2022 PLS-CADD Advanced Training and User Group

The Effects of Stringing Direction on Wind Loads

by

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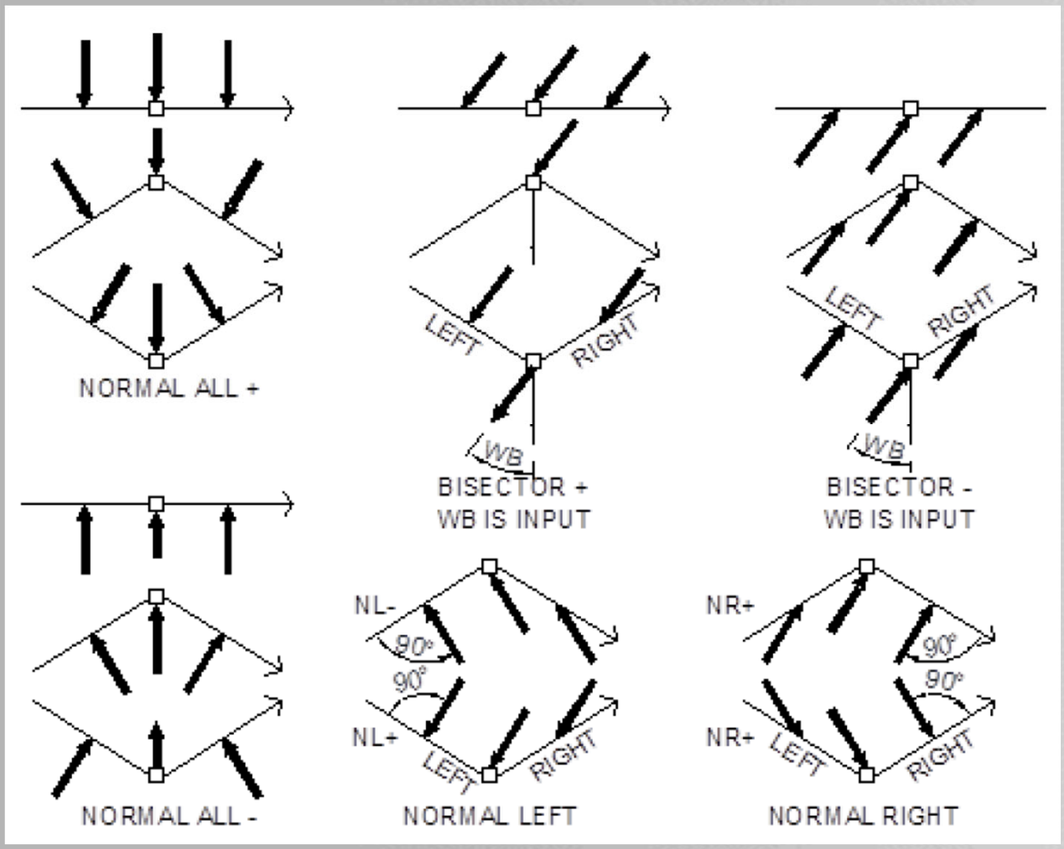
Power Line Systems

Wind Load Models



2. Horizontal load component

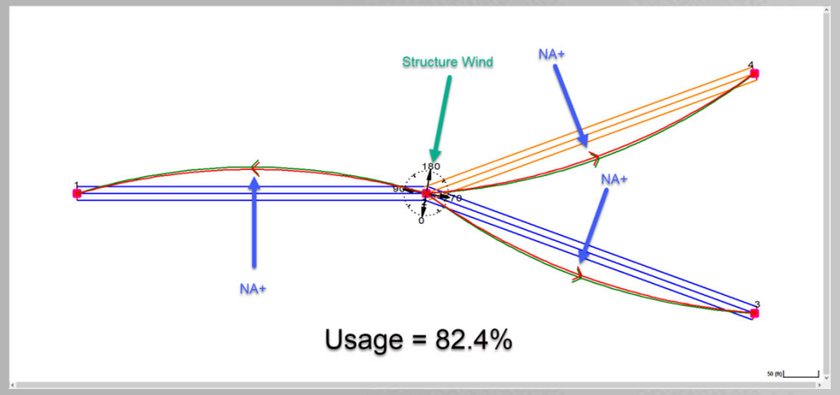
The horizontal load shall be the horizontal wind pressure of determined under Rule 250 applied at right angles to the direction of the line using the projected area of the conductor or messenger and conductors spacers, or equipment that it supports, ice covered where required by Rule 250.

