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Concrete Vulnerability Study of the New York City Bridges

New York, NY

PROJECT NAME

Concrete Details Vulnerability Study of 450 Bridges in Region 11 (Five Boroughs of New York City)

PROJECT OWNER

NY State Department of Transportation

SERVICES PROVIDED

- Condition Inspection Vehicular Bridges
- Structural and Seismic Analysis

DATE OF SERVICE

1999 - Present

PROJECT DESCRIPTION

KS Engineers, P.C. (**KSE**) is providing detailed inspection and engineering assessment services for 75 bridges / 810 spans (of a total of 450 bridges/4,200 spans) located in all 5 boroughs of New York City (NYSDOT Region 11). The purpose of the project is to provide a detailed assessment of the vulnerability of the concrete details on these bridges.

Services consist of visual, hands-on, and in-depth inspections; review and assessment of the concrete details on both superstructure and substructure elements; preparation of a detailed database; and preparation of assessment reports. **KSE** is responsible for visual inspection of approximately 70% of the spans, hands-on inspection of 15% of the spans, and in-depth inspection of the remaining 15% of the spans.

In addition, a Structural Integrity Evaluation (SIE) of a number of bridges has been prepared. The SIE evaluates the overall condition of the bridge and includes inspection data; load ratings; steel, concrete, seismic, and collision vulnerability assessments; and flag reports. All results are documented in the SIE report. Also, **KSE** is preparing, under an extension of the original contract, repair drawings for the 5-mile long Bruckner Expressway viaduct. The viaduct has 176 spans and the repair plans are being prepared for the substructure piers rated three or less on the last biennial inspection.

All work on this project is governed by the *NYSDOT Concrete Details Vulnerability Manual* and the *Bridge Safety Assurance Manual*.

