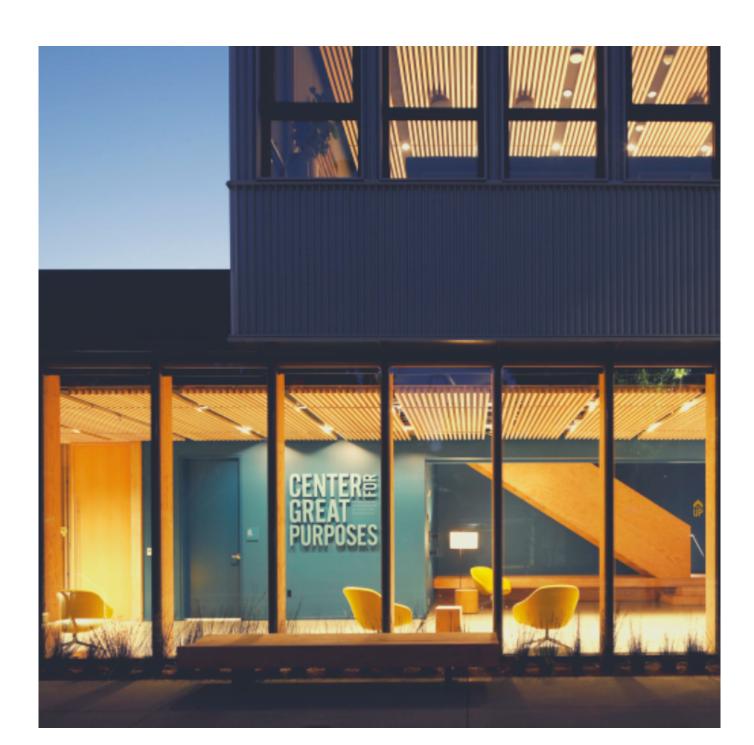


Meyer Memorial Trust Headquarters: Using Wood Procurement to Achieve Community, Equity and Conservation Goals



A CASE STUDY: Using Wood Procurement to Achieve Community, Equity and Conservation Goals

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(Cover photo by Jeremy Bitterman)

Conservation Goals

Executive Summary

This case study examines how community, equity and conservation outcomes can be achieved in a development project through intentional wood product sourcing and by the critical choices made by the project team. The case study also summarizes lessons learned that can give guidance to other development, design and construction teams that wish to achieve mission-related results related to wood sourcing. In the spring of 2018, Meyer Memorial Trust started a journey to create a new home. The project took shape as a three-story, 19,829square-foot, wood-frame / massplywood building at 2045 N. Vancouver Avenue in Portland, Oregon.

Using the wood needs and materials budget for the project, the project team set out to connect with and make investments in the people and forests of Oregon. Forests are one of Oregon's greatest assets. They represent 48% of Oregon's land area. Impacts of wood procurement sourcing and forest management are significant to human health, water quality, climate resilience and the ecological benefits potentially secured from these landscapes.

Project Goals

Meyer Memorial Trust's mission is to work with and invest in organizations, communities, ideas and efforts that contribute to a flourishing and equitable Oregon. The construction of Meyer's headquarters was an opportunity to use construction choices and specifically intentional wood procurement as a vehicle to advance the foundation's mission.

Defining "Sustainable Wood" Sourcing

Forests are one of Oregon's greatest assets. They represent 48% of Oregon's land area. Impacts of wood sourcing and forest management are significant to communities and the ecological functions provided by forestlands. Forests can be managed intentionally for resilience to climate change and increased ecological benefits while providing sustainable building materials and jobs.

The project was oriented to identify forest management attributes and sourcing criteria that optimize economic, social and environmental outcomes. Sustainable wood sourcing criteria were created to

recognize and support forests managed intentionally for human health, water, wildlife habitat, carbon sequestration and worker rights.

Additionally, Meyer has committed to supporting rural forestry-based jobs, rural communities and innovation in Oregon by constructing parts of the new building with wood.

The approach focuses on achieving the greatest positive impact. This orientation intentionally avoids defining what is not sustainably sourced wood. The project team believes all forestland and jobs associated with wood products provide value related to one or more of our stated project goals.

