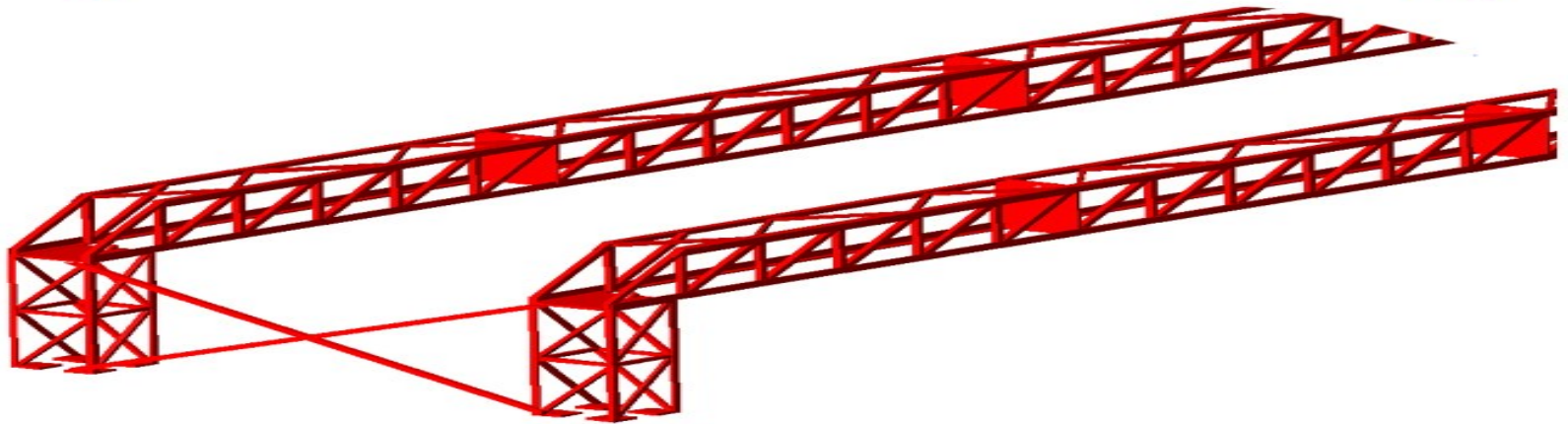


AISC 2003 STUDENT  
STEEL BRIDGE COMPETITION



ILLINOIS INSTITUTE  
OF TECHNOLOGY

# Team

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- Advisor
    - Dr. Jeff Budiman
  - Majors
    - Architecture
    - CS
    - CAE
    - MMAE
  - Website
    - [www.iit.edu/~ipro310s03](http://www.iit.edu/~ipro310s03)
-

# Challenge

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- Design and fabricate a model steel bridge based on the following criteria:
    - Durability
    - Constructability
    - Usability
    - Stiffness
    - Construction Speed
    - Efficiency
    - Economy
    - Aesthetics
-

