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# Buildings of Distinction

**FEATS IN POST-FRAME** 













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BY DAN BROWNELL



# Making a Distinct Impact

would like to introduce myself as your new editor. I consider it a privilege and look forward to continuing *Frame Building News*' tradition of delivering practical, timely information to help you save time and money and to improve your bottom line.

#### **Buildings of Distinction**

In this issue, we're showcasing standout projects from across the country in our annual Buildings of Distinction article. Builders like to follow what others are doing to keep up with the latest trends, techniques, ideas, and products. We trust you'll find sources, ideas, and inspiration.

#### **Project Submissions Needed**

We're constantly searching for new project submissions to feature each month. If you haven't submitted one yet, now is a great time. Here's the link: *shieldwallmedia.com/frame-building-news-project-submission*. It's fast and easy and a great way to get the word out about your company. Just upload some high-resolution photos, tell us briefly about the project, and list the key manufacturers and products you used.

#### **Article Topic Submissions Welcome**

We want to cover the topics you find most important. Feel free to send me an email with your ideas, suggestions, and feedback to dan@shieldwallmedia.com.

#### Post-Frame Builder Show in Branson

You don't want to miss this opportunity to meet manufacturer reps and see their newest products in person. And, of course, there's the networking and educational opportunities as well. Industry experts will be there to present seminars on key topics. All this will take place in beautiful Branson June 19-20. Bring your family and make it a working vacation.

To Your Successs!

Dan Brownell, Editor

.24

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Gary Reichert, Publisher, Shield Wall Media



### **SPECIAL PURPOSE**

# **Family Gathering Compound**

ORCHARD CONSTRUCTION



#### **WALL AND ROOF PANELS:**

McElroy Metal

**COLUMNS:** Ohio Timberland

**SECTIONAL DOORS:** Clopay

WINDOWS: Andersen

**CUPOLAS: MWI Components** 

**BALE DOORS: MWI Components** 

FASTENERS: ST Fasteners ZXL





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rchard Construction helped this family create a memorymaking dreamland with this pair of post-frame buildings built on 95 acres in the "thumb" area of Michigan.

"They wanted a gathering space for their family and they use it for all kinds of activities," said Steve Nikkel of Orchard Construction (Armada, Michigan). That includes snowmobiling, fishing in the newly dug pond, hunting, and family events including weddings and reunions.

MWI added some kev elements like the cupolas, while ST Fasteners ZXL screws hold it all together.

Nikkel said Orchard Construction has been in post-frame for 35 years. This was one of the final projects for Ohio Timberland columns. whose owner has retired. Orchard now uses Rigidply.

# YOUR VOTE COUNTS!





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### AGRICULTURAL

# AG STORAGE BUILDING

#### MILLER'S PREMIER CONSTRUCTION LLC

#### **BUILDER:**

Miller's Premier Construction LLC

SPECS: 80'x150'x18' with 20'x80' lean-to and 500 sq. ft. front porch

**ROOF PITCH: 3.5/12** 

TRUSSES: Hostetler

**POSTS:** Richmond Laminated

3-ply 2'x8'

**DOORS:** ProVia service doors, three Holmes 22'x16' overhead

doors

#### **ROOF PANELS/SHINGLES:**

Kynar Evergreen by Premier Metals, 28-gauge Premier Rib

INSULATION: Single bubble

underlayment on roof

#### **VENTILATION:**

Vented eaves and ridge

#### **WALL PANELS/SIDING:**

Clay siding with Evergreen wainscot, 28-gauge Premier Rib

WINDOWS: ProVia EcoLite

**CUPOLAS:** MWI





his building was built in West Mansfield, Ohio, for a grain farmer to use for equipment storage. The materials all came through Keim Lumber in Charm, Ohio. The project was started in the dead of winter, but other than quite a few blustery windy days to work in, the weather was fairly mild for the time of the year.



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### RESIDENTIAL

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REMUDA BUILDING



**BUILDER: Remuda Building** 

**SPECS:** 40'x40'x16'

**ROOF & SIDING METAL:** 

FormaSteel

**ROOF PITCH: 4/12** 

**POSTS:** Remuda Building

**POST PROTECTION:** 

Post Protector Grade Guard

**SIDING ACCENTS:** Versetta Stone

WINDOWS: All Weather Windows

**INSULATION:** JohnMansville

ot a primary residence, but it could be, this is a beautiful building to work on toys and escape the day-to-day. This Remuda Building creation is fully equipped with guest

living quarters, functioning garage and loft with a full entertainment and gaming center.

