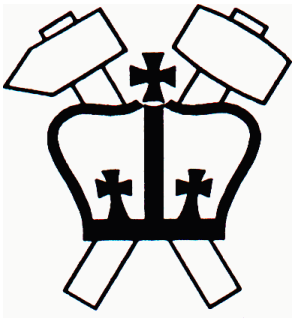
Department of Civil Engineering and Engineering Mechanics

Columbia University



Safety Evaluation of Bridge Scouring in Taiwan

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The illegal sediment extractions of river beds unearth the bridge foundation. The frequent typhoons induced high speed flood which also deepen the bridge piers scouring in Taiwan. To reduce damages induced by bridge scour, the monitoring and safety evaluation after consolidation measures of bridge scour are needed. 53 bridges were investigated in Taiwan. To screen out the scouring potential bridges, a preliminary rapid flood-resistant evaluation was established.

After the screen out process, the fast safety assessments were applied to the chosen bridges for evaluating the safety of bridge foundation encountering 100-year design flood. Through this process, chosen pile foundations or caisson foundations of the bridges can be evaluated. Bridges that required special attention were referred to the Administration of Transportation for further enhancements of the foundations. A new developed Live-bed Bridge Scour Monitoring System by Fiber Bragg Grating Sensors will also be briefly introduced.

February 17, 2009 (Tuesday)

3:00 - 4:00 p.m.
Room 627, Mudd

http://www.civil.columbia.edu/~ling/seminar