# Tasks

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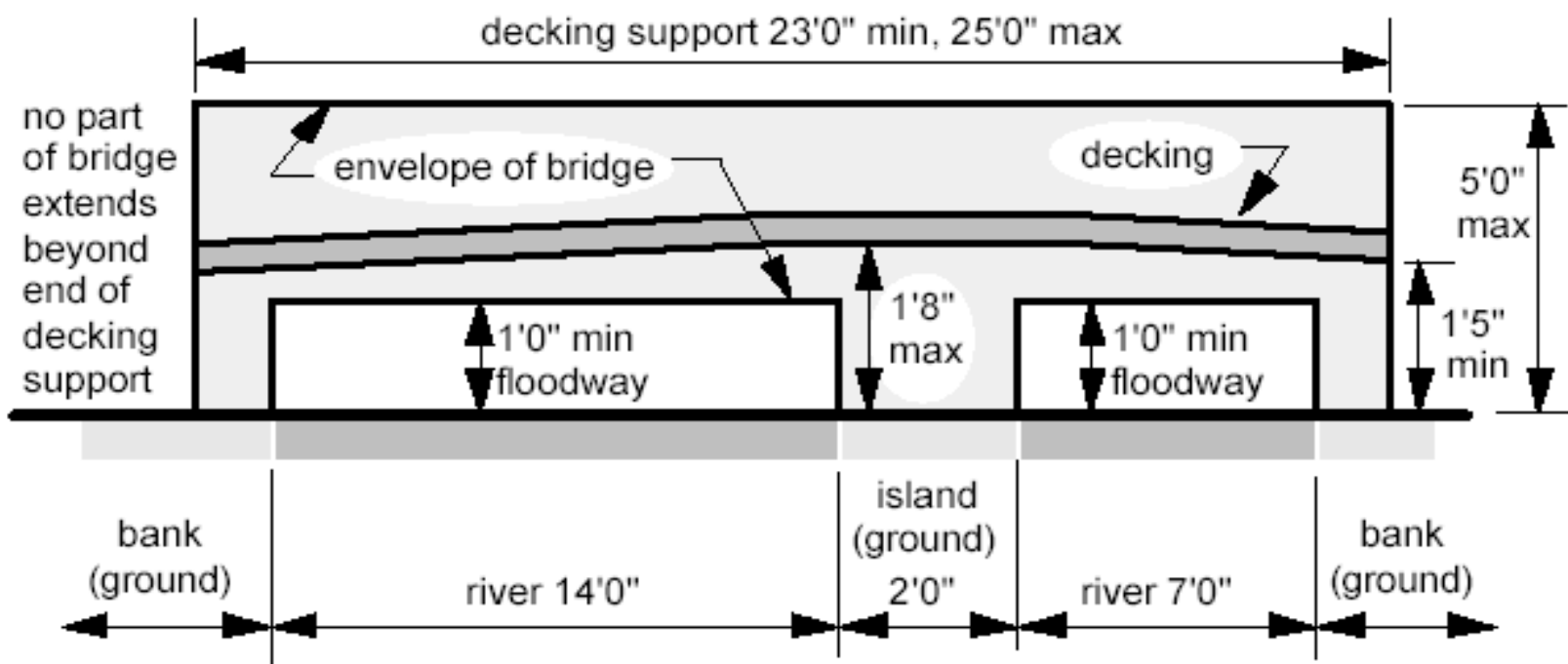
- Design
  - Fabricate
  - Raise funds
  - Obtain tools
  - Purchase shirts
  - Compete
-

# Design

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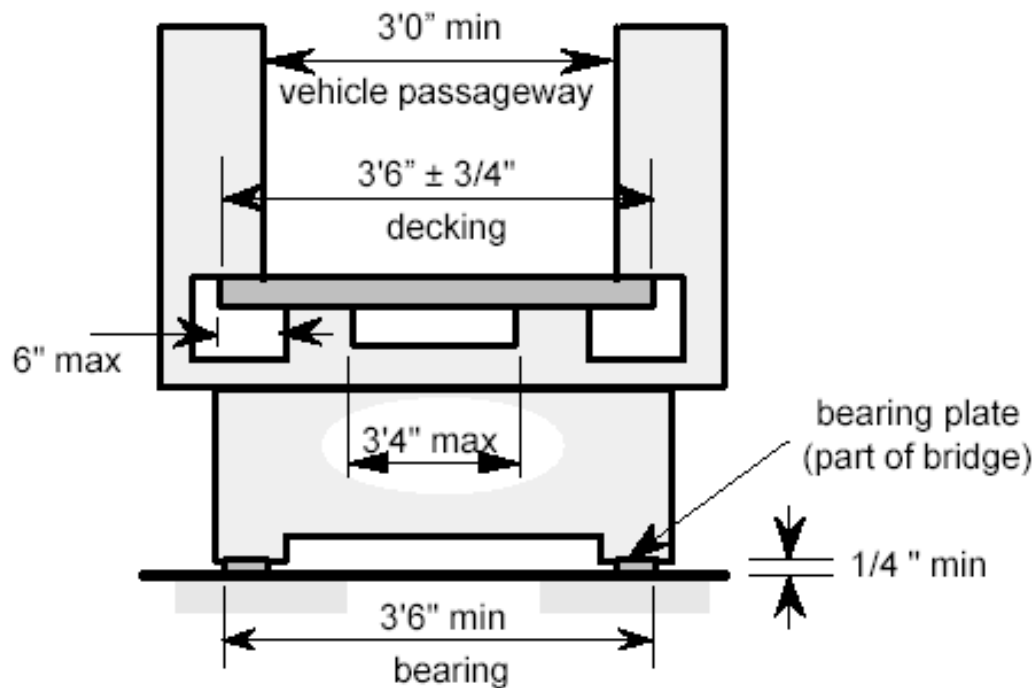
- Preliminary ideas
    - I-beam, truss, and/or cable-type
  - Primary design premise finalized
  - Score analysis
    - Weight, stiffness, and structural efficiency considered
    - Aesthetics and construction speed neglected
  - Member connections
-

