

ANALYSIS OF VALMONT INDUSTRIES LIGHTING STRUCTURE
IN ACCORDANCE WITH AASHTO-1994 RQMTS. (FINAL DEFLECTED POSITION)
BY MLS 03/31/2010 VERSION Fuse 1.9.0.363

SUBJECT: MASSACHUSETTS, 25' MAST ARM (WORST CASE LOAD)

FOLDER: MATR335 FILE: 25

THIS PAGE PROVIDES THE PERTINENT INFORMATION CONCERNING THE ANALYSIS
OF THE ARM-TO-POLE ATTACHMENT COMPONENTS OF THE SIGNAL AND SIGN ARMS.

***** INPUT DATA *****
ARM 1

CONNECTION BOLT DATA
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NUMBER = 4
BOLT DIAMETER (IN) = 1.000
ASTM SPECIFICATION = A325
HORIZONTAL SPACING (IN) = 10.88
VERTICAL SPACING (IN) = 10.88

ATTACHMENT PLATE DATA
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HORIZONTAL WIDTH (IN) = 13.38
VERTICAL WIDTH (IN) = 13.38
THICKNESS (IN) = 1.000
YIELD STRENGTH (KSI) = 36
GUSSET THICKNESS (IN)
- VERTICAL = 0.250
- HORIZONTAL = 0.250

ATTACHMENT TYPE
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ARM 1: SIMPLEX - THRU BOLTS

***** RESULTS *****

ANALYSIS OF SIGNAL/SIGN ARM SIMPLEX BOLTS
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MAX. BOLT LOAD	GROUP LOAD NO.	TENSION LBS	APPLIED STRESS KSI	ALLOWABLE STRESS KSI
ARM CSR				
1 0.33	2	13612	17.33	53.20

ANALYSIS OF SIGNAL/SIGN ARM SIMPLEX PLATES
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MAX. PLATE CSR	GROUP LOAD NO.	APPLIED STRESS KSI	ALLOWABLE STRESS KSI	SLOPE OF BEND LINE DEGREES	LENGTH OF BEND LINE IN
ARM CSR					
1 0.86	2	28.73	33.26	45	11.92