The porch has fir beams and columns that are accented by Versetta Stone. FormaSteel provided the



metal for the roof and siding, and the post-frame columns are protected by Post Protector Grade Guard.



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### **SPECIAL PURPOSE**

# FIRE STATION

GRABER POST

**BUILDER:** Graber Building Supply

SPECS: Truck bay is 60'x 80' x 14' framed with 3-ply 2' x8' poles. Office portion is 64' x64' x14' framed with 2' x6' studs, 16" o/c., with an 8' porch on front and back.

#### **ROOFING AND SIDING:**

Graber Post Buildings, G-Rib metal panels

#### WAINSCOT:

Affinity Stone Aspen Ridge Cut

#### **OVERHEAD DOORS:**

Wayne Dalton, 12' x14' 9700 Lexington

WINDOWS: Pella





dinburgh, Indiana's, new post-frame fire station is a great solution to a problem the town's firefighters had been facing for quite some time. A few years ago, when the town decided to man the fire station 24/7, the additional manpower made the old station too cramped. This new post-frame building provides additional space for equipment and personnel. Now the

crew have more a comfortable place for overnight accommodations, so there are separate sleeping rooms. This also makes it easier to recruit new firefighters. In addition, the new location for the building helps



crews to reach fires faster.

The entire building was built on a continuous concrete stem wall and footer and includes spray foam insulation, batt insulation in the walls, and blown insulation in the ceiling. The building's size and layout creates better use of space for the firefighters' equipment.

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### SPECIAL PURPOSE

# **MAN-CAVE SHOP**

BURROW'S POST-FRAME SUPPLY



BUILDER: Dake Contractors, Shawnee, Oklahoma

**BUILDING PACKAGE SUPPLIER:** 

Burrow's Post-Frame Supply, Ft. Gibson, Oklahoma

ROOFING & METAL SIDING: Burrow's

DIMENSIONS: 40' x 60', 16' ceiling height

**ROOF PITCH: 4/12** 

DOORS, CUPOLAS, FASTENERS: Plyco

WINDOWS: Crestmark

PAINTING: Overhead doors, windows, ductwork and trusses painting by Gonzalez Painting LLC

OVERHEAD DOORS: Raynor and CHI, installed

by Winkler Garage Door, Shawnee

INSULATION & SPRAY FOAM: IDI Distributors
Natural Polymers Spray Foam Insulation. Installed by
Keith Wendt of Cruz Insulation & Spray Foam

HVAC: Armstrong, installed by Tri-County Air Solutions





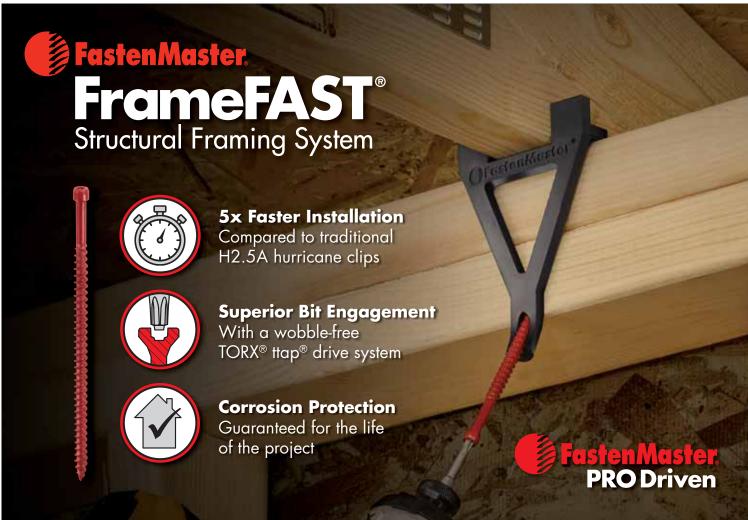
his fabulous man-cave shop building from Dake Contractors is next to what will eventually be a high-end residence in a high-end neighborhood in rural Shawnee, Oklahoma.

Among the niceties are black textured metal, painted overhead doors, a painted walk door, painted trusses and duct work, and a 20-foot leanto off the gable end. As usual with the "Complete Post-Frame Solutions" Company, Burrow's provided most of the materials with its package.











