

SUBJECT: MASSACHUSETTS, 30' MAST ARM

FOLDER: MATR335 FILE: 30

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) = 1.250
ASTM SPECIFICATION = A325
HORIZONTAL SPACING (IN) = 13.88
VERTICAL SPACING (IN) = 13.88

ATTACHMENT PLATE DATA
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HORIZONTAL WIDTH (IN) = 17.88
VERTICAL WIDTH (IN) = 17.88
THICKNESS (IN) = 1.500
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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ARM	MAX. BOLT CSR	GROUP LOAD NO.	TENSION LBS	APPLIED STRESS KSI	ALLOWABLE STRESS KSI
1	0.38	2	21866	17.82	46.55

ANALYSIS OF SIGNAL/SIGN ARM SIMPLEX PLATES
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ARM	MAX. PLATE CSR	GROUP LOAD NO.	APPLIED STRESS KSI	ALLOWABLE STRESS KSI	SLOPE OF BEND LINE DEGREES	LENGTH OF BEND LINE IN
1	0.57	2	19.03	33.26	45	16.29