Sourcing Criteria

The sourcing criteria followed three scenarios:

Scenario 1 is for wood products from supply chains when the fabricator and source forest are known. The criteria prefer buying wood products fabricated and sourced locally from rural communities, Tribal enterprises, and businesses that are minority-owned, women-owned, emerging small businesses, service-disabled veteran owned, or disadvantaged businesses (MWESB businesses) and ensuring ecological forest management.



(Fred Joe, 2020)

Scenario 2 is for wood products from supply chains where the source forest is unknown. The criteria prefer Forest Stewardship Council (FSC) certified wood, wood connected to ecological forest restoration, recycled wood and urban salvage trees.

Scenario 3 is for when fulfillment of scenario 1 or 2 is not possible. If the project team concluded there are no wood products available that meet the above criteria or the premium was too great,

the project prioritized wood products from Oregon first, the Pacific Northwest second and North America as a third choice.

Sourcing options that met criteria in scenarios 1 or 2 were to be purchased any time options were available for less than an 8% premium. Material with a 9-25% premium was considered pending funding availability and value. The full sourcing criteria text can be found in Appendix B.

Team and Wood Package

To implement these robust project goals, Meyer Memorial Trust put together an interdisciplinary project team to evaluate options and implement wood sourcing criteria. The team led by project^ included LEVER Architecture, O'Neill/Walsh Community Builders, and Sustainable Northwest, with regular communication and buy-in from subcontractors and suppliers. Contact information for

the project team, subcontractors and suppliers can be found in Appendix A.

Meyer used wood for the following 12 building elements: flooring, siding, decking, cabinets and casework, framing, glulam beams, roof trusses, interior doors, trim and baseboard, acoustic ceiling, joists, and mass plywood panel. The wood package was \$750,000.

Outcome

Meyer Memorial Trust set wood sourcing goals for the project early in the design phase and hired Sustainable Northwest to inform and support project partners. Setting goals independent of building certification standards enabled Meyer to design procurement to deliver unique outcomes and maintain flexibility. The balance of setting goals early while maintaining flexibility created conditions for success.

The 3% premium paid to ensure the project's wood product procurement achieved Meyer's community, equity and conservation goals was minimal (\$24,650 of a \$754,000 total wood package). The project was able to source all wood products from the Pacific Northwest and 10 out of 12 wood products from Oregon businesses. Sourcing wood products grown and manufactured locally allowed Meyer to invest in Oregon.

Buying wood from minority-owned businesses and small family businesses was another proactive step toward positive economic impact and equity goals. The project was able to engage minorityowned businesses in the purchase and installation of six of 12 wood products and engage small businesses in seven of 12.

Meyer believes that community health, human health and equity are dependent on environmental health. Project wood sourcing goals were created to support forest health by recognizing and rewarding forest owners practicing high levels of forest stewardship. The project succeeded in sourcing nine of the 12 wood products from forests managed for enhanced ecological values.

| Project Success | |
|--|--|
| Wood from Pacific Northwest (PNW) forests | 12 of 12 |
| Wood from Oregon forests | 7 of 12 |
| Wood products from PNW companies Wood products from Oregon companies Wood products from minority-owned companies Wood products from small businesses | 12 of 12 10 of 12 6 of 12 7 of 12 |
| Wood that supports ecological forests management | 9 of 12 |
| Wood products traceable back to its forest of origin | 3 of 12 |

Mission-Driven Economic Impact

The Meyer Memorial Trust headquarters project made economic impact through local forests and jobs, investment in minority-owned businesses and investment in small businesses.

Local Forests and Jobs

Forest health and jobs created by the local wood economies underpin community health in many parts of the region. The following bullets illustrate the outcomes related to the project's mission-driven economic impact goals:

- Economic impact of the project's wood procurement went to the eight Oregon counties of Polk, Clackamas, Multnomah, Yamhill, Washington, Marion, Lane and Linn and the three Washington counties of Thurston, Clark and Whatcom. Fabrication of nine of the products was within 70 miles of the project site, directly supporting local wood products jobs.
- Three products achieved full transparency throughout the supply chain by linking finished product to fabricator, mill and forest-of-origin - all within 57 miles of the Meyer headquarters project site.
- Eighty-five percent of the wood package met project criteria for "sustainable wood."
- Forty-nine percent of the package was FSC certified.

 Ecological forest management stands behind nine of the wood products used in the project.
 Sourcing from these forests recognizes and rewards clean water, improved habitat, reduced chemical use and 30% more carbon sequestration within working forests than standard practices. An economic model and social values that enable and encourage ecological forest management benefits us all.