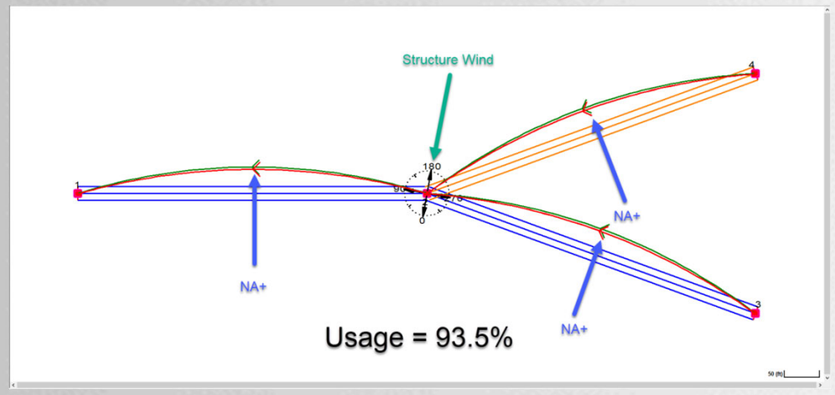
NOTE: The projected area of the conductor or messenger is equal to the diameter of the conductor or messenger, plus ice if appropriate, multiplied by the span length (see Rule 252B4). See Rule 251A2 for force coefficient values of different surface shapes.

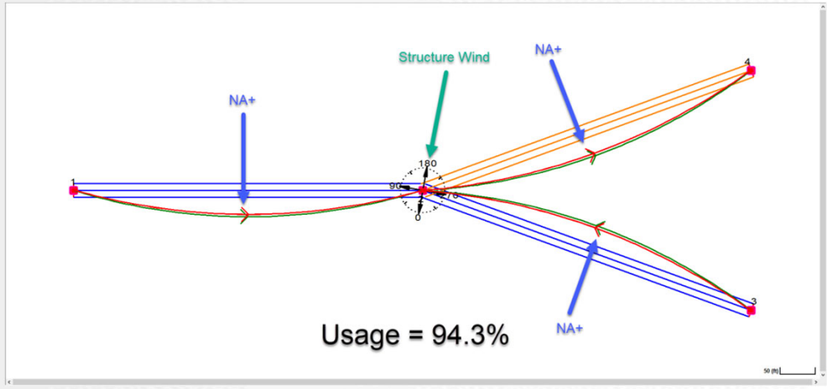
3. Total load

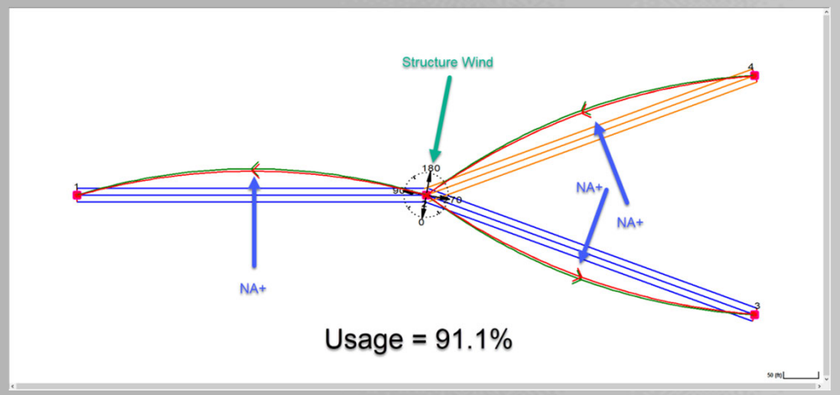
The total load on each wire, conductor, or messenger shall be the resultant of components 1 and 2 above, calculated at the applicable temperature in Table 251-1, plus the corresponding additive constant in Table 251-1. In all cases the conductor or messenger tension shall be computed from this total load.

