February 7, 2025

Denise Vestuto
T-Mobile

RE: Proposed 190' Sabre Monopole for City Of Naperville, IL

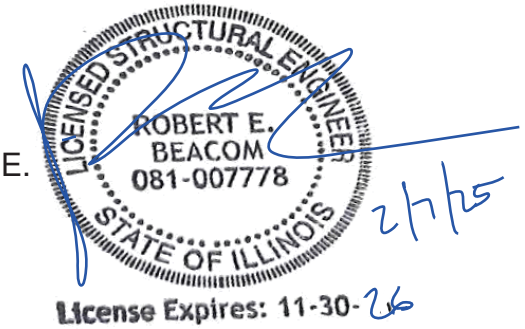
Dear Denise,

Upon receipt of order, we propose to design and supply the above referenced Sabre monopole for an Ultimate Wind Speed of 107 mph without ice and 40 mph + 1.5" ice, Risk Category II, Exposure Category C, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA 222-H-2017 "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. 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. This is likely to result in the portion of the monopole above leaning over and remaining in a permanently deformed condition. This would effectively result in a fall radius of 55' at ground level. *Please note that this letter only applies to the above referenced monopole designed and manufactured by Sabre Industries.*

Sincerely,



Robert E. Beacom, P.E., S.E.
Engineering Manager

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