

# UAF Steel Bridge 2025





# The Student Steel Bridge Competition

- Nationwide competition
- Run by AISC and ASCE
- Regional and national rounds
- Teams of engineering students design and construct model bridges and test them
- Over 200 schools compete!





# Our Team

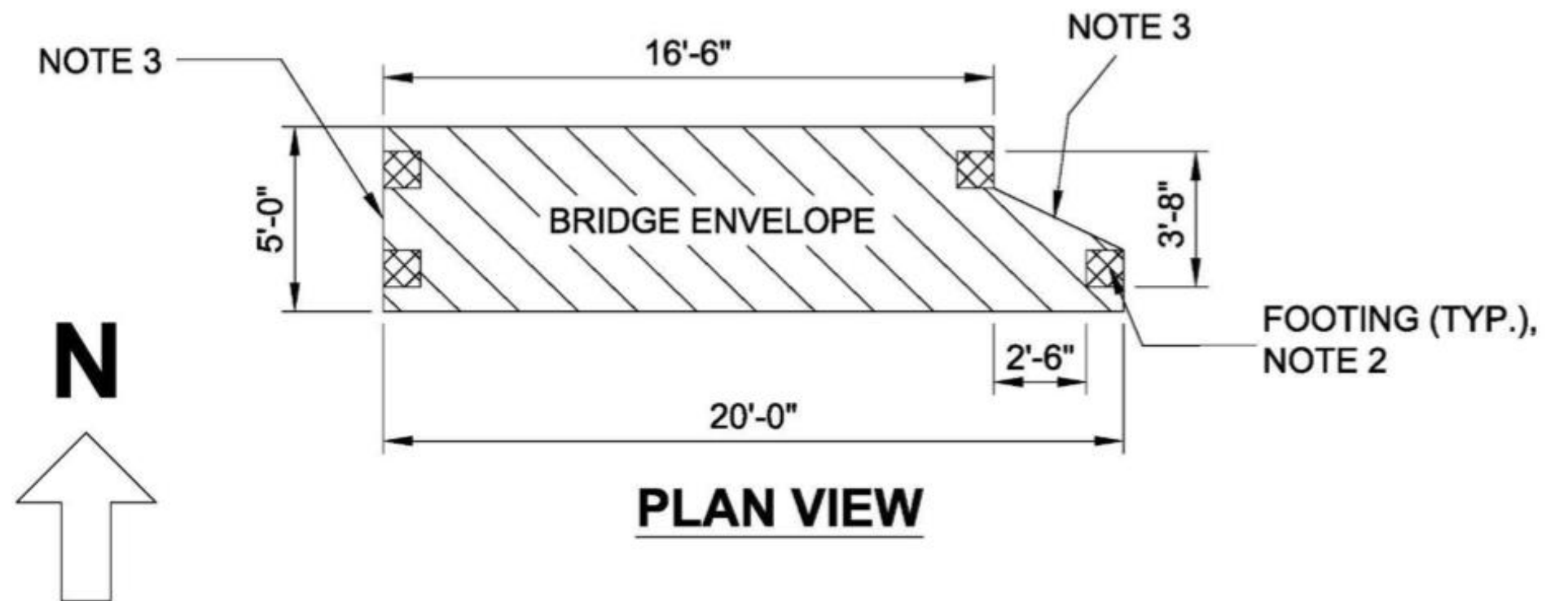
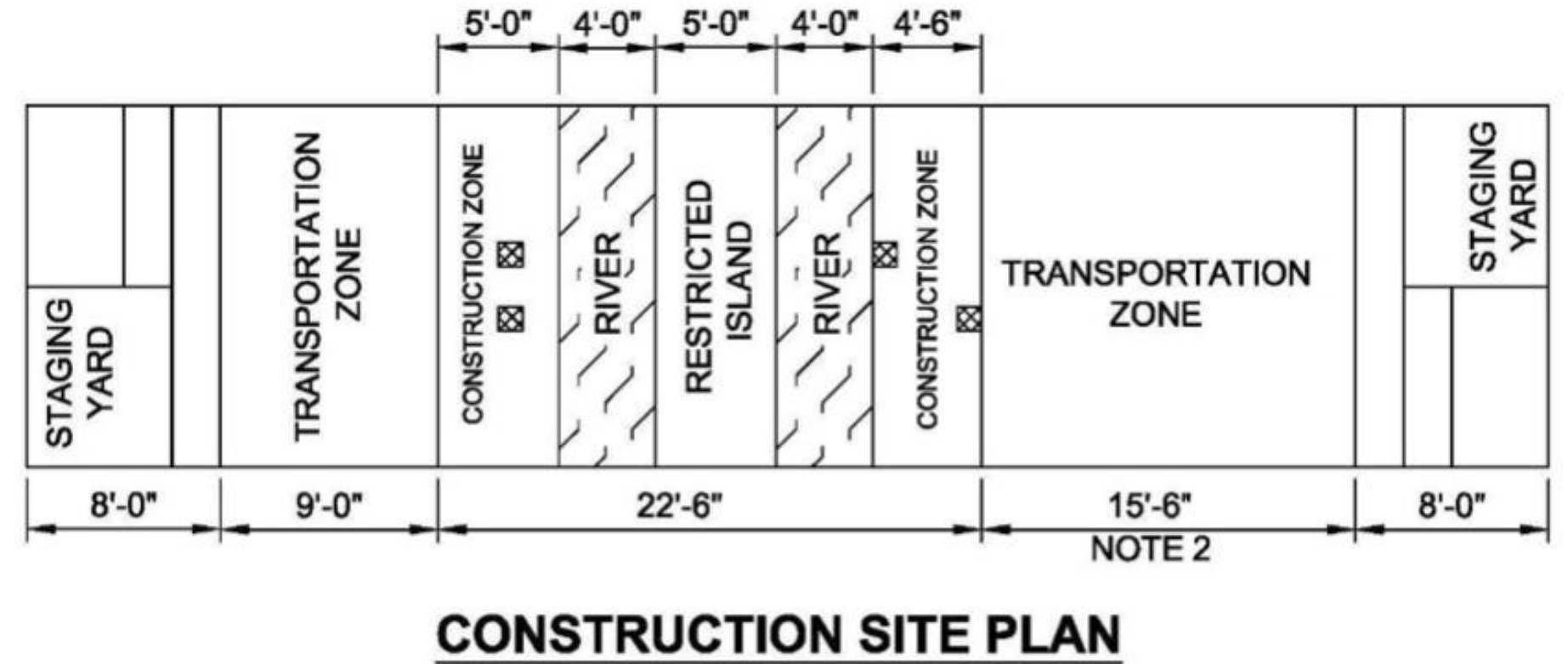
- Top 10 in the nation consistently
- 8 students and a faculty advisor
- We design and build everything in our shop in the UAF Engineering Building





