

ISSUE
14

The magazine
for building
professionals
from LP Building
Products

ENGINEERED WOOD

SUMMER/FALL 2015

PG **08**

Now more than ever,
weather is a major
priority for the industry.

Challenging the **Elements**

INSIDE THIS ISSUE

Stronger Wall Framing Using LSL in the places it counts the most

A NEW PATH TO NEW CODE COMPLIANCE

COASTAL HOMEBUILDING

We're proud to announce the return of *Engineered Wood* magazine! Just like before, LP Building Products will deliver news and insider points of view for builders, architects, engineers and other industry professionals. In the offseason, we refreshed the look of *Engineered Wood* to bring our readers an issue more indicative of the current landscape we are seeing in the industry.

While Mother Nature is an uncontrollable and unpredictable force, we discuss current building materials and techniques to more efficiently and effectively challenge the elements in our cover story starting on page 8. For those affected by hurricane season along the coast, also be sure to check out the coastal homebuilding article "The Evolving Nature of Coastal Homebuilding" on pages 18–19.

As weather affects worksites and buildings, it also affects our environment. On pages 6–7, you can discover how the Sustainable Forestry Initiative (SFI) is teaming

up with organizations like Ducks Unlimited Canada and LP Building Products to lay "corduroy roads" across forest road wetland crossings to preserve the integrity of the wetland.

We'll also discuss the differences between fiber cement and engineered wood siding, including how the two are affected by growth or shrinkage post-installation. Refer to our engineered wood siding installation tips for a helpful checklist.

We are excited to bring back *Engineered Wood* magazine, and we hope you—our readers—are equally excited to receive it. Visit us at EngineeredWoodOnline.com for additional content and videos. If you like what you see in this magazine, or if you have any ideas about what you'd like to see in the future, let us know by contacting our editor Kristin Hampel at editor@engineeredwoodonline.com.

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CONTENTS

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ON
THE
COVER

PG
08
CHALLENGING
THE ELEMENTS



PG **03**
A New Path to Code Compliance:
The 2015 IECC

PG **04**
**Stronger Framing for
Stronger Homes**
by Neil Sherman

PG **06**
**Looking to the Past for New
Ways to Build Sustainability into
Wetland Road Crossings**
by Andrew de Vries

IN
EVERY
ISSUE

PG **02**

TRENDS
& TECHNOLOGY

PG **14**

INDUSTRY
NEWS & TRENDS

PG **20**

INSTALLATION
TIPS: Engineered
Wood Trim
& Siding

PG **21**

INTERNATIONAL
FOCUS:
South America

LP® SMARTSIDE®
TRIM & SIDING

06

PG **16**
**Marketing Tips for
Building Professionals:**
Reaching Today's Homebuyer
in the Mobile Space

PG **15**
**Light Commercial
Construction:**
Engineered Wood Siding
vs. Fiber Cement



The Evolving Nature of Coastal Homebuilding



BUILDER TOOLKIT

TRENDS & TECHNOLOGY



+ Available for download on iTunes, Google Play and Amazon

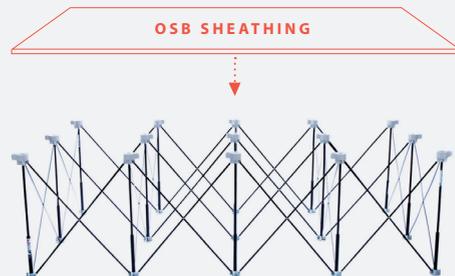
Construction Instruction® App

Construction Instruction®, a consulting, building resources, and education and training organization, has added a mobile app to its arsenal. The app is equipped with home construction videos, animated building details, building science articles, and building product and material info including step-by-step installation methods, technical data and other “Best Practices.” Save important or pertinent info to your “Favorites” for easy recall when you’re on-the-go on the jobsite. Designed by and for builders, contractors, manufacturers and architects, the Construction Instruction mobile app can be your source for building science information and building products arranged by manufacturer’s name, product name or product category.

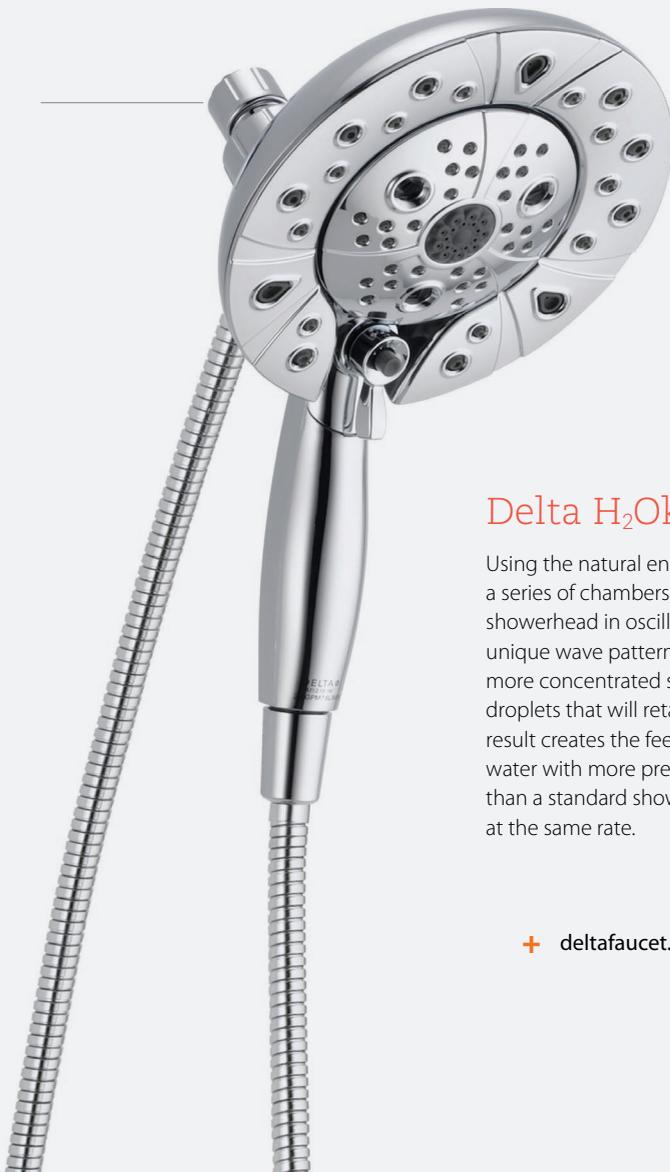
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Centipede™ Portable Work System

The manufacturer states that this durable, portable base creates a table or workbench base in seconds. Featuring a unique frame constructed of multiple steel ruts resting directly between the load and the ground, the design supports incredible weight. The frame condenses to an easily transportable or storable size. Available in two sizes.