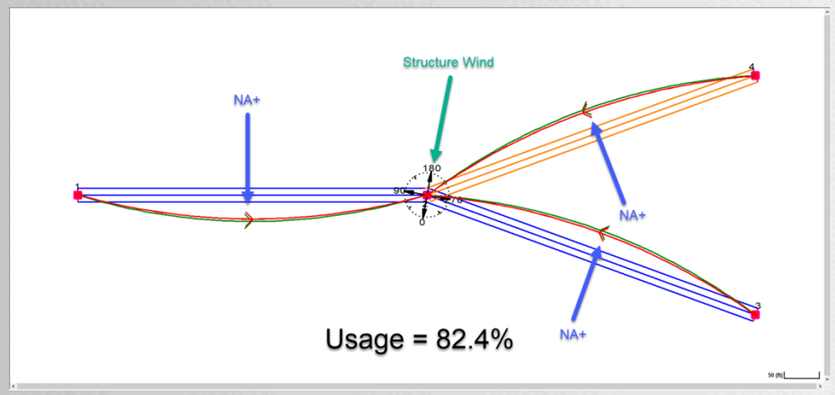
Station Based NA+ Impacts

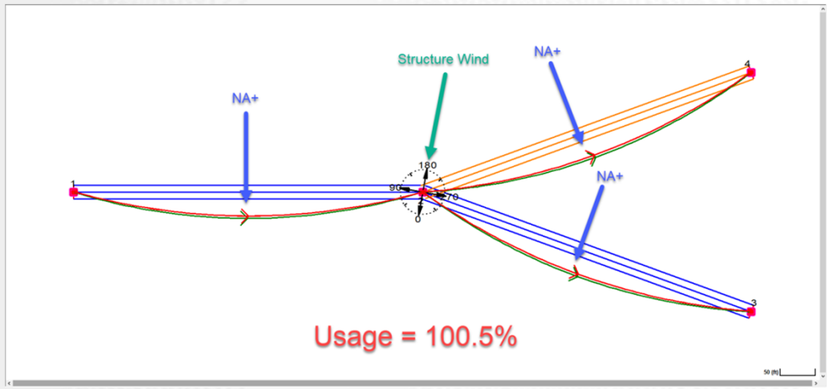






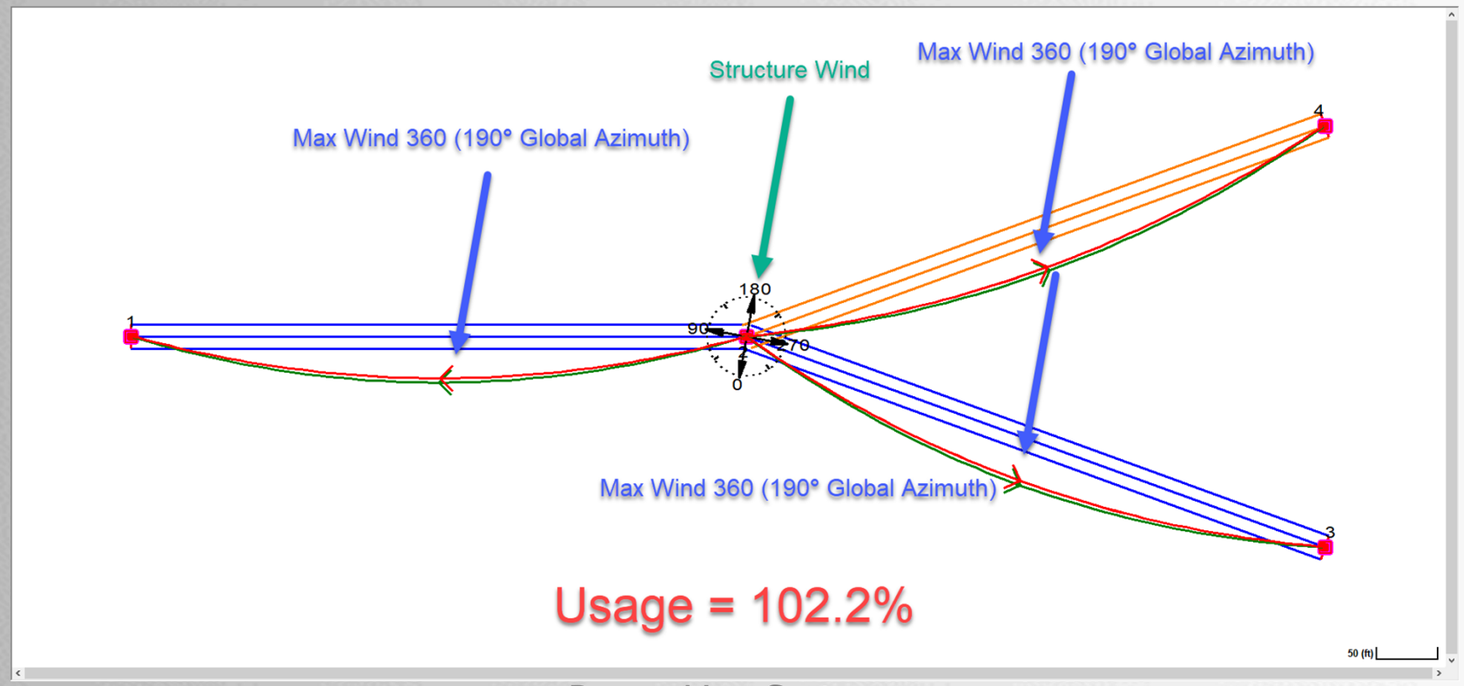






