ENGINEERS &
GEOSCIENTISTS
BRITISH COLUMBIA

CENTRAL INTERIOR BRANCH 24TH ANNUAL POPSICLE STICK BRIDGE BUILDING CONTEST

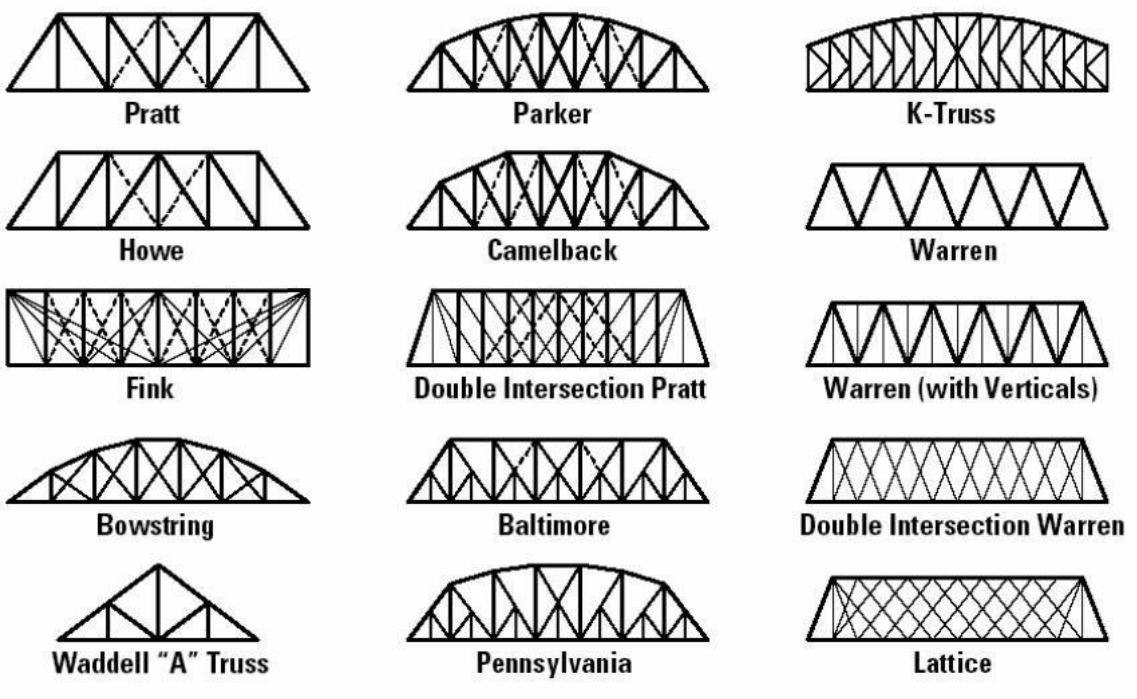
RULES & INSTRUCTIONS

Central Interior Branch

Popsicle Stick Bridge Building Contest

The Central Interior Branch of EGBC is proud to present the 24th Annual Popsicle Stick Bridge Building Contest.

The object is to build the strongest possible model bridge out of popsicle sticks and white glue. ***Contest entry and construction materials are free.*** Bridge testing will take place on ***Saturday April 23, 2022.***



The bridges will be tested with a specially designed machine that applies an increasing load until the bridge breaks (Engineers call this 'destructive testing'). The machine is equipped with a sensor (called a 'load cell') that measures the force that is applied to the bridge.

Prizes will be presented in the following categories and each participant will receive a certificate.

Category	**Prizes**
Primary (Grades 1 to 3)	1st, 2nd, 3rd
Intermediate (Grades 4 to 7)	1st, 2nd, 3rd
Secondary (Grades 8 to 12)	1st, 2nd, 3rd
Open (Adult)	1st

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DESIGN BRIEF

Construct the strongest bridge possible with only 100 Popsicle sticks, (a paper bridge deck if desired) and white school glue. The design and construction of the bridge is up to the competitor(s). Detailed specifications as follows.