+ centipedetool.com



Delta H₂Okinetic®

Using the natural energy of water through a series of chambers, the water exits the showerhead in oscillating vortexes. The unique wave pattern provides a denser, more concentrated spray made of larger droplets that will retain heat longer. The result creates the feeling of more, warmer water with more pressure and coverage than a standard shower—all while flowing at the same rate.

+ deltafaucet.com/smart-solutions

A New Path to Code Compliance

THE ENERGY SCORES ARE CHANGING

The new 2015 International Energy Conservation Code (IECC) has been in play for a little more than six months, and more and more states and municipalities are expected to make the move from the older codes to the new requirements. Many are jumping directly from the 2009 code, skipping the 2012 changes entirely, which offers builders more flexibility in meeting the tighter standards.

While the latest IECC makes some additional prescriptive changes to inspections, air leakage testing, combustion closets, vertical access doors and duct insulation, the most significant update and benefit to many builders is the addition of the Energy Rating Index (ERI) performance path.

The ERI path gives builders another option for complying with the IECC that wasn't available in the 2012 code. The older code offered a U-factor alternative, allowing builders to find their own ways to meet the code, provided their methods met the requirements. For many small- to medium-sized builders, this could prove to be cost-prohibitive.

The new ERI path allows the state or municipality adopting the code to select a qualifying ERI method—such as RESNET's Home Energy Rating System (HERS) index. And because of its national recognition, many states are likely to select HERS for this new path.

What is an ERI score? For the 2015 code, it's a numerical value where 100 is equivalent to the energy value identified in the 2006 IECC requirements and 0 is a net-zero home. According to RESNET, each integer value on the scale represents a one percent change in the total energy use of the rated design relative to the total energy use of the ERI reference design—in this case, the 2006 home.

The ERI scores required by the 2015 code are based on an analysis of HERS index scores completed by the

So, the lower the score, the more efficient the home.

Florida Solar Energy Center. The center reviewed homes in 16 cities distributed across each climate zone, and the final required 2015 IECC adopted scores range from 51 to 55.

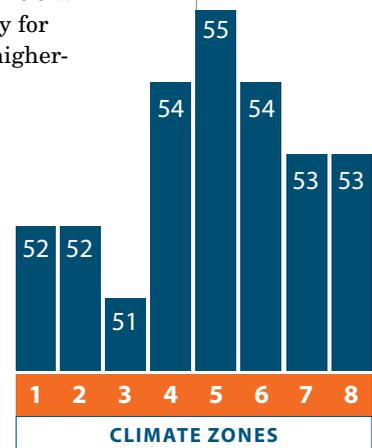
For states moving from the 2009 to the 2015 IECC, there will be around a 30 point difference as the 2009 code requirements would achieve an 85 on the HERS index. For states transitioning from the 2012 code, meeting the 2015 IECC will be a smaller jump, as a home built to 2012 standards would have been scored at approximately 70 on the HERS index.

Many upgrade options are available that may help lower a home's overall score. For example, replacing traditional roof sheathing with a product like LP® TechShield® Radiant Barrier Sheathing may help qualify for up to three HERS points.

No matter how a builder achieves a lower score, the addition of the ERI path to the 2015 IECC will provide more flexibility for builders to construct higher-performing homes. ■

2015 IECC ADOPTED SCORES:

Sources: RESNET Energy Rating Index Performance Path



The energy ratings are based on a number of variables, including upgrades to equipment or appliances, as well as the type and efficiency of the following:

- Ceilings and roofs
- Exterior walls
- Attics
- Foundations
- Crawlspaces
- Floors over unconditioned spaces
- Windows and doors
- Vents and ductwork
- Air leakage
- Leakage in the heating and cooling distribution system
- HVAC and water heating systems

Stronger Framing for Stronger Homes

BY NEIL SHERMAN

When it comes to minimizing callbacks on a new home, what's behind the walls makes all the difference. By using stronger framing members like LP® SolidStart® LSL where strength matters most, builders can save themselves time and costs down the road.

For a lot of builders framing a whole house with LSL isn't always practical because of the cost, but the added strength and lower moisture content really does make a difference. That's why we recommend targeted wall framing—using LSL where you need it.

Where should you frame with LSL? Start with your kitchens and bathrooms, where weaker walls can mean more callbacks for cracked tile or shimming for a proper countertop or cabinet installation.

It resists warping, shrinking and twisting better than traditional lumber.

Because LSL is manufactured at 7 to 10 percent moisture content, similar to the conditions inside a home, it resists warping, shrinking

and twisting better than traditional lumber, which has to dry down 10 percent from 19 percent.

That can make a huge difference in doors and window headers, or the framework for sliding doors, where cracks in the drywall and nail pops can be a problem when framed with traditional lumber. Plus, a single piece of LSL can be an easy substitution for an OSB sandwich header or can help reduce costs when used in place of an LVL header.

With grades up to 1.75E, LP SolidStart LSL is strong enough for some tougher applications as well, like building longer spans and taller walls in great rooms and foyers. It can help reduce movement that could lead to stress cracks and leaking seals, which can often happen when using other products in these types of applications.

So even if LSL isn't a whole-housing framing option for your company, consider targeted wall framing so you can get the benefits of LSL where you need them at a feasible cost. ■

+ Learn more at APAwood.org and download a free copy of the *Advanced Framing Construction Guide*.

01

Door Frames

Protect your door frames. Because LSL's consistent low moisture content helps resist warping and shrinking, it can help minimize cracks in drywall around door frames, which can reduce callbacks.



NEIL SHERMAN

SR. VICE PRESIDENT, LP BUILDING PRODUCTS

Neil Sherman is the Senior Vice President of Engineered Wood Products for LP Building Products. He joined the company in 1994. Most recently, he served as Vice President of Procurement, Logistics and Supply Management. Sherman holds a B.S. in Waste and Waste Water Management from Humboldt State University.

HAPPIER HOMEOWNERS AND REDUCED CALLBACKS START WITH STRONGER FRAMING MEMBERS LIKE LP® SOLIDSTART® LSL, HELPING YOU BUILD WALLS THAT

START STRAIGHT & STAY STRAIGHT

02 The Grand Foyer

LP SolidStart LSL is available in 1.75E grade—the industry's highest grade of LSL—making it a great solution for building longer spans and taller walls in foyers and similar applications.

03 Kitchens and Baths

With the strength of LSL, straighter walls mean less shimming for countertops and cabinets and less of a chance of cracked shower tiles.

