VDOT Northern Virginia Traffic Signal Workshop, 2016

ANCILLARY STRUCTURES DESIGN

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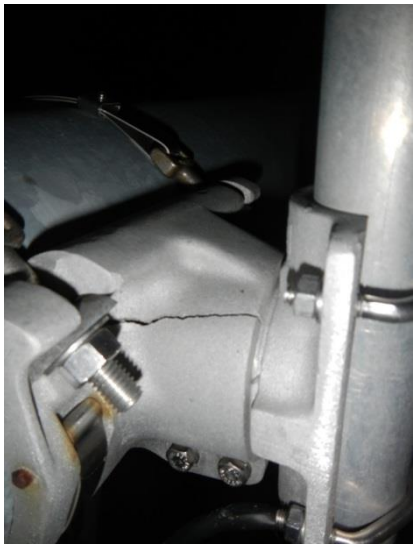
Ancillary Structures Challenges



IIM-S&B-90.2 – VDOT Guidelines for AASHTO Specifications

- Supplemental Specifications provides requirements for IIM in contracts
- Adopts AASHTO 2013 Specifications, with VDOT Guidelines
- Design wind speeds vary based on geographic area
- Maximum span lengths in TE-375 IIM

VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: Ancillary Structures	NUMBER: IIM-S&B-90.2 IIM-TE-382.1
SPECIFIC SUBJECT: VDOT Guidelines to AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals, 6th Edition, 2013 with 2015 interims	Date: April 28, 2016
	SUPERSEDES: IIM-S&B-90.1

Fatigue Importance Categories		
Structure Type	**Span Length*, ft.**	**Fatigue Category**
All structures supporting dynamic message signs	All span lengths	Category I
Overhead sign span structure	> 150	Category I
	≤ 150	Category II
Overhead sign cantilever structure	> 50	Category I
	≤ 50	Category II
Overhead sign butterfly structure	All span lengths	Category II
Signal mast arm**	> 75	Category I
	50 to ≤ 75	Category II
	< 50	No fatigue design required
Overhead signal structure	> 190	Category I
	≤ 190	Category II
High mast light poles	All lengths	Category I
Signal span wires, conventional lights poles and ITS device support poles (excluding DMS)		No fatigue design required

PF-8 Signal Pole/High Mast Foundation: Standard Updates - Foundations

- Torsion wings are optional, as determined by the foundation designer
- Foundations are elevated 1’ above grade
- Spread footing is allowed to be considered per the Standard