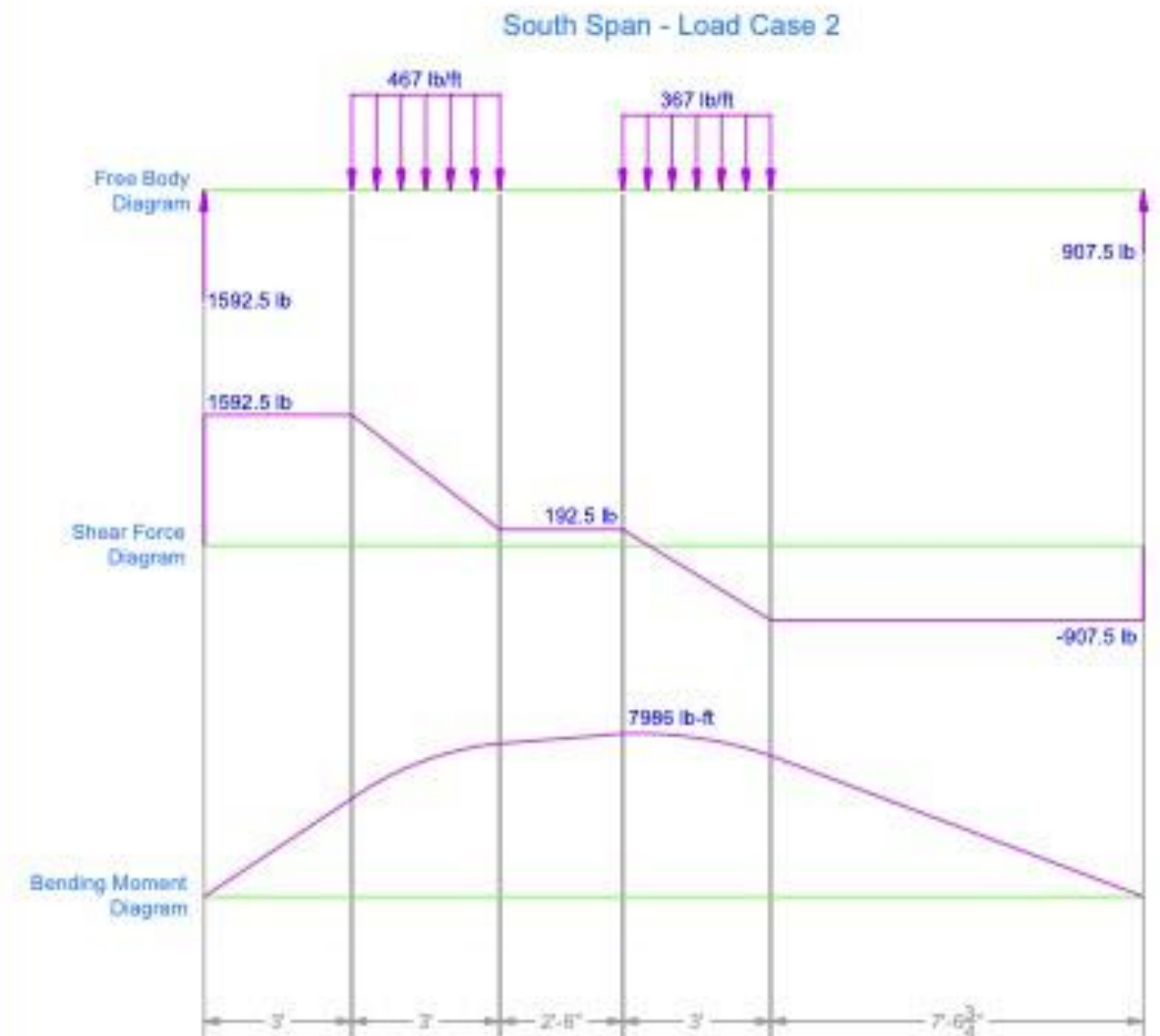
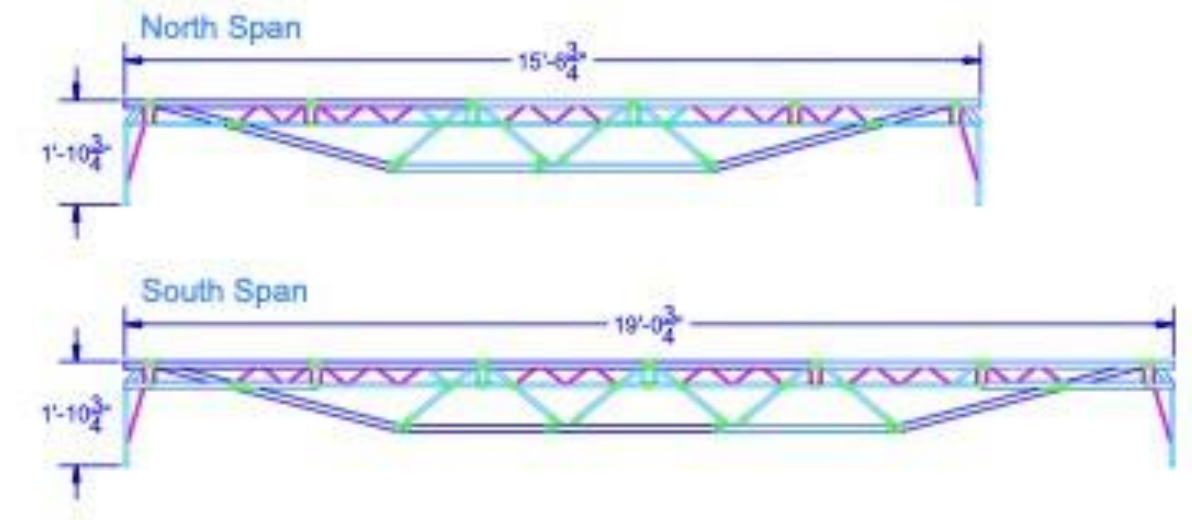