TARGETED WALL FRAMING:

BUILDING A WHOLE HOUSE WITH LSL ISN'T ALWAYS FEASIBLE, BUT BY FRAMING SPECIFIC WALLS WITH THE PRODUCT, YOU CAN AVOID A LOT OF HEADACHES DOWN THE ROAD.

04 Window Headers

Window headers are made easy with LSL. One piece can replace an OSB sandwich window header or can help reduce costs when substituted for an LVL header. Because it resists twisting, it reduces the likelihood of drywall cracks and nail pops.

MAKE IT SUSTAINABLE

LP SolidStart LSL is manufactured from wood sourced through programs certified under the Sustainable Forestry Initiative®.

Looking to the Past for New Ways to Build Sustainability into Wetland Road Crossings

BY ANDREW DE VRIES

Since the early days of Canada's timber trade, foresters have used "corduroy roads." By laying logs down side by side—giving the appearance of corduroy fabric—they built paths over wet areas, providing bearing capacity of the road surface while allowing the water to flow through.

Forestry roads and poorly constructed water crossings can often interrupt the natural flow of water and the nutrients it carries. In the winter, water flowing through crossings can freeze, blocking the passage of water and creating a build-up of ice on top of the road bed. During the spring melt this ice dam can cause roads and crossings to wash out, creating a myriad of problems for foresters. The Sustainable Forestry Initiative® (SFI) was eager to support an environmental research project designed to develop and test new crossing techniques for forest roads that intersect with wetland environments. SFI partnered with Ducks Unlimited Canada and SFI program participants LP Canada Ltd., Weyerhaeuser and Spruce Products Ltd.

Ducks Unlimited Canada shared their wetland expertise with forestry professionals to plan and build roads in ways that conserve Canada's critical boreal forest wetland ecosystems. The project focused on boreal forest wetlands in Manitoba and Saskatchewan. Ducks Unlimited Canada worked with engineers from FPInnovations, a nonprofit forest research center in Canada, and forest industry partners to come up with

best practices for the construction of resource road wetland crossings.

After many workshops and field trips that focused on understanding wetland hydrology and construction best management practices for forestry roads and crossings that best conserve boreal wetlands, Ducks Unlimited Canada and its forestry partners decided to reinvent the corduroy road crossing.

First, it was important to determine the type of wetland the company would have to cross in order to access timber. For instance, water in bogs is stagnant; in swamps, water flow fluctuates; and water can flow very slowly in fen wetland types.

Depending on the wetland type and anticipated water flows, one or several culverts are added to increase water flow capacity and geotextile fabric is used to provide for roadbed separation and support. The root mats and stumps are left intact to further stabilize the road bed. Fabric is placed over the corduroy prior to placing the road gravel to prevent dirt from plugging the corduroy or entering the water. Although the basic crossing design remains the same, minor adjustments are made depending on the wetland type and anticipated flow dynamics of the wetland being crossed. The result is almost like a suspended road that allows water to flow through.



REINVENTING "CORDUROY ROADS"
 THE RESULT IS ALMOST LIKE A SUSPENDED ROAD
 THAT ALLOWS WATER TO FLOW THROUGH.

In 2014, the partners produced a wetland field guide and operational handbook that allows foresters to build better roads in the boreal. It helps them classify wetlands and contains construction schematics. Armed with this information, foresters can access timber while at the same time leaving the wetlands intact. Supported with funding from the SFI, the wetland field guide and handbook for forest road wetland crossings are documents that help resource managers identify wetlands in the field and provide practical guidance on how to cross different wetland types.

The project is an excellent example of why SFI launched the conservation grant program in 2010; it brings together conservation and forest engineering expertise, fosters collaboration, and builds knowledge to improve practices and protect special areas. LP Canada Ltd.'s support and continued partnership helps ensure the continued success of these objectives. This project is one of more than 60 SFI Conservation and Community Partnership grants awarded since 2010. Since then,

SFI has provided more than \$1.9 million to foster research and to pilot efforts to better inform future decisions about our forests. When leveraged with project partner contributions, that total investment exceeds \$7.1 million.

The research, which began in 2011, is now being expanded to a national scale. This project will provide information on forest resource roads and wetland crossings in order to influence best practices on millions of acres of forestland certified to the SFI standard across Canada and the United States. ■



Andrew de Vries is Vice President of Conservation and Indigenous Relations at SFI — an independent, nonprofit organization that is solely responsible for maintaining, overseeing and improving the internationally recognized SFI program. Across North America, approximately 109 million hectares are certified to the SFI forest management standard.



RESOURCE

The Boreal Wetland Field Guide and Operational Handbook for Forest Road Wetland Crossings can be downloaded from:

Ducks.CA/
 What-We-Do/
 Where-Work/
 Boreal-Forest/
 Boreal-Forest-
 Wetland-
 Resources



THE BUILDING INDUSTRY HAS ALWAYS BEEN SUBJECT
TO THE UNCONTROLLABLE POWER OF MOTHER NATURE.

CHALLENGING THE EL



ELEMENTS

**AS SEVERE WEATHER CONDITIONS
CONTINUE TO IMPACT THE INDUSTRY,**

the research and development of products, practices and performance requirements designed to help resist the effects of severe weather are a major priority.



HURRICANES

In hurricane zones, homes subject to wind uplift pressures of 20 pounds per square foot or greater must have roof rafters or trusses attached to the supporting wall assemblies using capable connections to transmit uplift forces to the foundation, in accordance with International Building Codes (IBC).

Traditionally, hurricane clips help hold a roof in place by transferring load pressure on the roof through the walls to the top plate. Hurricane straps and hardware anchor the top plates to the studs and then to additional studs through the building platforms to the foundation.

Per the APA – The Engineered Wood Association, “Wind-resistant framing details such as roof-to-wall connectors and continuous wood structural panel wall sheathing are also an economical means to provide an uninterrupted path for wind loads to be carried from the roof to the foundation.”

Building with LP® LongLength™ nine- and ten-foot panels and LP® LongLength XL™ panels (with an additional 1 5/8”) can improve frame strength by using a longer single panel to seamlessly connect the top plates to the studs down to the bottom plates. These products reduce uplift strap requirements at the top and bottom of the wall assembly, saving time, labor and materials.

In addition to hurricane zones, there are currently some 6.6 million homes along the Gulf and Atlantic coasts in at-risk areas of storm surge damage from the

DAMAGE FROM STORM SURGE CAN
BE EFFECTIVELY REDUCED SIMPLY BY
BUILDING HOMES IN COASTAL AREAS
ABOVE THE FLOOD LEVEL.

