

# Cabuz II Bridge Construction Supervision



ANZUETO & ASOCIADOS

Contractor and Consulting Engineers

LOCATION		YEARS	
Guatemala		PROFESIONAL SERVICES	CONSTRUCTION (if applicable)
		2007 - 2008	
PROJECT OWNER INFORMATION			
a. PROJECT OWNER	b. CONTACT	c. CONTACT PHONE NUMBER	
MICIVI	Dirección General de Caminos	+502-2223-4000	
PROJECT REPORT (reach, size and cost)			

**Project Background** – This Project is located in the Malcatan municipality in the San Marcos Department, it is on the road between the towns of La Lima and Catarina. This bridge is on the area that was heavily affected by the Stan tropical storm on October 2005. Before the construction of the bridge, a 45 meters suspended bridge was in place, it wasn't affected by the storm but studies on the resulting topography changes caused by the flood indicated that the construction of a new bridge was necessary. Hydrologic and hydraulic studies were made and based on them two bridges were constructed (in line), one 43 meters and the other 30 meters with a separation of 50 meters.



**Project Description** - The final design was for two bridges, one 43 and the other 30 meters in length parallel to the existing suspension bridge. The structures were built using post tensed reinforced concrete, having a road track with of 8 meters and two pedestrian sidewalks 1 meter wide each. 200 meters up and down the bridge protection and alleviation works were constructed. The project also included 2 kilometers of paved road. Total cost of the project was Q 20 millions (US \$ 2.5 millions) and the project was built in 12 months.

**Technical Supervision** – A plan was made to make sure all work is up to the client technical specifications. Technical Supervision included hydrologic, hydraulic studies review and approval for all 16 rivers that were going to be crossed with bridges. All detailed engineering design and construction schedule was also reviewed and approved. A day to day log was kept on work progress and construction materials quality assurance tests. Anzueto y Asociados certified work progress and approved construction contractor payments.

**Hydrologic and Hydraulic Studies** – Hydrologic and Hydraulic Studies were taken into account for their design. Anzueto y Asociados reviewed all studies and certified that designs did take into account those studies.

**Quality Assurance** - Day to day verifications were made on the necessary construction materials tests including geotechnical soil tests, soil mechanics tests, concrete and asphalt tests and steel quality certificates.

**Construction Schedule and Payments** – On site personnel was available at all time to verify construction progress and make reports to the financial officer for payments authorization.

Project Key Elements
➤ Bridges
➤ Technical Supervision
➤ Hydrology and Hydraulics studies review and approval
➤ Detail Engineering Design Review and Approval
➤ Construction Schedule Review and Approval
➤ Quality Assurance Inspection
➤ Construction Contractor Payment Approval