# Physical Constraints



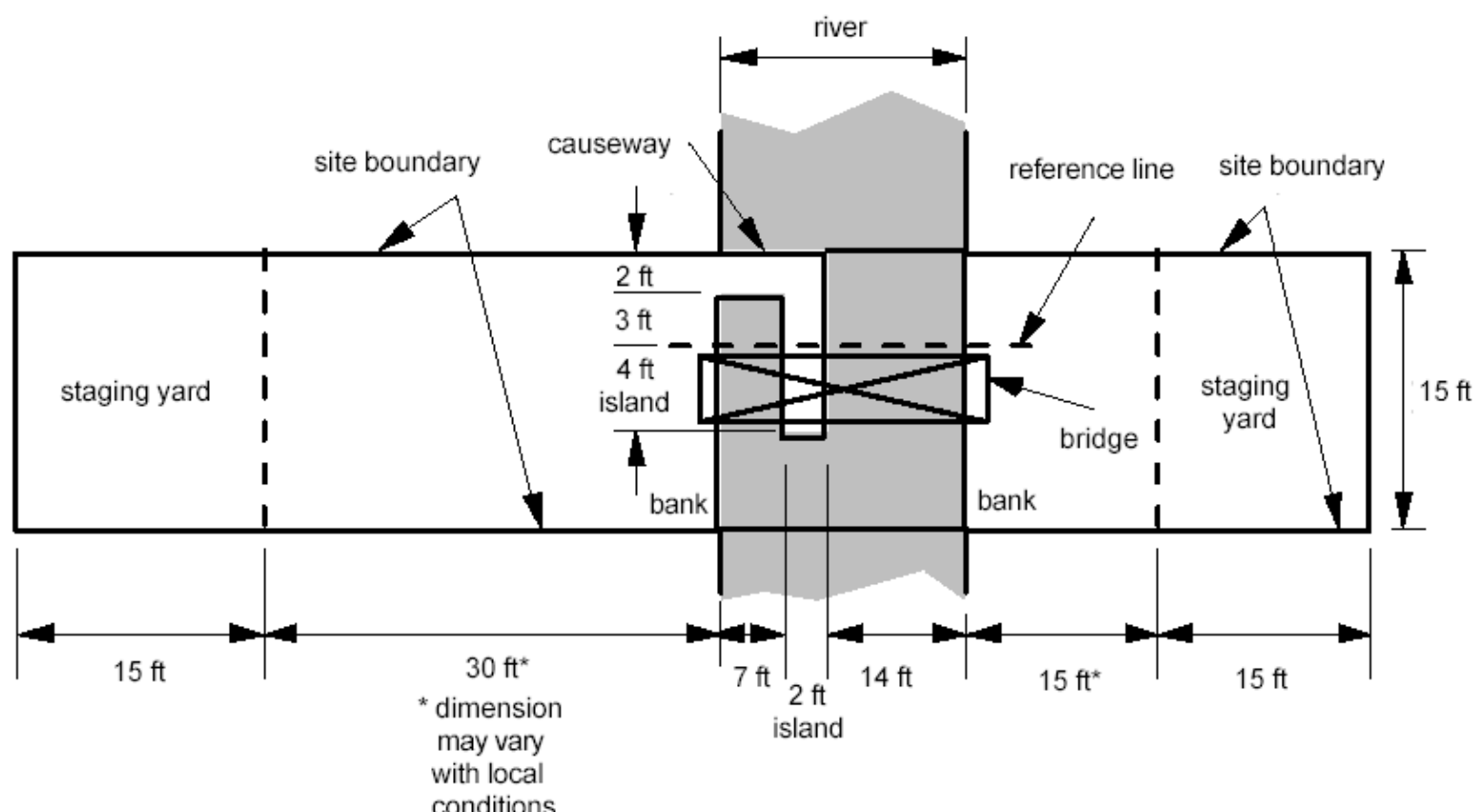
Spans and Clearance (Side View)

