

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, 35' MAST ARM (WORST CASE LOAD)

FOLDER: MATR335 FILE: 35

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	0.26	10101	0	7.16	0.00	27.50	16.50	0.60
2	90	0.85	33164	19437	23.52	13.79	38.50	23.10	0.60
3	75	0.61	29532	9251	20.94	6.56	38.50	23.10	0.60

ANALYSIS OF BASE PLATE

COMBINED STRESS RATIO	=	0.74
GROUP LOAD NUMBER	=	2
CRITICAL WIND DIRECT.*	=	60.00 DEGREES
ALIGNMENT OF THE BEND LINE	=	315.00 DEGREES
BOLT FORCE	=	37066 LBS
BOLT-TO-BEND LINE MOMENT ARM	=	1.75 IN
WIDTH OF BENDING SECTION	=	10.13 IN
APPLIED BENDING STRESS	=	24.59 KSI
ALLOWABLE BENDING STRESS	=	33.26 KSI

* THESE ARE DIRECTIONS TOWARD WHICH THE WIND IS FLOWING.