



ENGINEERS &
GEOSCIENTISTS
BRITISH COLUMBIA

CENTRAL INTERIOR BRANCH 25TH 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 25th Annual Popsicle Stick Bridge Building Contest.

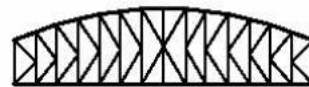
The object is to build the strongest possible model bridge out of popsicle sticks and white glue. **Contest entry and construction materials are free.** Bridge testing will take place on **Saturday April 22, 2023** at Pine Center, center court.



Pratt



Parker



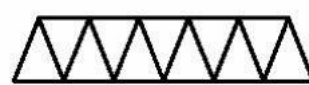
K-Truss



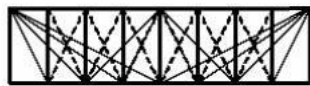
Howe



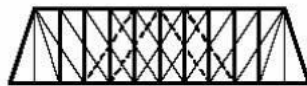
Camelback



Warren



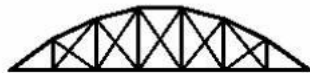
Fink



Double Intersection Pratt



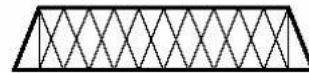
Warren (with Verticals)



Bowstring



Baltimore



Double Intersection Warren



Waddell "A" Truss



Pennsylvania

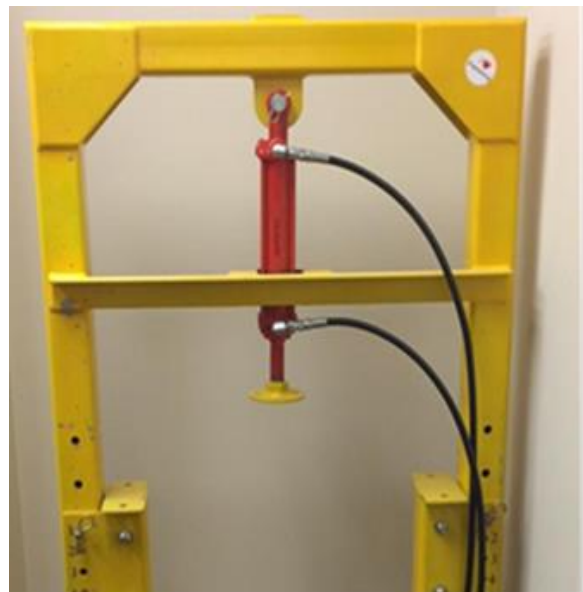


Lattice

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) | 1 st , 2 nd , 3 rd |
| Intermediate (Grades 4 to 7) | 1 st , 2 nd , 3 rd |
| Secondary (Grades 8 to 12) | 1 st , 2 nd , 3 rd |
| Open (Adult) | 1 st |



Central Interior Branch

Popsicle Stick Bridge Building Contest

DESIGN BRIEF

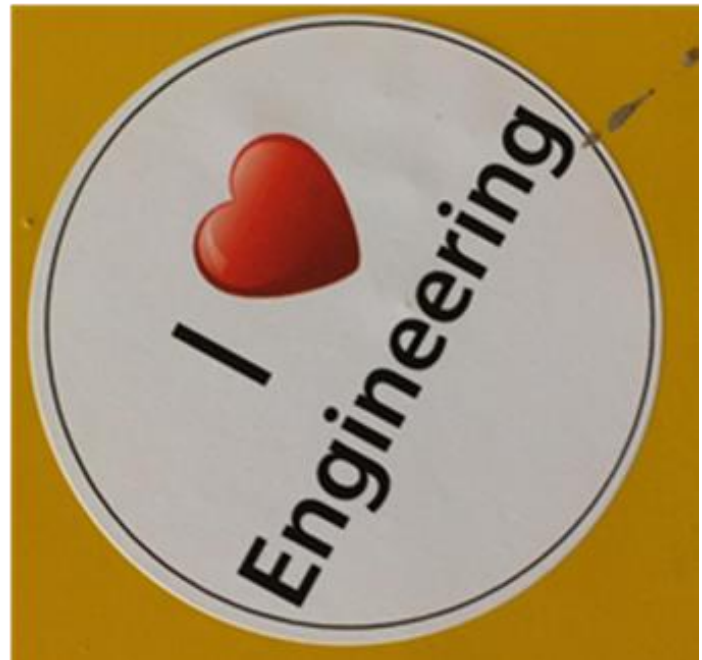
Construct the strongest bridge possible with 100 Popsicle sticks, (a paper bridge deck if desired) and white school glue. The design and construction of the bridge is up to the competitor(s). Detailed specifications as follows.