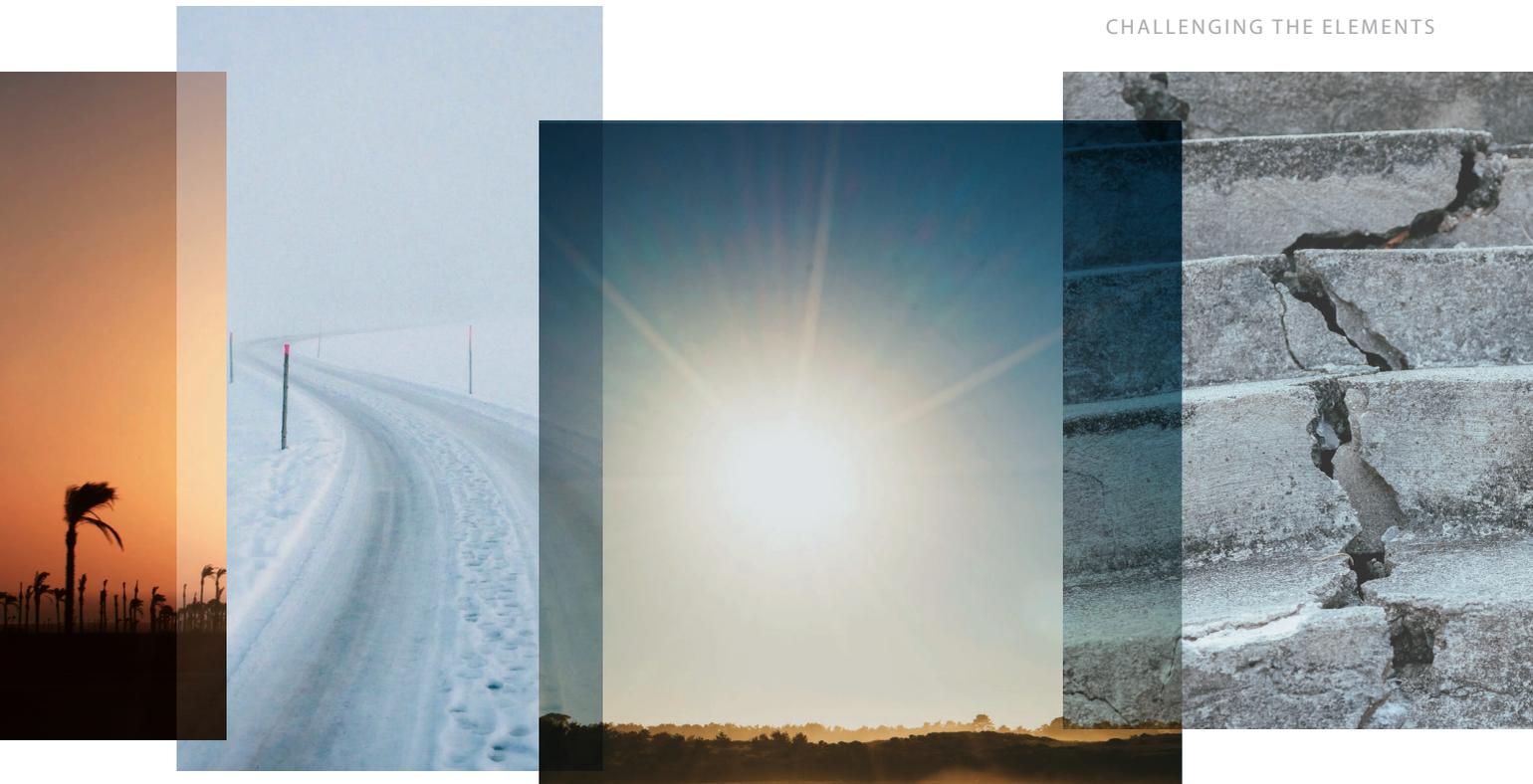
traditional hurricane season in the Atlantic running June through November.

According to the APA, “Damage from storm surge can be effectively reduced simply by building homes in coastal areas above the flood level. Strategies include constructing homes in the immediate vicinity of the coast on raised pile foundations. Further inland, a reduction in flood damage may be realized by constructing homes over crawlspaces instead of atop slabs that are more susceptible to flooding as the storm surge moves inland.”

An example is the raised wood floor system designed by LP Building Products, featuring LP® TopNotch® Sub-Flooring as well as LP® SolidStart® I-Joists and Rim Board.

TORNADOES

Around 1,000 tornadoes occur annually in the United States. And while tornadoes can occur at any time, the typical season starts in April in the Southeast, then moves westward and northward.



Unlike straight-line hurricane winds, spiraling tornado winds can produce wind speeds up to 200 mph that can create enormous pressure on ceilings and roofs and destroy a structure in seconds.

However, by observing tornado damage, the APA identified a set of low-cost recommendations for uplift load path improvements in light frame construction along the fringe areas of a tornado's path.

Like coastal builders, inland builders in tornado zones are also constructing homes with a continuous load path that anchors the roof, walls and foundations with fully sheathed walls and reinforced connections. Products such as LP LongLength XL panels enhance the strength and structural integrity for homes exposed to tornado conditions, while wall bracing also helps keep walls square in severe wind.

Products like LP® SmartSide® Trim & Siding also meet additional needs as they are manufactured to withstand harsh elements and offer some impact resistance. The APA confirmed LP SmartSide is rated for specific wind loads at certain exposures, thereby meeting building codes in most wind zones (ESR-1301).

Other building materials—such as impact-resistant, reinforced windows and doors—are increasing in use, as is the growing number of “safe rooms.”

WILDFIRES

In 2014, more than 63,000 wildfires burned approximately 3.6 million acres in the United States, mostly in the West. As more homes are built in areas known as the wildland-urban interface, or WUI, the risk for wildfires increases as the environment creates more opportunities for fire to move between structures and vegetation.

WUI, IBC, IRC, and state and local codes include requirements for construction performance regarding fire resistance and flame spread.

LP® FlameBlock® Fire-Rated OSB Sheathing allows builders to easily and effectively meet some designated fire codes. The cementitious-coated OSB sheathing has structural design values equal to standard sheathing in the same performance category. ICC-certified (ESR-1365) per AC264 with a Class A and 30-minute Flame Spread Rating (ASTM E84) and tested one- and two-hour assemblies,



WIND-RESISTANT TECHNIQUES THAT COST *LESS THAN \$600** in additional labor and materials for an average 2,100 sq. ft. new home:

- Nail types and patterns
- Continuous wall sheathing on structural panels using plywood or OSB
- Sheathing connections to the roof framing and at sill plate intersections
- Tying and/or sheathing of gable end walls

*APA's "Building for High Wind Resistance in Light-Frame Wood Construction Guide."



