

Enhancing Earthquake Resilience Istanbul Bridges

Renforcement de la résilience sismique
des ponts d'Istanbul



Overview

A major earthquake struck the Kocaeli region in 1999, located 110 km east of Istanbul. With the expectation that a major earthquake might hit Istanbul in the future, IHI carried out seismic reinforcement work on several major bridges in the city.

① **Old/New Golden Horn Bridge**

② **Ortaköy Viaduct**

③ **Mecidiyeköy Viaduct**

④ **1st Bosphorus Bridge**

⑤ **2nd Bosphorus Bridge**



Old / New Golden Horn Bridge

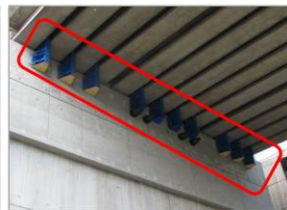
【Hysteretic Damper】



【Fall Prevention Cable】



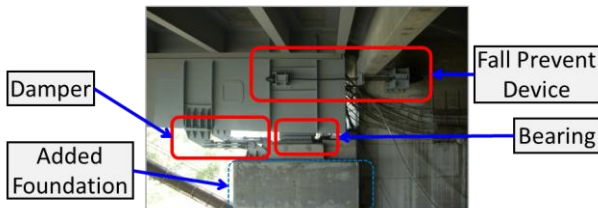
【Fall Prevention Device】



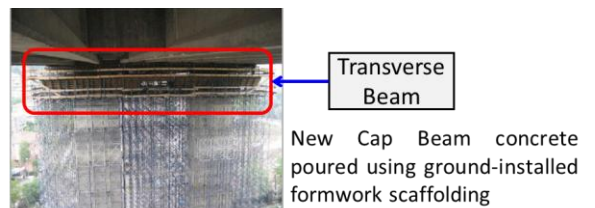
【Displacement Restrict Dvc.】



1st Bosphorous Bridge

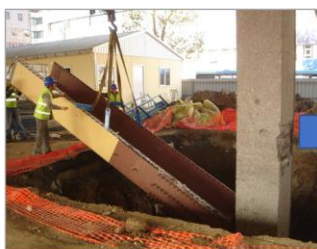


Ortaköy Viaduct



Seismic Reinforcement for Bridge Piers

Mecidiyeköy Viaduct



Steel lining plate installed around the existing PC pier



Concrete lining installed on the underground part



Pier head cut while supported by a steel bent



Lead rubber bearing installed. Work completed



Replaced Bearings to Seismic lead rubber bearing