BRIDGE ENGINEERING SPECIFICATIONS

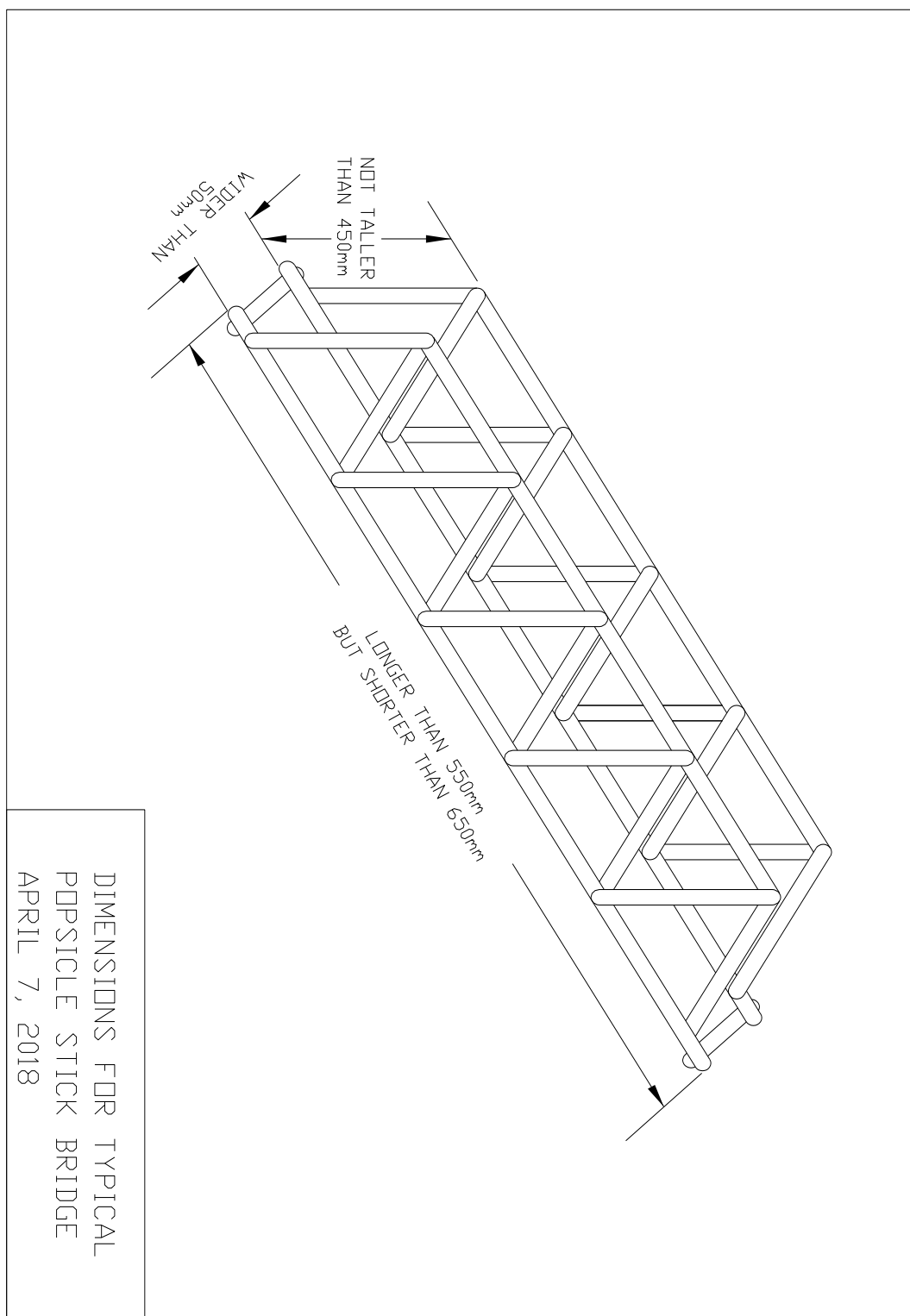
1. Maximum of 100 standard popsicle sticks per bridge
2. Popsicle sticks must be left whole. No cutting, grinding or sanding.
3. Standard all-purpose white glue such as Titan School Glue or Elmer's School Glue.
4. Bridge Dimensions: (see the illustration next page for clarity)
 - a. Bridge span (i.e., 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 DIMENSIONS ILLUSTRATION



Central Interior Branch

Popsicle Stick Bridge Building Contest

REGISTRATION

Please complete this registration form and email a copy, scan or 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 at the event. But contestants are encouraged to pre-register in advance to speed up registration and to secure your spot
- There is no enrolment fee to enter the contest; however, we encourage participants to bring a non-perishable food item for the local food bank.
- 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:** _____

Central Interior Branch

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LINKS

- These rules are also available on our website: <https://www.egbc.ca/Events/Events/2023/CI1APR23>
- E-mail address for entry forms and any questions: chair.ci@volunteer.egbc.ca.

BRIDGE KITS PICKUP

- Beginning March 25, 2023, Weekdays 8:30am to 4:30pm: Wood Innovation & Design Center (WIDC) at 499 George Street V2L 1R5--Paladin Security desk.
- Beginning March 25, 2023 at Exploration Place gift store
- Saturday April 1, 10:00pm-3:00pm Pine Center Mall Community kiosk (near Center Court)

BRIDGE TESTING

The competition event will take place at Pine Center Mall center court (near the Food Court) on April 22, 2023.

| Event Detail | Time |
|--|--|
| Registration (all categories) | 11:00 – 11:45 am or, one hour before the start time for each category. |
| Opening Ceremony | 11:45am |
| Category 1, Primary (Grades 1 to 3) | 12:00 pm |
| Category 2, Intermediate (Grades 4 to 7) | 1:00 pm |
| Category 3, Secondary (Grades 8 to 12) | 2:00 pm |
| Categories 4, and 5, Professional and Adult | Following the youth categories. |