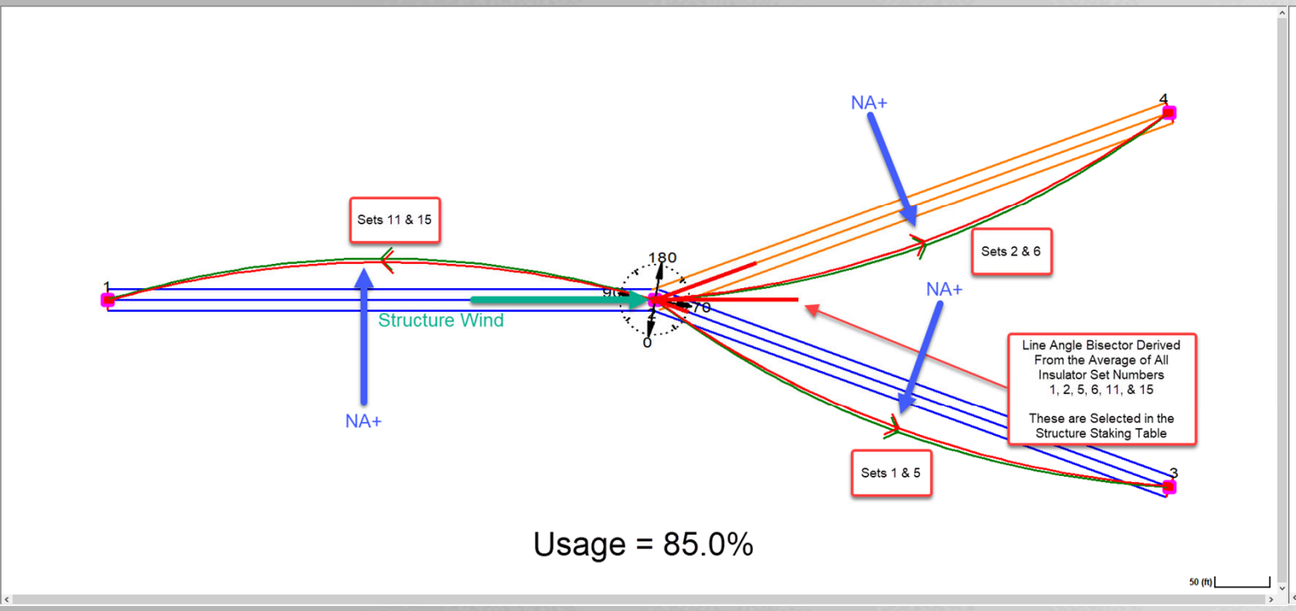
Max Wind 360 Impacts

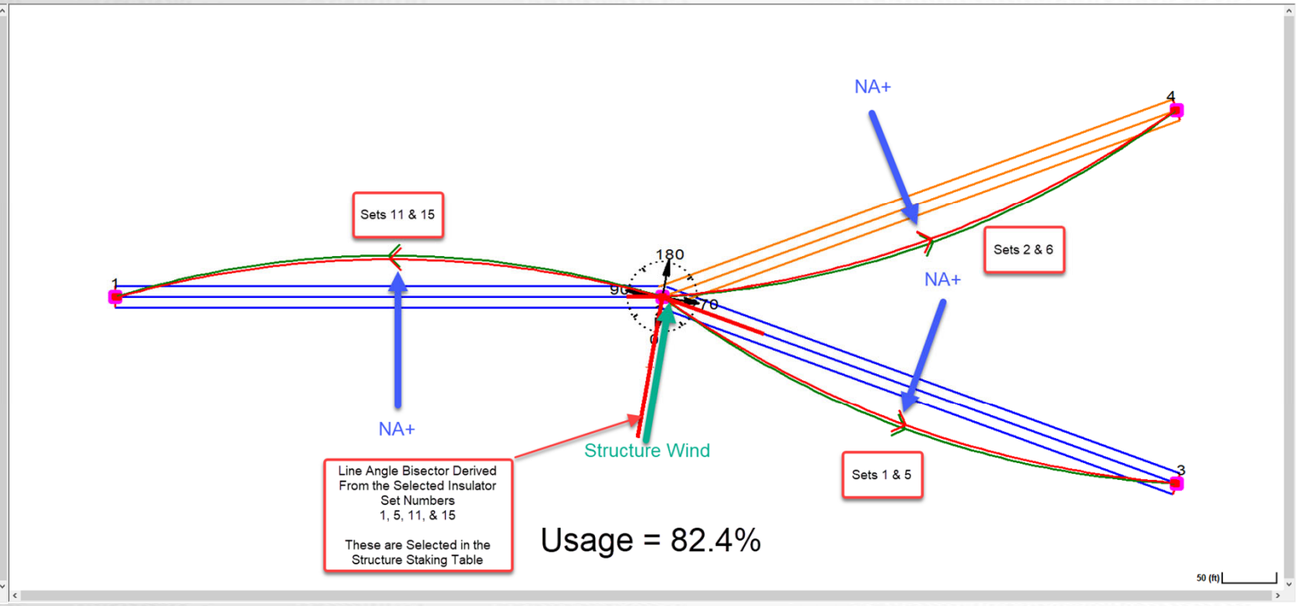
- Immune to stringing direction
- Single global wind direction applied to all spans and structure at the azimuth that yields the highest usage



XY Based NA+ Impacts

- Structure bisector wind is based on angle formed by selected wires in the structures staking table