BRIDGE ENGINEERING SPECIFICIATIONS

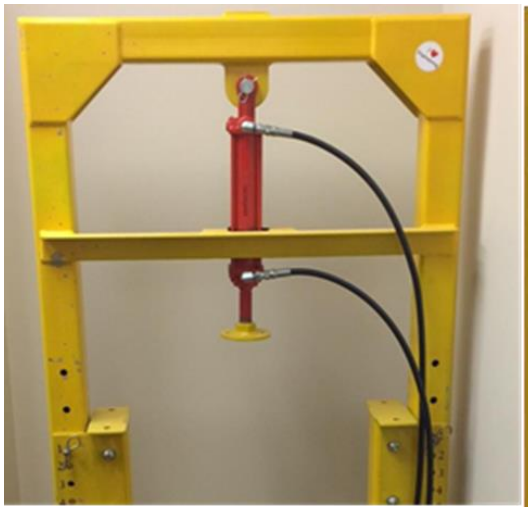
1. Maximum of 100 standard popsicle sticks per bridge
2. Popsicle sticks must be left whole. No cutting, grinding or sanding.
3. Standard all-purpose white glue only such as Titan School Glue or Elmer's School Glue.
4. Bridge Dimensions: (see the illustration next page for clarity)
    a. Bridge span (i.e., length): 550mm to 660mm
    b. Width: 50mm or greater
    c. Height: 450mm or less
5. The testing machine applies a load to the bridge with a 50mm diameter disc. A 50mm square flat spot at the bridge midpoint is recommended to distribute the load but is not strictly necessary. The testing machine can happily crush a bridge of any shape.
6. Architectural enhancements (such as color and glitter) are permitted. However, bridge engineers must accept that such enhancements generally increase weight without adding strength.
7. Wet glue adds unnecessary weight and reduces strength.
8. Bridge engineers' names should be written on submitted bridges with a 'sharpie' type marker.

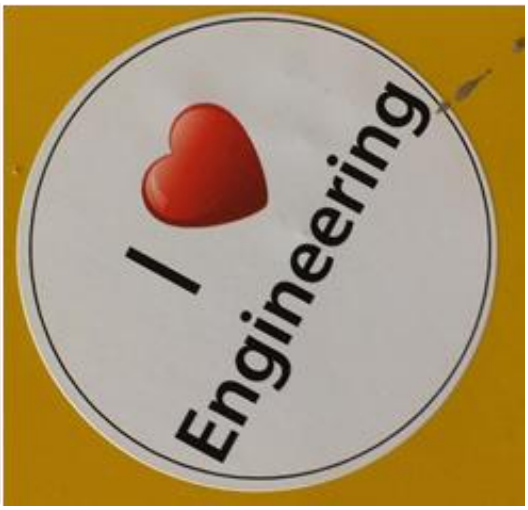
JUDGING CRITERIA

- Bridges will be inspected for compliance with the rules.
- Bridges that don't meet the rules will not be eligible for prizes. However, disqualified bridges may still be load tested as long as they fit into the testing machine.
- Bridges will be judged for innovative design, build quality and style.

BRIDGE TESTING

- Bridge testing will be conducted in private (due to Covid rules) and broadcast online via Zoom.
- Score is based on maximum load divided by bridge weight, also known as the load/weight ratio.
- In the event of a tie (equal load/weight ratios) the lighter bridge will win.





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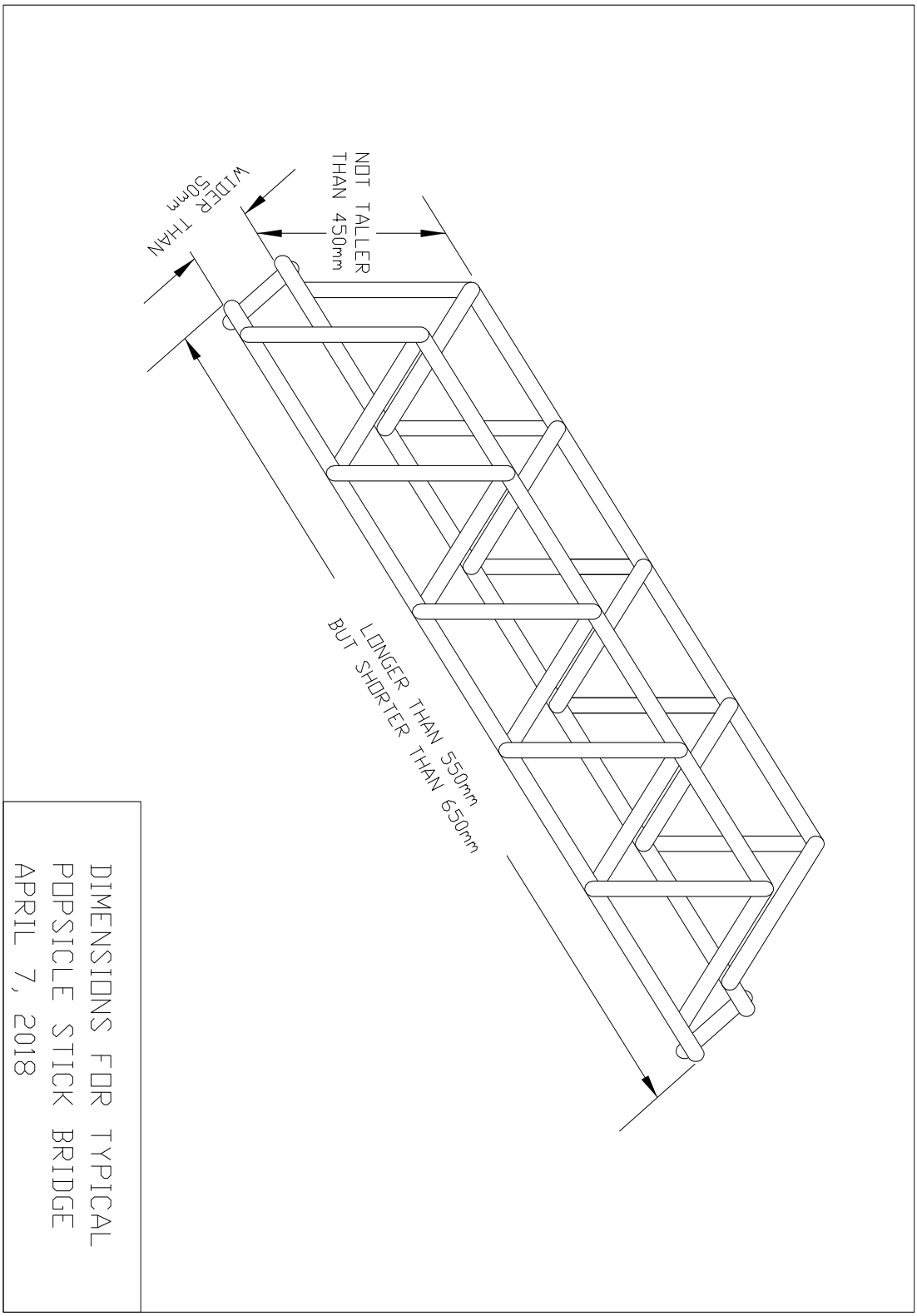
BRIDGE DIMENSIONS ILLUSTRATION