**SO MUCH OF THE
DAMAGE IS PREVENTABLE.**

Communities are encouraged to take measures to make getting back to normal operation an easier task. Following resilient building techniques are a key element to reducing damage, decreasing recovery costs, and returning to normal more quickly after a disaster.

APA – THE ENGINEERED WOOD ASSOCIATION

LP FlameBlock sheathing combines fire resistance and impressive structural performance in a single panel, allowing for fast, cost-effective compliance with various fire codes in Types I, II, III and V construction.

EARTHQUAKES

This year, the United States Geological Survey released updated seismic hazard maps. The seismic provisions of building codes align with these maps to drive construction of earthquake-resistant buildings.

WHILE EARTHQUAKES ARE MORE REGIONALLY CONTAINED, AT LEAST 40 STATES ARE AT SOME RISK FROM DAMAGE CAUSED BY SEISMIC FORCES.

A structure's key elements (frames, shear walls and diaphragms) are critical in earthquake zones. According to the Wood Products Council, wood-framed structures can meet or exceed earthquake design requirements. Wood-framed construction can be engineered for earthquakes and has a long history of excellent performance in actual events.

A structure's weight amplifies earthquake forces, and wood is substantially lighter than steel or concrete. Ordinary wood-framed construction techniques tend to have numerous nail connections, equaling more opportunities for load paths. More load paths also improve ductility, which is the ability to dissipate energy in an earthquake. With some minor methodical changes and greater attention to detail, wood-framed buildings can better protect their occupants.

"Earthquake and wind forces are exerted onto buildings in a much different fashion, but in many ways the forces are resisted by wood-framed systems in the same ways. Load-path continuity and strength enhancements are vital to resisting the lateral and uplift forces that can result from these very different events," according to the APA. Products such as LP LongLength panels, offered in APA Struc-1 grades, may be used to provide a fully sheathed and connected wall.

An earthquake's lateral forces can distort, or rack, buildings. Diaphragms (using the roofs and floors) and shear walls are used to transfer loads and to keep the building from distorting or twisting. Engineered systems are designed to resist calculated earthquake

loads at a specific location and require evaluation of lumber framing elements and connections between all of the elements in the load path.

FLOODING

Floods are the most common severe weather emergency in the United States, and flood risk maps continue to evolve. In addition to staying updated on flood hazard areas, the building industry must follow existing IRC codes and local municipality laws if building in or around floodplains.

The industry continues to utilize proven wet-weather construction practices like raised floor systems, weather-resistive barriers, concrete moisture barriers, roof underlayment, breakaway panels, and waterproof basement and foundation coating.

While manufacturers like LP work on new solution-oriented products, planners will continue to research the cause and effect of urban development on flooding so they may guide builders on where, when and how to build in order to offer protection from future flooding in these areas. ■

As designers and builders will continue to be challenged by Mother Nature, the industry will need to continue to improve by creating strong, sustainable structures.

While national, regional, and even emerging resiliency codes continue evolving to address design requirements, groups like the APA are providing additional resources and detailed construction practices to help builders construct even better against severe weather conditions, improve resiliency of communities to natural disasters, and reduce monetary damage.

FACE THE ELEMENTS



LP® SolidStart®
Engineered Wood LSL



LP® TopNotch®
Sub-Flooring



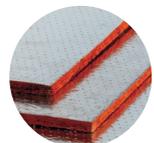
LP® LongLength™
OSB Sheathing



LP® SmartSide®
Trim & Siding



LP® FlameBlock®
Fire-Rated OSB Sheathing



LP® TechShield®
Radiant Barrier
Sheathing



#NOWTRENDING

INDUSTRY NEWS & TRENDS

NO. **1**

Commercial developments emerge as driver for growth of new construction

While 2014 brought signs of recovery in the nonresidential building market, the positive trend is expected to continue to soar into 2015 and 2016, according to the American Institute of Architects' Consensus Construction Forecast.

The commercial construction sector is looking at double-digit increases in 2015, led by high levels of demand for hotels and office buildings. Others among the growing commercial development types include industrial facilities and retail space.

Overall, nonresidential spending is expected to increase 7.7% in 2015 and continue to grow up to 8.2% in 2016, making it the first year since the Great Recession that every major building category is projected to see increases in spending.



NO. **2**

Millennials and empty-nesters alike flock to townhouses

For many younger homebuyers, as well as their retiring counterparts, the townhouse is becoming more appealing, according to multiple sources. Slightly smaller in size and more affordable than typical single-family homes, townhouses can offer these buyers a renewed option for housing. For retirees and empty-nesters looking to downsize, the townhouse is a comfortable medium between their house and a smaller condo.

For builders, too, attached townhouses can be a more affordable option than freestanding single-family homes. Total townhouse construction was up on a year-over-year basis during the third quarter of 2014. According to an analysis from the NAHB Census data of Starts and Completions by Purpose and Design, single-family attached starts totaled 20,000 for the quarter, 17% higher than a year prior.

NO. **3**



Shedding some light on the shed movement

If the word “shed” conjures up thoughts of lawnmowers, out-of-season lawn furniture and junky garage overflow, think again. While sheds will always serve as storage, many people are using them to create small, livable spaces to serve as an extension of their in-home selves. For some homeowners, the affordable, livable prefabricated or custom-built shed may be more appealing than adding a more expensive addition to the home.

Regardless of the shed's final purpose—be that a “she shed,” “man cave,” hobby nook, party room or relaxation zone—all sheds must be built with sturdy, reliable products. LP Building Products offers a line of shed materials for durable and attractive walls, roofs and floors that offer your space protection from fungal decay and termites, help the shed stand up to harsh weather conditions, and present a uniform finish. Get started on your shed project with LP® Outdoor Building Solutions®.

LP® SMARTSIDE®
TRIM & SIDING

Light Commercial Construction

ENGINEERED WOOD SIDING VS. FIBER CEMENT

A one-hour
firewall is the
same whether
you use fiber
cement (Class A)
or SmartSide
(Class C).

Fiber cement has been the “go to” siding and trim product for light commercial construction projects over the past 15 years, but LP® SmartSide® Trim & Siding is making industry influencers across the country take notice.