### **SPECIAL PURPOSE**

# **PAVILION**

#### CEDAR VALLEY POST-FRAME LLC

#### **BUILDER:**

Cedar Valley Post-Frame LLC

#### SPECS:

40'x60'x10', Roof Pitch 4/12

**FASTENERS:** Everlast Roofing, 1/4" RDP #10 Hi-Lo

POSTS: Rigidply Rafters, 4-ply Glu-Laminated Columns

#### POST PROTECTION:

Green Post Protection

ROOF & WALL PANELS: Everlast Roofing, Omni Panel 27 Ga. AZM

#### **SPECIAL INTERIOR FEATURES:**

Custom Header and Post Trims

**TRUSSES:** Rigidply Rafters, 40' Clearspan, 40psf

#### **CONCRETE WORK:**

CG's Contracting

#### **LIGHTING & ELECTRICAL:**

Valley Wide Electrical



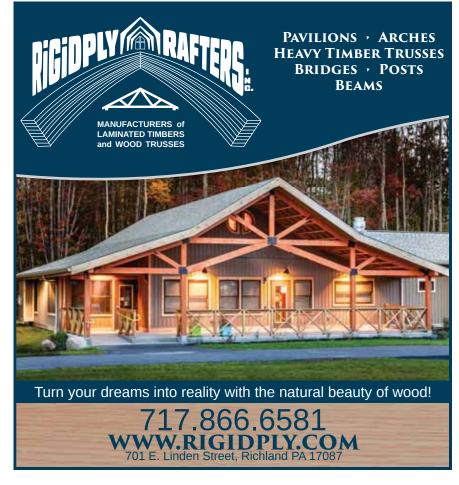
his pavilion was constructed in honor of the late Clark Deardorff, a true hero. One day in July 2017, Clark went to bed with strep throat. He woke 70 days later to learn that he had been in an induced coma from sepsis that caused the loss of his arms and legs. Undeterred, Clark remained positive and worked tirelessly to use his prosthetics and, within a year, was back out coaching for his son's baseball team. Clark was a lifelong member of Trinity Lutheran Church in Lansdale, Penn., and is survived by his wife, Celeste; son, Ares; and daughter, Ava, who was born while Clark was in a coma. Clark's father, Curt, said Clark was always a very positive person and wanted everyone to have a good time. One of his favorite things was to celebrate with family under a pavilion, and they were going to have a celebration







under a tent in Clark's honor. But when Denny, the church's building and grounds manager, suggested a permanent pavilion instead of a temporary tent, Curt jumped at the idea. The quality-first approach of everyone involved in this project will ensure Clark's legacy will live on indefinitely. This project used SmartBuild's online builder and was submitted courtesy of SmartBuild's Keith Dietzen.





# Multi-Purpose Barn

RAM BUILDINGS



#### **DESIGN AND CONSTRUCTION:**

RAM Buildings, Winsted, Minnesota

SPECS: 60'x80'x18' with 60'x56' monitor building

POSTS: Perma-Column with Laminated Columns

#### **ROOF PANELS:**

Metal Sales Classic Rib 29-gauge steel

TRUSSES: Littfin roof and floor trusses

#### **INSULATION & BUILDING WRAP:**

Tyvek, spray foam & fiberglass batts

WINDOWS: Thermo-Tech

#### DOORS

AJ Manufacturing & Midland Garage Doors

**SLIDING DOOR HARDWARE: MWI Components** 

FASTENERS: SFS



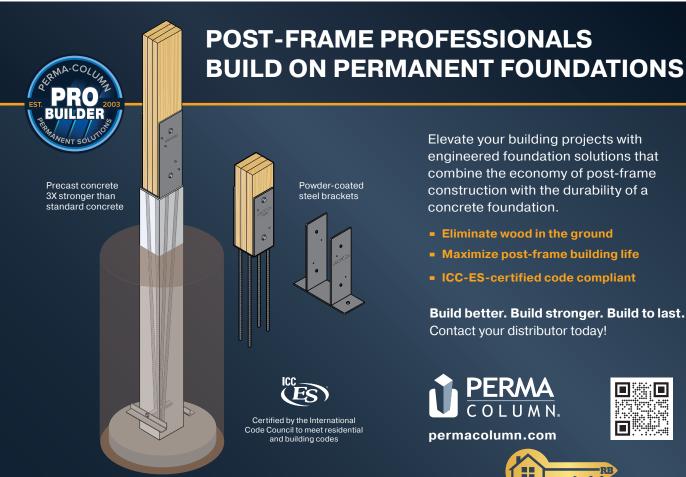
his building from RAM Buildings of Minnesota was designed to meet all the needs for this owner: An ag shop for his farming operation end to end, with a two-story monitorstyle building that serves as a mechanical shop below, and above a social gathering area for the owner's band and musical friends to practice in. It stands tall and proud on the landscape and has become a point of reference for people in the area.