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REGISTRATION

Please complete this registration form and email a copy (or a smartphone image) to chair.ci@volunteer.egbc.ca. One form is required for each bridge.

REGISTRATION DETAILS

- Bridges can be built by individuals or teams. Each bridge is considered as one (1) entry.
- Print in block letters using the spelling that you want to appear on the certificate.
- Registrations will be accepted until April 23, 4:00pm. But contestants are encouraged to pre-register in advance to speed up registration on the day of the event.
- Each bridge must have a Team Leader who will coordinate the team. For Primary and Intermediate entries, the Team Leader must be an adult.
- Please indicate the category in which you are registering
    - Primary (Grades 1 to 3)
    - Intermediate (Grades 4 to 7)
    - Secondary (Grades 8 to 12)
    - Open (Adult)

Category: _____

Name of Bridge Engineer(s)	**Age**	**School (if applicable)**

Please provide a name and e-mail address for the Team Leader (This will allow us to contact you with further information regarding the contest if required.)

Team Leader: _____ **Email**: _____

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LINKS

- These rules are also available on our website: **https://www.egbc.ca/Events/Events/2022/CI1APR22**
- E-mail address for entry forms and any questions: **chair.ci@volunteer.egbc.ca.**
- Bridge testing will be broadcast in a **Zoom meeting** between 5:00pm and 7:00pm on Saturday April 23, 2022. Login details are as follows:

  Topic: Bridge Crushing
  Time: Apr 23, 2022, 05:00 PM Pacific Time (US and Canada)
  Join Zoom Meeting:
  https://unbc.zoom.us/j/68569319915?pwd=RDRqOFJUUkNUT1lkVzVFMEcvdFE1dz09
  Meeting ID: 685 6931 9915
  Passcode: 373234

  One tap mobile
  +14388097799,,68569319915#,,,,*373234# Canada
  +15873281099,,68569319915#,,,,*373234# Canada

  Dial by your location
  +1 778 907 2071 Canada
  833 958 1164 Canada Toll-free
  833 955 1088 Canada Toll-free

  Join by SIP
  68569319915@zmca.us

  Join by H.323
  69.174.57.160 (Canada Toronto)
  65.39.152.160 (Canada Vancouver)

BRIDGE KITS PICKUP

- Beginning April 1, 2022, Weekdays 8:30am to 4:30pm: Wood Innovation & Design Center (WIDC) at 499 George Street V2L 1R5--Paladin Security desk.
- Exploration Place 'pop-up' store at Pine Center
- Saturday April 2, 12:00pm-4:00pm UNBC Wintergarden (near the bookstore)
- Saturday April 16, 1:00pm-4:00pm Pine Center Mall Community kiosk (near Center Court)

COMPLETED BRIDGE DROP OFF

- Saturday April 23, 12:00pm-4:00pm UNBC Teaching and Learning Center lobby (the building with the bear)
- Google maps link for the Teaching & Learning Building (Building 10)**:** **UNBC Campus Site Map**