In this Issue >>>

- Special Announcement: Vigas are Back!
- Making lumber grading affordable and accessible
- Wood Innovations
- Accomplishments
- Looking Ahead

SOURCE VERIFIED GOOD WOOD®
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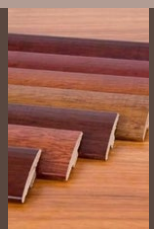
Quarterly Newsletter from *Source Verified GoodWood®* - Fall 2023

The Quarter Round



Member Spotlight

Walatowa Timber Industries
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Walatowa Timber Industries is a founding member of Source Verified GoodWood®. They have been providing quality wood products to New Mexicans for over 10 years as well as proudly sending New Mexico's wood across the country. Every board, beam, and viga, every sack of pellets and truckload of chips or firewood helps to restore and protect the forests and watersheds of the Jemez Mountains.

Walatowa Timber Industry (WTI) extracts the highest and best use of the trees they harvest, turning them to lumber, beams and vigas. They go on to use nearly every part of the tree making corbels, latillas, heating pellets, firewood, mulch, animal bedding, and more.

WTI is a majority native-owned enterprise located in the heart of Jemez Pueblo providing jobs and economic opportunity within the pueblo and surrounding community.

Stop by WTI and you will be amazed by the array of beautiful wood products. They can work with you or your builder to fulfill your orders large or small. WTI carries GoodWood® products, eligible for credit under Build Green New Mexico!

An opportunity to put your name on what you believe.

Through forest verification and chain-of-custody the Source Verified GoodWood® program gives its members a chance to put their name on something they believe in. We are a collaborative membership community of open-minded leaders who are committed to the stewardship of our forests, communities, and local economies.

GoodWood® membership is open to anyone who shares this commitment! Unlike other certification programs that are complicated, lengthy, and expensive, we are a source-verified branding initiative that is accessible and affordable and the only program that verifies wood from Forest Service Lands.

As a **member**, you gain visibility for supporting our forests and communities. As a **customer** purchasing GoodWood products, you support healthier forests and mindful businesses. Together, we create a committed community helping to find harmony between forests and commerce. To become a member or find out more about Source Verified GoodWood visit our website: www.goodwoodverified.com.

A note from Rachel

Crisp mornings, brilliant blue skies, elk bugling and the smell of chile roasting – fall is in the air! What is now the "official state aroma" points to the importance of authenticity and certification.

A decade ago, chile production in New Mexico was waning despite the popularity of the product increasing across the country. Farmers were being undercut by cheaper chiles from Mexico and California. These imposters were being sold to restaurants and supermarkets and at roadside stands as "New Mexico" chile. In 2013, the expanded *New Mexico Chile Advertising Act* was signed into law, ensuring companies that brand their chiles as "New Mexican" are truly selling and serving peppers grown and harvested in New Mexico.

Similarly, when you buy wood products bearing the Source Verified Good Wood® brand, you also know you are buying a locally grown and produced product. In addition, you know it was harvested to restore and protect New Mexico's forests and waters! Look for (or ask for) wood products bearing the GoodWood brand.

Unless otherwise noted, articles written by Marie Rodriguez, Promise PCES, LLC; edited and improved by the GoodWood Team

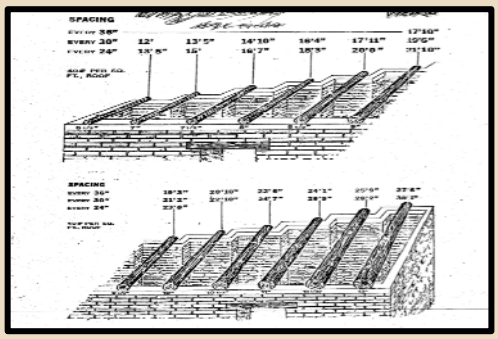
Special Announcement – Vigas are Back in Support of New Mexico's Roofs!

Rachel Wood Consulting (RWC) is pleased to announce that a viga span chart is now accepted in the New Mexico Residential Building Code. See section 14.7.3.16 of the updated 2021 New Mexico Building Code published online at: https://www.rld.nm.gov/construction-industries/find-a-bureau/bureaus/rules-laws-and-building-codes/.

This fulfills one of the primary objectives of RWC's CFRP (Collaborative Forest Restoration Program) project. Re-establishing the use of vigas as construction elements supports the protection and restoration of New Mexico's forests, the creation of jobs in our forest and wood products industry, and the preservation of New Mexico's unique adobe building style.

