#	Question	Answer(s) & Additional Information	
	Design of Multi-Story Wood Buildings in RISA - Q&A Report		
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1	Preemptive questions for you... What is the beat way to model discontinuous elements and how to model shearwalls where the wall above is shorter than the wall below.	For the shearwall modeling, you should just model them as such in RISAFloor (at each level), the regions for the walls would align and then chord straps would be designed based on the geometry of the walls above/below	
2	The flexible diaphragm result report can be obtained thru RISA3D yet?	Jung, the results for this are simply the loads that get distributed to the corresponding lateral elements in RISA-3D. These loads are visible as point/line loads in RISA-3D. You can also see information in the detailed report when using flexible wood diaphragms as shown in this section of our Help file: See Flexible Diaphragm - Detailed Reports	Link
3	Is the lateral analysis occuring for the full building (similar to ETABS)? Or is there some crudeness/simplifications associated with a story-by-story evaluation?	The wind/seismic loads are determined at each level and then applied at the respective diaphragms. These are all available in RISA-3D and then the loads are distributed by the diaphragms to the connected elements based on the diaphragm behavior chosen. The Load Generators are applying loads to the diaphragms, but the stiffness of the entire structure is taken all at one time during the solution. So, the "full building" is being analyzed not just "story-by-story"	
4	How can we model dummy members that act like an open web truss?	You can find the workflow for this by reading the article on modeling trusses in RISAFloor.	Link
5	Are "non-shearwall" wall panels allowed or must all walls be analyzed as shearwalls?	Yes, you can analyze walls as "gravity only" if you want.	
6	For multi-story buildings, is there a way to take into account hold down eccentricity for the upper level? We typically utilized ATS system for multi-story which cases under estimation for hold down forces. Separately, can a hold down be called out above the lowest level? We have attemted this before but the model does not seem to deflect or transfer load correctly.	Hold-downs are only designed at the bottom level, but chord-straps can be designed between upper levels. Currently, we only support chord straps and not the Simpson ATS system	
7	When I tried to draw a construction line on imported dxf drwaing layer background, the dxf drawing layers disappeared.	Yes, this is currently a limitation in the way construction lines are associated with imported dxf files. We have added this as a future enhancement.	
8	When using a segmented approach, do you have to model the segments as separate walls?	No. The different parts are incorporated as regions in the individual wall.	
10	Quite often architects like to stagger windows/openings. How does the program handle this?	The program would create regions based on the positions of the openings and then attempt to design the regions through out the wall stack according to the position of the openings. If a design cannot be achieved, the program will render an error/warning message.	
11	Can you drop in openings from the plan view to snap to an architectural background?	No, openings can only be drawn using the wall panel editor.	
12	Can perpendicular interior walls be modelled that intersect an exterior wall or only at the ends of a perimeter wall segments?	Yes, walls can intersect anywhere and don't have to be connected at the ends of walls.	
13	Do you need to model columns at the end of walls, or does it account for the extra accumulated loads at those locations in the design of the wall?	RISAFloor doesn't currently incorporate "pilasters" or additional structure the the end of walls or locations of point loads. These loads are "spread out" over the wall using the finite element mesh and then the studs throughout the entire wall are designed for these loads.	
14	Will Risa check out of plane bending in the stud walls?	No, RISA makes the assumption that the wood walls are "tied" to the diaphragms and therefore only take the in-plane loading for incorporation in the design results.	
15	Does RISA-3D account for different stiffnesses between plywood shear walls with different edge nailing? and between wood shear walls and concrete shear walls?	Yes, in the wall definition (wall design rules) you can set the nailing requirements and select various conditions when selecting the plywood/OSB being used - also, the stiffness differences between wood and concrete would be included (walls are always meshed) and therefore the load transferred to walls with differing stiffness would be taken into account.	
16	Can RISA consider continuous beams?	Yes, you would need to model the beam and choose the it is "continous" when creating it.	
17	Does the program allow for the FTAO method to be done when a door is modeled as opposed to a window? Currently outside the scope of the APA FTAO calculator. If so do you have any documentation on how this is performed?	To my knowledge, we don't have any guidance for doors (similar to the APA FTAO calculator). Generally, the math just doesn't work out.	
18	Let say, I have 4 stories wood building with corridor shearwall. Could I define the diaphargm as rigid in the long direction. flexible in short direction ?	No, you have to select a diaphragm type for a specific "slab/diaphragm edge". You can have multiple diaphragms at the same level but the slabs/floors have to be seperate. See the article on multiple diaphragms in the same building.	Link
19	Do the walls automatically get a column where a beam intersects?	No.	
20	Can you place a wood column (say one that supports a girder) on top of a wall below?	On top of a wall, yes. Just not within a wall.	
21	Is it possible to use the program for the design with discontinuous walls?	No, this is not possible. Diaphragrms will break up wall panels into individual regions and design the region accordingly.	
22	Is there a way to copy elements between floors after you have copied a floor plan?	If you are using the Parent/Child relationship, then yes but not if they are just a simple copy, you would have to add the beams individually.	
