

SUBJECT: MASSACHUSETTS, 15' MAST ARM

FOLDER: MATR335 FILE: 15

ANALYSIS OF ANCHOR BOLTS

GROUP LOAD NO.	CRITICAL WIND DIRECT* (DEG)	MAX. COMB. STRESS RATIO	AXIAL FORCE (LBS)	SHEAR FORCE (LBS)	APPLIED		ALLOWABLE		BOLT CONST "K"
					STRESS (KSI)		STRESS (KSI)		
					AXIAL	SHEAR	AXIAL	SHEAR	
1	0	0.08	2129	0	2.20	0.00	27.50	16.50	0.60
2	60	0.52	18187	4173	18.77	4.31	38.50	23.10	0.60
3	60	0.33	11814	2150	12.19	2.22	38.50	23.10	0.60

ANALYSIS OF BASE PLATE

COMBINED STRESS RATIO	=	0.54
GROUP LOAD NUMBER	=	2
CRITICAL WIND DIRECT.*	=	55.00 DEGREES
ALIGNMENT OF THE BEND LINE	=	315.00 DEGREES
BOLT FORCE	=	18299 LBS
BOLT-TO-BEND LINE MOMENT ARM	=	3.50 IN
WIDTH OF BENDING SECTION	=	13.63 IN
APPLIED BENDING STRESS	=	18.05 KSI
ALLOWABLE BENDING STRESS	=	33.26 KSI

* THESE ARE DIRECTIONS TOWARD WHICH THE WIND IS FLOWING.