Vigas are round timber rafters made of hand-hewn peeled logs historically used in Native American and Spanish Colonial Architecture and the traditional adobe architecture of New Mexico and the American Southwest. In these types of construction, vigas are the main structural members carrying the weight of the roof to the load bearing exterior walls. Vigas are typically about 6 to 10 inches in diameter and often average 15 feet in length and spaced 3 feet apart. A defining characteristic are the exposed beams projecting through the outside walls (shown right).

The 2022 Viga Span Chart specifies the number and spacing of vigas, based on the length of the roof span and the size of the vigas. Designers and builders can incorporate vigas as load bearing support for the roof without further engineering, provided they are installed consistent with the span chart and comply with other applicable provisions in the code. This is similar to the application of span charts for rafters and joists that are also in the code.



In bygone days, a common viga span chart (shown left) was used and trusted by builders, architects, and engineers and generally accepted by Construction Industries Division (CID) permitting officials. With the adoption of internationally accepted codes for residential building and log structures those span charts were deemed unusable. Without an industry accepted span chart, installing vigas in a load bearing capacity required a plan developed by a licensed engineer or architect. The additional cost and time for planning and design resulted in vigas being relegated to decorative purposes. Code-compliant open-webbed trusses or I-joists were being installed above perfectly sound vigas or beams. This waste of material added expense for the consumer and contributed to the loss of New Mexico's authentic adobe building style.

Forest thinning, an essential tool in restoring and protecting our forests and watersheds, focuses on the removal of small diameter trees. Small diameter trees are typically of low value and are usually disposed of through burning, chipping or removed as firewood which is expensive and time consuming. However, these small diameter trees are the same sized trees traditionally used as vigas. Use of the viga span chart can lead to increased small diameter tree utilization, supporting emerging small businesses in New Mexico's wood products industry.

The success of this effort would not have been possible without support and expert knowledge from members of New Mexico's forest industry and building communities. Many thanks go to Kim Shanahan, former Executive Director of the Santa Fe Area Home Builders Association (SFAHBA), Miles Conway, the current Executive Director of SFAHBA, Gordon West of Santa Clara Woodworks, the New Mexico Small Business Assistance program, structural engineers Thomas Bosiljevac of Sandia National Laboratories, August Mosimann of Los Alamos National Laboratory, Tom Gorman, PhD, the Construction Industries Division, the CFRP program, and project partners who all saw the value of bringing back use of viga span charts and this very special use of New Mexico's small diameter trees. In addition, we appreciate the contributions from our local producers and GoodWood team members including Katie Fernholz, CEO Dovetail Partners, Marie Rodriguez, Promise PCES, Naomi Engelman of QB LLC, David Breeker, DBA, and Rachel Bean, Forest Stewards Guild, and others who helped us bring this effort to fruition!

Making Lumber Grading Services Accessible and Affordable to New Mexico's Small Producers

One of the objectives of the GoodWood program was to make lumber grading services accessible and affordable to New Mexico's small producers.

When you visit a lumberyard or the lumber section of your local home improvement center, you may have noticed the different stamps on the lumber as well as different prices. This is because retail lumber is professionally evaluated or "graded" to determine how it can be used. New Mexico Residential Building Code requires that all lumber, beams, timbers, etc. used in load-bearing capacities such as walls and roofs, must be grade stamped as suitable for that use. Lumber grading is an important consumer protection and is consistent throughout North America.

Only lumber graded under the direction and control of one of 14 companies in North America can be grade stamped. Large lumber mills and yards acquire these services on a regular schedule and absorb the costs into their high volume of sales. For small, rural lumber mills producing small volumes of lumber, acquiring grading services can cost more than the additional value received. Therefore, small producers end up selling construction quality lumber, vigas, and beams for low grade uses or selling to large sellers who can absorb the cost of grading into their high volumes.

The GoodWood team is considering several approaches to making lumber grading services affordable and accessible to our local producers.

Some states including Alaska, New Hampshire, Tennessee, and Wisconsin have passed laws allowing mills to grade their own lumber for direct sale to a builder or homeowner. The mill owner must complete a state approved lumber grading course and pass a certification exam to participate in the program. Lumber graded under these local lumber rules is not considered "grade stamped" for the purpose of retail sales, but it is a way for local mills to sell their local lumber, vigas, and beams to discerning customers who want locally and responsibly sourced wood in their home.

