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, 20' MAST ARM (WORST CASE LOAD)

FOLDER: MATR335 FILE: 20

ANALYSIS OF ANCHOR BOLTS

GROUP LOAD NO.	CRITICAL WIND DIRECT* (DEG)	MAX. COMB. STRESS RATIO	AXIAL FORCE (LBS)	SHEAR FORCE (LBS)	APPLIED STRESS (KSI) AXIAL	APPLIED STRESS (KSI) SHEAR	ALLOWABLE STRESS (KSI) AXIAL	ALLOWABLE STRESS (KSI) SHEAR	BOLT CONST "K"
1	0	0.09	2366	0	2.44	0.00	27.50	16.50	0.60
2	65	0.55	18989	4611	19.60	4.76	38.50	23.10	0.60
3	60	0.35	12543	2273	12.94	2.35	38.50	23.10	0.60

ANALYSIS OF BASE PLATE

COMBINED STRESS RATIO	=	0.57
GROUP LOAD NUMBER	=	2
CRITICAL WIND DIRECT.*	=	55.00 DEGREES
ALIGNMENT OF THE BEND LINE	=	315.00 DEGREES
BOLT FORCE	=	19231 LBS
BOLT-TO-BEND LINE MOMENT ARM	=	3.50 IN
WIDTH OF BENDING SECTION	=	13.63 IN
APPLIED BENDING STRESS	=	18.97 KSI
ALLOWABLE BENDING STRESS	=	33.26 KSI

* THESE ARE DIRECTIONS TOWARD WHICH THE WIND IS FLOWING.