



Construction was started in the rough 2015 winter and finished that April. Exterior boards were installed diagonally for better wall strength and weather resistance.

Pine Workshop Boosts Fence Building

Main Line Fence replaced a metal warehouse with an eastern white pine workshop that provides more space, better working conditions.

The team at Main Line Fence, Cumberland, ME, knew they had a problem. Their existing 1970s-era workshop, originally built as a warehouse for industrial chain-link fittings and where much of their fence building takes place, wasn't working. The building was too small, it was metal, uninsulated, and there was zero room for expansion.

In the mild Maine summers, temperatures inside the workshop would frequently top out at 15 degrees hotter than the outdoor temperature. Cold indoor winter temperatures made work almost impossible.

Ryan Cianchette, project manager with Main Line Fence, realized it was time for a change. The solution? A brand-new building, designed specifically for their needs, offering room to grow, and with an unmatched level of energy efficiency.

Construction began in early 2015 and the new workshop was completed that April. The new

building offers 4,000 sq. ft. of workshop space, primarily used by fence-construction teams. Interior and exterior sheathing consists of 1x10-in. rough-sawn eastern white pine boards.

WHY PINE?

"Bottom line: it's locally grown, it's energy efficient, and it insulates incredibly well," said builder Bob Vail, owner of Vail General Contracting Inc., Cumberland Center, ME. "I love it, and work with it every chance I get!"

Vail's company was called upon by Cianchette to help solve their growth challenges.

"They came to me saying they'd outgrown their space and needed a larger, well-insulated building to allow them to grow, now and in the future," said Vail. "I wanted this building to be something beautiful and useful, so we engaged an architect to help us place the building using the existing footprint." The architect was Dick Reed, Reed Architecture, Portland, ME.

While the interior of the building features pine boards installed in the traditional horizontal method, it's the exterior that caught everyone's attention: the 1x10 rough-sawn eastern white pine boards were installed shiplapped, on the diagonal.

Vail chose the diagonal exterior installation because it results in a much stronger, more energy-efficient structure than the conventional horizontal approach. Among the results he's experienced over the years: Wall ri-



The new Main Line Fence workshop features interior and exterior eastern white pine sheathing, which contributes significantly to the energy efficiency of the structure.



The interior of the Main Line Fence workshop is spacious, with plenty of room for company growth. Pine sheathing provides an extra layer of insulation, helping the company reduce heating and cooling costs.

gidity starts at the sill plate, lending greater strength to the walls, and the entire structure stands up to weather better because of the natural insulating nature of the wood. The pine boards are twice as thick as OSB, the traditional sheathing choice, which results in greater abilities to cool and heat the interior of the structure. This equals less heating and cooling costs for the company.

“One of the biggest problems with the old building was we didn’t have a workable interior,” said Cianchette. “All we had to work with was the metal framing of the building and the backside of the exterior metal-wall sheathing. We needed something different and useful for the new building. You can’t lean anything up against dry-wall without causing damage. We needed something strong, durable, and natural. The [pine] is so strong we can hang things on it, and it stands up to the sections of wood frequently leaned against it as we build fences.”

Sustainability is another reason Vail chooses to build with eastern white pine. “In Maine, eastern white pine is locally grown and easily available,” continued Vail. “It’s been a traditional building product in New England since Columbus came over, and it lasts for hundreds of years. Bottom line: you can’t get any greener than a renewable wood board.”

According to Jeff Easterling, president of the Northeastern Lumber Manufacturers Association (NELMA, Cumberland Center, ME), the grading agency for eastern white pine, and to NELMA members, this build is an exciting first. “Traditionally, eastern white pine is used in residential applications—flooring, paneling, and the like—your typical appearance-grade opportunities. To see the product used in a commercial build and to see it used with such overwhelming success is very exciting. This opens up

a whole new world for builders and for our manufacturing members.”

While no building-code challenges were encountered throughout the process, the building itself turned out to be the biggest challenge of all. According to Cianchette, “We needed to build the new workshop on the same footprint as the old one. Except the new building needed to be much larger. With the help of Bob Vail and an architect, the solution was created: The new building is L-shaped to fit in between our other buildings and really maximize the available space on the lot.”

EXCELLENT RESULTS

The workshop got its first workout during the summer of 2015, with Cianchette reporting only good results: “We have more room than ever before, lots more equipment storage, and it’s much more comfortable inside—which means our team is willing to put in longer hours. Used to be when our guys would return from an install early, no one wanted to go back into the workshop due to the extreme temps. Now they will!”

A natural-gas heat source was installed in the structure to prepare for winter. Thanks to the natural insulation provided by the wood sheathing, it only takes 10 minutes to raise the interior temperature when it’s cold. Additionally, a comfortable temperature is maintained throughout the night, allowing employees to jump right into work upon arrival in the morning.





A once drafty, hard-to-use building has been successfully replaced with an energy-efficient workspace, a structure that contributes daily to the success of Main Line Fence. Phone and Internet were recently installed in the new building, something that was impossible before due

to the drafty and sometimes wet conditions within the previous structure. The insulating envelope provided by the pine sheathing is directly related to the expansion and continued success of the business: What was once a phoneless, tiny building is now a connected extension of the main office—and there’s plenty of room for expansion.

“In the past, only two crews could build fence sections at a time,” stated Cianchette. “Now we have room to spare. When we’re ready, we can add two more jig tables and additional crews to increase production even more. Wood is becoming a very strong part of our business. We’ve been in business since 1948 and have continuously adapted to the times and the market—when the original metal building was built, we never thought we would be building residential wood fences. Who knows what we’ll be doing in another 30 to 40 years; but now we have a building that can adapt right along with us. There’s nowhere to go but up.” CA

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