Another idea is to financially assist small producers in acquiring lumber grading services. An advantage of this alternative is that traditionally grade stamped lumber, beams, and vigas are eligible for retail sales. A third idea has been to support collaboration amongst the small mill owners to increase efficiency and lower the costs for grading services.

As we move forward to assess these options and develop a plan of advocacy and action, we will be gathering input from our members and other small producers in New Mexico.

Wood Innovations

For centuries we harvested trees for lumber - cutting the largest trees and only making use of the boles of the tree. Current innovations in wood products are improving our appreciation of wood and includes research focused on using smaller trees and parts of the tree that used to be considered waste. Making sustainable wood products from material traditionally considered waste is innovative and central to Source Verified Good Wood's mission! Some important innovations in wood products that could bring opportunities to producers in New Mexico include:

Cross-Laminated Timber

Cross laminated Timber, also known as CLT or *Mass Timber,* is a laminated panel made with solid wood boards (i.e., 2x4, 2x6, or 2x10 lumber) that are glued together alternating the direction of their fibers (i.e., plywood on steroids!). Its strength and stability enable the possibility to use wood as an environmentally friendly alternative to concrete and steel construction systems. CLT is exceptionally strong and suitable for load bearing applications including walls roofs and floors.

Figure 1 – Cross Laminated Timber

In a feature story, Build Better, Stronger, Faster with CLT | US Forest Service (usda.gov), the Forest Service states, "*…CLT is highly resilient to fire, earthquakes, and even explosions. In fact in a recent series of* live blast tests*, CLT passed with flying colors. An examination of the results showed that the CLT structures suffered less degradation than expected and might outlast concrete and steel."* At GoodWood, we love that CLT can be manufactured from small diameter trees harvested to restore and protect our forests.

If you want to know more about CLT read the excellent 2023 report, Mass Timber and Tall Wood Buildings: An Update prepared by Dovetail Partners, Inc. which includes policy and code changes which have occurred in recent years and the trends in adoption of mass timber. Their report also looks ahead to consider the challenges that mass timber may face. This

report focuses on developments related to mass timber construction in the United States with some references to resources and information available globally.

Biobased Adhesives and Cellulose Nanofibers

Biobased adhesives and cellulose nanofibers are innovations derived from wood that could further enhance a variety of products.

- Biobased adhesives that bond together wood composites, and wood plastic composites (WPCs), that combine plastic and cellulose fibers are being developed. Also, wood fibers are being used to strengthen structural materials.
- Cellulose nanofibers to enhance the strength and durability of diverse products are being developed.

Thermally Modified Timber

Thermally Modified Timber (TMT) is wood that has been modified by exposure to high temperatures in total or partial absence of oxygen inducing some changes to the chemical structures of cell wall components of the wood to increase its durability. TMT is frequently used for outdoor applications, including cladding, decking, garden furniture, and interior joinery. Due to its reduced density and therefore improved thermal insulation properties, TMT is also used for window frames. The use of TMT for load-bearing applications is inhibited due to significant strength reduction at higher treatment intensities.

Biochar

Biochar is also produced by heating wood and other forms of biomass in the total or partial absence of oxygen but at lower temperatures. Biochar is a carbon-rich soil amendment created by burning wood waste or slash with specially designed equipment. Biochar production from forest slash offers clear benefits for soil health and carbon emissions. The Forest Service identifies the following benefits that could be realized from biochar production:

Figure 2 - CharBoss

- ✓ Biochar can be created from woody residues left over from fuels management, thinning, harvesting, or restoration activities. It therefore provides a way to repurpose the massive amount of waste fuels land managers are challenged with while building economic opportunities.
- ✓ Woody residues are often burned in slash piles, which although economical, can wreak havoc on the soil beneath piles, contribute to air pollution, and generate greenhouse gas emissions. Forest Service researchers and partners work together to develop technologies that create economically viable alternatives to slash piles by creating biochar on site, such as the patented CharBoss (a trailered FireBox system specifically designed to be mobile and available for in-the-field production of biochar from wood and vegetative waste).
- ✓ Using Biochar as a soil amendment can reduce the need for chemical fertilizers. Chemical fertilizers can be a source of greenhouse gas emissions, both in their production and application. They can also be source of water pollution as the runoff from fertilized agricultural fields enters waterways, contributing to declines in water quality and eutrophication.
- ✓ Biochar may provide nursery managers with opportunities to produce seedlings for reforestation and restoration in a more sustainable way, particularly by reducing irrigation inputs.
- ✓ Biochar offers a promising approach for restoring sites impacted by mining. Forest Service scientists are researching how applying it to soils at abandoned or decommissioned mines can improve water quality, bind heavy metals, and decrease toxic chemical concentrations, while improving soil health to establish sustainable plant cover. Doing so also prevents soil erosion, leaching, and other unintended, negative environmental effects.