Zena Forest Products (Andrea Lonas, 2018)

Investment in Minority-Owned Businesses

Six minority-owned businesses were involved in the sourcing, fabrication and installation of wood products. Businesses certified by the Oregon Certification Office for Business Inclusion and Diversity (COBID) program are detailed below.

Casework

Custom casework was FSC certified, fabricated and installed by Summit Wood Creations. Inspired as a young girl by a beautiful handmade dresser given to her by her grandmother and passed down through her family for four generations, Reyna Badillo, owner of Summit Wood Creations, has carried the values and tradition it embodied forward.

Summit Wood Creations is a custom wood design manufacturer specializing in rustic and modern aesthetic furniture and casework. Summit Wood Creations is a certified Minority Business Enterprise, Emerging Small Business, Disadvantaged Business Enterprise, and Women Business Enterprise (COBID #10114) established in 2001. Summit is also FSC certified to sell third-party audited sustainably sourced wood (SA-COC-002372-153).

Badillo chose to get FSC certified to connect the business, wood sourcing and custom casework with forest conservation. Summit Wood Creations is now set up as a minority-owned business, to provide



Casework and hardwood flooring (LEVER Architecture, 2020)

certified wood products to future projects.

Wood Slat Ceiling

The wood slat ceiling was FSC certified and installed by Bridgeport Interiors, a commercial interior contractor specializing in metal stud framing, drywall and acoustical ceilings. Bridgeport is a certified Minority Business Enterprise and Emerging Small Business (COBID #9749) established in 2014.

Door and Trim

Doors and trim were installed by Gibson Door & Millwork. Gibson is a commercial door and trim installation company and a certified Women Owned Businesses and Disadvantaged Business Enterprise (COBID #646) established in 2001. Trim was sourced as FSC certified and fabricated by Northwest Millworks. Doors were fabricated and sourced from Lynden Door as FSC certified However, the chain-of-custody was broken by the local distributor.

Hardwood Floors

Hardwood flooring was FSC certified and installed by Techsource Enterprises, which specializes in installation, repair or replacement of commercial floors in the Portland area. Techsource is a certified Minority Business Enterprise (COBID #7515) established in 1996.

Cedar Siding

Western cedar siding was FSC certified and installed by Matson Siding, which specializes in commercial and residential siding in the Vancouver and Portland areas. Matson is a certified Minority

Business Enterprise (COBID #8354) established in 2004.

Investment in Small Businesses

Small businesses involved in the project include Summit Wood Creations, Gibson Door & Millwork, Techsource Enterprises, Matson Siding, Bridgeport Interiors, Zena Forest Products, Sustainable Northwest Wood, Northwest Millwork, Kasters Kustom Cutting and Trout Mountain Forestry. All small businesses used, apart from installers, are FSC certified.

Intentionally hiring minority contractors and small businesses allowed the project to proactively invest money in ways that elevate these businesses and advance equity goals.

Tracing Wood Products Through the Supply Chain to Ecologically Managed Forestlands

Hardwood Flooring Traceability

Floors and stair treads were sourced as FSC certified from Zena Forest Products, a local small business; from native bigleaf maple grown in Polk County; and installed by Techsource Enterprises, a minority-owned business.

Buying flooring from Zena Forest



Polk County, Oregon (Zena Forest Products, a.d.)

Products supports a multigenerational family business owned and managed by the Deumlings. The Deumlings grow, mill and manufacture native hardwood floors within 57 miles of Portland. In addition to economic and community value, flooring sourced from Zena Forest directly helps restore critically endangered Willamette Valley oak woodlands.

The Deumling family manages 1,300 acres of forest nestled in the Eola Hills a few miles northwest of Salem. The forest is the largest contiguous block of mixed-hardwood forest within the valley. Oak woodlands that once covered 400,000 acres now exist in fragmented patches over less than 28,000 acres, less than 7% of their historic range.

On a recent tour of Zena Forest, Ben Deumling stopped at a little seedling tree and shared "This seedling is an investment in the future, to be harvested by my great grandchild. I will be long gone." This stewardship mentality and the permanent working forest conservation easement the family has on the forest ensure the forest will provide economic and ecological value far into the future.

