

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, 30' MAST ARM

FOLDER: MATR335 FILE: 30

ANALYSIS OF ANCHOR BOLTS

GROUP LOAD NO.	CRITICAL		MAX.	AXIAL FORCE (LBS)	SHEAR FORCE (LBS)	APPLIED		ALLOWABLE		BOLT CONST "K"
	WIND DIRECT*	COMB.	STRESS RATIO			STRESS (KSI)	STRESS (KSI)			
								=====	=====	
1	0	0.16	6373	0	4.52	0.00	27.50	16.50	0.60	
2	80	0.70	28946	14776	20.53	10.48	38.50	23.10	0.60	
3	75	0.48	22922	7430	16.26	5.27	38.50	23.10	0.60	

ANALYSIS OF BASE PLATE

COMBINED STRESS RATIO	=	0.61
GROUP LOAD NUMBER	=	2
CRITICAL WIND DIRECTION*	=	60.00 DEGREES
ALIGNMENT OF THE BEND LINE	=	315.00 DEGREES
BOLT FORCE	=	30808 LBS
BOLT-TO-BEND LINE MOMENT ARM	=	1.75 IN
WIDTH OF BENDING SECTION	=	10.13 IN
APPLIED BENDING STRESS	=	20.44 KSI
ALLOWABLE BENDING STRESS	=	33.26 KSI

* THESE ARE DIRECTIONS TOWARD WHICH THE WIND IS FLOWING.