

May 1, 2017

Cris Hernandez  
Senior Project Manager  
Milestone Communications

RE: Proposed 150' Sabre Monopole for DVP Chancellor Substation, VA

Dear Cris Hernandez,

Upon receipt of order, we propose to design and supply the above referenced Sabre monopole for a Basic Wind Speed of 89 mph (115 mph Ultimate) with no ice and 30 mph with 3/4" radial ice, Structure Class II, Exposure Category C and Topographic Category 1 in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas".

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors, resulting in an overall minimum safety factor of 25%. Therefore, it is highly unlikely that the monopole will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within the monopole shaft, above the base plate. Assuming that the wind pressure profile is similar to that used to design the monopole, the monopole will buckle at the location of the highest combined stress ratio within the monopole shaft, resulting in the portion of the monopole above leaning over and remaining in a permanently deformed condition. ***Please note that this letter only applies to the above referenced monopole designed and manufactured by Sabre Towers & Poles.*** The fall zone of this structure will be in accordance with applicable Spotsylvania County, VA ordinances.

Sincerely,

Robert E. Beacom, P.E., S.E.  
Senior Design Engineer