Siding and Decking Traceability

Being able to walk through a building and name the forest that grew the wood product you are looking at is extremely rare. Cedar siding and decking in the Meyer Memorial Trust building maintains



Clackamas County, Oregon (Camp Arrah Wanna a.d.)

its forest story. Cedar was segregated and can be traced back through retail, distribution, fabrication and milling to cedar logs sourced from Camp Adams and Camp Arrah Wanna.

We are honored to be connected to Camp Adams and Camp Arrah Wanna in such a tangible way. Revenue from sustainable forest management enables both camps to increase community events and offers increased camp access through reduced camp costs and scholarships.

Decking

FSC certified western red cedar decking was sourced from Sustainable Northwest Wood through a local small business, provided by a small forest management company, and sourced from Camp Adams and Camp Arrah Wanna within 25 miles

of the project. The transparency and connection to local forests embodied by this supply chain did not add cost to the project.

Camp Arrah Wanna is a nonprofit youth camp established in 1941. In addition to hosting campers, Camp Arrah Wanna manages 120 acres of multi-species, mixed age forestland along 0.6 miles of the Salmon River. Harvest revenue directly supports the camp, community and campers.

The primary goals for forest management at Camp Arrah Wanna are to:

- 1. Conserve and enhance biological diversity and ecological integrity
- 2. Minimize risk for natural blowdown that causes property damage or injury
- 3. Maintain and enhance the aesthetics and recreational value of the property
- 4. Generate income from selective harvesting for sustained revenue for the camp

Because of the diversity of habitat, forest age (85-year-old overstory) and river frontage, the forest provides key habitat. Some of the likely species include black-tailed deer, black bear, Roosevelt elk, mountain lion, bobcat, beavers, ruffed grouse, hawks, owls, woodpeckers, flycatchers, sapsuckers, American dippers, belted kingfishers, salamanders and other amphibians.

The Salmon River provides significant habitat for salmon and other cold-water fish. As a tributary

of the Sandy River, it is part of a large undammed system that flows into the Columbia and to the Pacific with no significant artificial barriers to salmon migration. Species known to occur include coho, chinook. steelhead, native cutthroat and sculpin. The coho, chinook and steelhead runs on the Salmon River were listed as threatened under the Endangered Species Act. Forest management directly supports threatened fish by providing shade over streams, off-channel habitat. deep-water pools and clean gravel beds for spawning.

Siding

Siding was purchased as FSC certified from Sustainable Northwest Wood, fabricated by a small business from wood grown in Clackamas County and installed by minority-owned Matson Siding.

The original wood siding specification was for "A and better" Port Orford cedar 1'x6" siding. Changing to a tight knot western red cedar siding enabled the project to source from a forest and small family mill within 25 miles of the project. This change saved 59% off the initial siding quote; cost went from \$45,000 to \$18,500. The decision was made for ecological and economic reasons. "A and better" cedar siding comes from slowgrowing older forests. Oregon options for "A and better" cedar are limited. Most cedar material comes from older forests in Canada. The switch to tight knot western red cedar enabled a switch to businesses and source forests that were closer to the project

and use of material that cost less.

Camp Adams is a 216-acre camp established in 1938. In addition to hosting camps, retreats and environmental education programs, Camp Adams manages 180 acres of multi-species, mixed age forestland with a conservation easement held by the Clackamas County Soil and Water Conservation District. Easement terms prohibit subdivision of the property and any activity that degrades natural conditions of the forests.

Director Natalie Becker established rights under the easement for part of the camp's forestland to be "working forest" managed for both economic and ecological value. The working forest was important to Becker because it recognizes and honors the importance of timber to the local economy and acts as a physical demonstration of the healthy balance possible between nurture and use of the natural world. The camp has partnered with local scientists, local conservation organizations, local schools, and local towns and cities to protect and share the special resource.

Camp Adams information detailed here draws on information from a United Church News article by Connie Larkman that appeared on Jan. 15, 2019, at ucc.org.

By intentionally sourcing wood with preference for local small businesses, minority-owned businesses, and sustainably managed forests, Meyer created a



Clackamas County, Oregon (Camp Adams Staff, 2019)

circular economy with ripple effects on the local community, conservation outcomes, recreational opportunities, business owners and workers' families within 25 miles of the project.

Conformant Framing

Lumber and plywood material was purchased as FSC certified from Sustainable Northwest Wood, and sourced from mills and forests in Oregon and Washington, in support of ecological forest management.