Features include Perma-Columns, 1.5" spray foam on the walls against Tyvek with fiberglass batt insulation inside the wall cavity, geo-thermal heating system, sliding doors in front of the overhead doors on the north end (monitor portion), and casement windows to help seal out the wind from the open landscape around it. The features were all selected to help ensure



this building serves the family farm for generations.

Some of the traditional building materials used are Metal Sales Classic Rib 29-gauge steel, Thermo-Tech fixed and casement windows. AJ Manufacturing 7100 exterior Series Doors, Midland 3" Thermo-Guard overhead doors, MWI Sabre Slim latches on the sliding doors, Tyvek Building Wrap, Littfin columns/roof trusses/floor trusses, and SFS Fasteners.



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### SHOME

# **SHOME**

#### GREINER BUILDINGS

#### SPECS:

Living: 40'x56'x19' / Shop: 48'x64'x19'

ROOF PITCH: 5/12

DOORS: Plyco/Windsor

#### **WALK DOORS:**

1 - 3'0" x 6'8" residential walk-door with side lite windows on both sides 1 - 3'0" x 6'8" Plyco 20 Series walk door

2 - 3'0" Plyco 20 series walk doors, solid panel interior doors

1 - 6'0" x 6'8" Windsor Next Dimension Pro, double sliding door, patio.

#### **OVERHEAD DOORS:**

2 - 12'x14' Garaga Standard+, Shaker-Flat XS, Chocolate Walnut Color

INSULATION: Tyvek house-wrap and R-19 fiberglass BAT insulation for all exterior walls, R-38 fiberglass blow-in insulation for the shop section, and R-49 fiberglass blow-in insulation for the residential section.

POSTS: Green Post

#### **SPECIAL INTERIOR FEATURES:**

This Shome is loaded with a variety of cosmetic features inside and out including, but not limited to, a variety of roof lines and pitches carefully blended together, decorative flying cedar wood gables, 36" tall metal wainscot on all sides including Versetta stone, unique color combination of Abalone and Penny, 1' sidewall overhang with ventilated soffit, 1' endwall overhand with solid soffit, large accenting windows, cedar walls and ceiling in main room, a large fireplace, and elegant interior light fixtures.



WALL PANELS: JMAC, 26G Trinar

WINDOWS: 3'0"x5'0" Windsor Next Dimension Pro, 6'0"x6'0" Windsor Next Dimension Pro, 2-wide fixed sash, 6'0"x7'0" Windsor Next Dimension Pro, Direct Set Fixed (trapezoid shape)

#### **ADDITIONAL INFORMATION:**

Material upgrades include Post-saver columns, 26 gauge Trinar painted metal, Thermopane Walnut overhead doors, and Plasti-Skirt. Post-frame construction was selected for this project as a result of this client's vision of large living quarters and a conjoined large shop space.

his Shome shows its sophistication with a unique and vibrant color combination of Abalone and Penny. The building is used as a primary residence and includes a large dining and living space to accommodate a large family comfortably. This Shome is surrounded by beautiful countryside offering a picturesque backdrop, and it is loaded with a variety of unique cosmetic features making it a standout beauty inside and out.