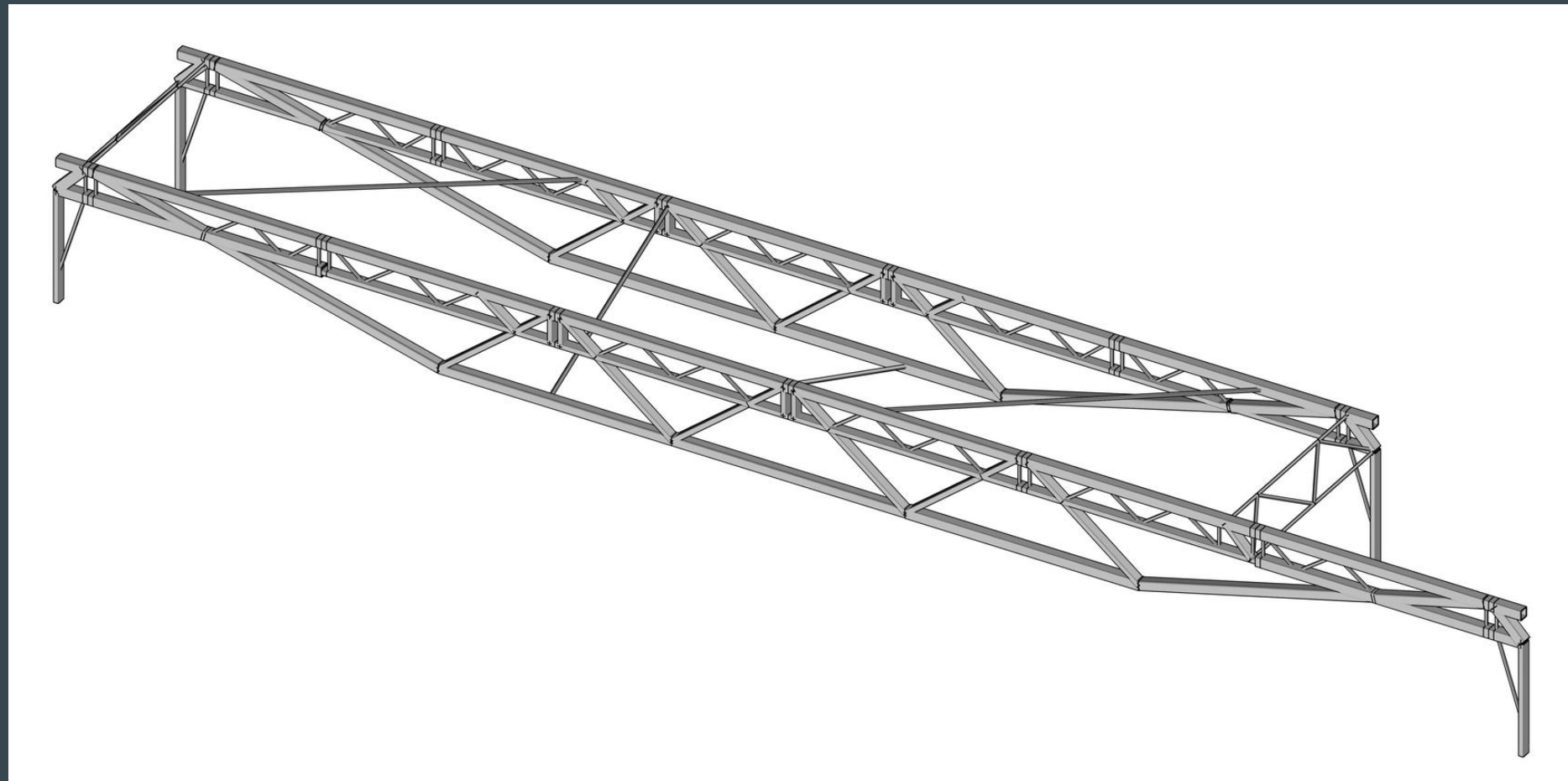
# The Rules