Conformant Roof Trusses

Truss material was sourced as FSC certified from Shelter Products and sourced from mills and forests in Oregon and Washington, in support of ecological forest management.

Choices

The project team made several choices that influenced outcomes. However, an overarching choice that was made early on with ramifications throughout the project was the choice to be okay saying no to options that were possible but not practical. Ramifications included saving money and forging an example of what is possible with modest resources.

- The design choice to use mass plywood panels (MPP) was pivotal. Freres Lumber is the only company in Oregon currently making MPP. Freres Lumber has not been willing to offer a certified or segregated product. Once the project design included MPP there was no fully conformant wood sourcing option available to the team. Achieving full conformance would have required a building redesign to engineer MPP out of the project design. MPP was chosen for its local sourcing, community investment goals and its innovation in wood material production.
- The project was interested in exploring where money could be spent to get the greatest return (mission-aligned value) for the investment. This approach meant each wood product and its sourcing options received "green, yellow or red light" status based on availability, cost and conformance with wood sourcing criteria. This approach

- allowed the project to capture significant value with modest expense. This approach also meant deciding to say no to two conformant structural wood options with unreasonable premiums.
- Our approach affected subcontractors and relationships. We are thankful for project partners willing to take risks on using a new supplier when necessary. Alternative suppliers were necessary when a partner's preferred vendor was not interested or capable of offering a conformant and/or competitive price.



Wood slat ceiling (LEVER Architecture, 2020)

Lessons Learned

There are three main lessons learned during the course of the Meyer Memorial Trust headquarters project: (1) start early, (2) build support and experience into the project team and (3) plan for flexibility.

• Start Early

Finding conformant wood products within the project budget requires planning from the start. The earlier a project starts thinking about wood product goals and options the more that can be achieved.

The design phase is the first major point of a project where wood options are impacted so you are not boxed in by design decisions. Designing with mass plywood panels, cross-laminated timber (CLT), laminated beams, traditional stick framing, non-wood and hybrid-wood/steel/concrete impact your supplier choices.

Selection of engineering software and lumber species limits the region and mills you can partner with. For example, engineering with Doug fir lumber favors westside mills white fir favors eastside mills.

The selection of the design firm, engineering firm, general contractor and framing contractor are also important. Existing relationships and



(Sustainable Northwest, 2016)

experience delivering conservation and equity goals for past projects can make success easier. It is important to find partners who are at least open to non-traditional options when solutions are not forthcoming.

Community, equity and conservation goals cannot be a last-minute design consideration at the end of a project. Starting early in the processes is the most important step you can take.

• Build Support and Experience into the Project Team

It is critical to have a knowledgeable person on the project team to support the creation of wood sourcing goals, help ensure all options are available to the team, problem solve and avoid unnecessary costs. Money spent to include support

and experience will save the project money by helping the project team navigate problems, identify cost saving options and avoid making decisions with limited information.

The cedar siding used for the Meyer project is an example of cost savings achieved through improved understanding of sourcing options. At first glance the Port Orford cedar was a good choice. It is grown and fabricated in Oregon and available from a local small business as ESC certified Sustainable Northwest was able to help identify an option with greater mission alignment at half the cost grown and manufactured within 25 miles of the project. The cedar siding, roof trusses, wood slat ceiling, framing, cabinets and casework all required unusual solutions that ultimately enabled cost savings and improved success.

Plan for Flexibility

As responsibly sourced wood becomes more available and minority-owned businesses continue to thrive, it has become easier to source wood in ways that meet aspirational goals.

Vendors said wood products were available in the quantity and grade needed. Minorityowned businesses and small businesses were available to bid on the project. However,

flexibility is critical for certain elements when supply chains offer limited or cost-prohibitive answers.

We evaluated sourcing options early in the project and applied a rating of "green, yellow or red light" to the options. This allowed the project to anticipate if sourcing was going to be easy, hard or possibly very hard to achieve our project goals. This also allowed us flexibility to secure easy wins and focus energy on what was the greatest impact for the value each option represented. Details related to the "green, yellow, or red light" assumptions are provided in Appendix C.

Hardwood flooring and cedar siding were examples of "green light" options that were available from multiple vendors at a reasonable price. Mass panel plywood sourcing was an example of "red light" for our conservation and equity goals but one that fulfilled our local sourcing and community investment goals.