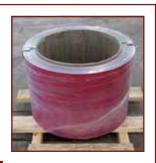




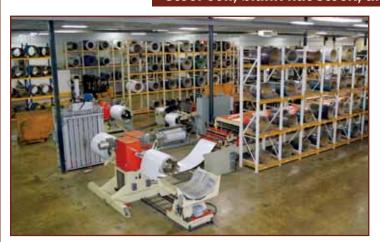




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### **SPECIAL PURPOSE**

# POLE BARN MAN CAVE

WALTERS BUILDINGS

#### **BUILDER:**

Bower Design & Construction

**SPECS:** 64'x48'x13.1'

**ROOF PITCH: 4/12** 

**POSTS:** Walters Buildings

#### **FASTENERS:**

Maze Nails & ST Fasteners

#### **ROOF AND WALL PANELS:**

Walters Buildings, JWS Steel Panels, 28 gauge/G-90

TRUSSES: Walters Buildings







his pole barn man cave serves as both a leisure retreat and a secure storage facility for an antique tractor collection. Step inside, and you'll find a harmonious blend of rustic charm and modern functionality. This space has been thoughtfully curated to combine a passion for vintage tractors with the comfort of a welcoming environment. Walters Buildings provided the engineering, plans, and material, and Bower Design & Construction provided the construction services for this stunning building.

The project was done in stages with the main building — an addition — and then finally adding the porch. The finished project includes three overhead doors, in-floor drainage, bar, kitchen area, bathroom, and rustic wood panels. The interior trusses and steel ceiling were painted black for an affordable but polished, finished look. The painted black ceiling and trusses are a very popular trend.







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### **AGRICULTURAL**

# **AG SHOP & OFFICE**

### MARTIN BUILDING SYSTEMS

#### **BUILDERS:**

Martin Building Systems

**SPECS:** 60'x100'x18', 24" overhangs, 10'x22' porch

**ENGINEERING:** Wick Buildings

WINDOWS: Weather Shield

WALK DOORS: Plyco Series 32

**OVERHEAD DOORS: Midland** 

#### **HYDRAULIC DOOR:**

Powerlift Doors of Colorado, 36x18

**INSULATION:** 6" batt in walls with 18" of blow in fiberglass in attic

#### **ROOF METAL & TRIM:**

Wick Buildings

WAINSCOTING: Versetta Stone

#### **SPECIAL FEATURE:**

Radiant floor heat system





avid and Liz Mollendor are farmers in southwestern Nebraska and needed a large farm shop for their combine, tractors, pickups, tools etc. David also needed a farm office, and he expressed a desire for a good-looking building, as it is located along a highway. The stone veneer and windows with black trim create an eye-catching building.

The radiant floor heat boiler system and good insulation and a full interior liner package supplied by Wick Buildings makes for a comfortable working environment in the winter. The building won Wick Buildings building of the year in the Agricultural category over 6,000 sq. ft.









### **SPECIAL PURPOSE**

# WEDDING CHAPEL

MEYER BUILDING, LLC

**BUILDER:** Meyer Building, LLC

**SPECS:** Building is 4,200 sq. ft. total. Chapel itself is 2,100 sq. ft., with other areas, such as offices and restrooms, comprising the remainder of the space.

ROOF PITCH: Chapel assembly room has a 6/12 roof pitch with a 3/12 interior ceiling pitch and faux cedar trusses manufactured by Meyer Building.

**DOORS:** Stronghold Glass, with aluminum storefront exterior doors and hollow metal frame interior doors.

FOUNDATION: Tri State Perma-Column featuring a permanent foundation system, using 45 Perma-Columns (ICC-ES-certified) to ensure the longevity of the foundation.

INSULATION: Johns Manville. The building exceeds energy code and is fully insulated with house wrap around the outside, R19 fiberglass insulation, and 12" R45 cellulose insulation in the ceiling. In addition, there is an insulated grade beam around the perimeter.

ROOF & SIDING PANELS: McElroy
Mesa steel panel roofing and siding were
used with Kynar premium paint finish.

#### **SPECIAL INTERIOR FEATURES:**

The acoustical steel ceiling is



perforated for sound deadening. The polished concrete floor offers subtle texture with an earthy color base that easily complements a variety of wedding themes and colors.

**TRUSSES:** Mitek single-ply, engineered, stamped trusses. All truss lumber is MSR 2400 grade.

**WALL PANELS:** McElroy. The chapel assembly room features a T1-11 interior finish that gives the space a clean, sleek look.

WINDOWS: Stronghold Glass.
The building features 27 aluminum storefront windows to provide an abundance of natural light.

SPECIAL FEATURES: Four premium lited cupolas. A two-hour post-frame fire wall separates areas of the building due to high occupant load, maximizing code compliance.

