SEMINAR ANNOUNCEMENT

New York City Bridges: Seismic Role in Rehabilitation

by

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At 3:00pm, on 28th March 2000 (Tuesday) in Room 140 Ketter Hall, Department of Civil, Structural and Environmental Engineering

The seismic retrofit of major bridges in New York is a part of the bridge inspection and rehabilitation program mandated by Congress and administered by FHWA through local bridge authorities. The program responded to the finding that collapse of an Ohio River suspension bridge in 1968 was due to corrosion and fatigue of an eyebar joint and to the suspicion that other steel bridges, including suspension bridges, might be similarly weakened. Inspections in New York and throughout the Northeast have indeed revealed important instances of corrosion and fatigue damage which require extensive rehabilitation.

Awareness of seismic hazards for major transportation facilities in the New York City area has been increasing since the late 1980’s. Although there are striking similarities between the technical approaches for seismic retrofitting long span steel bridges in New York and in the western U.S., including consideration of site-dependent ground motions and the vulnerability of approach structures, there are also important regional differences. One major difference is that some New York bridges are much older than their western counterparts and, in some cases, are in much poorer condition due to corrosion and fatigue damage. Seismic retrofit, while important, is only one of several considerations that include rehabilitation for corrosion and fatigue of beams, trusses, connections, cables and anchorages. Another difference is that piers and anchorages of turn-of-the-century bridges are often constructed of unreinforced or otherwise nonductile masonry. Third, the high population density of New York presents the risk of collateral damage from fire and toppling of adjacent structures. Finally, maintenance and protection of traffic sometimes govern the choice of rehabilitation and retrofit solutions.

This seminar describes the status of seismic hazard definition for major bridges in New York and the retrofits that are being considered for several specific bridges.

All interested are invited. Refreshments will be served at 2:50pm.