Furthermore, at the end of the project, vendors need flexibility to make last-minute small wood purchases even if they do not meet sourcing goals. Forcing conformance on last-minute needs risks damaging relationships, creating project delays and increasing costs.



Appendix A: Project Partners

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(Murphy Plywood, a.d.)

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(Fred Joe, 2020)

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FOREST-OF-ORIGIN FOR SIDING, DECKING, AND FLOORING

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Appendix B: Wood Product Sourcing Criteria

Intent Statement:

Forests are one of Oregon's greatest assets. They represent 48% of Oregon's land area. Impacts of wood procurement sourcing and forest management are significant to human health, water quality, climate resilience and the ecological benefits potentially secured from these landscapes.

Given Meyer's overarching commitment to environmental protection and equity as core pillars of its mission to work with and invest in organizations, communities, ideas and efforts that contribute to a flourishing and equitable Oregon, it has established sourcing criteria for wood to be used in construction of its new building. The criteria support forests that are managed intentionally for carbon sequestration, worker rights, human health, water and wildlife habitat. Additionally, Meyer has committed to supporting rural forestry-based jobs, rural communities and innovation in Oregon by constructing parts of the new building with wood.

Note: The orientation for identifying positive forest management attributes and sourcing criteria is to detail what we believe to be wood sourcing that optimizes for economic, social and environmental

outcomes. This orientation intentionally avoids defining what is not sustainably sourced wood.

Sourcing Criteria:

Criteria have been created for three scenarios. Scenario 1 is used when information is known about the forest where wood for a product was harvested. It is recognized that source information is often not available. This goal encourages the supply chain to illustrate information that is available and to share what is known with the project team. Scenario 2 is used when source forest information is not available. Scenario 3 is used when fulfillment of scenario 1 or 2 is not possible. Preference is given to products that support forestry-based jobs, rural communities and wood product innovation with preference to achieving as many ecological goals detailed in Scenario 1 as possible.

Scenario 1: When Source Forest is Known

Source forest information shall be confirmed to meet the following goals:

1. Oregon Jobs

Wood shall be sourced and manufactured in the Pacific Northwest, with a strong preference for Oregon-grown and manufactured wood products sourced from rural communities, Tribal enterprises or MWESB businesses.

2. Carbon Sequestration

Forests shall be managed on extended age harvest rotation, with 50+ year rotations.

3. Ecosystem Values

Forest management shall maintain natural forest attributes to provide co-benefits such as carbon sequestration optimization and protection of societal and ecosystem services (soil, air, water quality, biodiversity).1

4. Harvest

Selective harvest methods shall be preferred.

5. Ecosystem Values

Harvest openings shall be accepted when deployed to mimic natural disturbances in spatial distribution and retention patterns. When used, individual openings of 40 acres or more shall maintain 30% or more living and dead tree retention. (Exceptions shall be made for larger openings performed for aspen regeneration or similar special habitat restoration projects).

6. Chemical Use

Forest management shall avoid use of harmful herbicides (like atrazine) used singly or in combination with other chemicals except when

alternatives have proven ineffective for control of invasive species (like Himalayan blackberry). Application shall be limited and applied from the ground using best practices for worker safety.2 A focus on toxics like atrazine enables Meyer to recognize the significant use of chemicals in some types of forest management and incentivize limited use through wood sourcing goals.

7. Stream Protections

Adequate science-based measures shall be taken to protect domestic drinking water sources, fish-bearing streams and nonfish-bearing streams to ensure adequate shade, structure and bank stabilization to provide normal stream temperature, sediment load and natural habitat (including large woody debris recruitment).3

Scenario 1 goals are met when material can be tracked to an Oregon FSC certified forest. The project team is open to other forms of ecological forest management verification.

Wood with Information connecting it to family forest operations endorsed by the American Tree Farm System, Habitat Conservation Plans, Safe Harbor Agreements, rangeland restoration (such as juniper) or other origin information that meets some but not all these sourcing criteria will be given preference over wood with fewer known criteria matches.

Scenario 2: When Source Forest is Unknown

When source forest information is not known, wood shall be one of the following: FSC certified, restoration credits, recycled wood or urban salvage.

