



Reedsport School District 105

100 Ranch Road, Reedsport OR 97467-1739

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Structural Safety Requires Gym Closure January 23, 2018

On December 20th, 2017, due to a broken bow truss and concurring structural engineering recommendations, we closed the Reedsport High School gymnasium. The broken truss, which is one of nine roof supports, was discovered during a visual inspection by a structural engineer as part of our prerequisite Seismic Upgrade Construction design phase work.

At first, due to the nature of a visual inspection, only one damaged truss was discovered and we contracted with Western Wood Structures, Inc., to repair the truss. As part of the single truss repair process, a more complete inspection of all nine roof bow trusses found three additional trusses were cracked and deemed unsafe. In short, the 60+ year old gymnasium bow trusses are stressed beyond their design capacity and the roof could collapse under its own weight at any time.

Last week, two independent engineering firms deemed our gym “a dangerous structure” and recommended closing our gymnasium until further notice. Copies of the written engineering recommendations were sent to Douglas County Building officials and are linked to our website for public view.

As most of our staff, students, and families may know, our Athletic Director, James Hixenbaugh, and staff has worked tirelessly to relocate home athletic contests for the remainder of this basketball and wrestling season. Fortunately, the use of our small gymnasium for basketball, and the former choir music room for wrestling, are providing practice space for extracurricular activities and physical education courses.

For public safety reasons the gymnasium will be closed until further notice. Engineers are currently developing a plan to maintain building safety around the gymnasium and design a permanent solution to repair and/or replace the nine bow trusses. Thank you for understanding our dilemma and thank you for your patience while necessary work is completed. Dan Forbess, Superintendent.

WESTERN WOOD



STRUCTURES, INC.

PO Box 130 Tualatin, OR 97062 – Phone: 503-692-6900 – Fax: 503-692-6434

January 17, 2018

Reedsport School District
Attn: Dan Forbess
100 Ranch Rd.
Reedsport, OR 97467

Dan,

Based on the initial inspection, Josh Bennett, P.E. of Western Wood Structures recommended the immediate shoring of Truss T6 over the basketball court. Our field crew started shoring the truss the next week. Upon closer inspection, it was determined that two bottom chord pieces and two top chord pieces as well as the heel connection needed to be replaced. This replacement was recommended to get the truss back to an unbroken state in hopes of not requiring shoring. This was all prior to the structural analysis.

At this point, the inspection report is almost complete. Preliminary findings show that trusses T1, T3, T4, and T6 have partial failure of the bottom chords and/or the bottom chord splices. Truss T7 has checking that could lead to a similar failed condition that was found at truss T6. Including the damage that was temporarily repaired at truss T6, more than half the trusses were in some form of failure at the time of the inspection.

In addition to the damage to the trusses, the analysis has demonstrated that these trusses are overstressed in both Dead Load and Total Load. Any overstress in the Dead Load only case is great cause for concern. Considering that these trusses are stressed 170% in the Dead Load only case, Western Wood Structures deems this a dangerous structure.

It was our hope to release the gym back to normal use after our work on Truss T6 with the condition of no gym use if any snow falls on the roof. Considering the condition of the trusses and the results from the analysis, Western Wood Structures recommends not using the gymnasium or any area under the trusses until repairs and upgrades can be implemented.

Respectfully Submitted,
Western Wood Structures, Inc.

Brentley A. Matthias, P.E.
Project Engineer



January 17, 2018

Reedsport School District
Dan Forbess
Superintendent
100 Ranch Road
Reedsport, OR 97467

Reference: Reedsport High School Main Gym

Subject: Main Gym Roof Truss Evaluation & Closure

Mr. Forbess,

An evaluation of the existing bowstring trusses supporting the roof framing over the main gym, has determined the trusses to be in a dangerous state. ZCS received a letter from Western Wood Structures on January 17, 2018, recommending the closure of the main gym at the High School. Given their initial site observations and further structural analysis of the trusses they have determined these trusses are dangerous under static dead load only loading. This letter has been attached for reference. I have contacted Western Wood Structures to discuss the current state of the trusses and their recommendations.

Based on my discussions with Western Wood Structures and our knowledge of bowstring structures we concur with Western Wood Structures, and agree the gym has become a dangerous building. At this time I, recommend the Main Gym at Reedsport High School be closed.

Please let me know what ZCS can do to help the School District through these difficult times. Please give me a call with any questions regarding this matter.



Matthew R. Smith, PE, SE
Principal

Att.



EXPIRES: 06-30-18