COMPETITIVE PRICE

The upfront costs of LP SmartSide are comparable to fiber cement, a misconception among those who assume it’s more expensive because it’s engineered wood. It comes in 16-foot lengths, compared to most fiber cement, which is typically cut in 12-foot lengths. The longer lengths help reduce costs associated with materials, time and labor right off the bat.

DURABILITY & LONG-TERM PROTECTION

In a NASA evaluation comparing the impact resistance of LP SmartSide and fiber cement siding, NASA found the fiber cement siding product sustained more damage than the engineered wood siding under similar conditions. The SmartGuard treatment on LP SmartSide helps protect against termites and rot for long-term durability. Plus LP SmartSide is backed by an industry-leading 5/50-year transferable limited warranty.

LESS BREAKAGE ON JOBSITE

A big issue with fiber cement is breakage and pull down on the jobsite. LP SmartSide products

are lighter, stronger and less prone to breakage, so installation goes smoother and faster with reduced waste.

INSTALLATION DIFFERENCES

The biggest difference between how the two products are installed is in the way they are cut. LP SmartSide works and cuts like traditional wood with standard woodworking tools. Fiber cement will typically shrink as it acclimates to equilibrium moisture on the jobsite, so it needs to be installed tightly. LP SmartSide products expand, so they are installed with a 3/16-inch gap between joints and between lap and trim.

ONE-HOUR FIREWALL

LP SmartSide is a Class C material and fiber cement is a Class A material—but contrary to popular belief, Class A materials are not required in most parts of the country. Class C materials burn, but you can build a one-hour firewall with it. “There’s a big misconception out there,” says Tony Jenkins, Independent Consultant, LP SmartSide, Light Commercial Segment. “In reality, most light commercial construction projects call for a one-hour firewall, not a Class A material.” ■

+ See full warranty details for LP SmartSide Trim & Siding at LPCorp.com



MARKETING TIPS

FOR BUILDING PROFESSIONALS

REACHING TODAY'S HOMEBUYER IN THE MOBILE SPACE

In case you missed it, let us fill you in. Mobile Internet usage has overtaken desktop usage.

The tipping point occurred in 2014, and the mobile trend is continuing to rise at an impressive clip, according to a report from comScore. Knowing that mobile marketing is now more important than ever, builders are at a key moment to capitalize on the opportunities. While nearly nine out of every 10 Internet users has a PC or laptop, 80% of users have a smartphone and nearly half have a tablet. With consumers' on-the-go lifestyle driving mobile devices as a highly popular avenue for accessing the Internet, marketers must consider mobile-friendly access points. Regardless of whether you opt for a mobile site, a mobile app or both, always remember that content is king. You must keep your consumers involved with fresh, relevant and engaging content.

MOBILE SITES

In the past few years, many marketers understood the need for mobile-friendly websites, or sites that are responsive to the user's device. As it relates to search engine optimization, Google has updated its search algorithm to rank mobile-friendly websites higher than those that are not mobile-friendly. Your website may have fantastic content, but don't let your competitors bypass you in search results—on mobile devices and computers—simply because your site isn't responsive. For example, visit the Pulte Homes website at Pulte.com on your mobile device or tablet.

MOBILE APPS

But before you invest precious marketing dollars in updating your website to be mobile-friendly, note the rise in mobile apps. For many users and marketers alike, mobile apps are the major gateway for interacting with brands and consuming content. In fact, many marketers are driving consumers *away* from their websites and *toward* mobile apps by directing them to download and use the app instead.

MARKETING TO MILLENNIALS

Now more than ever, Millennials are entering the U.S. housing market. This is a generation of 77 million individuals who predominantly grew up with the Internet and are now proverbially tied to their smartphones. Per the 2015 National Association of REALTORS® Home Buyer and Seller Generational Trends study, Millennials account for nearly 32% of homebuyers, with the mobile-savvy Generation X'ers close behind at 27%. Representing the largest generation in the United States—and poised at a time to enter the housing market—Millennials are putting their stake in the ground as a force to be reckoned with. As one in five Millennials reports accessing the Internet solely via a mobile device, reaching this population via mobile-friendly access points is paramount.

REACHING CONTRACTORS AND BUILDERS

According to a 2013 survey, 68% of contractors use smartphones as part of their workday and about one in four use a tablet on the jobsite (a whopping 54% increase from the previous year), both statistics that are likely increasing in number daily. Jobsite smartphone and tablet usage is highly driven by convenience, allowing contractors to stay connected, continue productivity and save time. They can do on-the-spot specification checks, product/price comparisons, and have other info literally at their fingertips. ■



2015 HOMEBUYERS:

32%
Millennials

AGES 34 & YOUNGER

27%
Generation X

AGES 35-49



80% of Internet users have a smartphone and nearly half have a tablet.



What's the difference?



MOBILE WEBSITE:

DESIGNED FOR SMALLER, TOUCH-CAPABLE SCREENS OF SMARTPHONES AND TABLETS ACCESSIBLE THROUGH THE DEVICE'S WEB BROWSER.

