



**Q:** In older versions of RISA-3D using the Open Structure loading caused loading on all members, even the ones that some consider shielded. This would cause a fairly conservative loading on all members. Has this been changed in the current version of RISA-3D?

**A:** The open structure area loading operates the same way as in prior versions- there is no shielding.

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**Q:** Is this a conservative interpretation of note 1 in figure 29.5-3?

**A:** Yes, conservative assumptions were used wherever they significantly streamlined the application of wind loads.

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**Q:** Is note 1 just poorly written? It reads that the  $A_f$  is the solid area of a plane. Plans are 2 dimensional but the transient loads appear to be 3 dimensional

**A:** Note 1 assumes that all load acts at the windward face. In this presentation, we are splitting the load evenly between the windward and leeward faces. Matt considers that more accurate but it's entirely engineering judgement.

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**Q:** Applying the open WL to all members is not consistent with the approach specified by ASCE's "Wind Loads for Petrochemical and Other Industrial Facilities" for open structures with multiple bays. Is there an option to apply open structure WL to a specified bay?

**A:** Our approach was strictly based off ASCE7. For applying wind load to a specific bay, you would use line load instead of area loading which will be demonstrated for the ice loading shortly.-

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**Q:** For Ice loading, is the  $V=40$  mph speed also ultimate (strength level) as for the wind without ice ( $v_{ultimate} = 120$  mph)? Both the ASCE 7 05 (ASD wind) and 10 (ultimate wind) have the same ice wind speed maps. Based on the load combinations (both ASCE 7 05 and 10), Wind with ice seems to be ultimate ( $0.7W_i$  for ASD)

**A:** Since the wind load value is coming out of ASCE7-10 as well, we assumed that they are internally consistent (both Strength level).

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**Q:** Will RISA ever allow us to create our own Load Categories, instead of having to use the "canned" ones?

**A:** You can always reference the load categories by the BLC number. The Load Combination Generator relies on the built-in categories so those will always need to be defined by RISA.

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**Q:** Would you think full wind loading on one half of the tank would be equivalent to your loading on all plate elements?

**A:** Maybe, it might be worth investigating with a test model.

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**Q:** Won't the tower wind load apply to the tank legs? In the x direction?

**A:** Yes, in this case the example shown was over-conservative.

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**Q:** What is the difference between trussed towers and lattice framework? In this case, couldn't either have been used?

**A:** Yes, it's entirely up to your judgement.

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**Q:** Are you applying a wind torsion to account for wind not being aligned with the axis? Please reference a section in ASCE 7-10 for further information.

**A:** We're applying it to check for torsional failure modes of the entire structure- see ASCE7-10 Figure 27.4-8

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**Q:** Should the wind-on-ice be on the projected surface rather than just in the orthogonal direction?

**A:** The calculation of wind load magnitude was based on projected size outside the program.

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