Today’s Topics

• Plate Connectivity
• Shape Limitations
• Submeshing and Accuracy
• Interpreting Results
• Common Uses and Modeling
• Plates are *not* physical members

• Plates only connect to plates, members, nodes, etc *at their corners*.

• If a node falls along a plate’s edge or interior it is *not* connected to that plate.
Node N4 falls along the edge of the bottom plate. Notice how a “tear” forms.
Submesh the bottom plate so that every plate’s corner connects to another corner.

PLATE CONNECTIVITY
SHAPE LIMITATIONS

L/W should not exceed 9.0

t/W should not exceed 3.0
SHAPE LIMITATIONS

L/W ratio = 9
Lateral Deflection = 2.0”

L/W ratio = 3
Lateral Deflection = 3.0”
t/W ratio = 3
vs
8-Node Solid Element

Solid Elements are more accurate than thick plates
**SHAPE LIMITATIONS**

- **Good Plate**: Relatively Rectangular
- **Bad Plate**: Interior Angle Exceeds 155 Degrees
- **Ugly Plate**: Bowtie Configuration
Plates only exhibit shear deflection (not flexural)

In other words, a plate’s edge cannot curve
INTERPRETING RESULTS

- $F_x$
- $F_y$
- $F_{xy}$
- $Q_x$
- $Q_y$

XYZ coordinate system
INTERPRETING RESULTS
Additional Resources

- RISA-3D Help File / Manual
- www.risanews.com

Presenter: Matt Brown, P.E.
Thank you for Attending!

Questions?

Please let us know if you have questions.

We will answer as many questions as time permits during the webinar.

Once the webinar is closed, we will post all Q&A’s, as well as the Quick Reference Guide, to our website: www.risa.com

For further information, contact us at: info@risatech.com