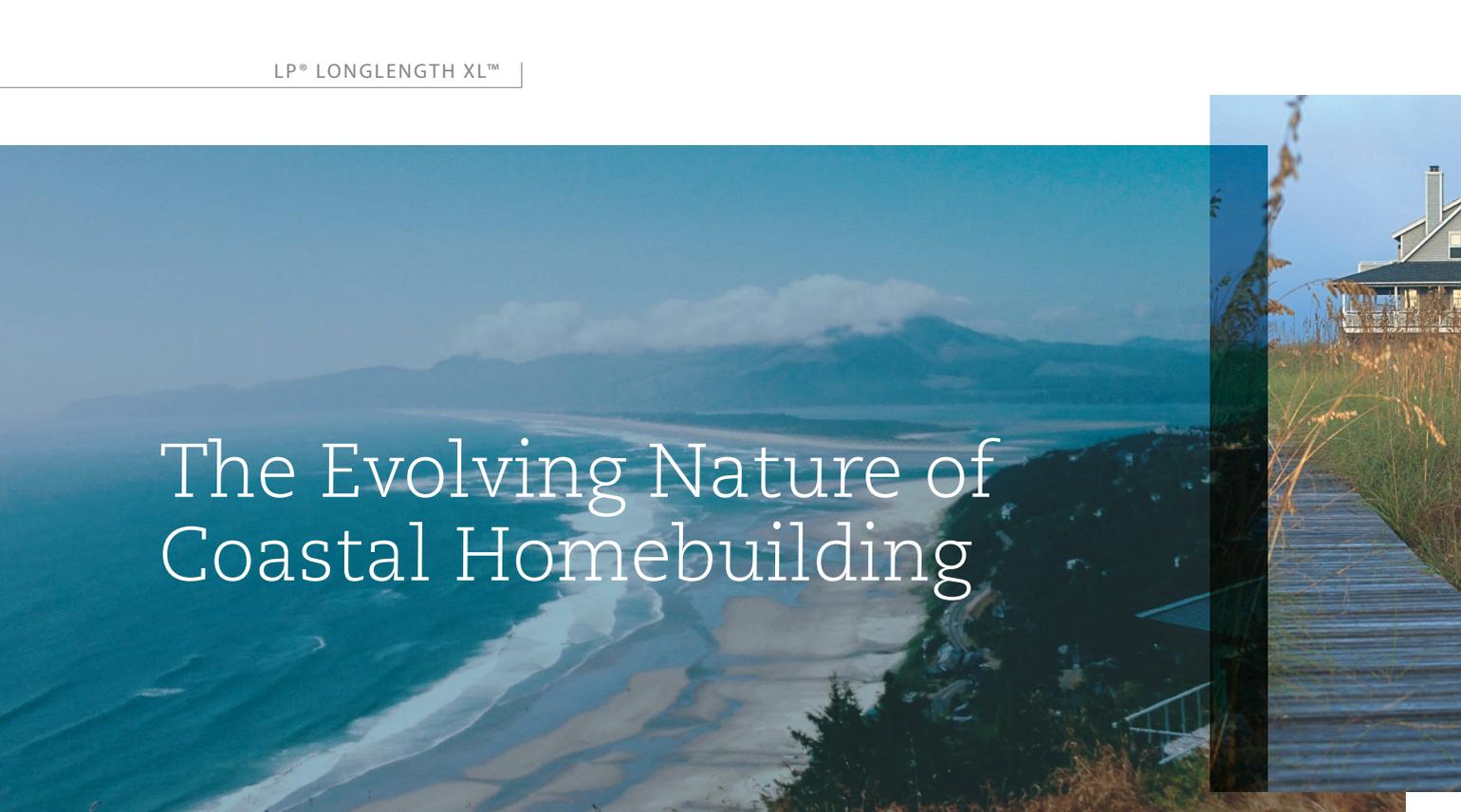
vs.

MOBILE APP:

APPLICATION BUILT FOR SMARTPHONES AND TABLETS THAT MUST BE DOWNLOADED FROM AN APP MARKETPLACE AND INSTALLED.

CONTRACTOR COLLEGE

LP and Wheelhouse 20/20 offer LP SmartSide Contractor College in the Midwest region. This helps dealers build relationships with new customers by talking about products instead of price, and it teaches builders valuable marketing strategies that can immediately impact their business.



The Evolving Nature of Coastal Homebuilding

THE CHANGING COAST

CoreLogic, a property information, analytics and services provider, reported recently that more than three-quarters of the nation's at-risk homes for storm damage are in six coastal states. Florida tops the list, followed by Rhode Island, Louisiana, New York, New Jersey and Texas.

The literal face of the coastline is changing, too. Natural processes like erosion and accretion driven by wind wash away beaches in some areas and deposit them in others. In addition, the warming oceans and rising sea levels could play a role in intensifying tropical storms in these areas, while storm surge risk moves beyond homes directly on the coastline.

Yet, the coasts continue to be some of the fastest developing areas in the country. With the ongoing development of these areas, changing coastlines and physically evolving coasts, coastal builders must be flexible and adaptable in order to meet required codes.

NEW FLOOD ZONES

Changing weather patterns, erosion and development are affecting floodplain boundaries. FEMA is currently working on new maps to show coastal flood risks. Known as Digital Flood Insurance Rate Maps (DFIRMS), these maps will cover more than 75% of U.S. coastal areas and will feature updated base mapping

and topography to improve upon the accuracy of floodplain determinations. The new versions of these maps are being developed through digital technologies and are scheduled for completion in 2018.

In the new National Flood Insurance Program (NFIP) maps, FEMA has identified four basic coastal flood zones and has added a new zone. Flood zone X represents areas in a low risk of flooding. VE zones or coastal high hazard areas are zones indicating when high velocity wave action accompanies storm surge and can cause damage to buildings. AE zones are areas affected by storm surge, but where wave action is diminished. FEMA established an area within the AE zone called "the limit of moderate wave action" or LiMWA. The moderate waves in this zone can also cause damage to buildings, though they are not as damaging as VE zone waves.

COASTAL CODES

Protection for coastal properties continues to evolve as well. Many coastal residential properties were built before the NFIP existed. Today, building codes enforce requirements designed to increase storm resistance of coastal homes.

Building codes vary by zone, state, municipality and weather threats. Most Atlantic and Gulf coastal codes



require enhanced resistance to high winds, including codes addressing the adequate specification of wind loads, requirements for wind-rated roof systems, and engineering-based design requirements leading to continuous load paths that anchor roofs to walls and walls to foundations.

The APA offers some general guidelines for building in high wind zones. First, because wind can affect a structure from many directions, a secure lateral design is imperative. When a structure is constructed to be wind resistant, it is equipped to resist lateral forces along both the width and length of a building as well as the downward vertical load path.

A wind-resistant design requires a continued connection between the roof, exterior walls and foundation. LP® LongLength™ nine- and ten-foot panels and LP® LongLength XL™ nine-foot 1-1/8 and ten-foot 1-1/8 panels can help provide this continuous connection and transference of uplift loads. Conveniently, these panels are pre-cut for standard-height walls.

The wood structural panels used in this application are providing three different structural aspects in the wall assembly. They provide shear resistance and impact resistance if fully sheathed. LP LongLength panels extend to the top of the top plate and, when teamed with a robust nailing pattern, provide uplift protection. ■



Other recommendations from the APA on techniques for building to wind resistance include:

- Nail wall sheathing with 8d common nails at four inches on center at all edges of sheathing and at six inches on center in intermediate framing
- Avoid staples
- Use deformed shank nails
- Sheath gable end walls with plywood or OSB
- For roof framing to wall connection, use a light-gauge metal uplift connector attached on the exterior (sheathing side) of the exterior walls
- Continuously sheath all walls with plywood or OSB, including areas around window and door openings
- Extend wood structural panel sheathing at the bottom of the wall to lap the sill plate
- Space ½-inch anchor bolts 32 to 48 inches on center with 0.229-inch x 3-inch x 3-inch slotted square plate washers at the wall to the sill plate intersection



ENGINEERED WOOD

INSTALLATION TIPS



Using Engineered Wood Trim and Siding? Mind the gap!

