2015 94th TRB Annual Meeting
Workshop #166

“Advancement of the State-of-the-Art in Traffic Structures”

• Xiaohua “Hannah” Cheng - New Jersey DOT; TRB AFF10(1)
Background

- Several NCHRP projects have been completed
  - NCHRP 10-70 – cost-effective connection detail (fatigue resistance)
  - NCHRP 10-74 – high mast light tower (fatigue load)
  - NCHRP 10-80 – development of AASHTO LRFD for LTS
  - NCHRP IDEA – vibration mitigation device

- AASHTO has passed the ballot for the new LRFD Design Specifications for SLTS at 2014 Annual Meeting in Ohio

- Design, fabrication, and inspection practices and knowledge have advanced in the past decade

- Sponsored by
  - General Structures (AFF10)
  - Fabrication and Inspection of Metal Structures (AFH70)
  - Traffic Structures (AFF10(1))
PART I - Advancement in Research:


- **AASHTO LRFD Division I (Design) Overview** - Jay A. Puckett, BridgeTech, Inc.  
  Michael G Barker, Univ. of Wyoming

- **NCHRP 10-74**: Development of Fatigue Loading and Design Methodology for High-Mast Lighting Poles - Robert John Connor, Purdue Univ.


- **AASHTO LRFD Division II (Fabrication and Construction) & Division III (Asset Management) Overviews** - Michael J. Garlich, Collins Engineers, Inc.

- **NCHRP IDEA 20-30**: Reducing Fatigue in Wind-Excited Traffic Signal Support Structures using Smart Damping Techniques - Richard Christenson, Univ. of Connecticut
PART II - Advancement in Practice:

- **Effect of Hot Dip Galvanizing on Fatigue Performance**
  - Karl Frank, Hirschfeld Industries

- **Fabricator Perspectives**
  - Carl Joseph Macchietto, Valmont Industries Inc.

- **Inspection Findings and Implications**
  - Michael J. Garlich, Collins Engineers, Inc.
Statistics

- 3.5 hours: presentations plus Q & A

- Total attendees: ~ 32+

- State DOTs: ~ 15
  - DE (1), FL (1), IA (1), MD (2), NJ (2), PA (3), TX (1), VA (2), FHWA (2), ...

- Academia ~6
- Industry ~11

- NCHRP Report 796 (10-80 on LRFD for LTS) distributed on site (20~30 copies)
• Workshop Presentations are available at TRB AFF10 Website:
  
  https://sites.google.com/site/trbcommitteeaff10/welcome/files

• AASHTO/State Implementation Training

• TRB Webinar for NCHRP 10-80 implementation (???)

Thank you very much!