

RISA Webinar Q&A

Using RISAFloor for Commercial Building Design

April 22, 2010

- Q: Where do you enter customized built-up beams (3-Plate)?
- A: Are you referring to a built-up wide flange using three plates? If so, then you can go into the Shape Database, select WF (Wide Flange), and then select Add. You enter the dimensions and the program will automatically calculate the section properties.
- **Q:** How does RISA account for the strong & weak positions of the composite studs (as shown in the AISC Commentary Section I3)?
- A: Are you referring to the Rg and Rp factors in equation I3-3?¬ If so, then these are automatically calculated based on the stud parameters you define in Global Parameters. RISA fully applies the limits shown in Eqn I3-3. We internally compute Rp and Rg as shown in the table on pg 16.1-87 and use the correct values in the appropriate cases.
- **Q**: Can the Tapered area load feature be used to do hydrostatic loads?
- A: The tapered load feature can be used for hydrostatic loads or wind loads. This feature allows you to taper the load over the entire wall height or just a portion of the wall height.
- **Q:** Also, does RISAFloor account for the Direct Analysis Method as described in Appendix 7 of the AISC book?
- A: Both RISAFloor and RISA-3D are using the Direct Analysis Method when you specify the AISC 13th Edition as the design code.
- **Q:** How would you find your diaphragm loads over the frames (shear) so you could design your deck side lap fasteners?
- A: If you are using a flexible diaphragm, then RISA-3D will display the force diagrams for the diaphragm. If you are using a rigid diaphragm, you can use the Force Summation Tool to look at the story shear in each frame at each level.
- **Q**: In RISA-3D, are the beams still considered composite?
- A: Within RISA-3D the beams are considered non-composite.
- **Q:** If RISA-3D is not taking into account the composite action for the floor beams, wouldn't this produce overly conservative results?
- A: The lateral force resisting system (moment frames and braces) do not generally consider composite design. If this is a demand we get from customers then we can look at adding it into the program.
- **Q**: Are semi-rigid floors an available option?
- A: For semi-rigid diaphragms I would recommend inactivating the diaphragm and using plate elements.

- **Q:** Will this webinar be available as a recording or a written tutorial in the future?
- A: We will be posting the recorded session to our website shortly. I will send you a special code to view the webinar for free for two weeks. If you need to view it again in the future please send a request to info@risatech.com. We will also be posting the Power Point presentation and Question/Answer session to our web site.
- Q: Are live loads reduced on moment frame columns?
- A: RISAFloor will reduce the live load to the columns for gravity design. We do not perform live load reduction on the RISA-3D side though. We plan to give users an option to reduce live loads on their RISA-3D members in the release scheduled for early 2011.
- **Q**: Are there going to be more RISAFloor classes like this one?
- A: We plan to offer live webinars monthly. The topics will vary but a good portion of them include information on RISAFloor. You can also view the **Online Video** tutorial section of our website. We also offer a two day training course on RISAFloor. This class was offered last week but we have another session in August. It's a live class in our California offices.
- Q: Can RISAFloor/RISA-3D design for flexible horizontal diaphragms?
- A: RISAFloor/RISA-3D can analyze both flexible and rigid diaphragms. Flexible diaphragm analysis was added in RISAFloor 4.1.
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- Does RISAFloor have the ability to do a proper vibration analysis in regards to Open Web Steel Joists? Will RISAFloor indicate the required moment of inertia for the joist?
- A: RISAFloor does not currently do vibration checks for open web steel joists. Vibration checks are done on hot rolled steel members per AISC Design Guide 11. RISAFloor will check the Joist girder deflection checks based on the moment of inertia. If the deflection criteria is not met, RISAFloor will give you a warning message that the girder fails the deflection checks.
- Q: When you assign a floor an elevation, is that elevation the top of slab or top of steel members?
- A: The floor elevation is the location of the applied load and the elevation of the diaphragm.
- Q: Can RISA-3D design concrete slender walls (tilt-up) including P-Delta effects per SEAOC Yellow book method?
- A: I would recommend using a Wall Panel to model tilt-up walls within RISA-3D. The P-Delta effects are considered on this wall. However, we are not currently designing the reinforcement. We plan to add this feature in the early 2011 release.
- 0: Does RISAFloor have the capacity to analyze and design two-way concrete slabs?
- A: RISAFloor does not currently design elevated concrete slabs. This feature is currently under development and will be added in 2011. At this time, the rigid diaphragm assumption is used for lateral load distribution.

- 0: How would you suggest modeling cantilevers for partial composite design and checking deflections?
- A: At this time, RISAFloor cannot design composite beams for negative moment. This means that cantilever beams cannot be designed for composite behavior. However, RISAFloor will produce the moments, shears and deflections for those beams.
- Q: At roof levels, can RISA Floor design continuous span beams or only simple span beams?
- A: RISAFloor can design both continuous, multi-span beams and single span beams.
- **Q**: Are seismic joint checks possible now with RISA-3D?
- A: The AISC 341 Seismic Provisions are being added to RISA-3D 9.0 which is scheduled for release in August 2010.

To view the webinar or download a copy, please visit www.risa.com/webinar