For installers new to engineered wood siding and trim, like LP® SmartSide®—or if you're a current user in need of an installation refresher—the primary difference is the spacing that is required. Spacing the joints allows the wood to expand as it acclimates to the higher moisture environment outside of the manufacturing mill.

Installation Checklist

SPACING

- Vertical joints 3/16" (including at corners and around windows, doors and trim)
- Horizontal joints 3/8" and properly integrate sloped metal Z-flashing

CLEARANCES

- Maintain a minimum 6" above grade and a minimum 1" above roof lines, sidewalks, patios, decks and other finished surfaces

FASTENING

- Follow the specified nailing patterns, which vary between siding and trim types and sizes

NAILS

- Use a minimum 8d hot-dipped galvanized box style nail, with 0.113" shank diameter and 0.270" head diameter

FINISHING

- Prime and paint all cut ends and edges

The installation method may vary depending on which type of engineered wood siding or trim you're using paired with the building's base material. Builders using LP SmartSide are encouraged to take advantage of LP's training program and materials. This will help ensure installation is done correctly so the product looks its best, meets expectations, and adheres to warranty guidelines.

Want to know more?

Visit LP University at LPCorp.com for complete installation instructions and on-demand online courses.



LP SMARTSIDE VS. FIBER CEMENT SIDING

LP SmartSide is significantly lighter per linear foot and stronger than fiber cement. It's easier to carry and install on the jobsite, and no special tools are required to cut it.



INTERNATIONAL FOCUS

Chile Builds—and Rebuilds—with OSB

Chile is considered to be a leader in South America in terms of stability and prosperity. This is partly due to Chile's position in the southern hemisphere that lends itself to multiple long and diverse agricultural seasons, which helps grow its export potential.

In 2001, LP Building Products began production of OSB in Chile, and the Chilean packing industry adopted early to it. Then, OSB evolved to applications not requiring a building system change, like fences. Eventually, Chilean builders began integrating OSB into buildings, which were costly and time intensive at the time. For OSB to really catch hold with builders, LP needed to position it as a material that would meet the needs of the typical South American framing system—but quicker, cheaper and more securely.

This change allowed LP to really bring OSB to the market. In 2005, LP's first and only mill (located in Panguipulli) could not produce enough to meet demand. A second mill in Lauturo opened in late 2007, but went dormant in December 2008 as demand dropped during the world financial crisis. As demand regained traction in 2009, LP restarted the mill later that year.

But in February 2010, tragedy struck southern Chile as an

8.8-magnitude earthquake off the coast caused immense structural damage, affecting an estimated 2 million people. Structures built using OSB were able to better withstand the impact of the earthquake, proving OSB to be a strong and viable material. The country was shocked but resilient following the earthquake, and began the rebuilding process, subsequently causing demand for OSB to skyrocket.

Today, Chile demands more OSB than the two current mills can produce, so a third LP mill is in development. Once completed, the three mills are predicted to help meet the country's demand for the next seven years. For the past 15 years, LP has been a leader in the evolution of the building industry by taking a risk to introduce change capable of impacting both our organization and an entire continent. Since 2001, OSB has grown to be the number one building material for houses in Chile, a trend expected to spread to other South American countries and positively impact the overall building industry. ■

+ Visit LPChile.cl to learn more about LP products specific to the South American building industry.

The three OSB mills are predicted to help meet the country's demand for the next seven years.

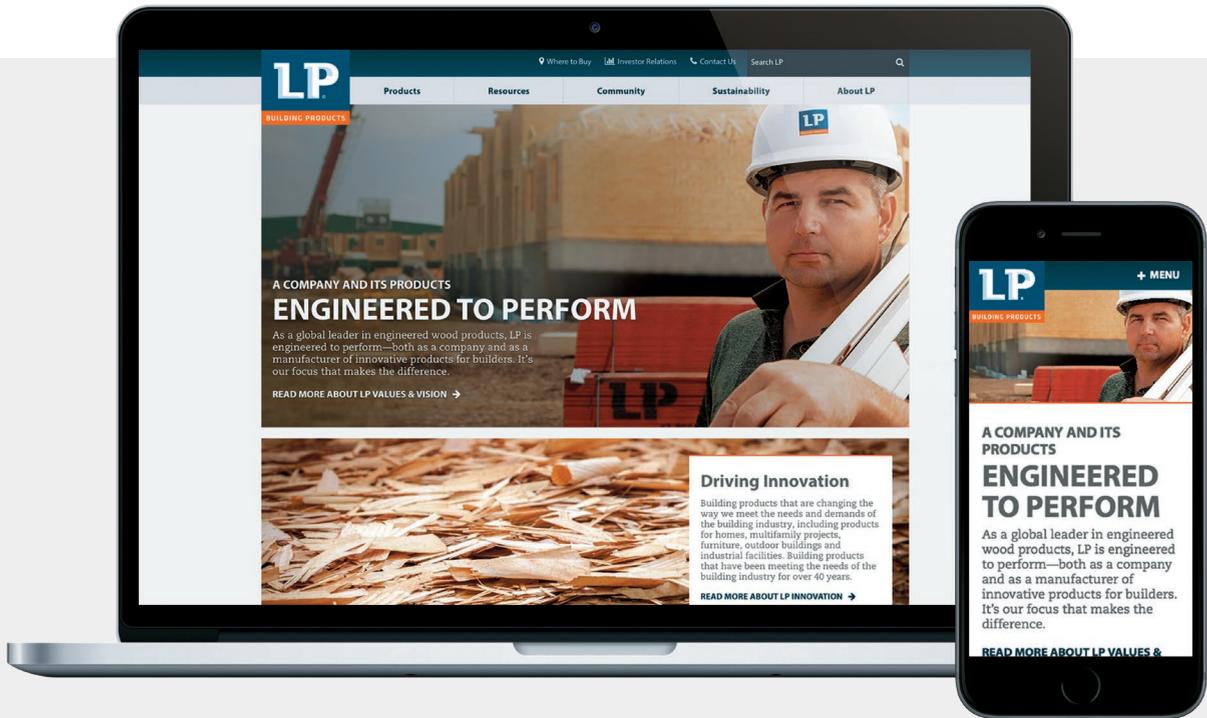
ENGINEERED WOOD

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Introducing the all-new

LP Corp.com

Our company website has a brand new look and a lot of new functionality. Not only is the site easier to use than ever before with updated menus, it's also responsive across all devices. So whether you need to pull something up on the jobsite from your phone or tablet, or you're searching from your desktop computer, you'll be able to find what you need—fast.

NEW LITERATURE FINDER TOOL | **ENGINEERED WOOD ONLINE** | **LP SUSTAINABILITY NEWS**