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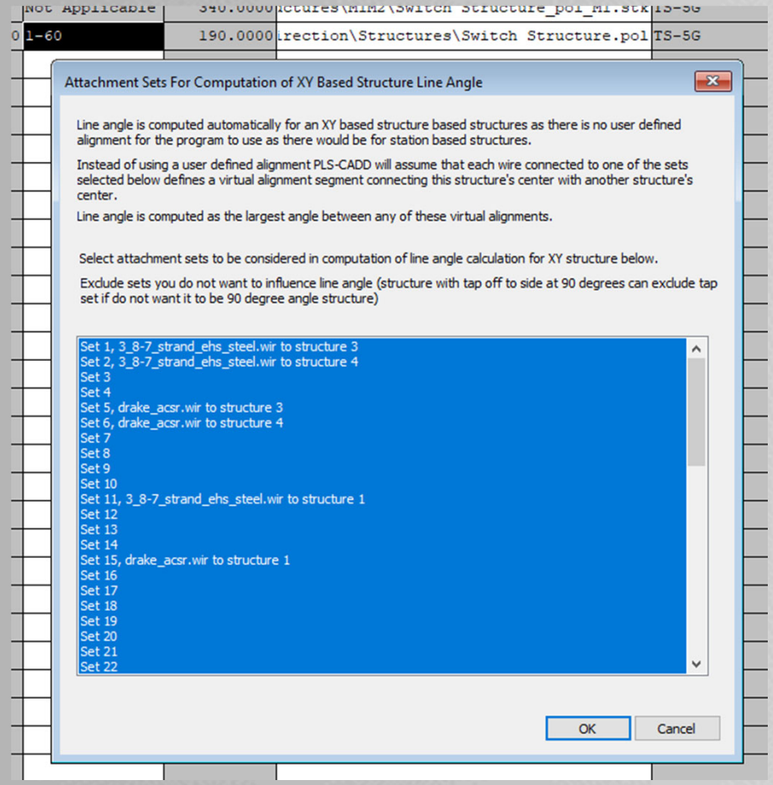

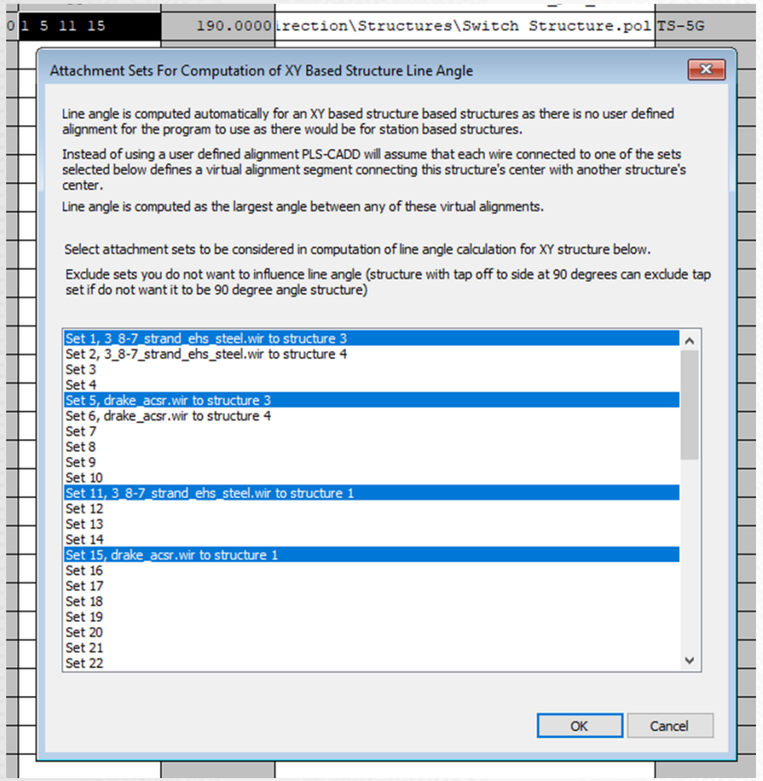

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