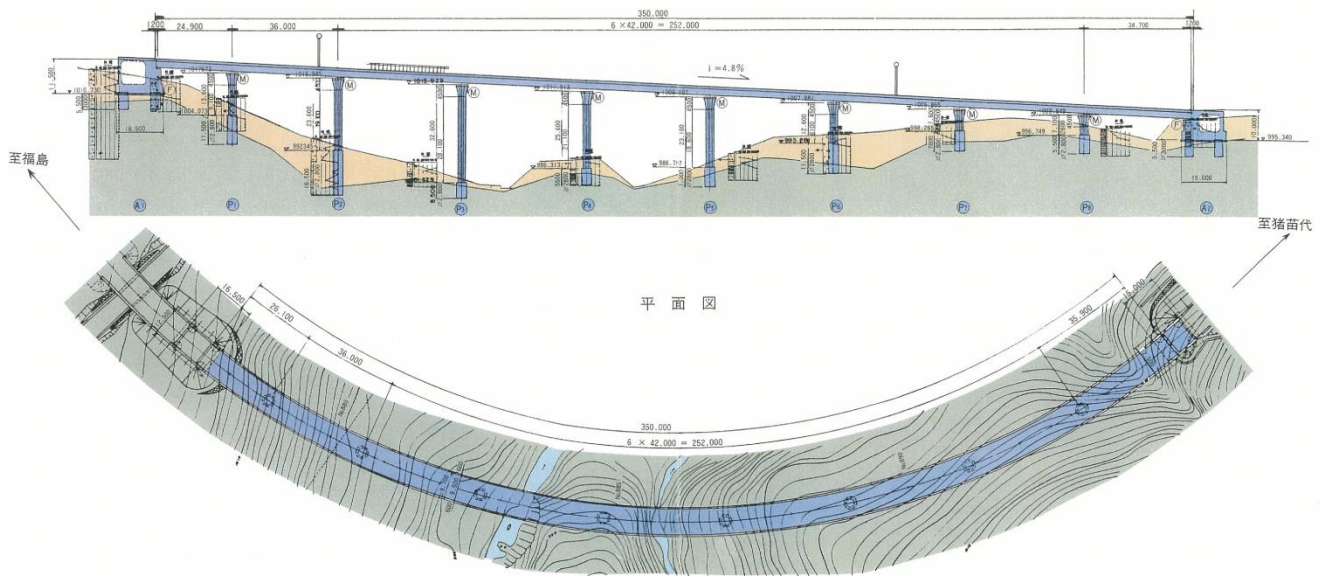
Brilliant curve on the bridge constituting the Tsuchiyu bypass



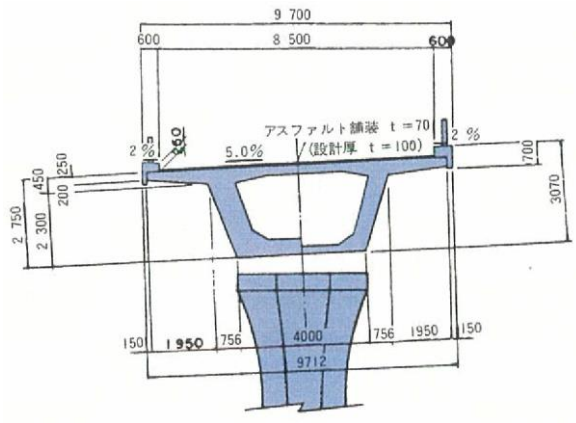
Client	: Fukushima Prefecture
Project Site	: Inawashiro Town, Fukushima Prefecture
Completion Year	: 1990
Bridge Length	: 350m
Bridge Type	: 9 Spanned Continuous Curve Box Girder
Width	: 9.7m
Span Length	: 42m (Standard Span)
Girder Height	: 2.75m (Constant)
Construction Method	: Incremental Launching Method
Vertical Gradient	: 4.8%
Award	: Japan Society of Civil Engineers Tanaka Award 1990 Japan Prestressed Concrete Institute Award for Work Category 1990
References	: Bridge and Foundation Engineering June 1990 Issue and Journal of Prestressed Concrete No.6 1993

The bridge is a continuous box girder bridge consisting of a single curve with 250m radius and constructed with incremental launching method. The pier is a slender single-column shape with an octagonal cross section, and is reinforced with a cable with a capacity of 270 tons during the launching process. Since the structure shape is a simple curve, the structure is such that the expansion and contraction of the superstructure due to temperature changes is minimized by the flat two-hinge arch design and the slender pier rigidity while simultaneously reduce the deformation on the arch. The trait of the structure is that one point is supported at the intermediate pier while most of the seismic force is sustained by the abutment, reducing the burden on the piers. As a result, the pier structure can be made smaller, minimizing the visual impact on the landscape of Bandai Asahi National Park.

Top and Side View



Cross Section View



Side Reinforcement for The P7 Pier

The Formwork and The Circular Bearing

Manufacturing of The Main Girder

Construction of the Superstructure Through the Launching Nose

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