PHOTOS COURTESY OF MEYER BUILDING



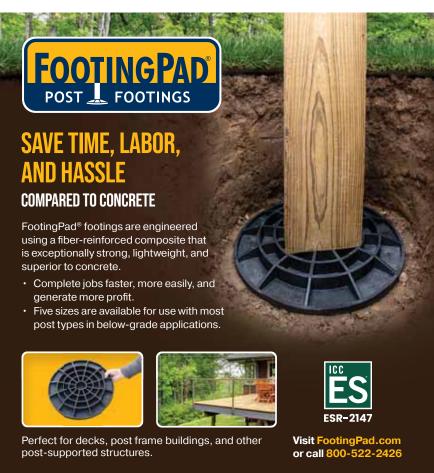
he Paddock is a 60-acre property that serves as a venue to host weddings and events. The chapel building is the newest addition that helps pull the entire property together as one cohesive venue. As such, the chapel not only needed to complement the circa 1885 homestead, but also the other buildings that have been added over the last 50 years.

The Paddock already boasted a bridal suite in the homestead and, in separate buildings, a groom room and dedicated space for wedding receptions. But owners Jeff and Jill Shelton wanted to be able to offer a separate. special place to hold wedding ceremonies that would be simple and inherently beautiful. Many detailed requests were taken into account in the design and build because they would impact on-site photography and would establish overall ambiance.

The Paddock chapel has hosted weddings almost every weekend since it opened. More than 40 weddings have already been scheduled for 2024. The owners are planning to expand to incorporate training, client presentations, charity events, and outdoor events. Because of the longevity of post-frame buildings, the chapel is poised to play a significant role in its community for many years to come.

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### **EQUESTRIAN**

# STABLES & RIDING ARENA

TRI STATE PERMA-COLUMN

**BUILDER:** Meyer Building, LLC

SPECS: The L-shaped building includes a 15,000 sq. ft. riding arena, a 4,600 sq. ft. stall saw barn with wash bay, tack room, feed room, and more, and a 2,000 sq. ft. awning/porch.

FOUNDATION: Tri State Perma-Column. The stall barn uses 80 Perma-Columns, and the riding arena uses 63 Perma-Columns.

TRUSSES: Mitek and Meyer Building. The stall area uses Mitek single-ply trusses. The riding arena features impressive 86-foot wide clear span two-ply trusses, which are the largest that Meyer Building makes. All trusses are engineered, stamped, and use MSR 2400 grade lumber.

ROOF PITCH: The L-shaped building has a 7/12 roof pitch tying into a 3/12 roof pitch. Where these intersect, a cupola was added.

ROOF PANELS: McElroy Max-Rib II steel siding and roofing panels and complementary MoistureLok condensation barrier for the riding arena roof.

WINDOWS: AJ Manufacturing. The facility features a combination of double-hung, fixed lite, and awning windows with low-E insulation and grids that use the EZ-V installation option.

**DOORS:** Silvercraft and Plyco.

Custom Silvercraft slide doors (glass



with crossbucks beneath) and bale doors (MWI painted slide door rails for the standard slide doors). There are also two 24' slide doors in the riding arena that have custom I beams for structural headers.

**ADDITIONAL DETAILS:** The facility features five louvered cupolas and a pleasing symmetry and alignment of windows and doors.

#### **ADDITIONAL DETAILS / MISC.:**

There is a 2,000 sq. ft. loft above the stall aisleway for hay storage and for ease of feeding the horses. The hay can simply be pushed/dropped into each stall.











atcher's Run Stables is located on 40 acres of farmland and woods in Noblesville, Indiana. Property owner Brad Boyer wanted to invest in his daughter's dream career while creating an equestrian facility that's unparalleled in the Midwest. Knowing that the investment would need to last a long time, offer flexibility for activities, and be arranged strategically for daily use, the Boyers opted for post-frame construction because of its versatility. They chose to use a permanent foundation system from Tri State Perma-Column to add longevity.

To achieve the light and airy atmosphere the Boyers desired, special features were incorporated into the plan. The indoor arena has doors and windows on all four sides for ventilation and to catch cross breezes in the summer. In other areas, doors with glass on top and crossbucks on the bottom not only look appealing from the road, they also allow a lot of natural light into the space. Even so, extra lighting was included in the barn for boarders' and riders' convenience.

Each of the 15 stalls in the barn is situated on an exterior wall and has a window because the owner wanted every horse to be able to hang its head out of his stall to get fresh air. The tack room, feed room, wash bay, shaving bay, mechanical room, and restroom are all conveniently located in the same building and are climate controlled. A large upstairs room can serve multiple purposes, including a quiet place for students to do homework, a playroom for siblings, and an event venue for parties.

