RISA Webinar Q&A

Exploring Anchor Bolt Pullout with RISABase
(May 6, 2010)

Q: Can you offset the base plate on the concrete pier?
A: You can offset the column on the base plate by a distance or eccentricity but the base plate is assumed to be centered on the concrete pedestal.

Q: Will the group check be done if "Custom" bolt layout is selected and there is a symmetric 4-anchor layout entered?
A: For the provided bolt arrangements the group is well defined, but when you use the Custom arrangement bolts can be placed anywhere. This makes it difficult for the program to determine where the "Group" is defined and what failure cones would govern, therefore it is not checked.

Q: Will you provide base plate stiffeners along the center line of the column similar to what you would see in a braced frame column detail for both interior and end columns?
A: RISABase places the Z-Direction stiffeners at the edges only but we can investigate this option further for an enhancement in a future release.

Q: Typical metal building foundations have multiple anchors within the webs. That bolt layout choice only allows two. This means we have to use custom and we can't get group results even though the bolts are regular. Is there any hope of changing that?
A: Adding multiple bolts within the webs is very high on the list of enhancements for the next release.

Q: Does the software design the stiffeners on the base plate if the stiffened base plate option is chosen?
A: You enter in the stiffeners for the analysis of the base plate and they are used to stiffen the base plate but they are not designed.

Q: I am curious how you weld anchor bolts to the base plate. Even a F1554-36 rod still uses a tempered nut. Welding an A36 washer still doesn't work because of the hole clearance.
A: You can specify weld-able material for anchor rods, however regarding the construction details we are not experts on that subject. Appendix D addresses this condition.

Q: Can we get multiple uniform bolts in the standard inside the web configuration?
A: Currently, you cannot add more than 2 bolts inside the web. However adding multiple bolts within the webs is very high on the list of enhancements for the next release.

Q: Could you please show where the report is that shows all of the code calculations.
A: You can access the comprehensive report by clicking on the Reports pull down menu within RISABase.

Q: Is the 25% reduction for seismic loads applied only to the concrete strengths?
A: It is applied to all of the Appendix D checks, the concrete strengths relative to pullout and the anchor rod steel strengths.

Q: What is a reasonable thickness that you can assume the base plate is "rigid"?
A: It's a function of thickness and plate size. Unfortunately, there's not a clear answer to exactly when to use this method or not, but you might try both methods and review the results to understand the differences.

Q: Can we model circular or hexagonal base plates?
A: Currently RISABase does not model this geometry, but we are looking at adding this to future releases.

Q: Does the program also evaluate the welds?
A: You can specify a weld in RISABase, however it does not check the weld.

Q: Is there hope in the future of getting RISA-3D to work with base?
A: Yes, this is definitely something we are going to add into a future release. It is a complex feature, but we recognize the demand for it.

Q: Is there an option to use leveling nuts instead of grout? Also, can you get your loads directly from RISA-3D to RISABase.
A: There is no direct way to model this in RISABase, however we are investing a way to add this into future versions of the program.

Q: Is there any consideration given to interface shear between the base plate and the pedestal?
A: There is no coefficient of friction considered in RISABase, so all the shear is taken thru the anchor bolts and/or shear lugs.

Q: Most of the base plates I design are supported on leveling nuts, not grout pad or concrete. Can the program analyze the plate in this fashion?
A: There is no direct way to model this in RISABase, however we are investing a way to add this into future versions of the program.

Q: Is the amount of supplemental reinforcement required in the single bolt tension check the amount of reinforcement necessary for the development of THAT single bolt or for the entire pier?
A: The single bolt results are listed for single bolt reinforcement and the group bolt results are listed for group bolt reinforcement.

Q: In the case of concrete break-out failure mode, when we have a base plate on a reinforced pedestal which the pedestal rebar goes through the failure cone, can the software count for that extra tension capacity?
A: No because RISABase reports the cone failure strength independently. The supplemental reinforcement is considered for seismic ductility checks.

Q: For the custom bolt arrangement, if it is uniformly spaced will it still not calculate group failure?
A: For the provided bolt arrangements the group is well defined, but when you use the Custom arrangement bolts can be placed anywhere. This makes it difficult for the program to determine where the "Group" is defined and what failure cones would govern, therefore it is not checked.

Q: I would like to have multiple attachments on the base.

A: RISABase is designed for single column base plate design. Multiple columns are not possible at this time.

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