American Society Of Civil Engineers

NORTH JERSEY BRANCH

Structural Technical Group November 2007 Dinner Seminar

BRIDGE INSPECTION, SAFETY ASSESSMENT AND BRIDGE PERFORMANCE MEASURES: A LOOK TO THE FUTURE

PRESENTED BY: **Bala Sivakumar, PE** - TransSystems/Lichtenstein Engineering Consultants

DATE: **Tuesday, November 27, 2007**

TIME: **Reception at 5:30, Dinner at 6:30 with Presentation to follow**

LOCATION: **The Newark Club,** One Newark Center, Newark, NJ

COST: $60 for ASCE members / $65 for guests / $50 for Government Employees / $25 for Students

REGISTER: **RSVP by Tuesday, November 20, 2007** ("No Shows" will be billed)
To register, please send your name, phone number, and email address to Mr. Satish Patel at 732.452.9200 or Satish.patel@jacobs.com or you may visit our website and register online at http://branches.asce.org/northjersey

PDH: Eligibility for 1 PDH Credit is under review.

With the August 1st collapse of the I-35W bridge in Minneapolis and our own NJ Section's Report Card giving our bridges a "D," greater certainty of their safety is needed. Mr. Sivakumar will review current and emerging trends in bridge inspection, bridge safety assessment, load capacity evaluation, and bridge performance measures. The reliability of visual bridge inspections can be highly variable and is influenced by many factors. Recent initiatives and emerging technologies such as FHWA's Long-Term Bridge Performance program, Structural Health Monitoring Systems and ITS applications will provide the high-quality quantitative data for better bridge management and decision making in the future.

With bridge rating terminology becoming more common in public discussion, terms such as "structurally deficient" and "functionally obsolete" cause public confusion and even anxiety. An overhaul of these terms using more objective data-driven and risk-based bridge performance measures is also needed. The AASHTO *Manual on Bridge Evaluation,* to be published in 2008 and being prepared by Mr. Sivakumar, will serve as a single standard and a comprehensive guide for all bridge evaluations and advance the use of structural reliability methods for bridge safety assessments.

Mr. Bala Sivakumar was the architect of the Load and Resistance Factor Rating evaluation philosophy and was the primary author of the 2003 AASHTO LRFR Manual and was selected by AASHTO to prepare the new AASHTO *Manual for Bridge Evaluation* that will be published in 2008. He currently serves as the Technical Consultant to the AASHTO Committee on Bridge Management and is frequently invited to make technical presentations to the AASHTO Committees during their annual meetings.