Bioenergy

While the technology for turning woody biomass into energy has existed for decades, bioenergy generation from woody biomass has not been extensively embraced in the US since a wave of innovation in the 1970s during the oil embargo years. Since that time, domestically produced fossil energy sources have continued to be lower-cost than many renewable alternatives like biomass energy unless there is significant subsidy provided. In contrast, modern methods of biomass energy production are major contributors to achieving climate change goals and energy transitions in the European Union. Biomass energy adoption and innovation is also included as a significant strategy in the Intergovernmental Panel on Climate Change (IPCC) scenarios for addressing global warming risks. A recent briefing paper authored by Gyanaranjan Sahoo, Amita Sharma, Asim Chandra Dash, notes that woody biomass offers global

energy availability and results in biogenic carbon emissions (rather than fossil carbon emissions), but there are concerns about long-term sustainability and scalability. The researchers explore these issues, and also note that, "*…current and emerging technologies can help us move toward a future based on renewable, sustainable, and low carbon economies.*"

Accomplishments

Our work is funded through a Collaborative Forest Restoration Program (CFRP) grant titled: *Expanding Market Opportunities for New Mexico Wood.* We put forward four deliverables in our proposal. We are proud to have completed three of the deliverables with work progressing on the fourth, as shown below.

1. Prepare a Buy Local Lessons Learned report for integration into GoodWood buy local marketing strategy (completed.)
2. Qualify GoodWood for use in New Mexico and national green building programs (completed in New Mexico.)
3. Continue to update formerly accepted viga span charts and seek to have them qualified statewide in New Mexico's building code regulations for accepted use in our unique historic building style (completed, published in building code and effective 7/14/23.)
4. Develop an affordable lumber, beam, and viga grading program to allow small diameter trees harvested from New Mexico's forests to be used for structural building use within our state (ongoing)

We are also funded to continue our efforts to "Increase the awareness of and demand for small diameter tree wood products derived from local forest restoration and wildfire hazard reduction projects" and to "Increase markets and market access for this wood".

The CFRP has done so much for New Mexico most notably making collaboration the norm. While differing parties may disagree on how the forests should be managed, we all agree on the need to protect our forests and watersheds now and for future generations. The success of the CFRP in New Mexico inspired the national version, the *Collaborative Forest Landscape Restoration Program.* As the CFRP comes to an end, Rachel Wood took some time to thank New Mexico's former Senator, Jeff Bingaman. Senator Bingaman authored and championed the legislation that changed how we worked together in New Mexico, and now the nation, for the better. Rachel noted in her letter: "*The program is so well designed with its focus on collaboration and getting more forest restoration treatments done on the ground. CFRP is a visionary program providing a model long-term solution we need to care for our forests."* Rachel informed the senator of her team's accomplishments, including that the successes of the *Source Verified Good Wood Program* would not have been possible "*…without the CFRP that you led to fruition"* and thanked him for his vision and leadership. The Senator responded promptly sharing his appreciation for her acknowledgement and congratulated her on the success of the program.

Looking Ahead

- As previously noted, we will be working on making lumber grading services accessible and affordable to New Mexico's small producers. We will be reaching out to our members and others but if you have ideas, share them with Rachel – rachel@goodwoodverified.com.
- Also high on our agenda is expanding our efforts to raise brand awareness and market GoodWood and its producers.
- As part of our efforts to develop a grading program we will be trying to better understand the types and quantities of wood products being produced in New Mexico – you may hear from us!

The Quarter Round is produced with funds from the USDA-Forest Service, Collaborative Forest Restoration Program.
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Project Title: Planning - Expanding Market Opportunities for New Mexico Wood - revision
Grant Project Period: 05/27/2021 – 05/31/2024 (2019 award)
Project Manager
Rachel Wood, Rachel Wood Consulting
Team Members
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