# Physical Constraints, cont'd.



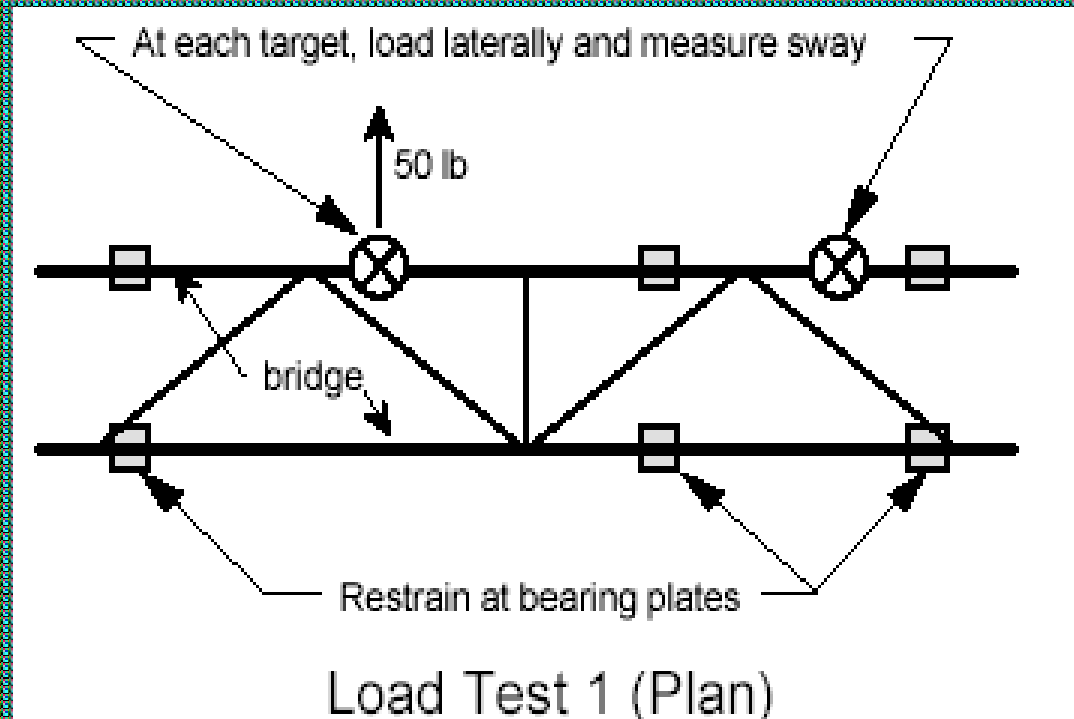
Deck Support, Roadway and Bearing (End View)

