November 29, 2023

Ms. Mary Caulfield
Site Development Manager
TowerNorth

RE: Proposed 180' Sabre Self-Supporting Tower for WI1040-A Lake Kegonsa, WI

Dear Ms. Caulfield,

Upon receipt of order, we propose to design a tower for the above referenced project for an ultimate Wind Speed of 115 mph and 40 mph + 3/4" radial ice, Structure Class II, Exposure Category D, and Topographic Category 1 in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas". The tower will be designed to support a total of four (4) wireless carriers at the following elevations: 175', 163', 153' and 143' (AGL).

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors. Therefore, it is highly unlikely that the tower 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 one or more of the tower members in the upper portion. This would result in a buckling failure mode, where the loaded member would bend beyond its elastic limit (beyond the point where the member would return to its original shape upon removal of the wind load).

Therefore, it is likely that the overall effect of such an extreme wind event would be localized buckling of a tower section. Assuming that the wind pressure profile is similar to that used to design the tower, the tower is most likely to buckle at the location of the highest combined stress ratio in the upper portion of the tower. This would result in the portion of the tower above the failure location "folding over" onto the portion of the tower below the failure location. *Please note that this letter only applies to the above referenced tower designed and manufactured by Sabre Towers & Poles*. In the unlikely event of total separation, this would result in a fall radius less than or equal to 127.5'.

Sincerely,

WISCONSIN
AMY R. HERBST
E-38026
SIOUX CITY
IA
PROFESSIONAL ENGINEER
11/29/23

Amy R. Herbst, P.E.
Senior Design Engineer