- Bridge with a 19ft span and a 15.5ft span
- Members must be 3.5ft or shorter
- Members assembled under timing on the construction site
- Land builders, barges, and inaccessible sandbar
- Various dimensional and connection restrictions
- Score based on construction speed, bridge weight, and stiffness



# Design

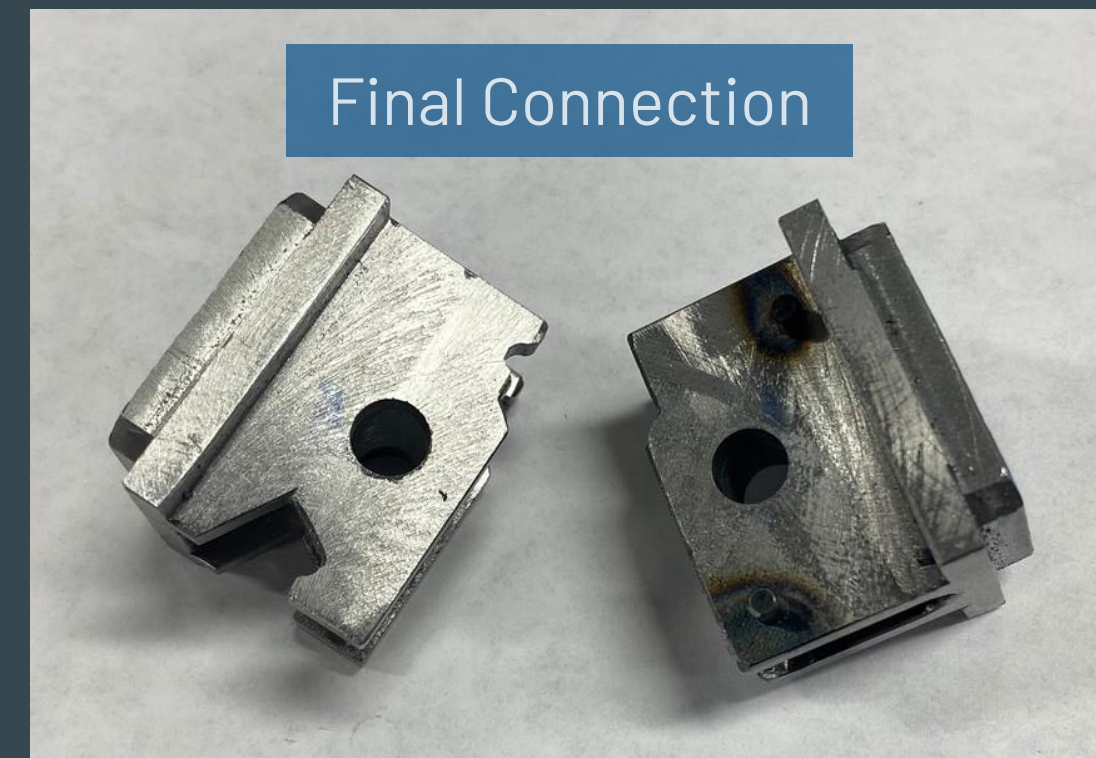
- Overall structure designed and analyzed in RISA 3D
- Modelled in AutoCAD
- Steel design hand calculations to check safety