# Site Plan

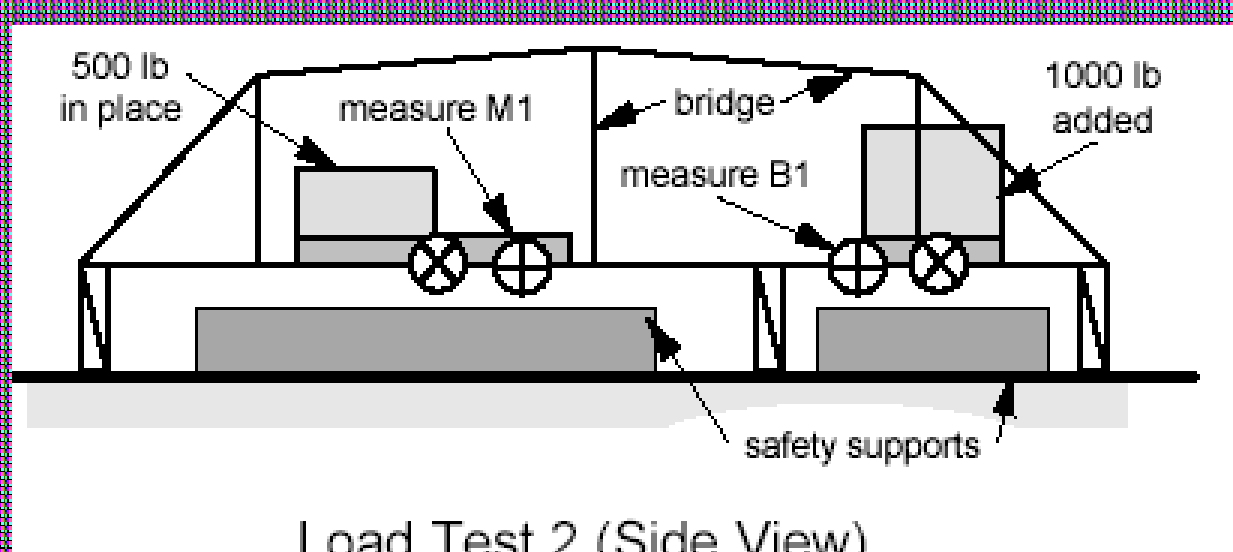




# Load Test 1

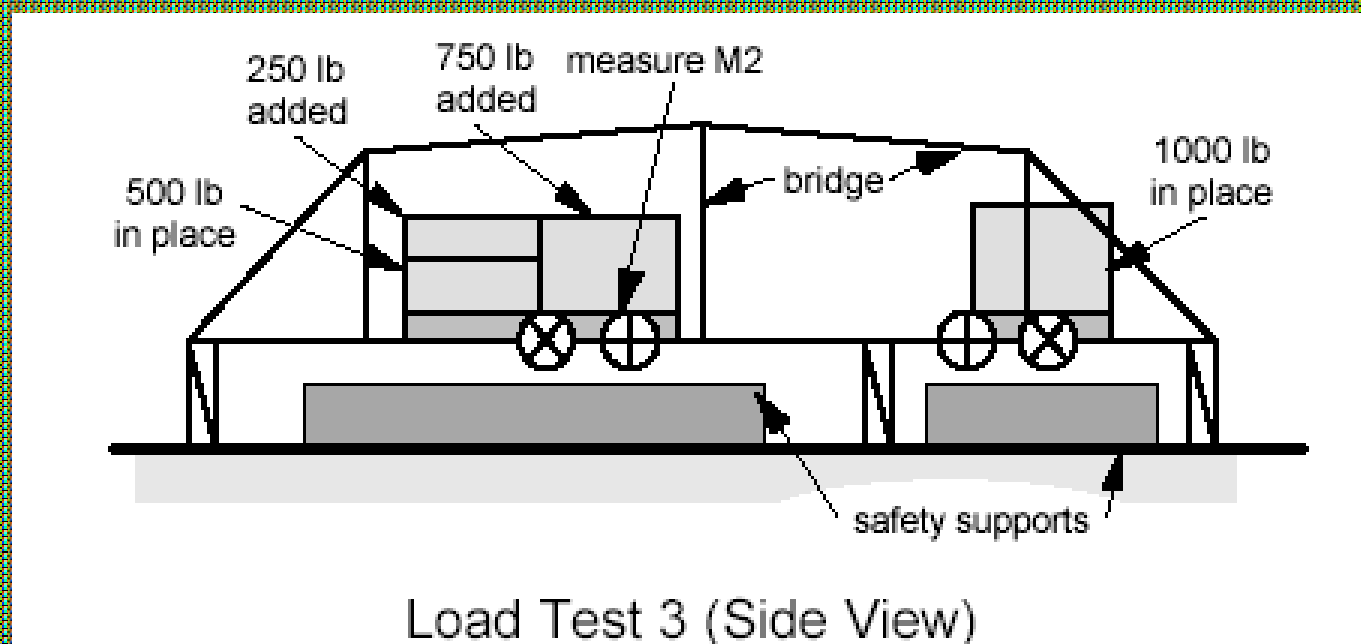


# Load Test 2



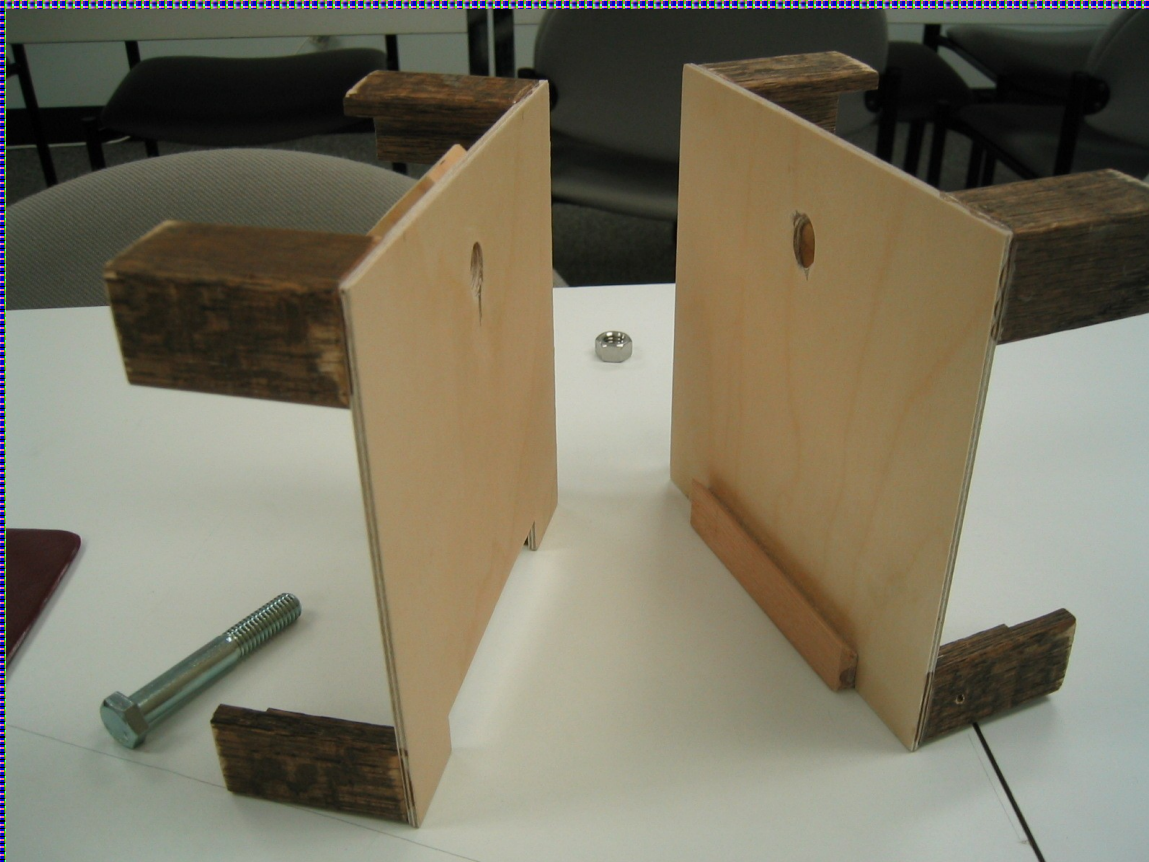
Load Test 2 (Side View)

# Load Test 3



# Connection Design

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# Fabricate

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- Find a fabricator
  - Obtain material
  - Create templates
  - Construct bridge members
  - Transport
-



# Bridge Fabrication

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# Raise Funds

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- Material
  - Tools
  - Fabrication
  - T-shirts
  - Hotel Accommodations
  - Registration Fees
-

# Sponsors

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- ASCE
  - STS
  - IHC
  - KENNY
  - Turner
  - Arlington Steel
-



# Final Decision

- Steel Truss
- Bolt Connections
- Tools
- Team of 8 Students





# Questions???