1. Forest Stewardship Council (FSC) certified

Certification is seen as a tool to achieve the six ecologically based criteria outlined above. It is recognized that FSC does not perfectly match the above criteria.

2. Restoration Credits

Restoration credits identify wood from an ecological restoration treatment (a treatment to help return a landscape to a more natural condition). Restoration credits work like wind-energy credits, linking a primary mill's log sourcing volume with an equal sales "credit" volume. Credits are built when wood from National Forest restoration projects that are supported by forest restoration collaboratives (USDA FS, 2017) are purchased by a primary mill.4 Meyer would receive a curated sheet detailing the National Forest project management plan along with volume of credits sold to Meyer.

3. Recycled wood

Wood salvaged from a waste stream is considered recycled wood. Wood chips, sawdust and other byproduct long established as a complementary product are not considered recycled under these sourcing criteria.

4. Urban Salvage

Urban trees are ones grown for non-timber values, removed for any reason.

Sources that meet the above sourcing criteria will be purchased anytime material is available for an 8% or less premium. Material that is available with a 9-25% premium will be considered pending funding availability.

Scenario 3: When Sourcing Criteria in Scenario 1 and 2 are not met

If the project team concludes there are no wood products available that meet the above criteria or the premium is too great, the project will give preference to wood products from Oregon as a first choice, the Pacific Northwest as a second choice and the United States as a third choice.

Citations:

Justification for the endorsement of FSC (Franklin, et al. 2018, p. 461)5: "The philosophy, goals and forest management practices of FSC closely match those of ecological forest management, with the focus in FSC on emulating natural processes and maintaining ecosystem integrity. Among the different certification systems we have reviewed, FSC comes the closest, by a significant margin, to fully reflecting ecological forestry as described in this book."

- 1 Principle 6: Environmental Impact, within the Forest Stewardship Council US forest management standard shall be matched or exceeded to demonstrate conformance with Meyer's ecosystem services goals. FSC-US Forest Management Standard v1.0 https://us.fsc.org/download.fsc-us-forest-management-standard-v1-0.95.htm (page 23-49).
- **2** FSC's chemical use restrictions shall be matched or exceeded to demonstrate conformance with this goal. FSC Pesticides PolicyFSC-POL-30-001 V3-0 https://ic.fsc.org/file-download.fsc-pol-30-001-v3-0-en-d1-0-fsc-pesticides-policy-en.7453.htm.
- **3** FSC's buffer requirements shall be matched or exceeded to demonstrate conformance with this goal. FSC-US Forest Management Standard v1.0 https://us.fsc.org/download.fsc-us-forest-management-standard-v1-0.95.htm (page 100-101).

4 USDA FS, 2017. Collaborative Directory. USDA Forest Service, Pacific Northwest Region, Portland, OR. 62 p.

https://www.fs.usda.gov/Internet/FSE _DOCUMENTS/fseprd567241.pdf5 Franklin, J. F., K. N. Johnson, D. L. Johnson. 2018. Ecological Forest Management. Waveland Press: Long Grove, IL. 650 p.

Appendix C: Green/Yellow/Red Light Sourcing Assessment

The following are the wood products in the project and the potential for obtaining sustainable wood products. This table is based on Sustainable Northwest's "Green/Yellow/Red Light" sourcing assessment.

Available: supply chains with multiple options or a provider that sells FSC

product as a major part of their business

Available: supply chains with at least one regular provider of FSC certified

materials

Possible: supply chains where the project may have to be creative to deliver a

conformant product

Not Possible: there may not be a conformant product available

| Wood Product | Sustainable Wood Availability | Sustainable Wood from Oregon Availability | Anticipated Product Premiums |
|-------------------------|-------------------------------------|--|------------------------------|
| Finished Carpentry | | | |
| - Acoustic Wood Ceiling | Available | Yes | Likely Increase |
| - Cabinetry/Casework | Available | Yes | Price Neutral |
| - Flooring | Available | Yes | Price Neutral |
| - Trim | Available | Yes | Increase |
| - Siding | Available | Yes | Price Neutral |
| - Doors | Available | Yes | Increase |
| Beams | Available | Yes | Increase |
| Lumber and Plywood | Available | Yes | Likely Increase |
| Mass Plywood | Not Possible | No | N/A |
| I-Joist | Possible | Variable | Increase |
| Trusses | Possible | Variable | Increase |
| Decking | Available | Yes | Price Neutral |