# Alignment Connections

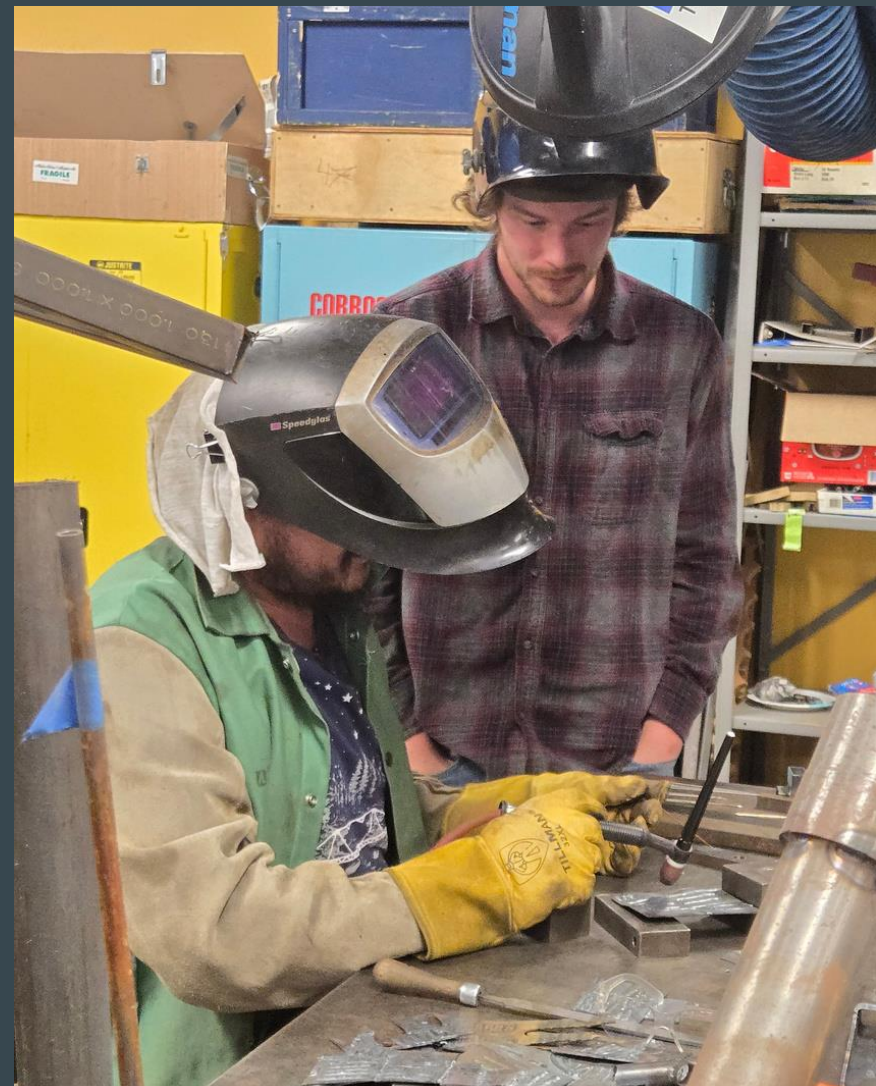
- We developed a brand-new connection
- Allows for easy and fast alignment while still following rules
- 3D-printed prototype used to check functionality





# Fabrication

- Parts manufactured on milling machines and lathes
- Students learn to use the machines and cut the parts
- Members are welded together
- Overall structure is meticulously aligned and finalized





# Finished Bridge - Just In Time For Regionals





# Competition Day

- Build time was 10:05, fastest by far
- No penalties!
- Bridge held up well in load





# Results

- Final Score: \$10,792,539
- Second place overall
- Placed first in subcategories Speed and Structural Efficiency
- Placed second in Lightness, Cost Estimation, Construction Economy
- Passed to next round





# Up Next: Nationals!

- Moving on to National Competition with ~50 Competitors
- Location: Iowa State University
- Dates: May 30th – May 31st





# Support Needed!

- Sending 5 students, our advisor, and the bridge
- Plane tickets, hotel, transportation
- Estimated Cost: \$10,800





# New Fundraising Opportunity: Name A Part





# The Details

- Deadline: May 25
- Sponsor a Part!
- Benefits:
  - Supporting UAF Student Engineers
  - A name or message will be written on said part
  - Social media shout out
- Send email confirmation of donation to [Imgomes@alaska.edu](mailto:Imgomes@alaska.edu) and [asce.agc.uaf@gmail.com](mailto:asce.agc.uaf@gmail.com)

# Thank You! Questions?

## HOW TO DONATE

### By Check:

Make check out to:  
University of Alaska  
Foundation  
Subject Line:  
Fund ID# 20314- ASCE Student  
Competition

### Mailing Address:

University of Alaska  
Foundation  
PO Box 755080  
Fairbanks, AK 99775

### Online:

<https://bit.ly/UAFSteelBridge>  
Designate donation to CEM  
ASCE Student Competition



### Contact Us!

#### Team Captain

Lucas Gomes  
[Imgomes@alaska.edu](mailto:Imgomes@alaska.edu)  
[asce.agc.uaf@gmail.com](mailto:asce.agc.uaf@gmail.com)

#### Social Media

Instagram:  
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Facebook:  
[@UAFASCE](https://www.facebook.com/UAFASCE)

#### Faculty Advisor

Il Sang Ahn  
[iah2@alaska.edu](mailto:iah2@alaska.edu)