

ANALYSIS OF VALMONT INDUSTRIES LIGHTING STRUCTURE
 IN ACCORDANCE WITH AASHTO-2009 RQMTS.
 BY BNS 5/12/2014 VERSION Fuse 1.10.0.540 32-bit

SUBJECT: VERMONT, 42' MAST ARM & 16' LUM ARM

FOLDER: VTTRAF FILE: 4216

ANALYSIS OF ANCHOR BOLTS

GROUP LOAD NO.	CRITICAL	MAX.	AXIAL FORCE (LBS)	SHEAR FORCE (LBS)	APPLIED		ALLOWABLE		BOLT CONST "K"
	WIND DIRECT* (DEG)	COMB. STRESS RATIO			STRESS (KSI)	SHEAR	STRESS (KSI)	SHEAR	
1	0	0.14	14300	0	10.14	0.00	27.50	16.50	0.60
2	90	0.51	29093	13518	20.63	9.59	36.58	21.95	0.60
3	90	0.62	37989	8583	26.94	6.09	36.58	21.95	0.60

FATIGUE ANALYSIS OF ANCHOR BOLTS

LOAD CASE	STR. RATIO	AXIAL (LBS)
NATURAL WIND GUST	0.43	-4207.0
TRUCK-INDUCED GUST	0.22	-2159.4

* THESE ARE DIRECTIONS TOWARD WHICH THE WIND IS FLOWING.