23	What is the method for adding a roof with a ceiling floor?	See the section in our Help file on Ceiling Diaphragm for Sloped Roofs.	Link

24	What will be the limit for the number of floors for shear wall to work? Can we design 4 or 5 story building with the RISA software?	Yes. There is no limit to the height of your building or shear walls.	
25	When creating a gable roof, does the stud wall at the gable end need to modeled as two separate walls joined at the ridge line?	Yes, that is correct.	
26	What determines the rigidity of the semi rigid diaprahm? Just the general plywood material stiffness? How would you account for nailing, boundary member stiffness, concrete topping, etc. that can affect the diaphragm rigidity?	For all semi-rigid diaphragms you define the panel thickness and the material (and you can define the material properties as well - we currently include a generic plywood material for this purpose). The nailing and other properties would not be included in the calculation of its stiffness.	
27	Is there a way to place the column in the shearwall or will that always create an error in the wall?	This is really only possible in RISA-3D (as a workaround): Link. Pilaster design is something that we are working on. RISAFloor would give you an error when adding a column within a wall.	Link
28	Does RISA account for long-term creep in the design/deflection for wood beams/joists?	No, not for wood beams/joists.	
29	Is there a way to model full span prefabricated wood gable roof trusses instead of ridge beam and rafters?	The trusses would need to be modeled and designed in RISA-3D, and you can follow the workflow in the article about how to model trusses in RISAFloor.	Link
30	How can we model a flexible diaphragm in RISA 3D?	The use of flexible diaphragms is only available when a model starts in RISAFloor. Since flexible diaphragms only distribute load via tributary area and have no stiffness, doing this in RISA-3D would amount to a manual application of loads in lateral load resisting elements.	
31	How do you consider accidental eccentricities for Seismic?	These are included in the diaphragm definition. For instance, see this video for semi-rigid diaphragms.	Link
32	Is there a way for the program to accurately calculate the wind load for a wood building on a concrete podium (ie not on grade)?	You can model both the wood building and podium in RISAFloor ES, or we are working on an integration with RISA-3D and ADAPT-Builder for podium analysis and design.	
33	Does shear wall deflection incorporate elements such as nail slip, boundary member stiffness, holdown elongation?	Yes, The Deflection Results (within the wood wall detailed report) gives both the calculated NDS deflection (Maximum Region Deflection) and the FE deflection for use as a means of comparison.	
34	Where you have a beam below a shear wall, will omega be applied to the shearwall hold down force to size the beam below the shear wall?	No, the omega factor is currently not incorporated in the analysis/design results.	
35	Are the drift results per floor or are they the cumulative drift of the building?	Drift results are rendered per floor in RISA-3D.	
36	What is the best way to model a shearwall when a column from above splits the wall length? Specifically when the column will split the length into multiple segments not meeting aspect ratios?	The only workaround is to split the wall panel to allow the column. If the wall panels do not meed the aspect ratio requirements, this will not work.	
37	Does RISAFloor check plate crushing?	No.	
38	Can RISAFloor design mass timber frames?	No, we currently don't included design for mass timber (CLT or NLT) frames.	
39	Are there ways to input the uplift resisting dead load at the tension end of shear walls within the program? I am assuming the program just takes the load directly above the shear wall end studs	Yes, that is correct. There isn't a way to specifically specify this.	
40	When you inspect a single level wall panel, say at the lowest floor, does it add holdown forces coming concentrically from stacking panels above?	The forces the wall experiences will not be from the holddown forces because all the wall forces in RISA-3D are based on Finite Element Analysis done prior to design of the holddowns.	
41	Do you need RISAFloor ES to do a podium if it's precast and you don't want to use the program to design the concrete?	If you want to model a concrete two-way slab, yes you need RISAFloor ES.	
42	I don't recall the perforated wall design modules including the uniform uplift requirements per 2015 SDPWS, SECTION 4.3.6.4.2. Can you confirm?	The software's use of FEA in calculating the actual forces (including uplift) in the wall panel should suffice in calculating and including the appropriate uplift forces that are resisted by chords/hold-downs in a perforated shear wall.	
43	Does RisaFloor check beam end crushing? Or does it specify a required bearing length?	It does not check beam end crushing or allow you to specify a bearing length.	
44	In general, how compatible is RISA wood design with the Revit-RISA import/export Link?	The RISA-Revit link supports the bi-directional transfer of members (columns, beams), walls and floor elements.	
45	Does the segmented approach at the door neglect the sole plate?	Yes, the segmented wall method ignores the sill plate in the wall panel.	
46	Is there a way to specify drag elements to make a diaphragm failing in shear work? Does RISA have the ability to analyze and design high-strength diaphragms?	If using a flexible diaphragm (with tributary load distribution) then drag struts are very important in order to achieve proper lateral force distribution in RISA-3D. These elements should be modeled as lateral beams in RISAFloor and then will be transferred to RISA-3D where they will participate in the lateral system. Similarly if the diaphragm is semi-rigid then it is a good idea to have the drag struts in the lateral model as well. As far as diaphragm material (and strength) goes, you only have the options within the Material database of RISAFloor to create/modify a material for the diaphragm. Other specific high strength diaphragms are currently not possible.	