Since opening, Watcher's Run has lived up to its goal of providing a happy home where horses can thrive and a safe, encouraging environment for riders of all ages and calibers.

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### RESIDENTIAL

# **Entertainment & Storage**

WICK BUILDINGS



#### **BUILDER:**

Lynnman Construction, Michigan

#### **BUILDING MANUFACTURER:**

Wick Buildings

SPECS: 40x80x14, 24x12 Foyer,

12x80 Porch

**ROOF PITCHES:** 7/12, 7/12, 3/12

**ENTRY DOORS:** Plyco

#### **ROOF & SIDING METAL:**

Wick Buildings

#### **POSTS & TRUSSES:**

Wick Buildings

**CUPOLAS:** Plyco



his big and beautiful building matches the residence that sits out front and overlooks the manmade lake. The family uses it for both entertainment and storage, and with a footprint of 3,200 square feet, there's plenty of room for both. Lynnman Construction created this building, largely from products supplied via the Wick Buildings package.



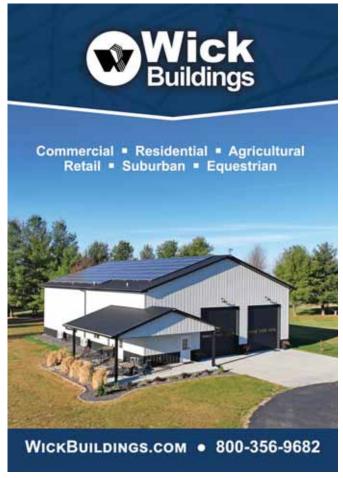


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### **EQUESTRIAN**

## Mare Barn

#### **STALLWORKS**

#### **GENERAL CONTRACTOR:**

Cobblestone Commercial Construction

**WINDOWS:** ABC Supply, Paradigm 8300, Dual Pane Low E, Argon Gas Filled

DOORS: Barn doors and stalls by StallWorks LLC and Custom Commerial Glass by Henderson Glass

SIDING: ABC Supply LP Smart Side, CertainTeed Restoration Millwork

**ROOF:** Certain Teed Landmark and standing seam metal

**VENTILATION:** RAMM Fence Company, concealed bearing fans

FASTENERS: Carter Lumber: Paslode, Stainless Steel and Hot Dipped Galvanized.

POST/COLUMNS, AND THE TREATMENT: Stark Truss Perma-Straight Laminated Columns, CCA





ased in Michigan, this stunning ten stall "Mare Barn" at Shelby Creek Farm was built to be the birthplace for some of the country's top Hackney ponies. This post-frame structure was spray-foamed and well-ventilated to maximize fresh air and keep newborns warm with Michigan's harsh winters. Among some of the main features of this barn are the stalls and barn doors by StallWorks LLC, giving it both the high-end style and the quality to last for years to come.













### **BARNDOMINIUM**

# **BARNDO**

#### NATIONAL BARN COMPANY - CENTRAL DIVISION

**BUILDER:** National Barn Company

- Central Division

**SPECS:** 40'x70'x20' with attached 40'x30'x10'

ROOF PITCH: 4:12

TRUSSES: Burrows Post-Frame

Supply, 40' trusses

**ROOF PANELS:** Burrows Post-Frame Supply, Quadra-Loc Plus

metal roof

WALL PANELS: Burrows Post-Frame Supply, Quadra-Loc Plus side wall panels

#### DOORS:

Plyco Series 20 entrance doors

WINDOWS: Krestmark, Series 400

vinyl windows

**CUPOLAS:** Plyco

**ADDITIONAL FEATURES:** Front wrap porch, 8', 1,048 sq. ft., Plyco

horse weathervanes

**BACK SHED:** 12'x70'x9'





evin and Monica
Bennett of Bixby,
OK, sought expertise to bring their vision
to fruition — a functional
structure seamlessly
blending temporary living
space with Monica's



cherished horse barn. Their objective: to craft a distinctive structure that not only met their practical needs but also artistically showcased the splendor of their property. Notably, this beautiful building held dual

significance as it doubled as the enchanting backdrop for their wedding celebration.



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## SPECIAL PURPOSE

## Family Lake Cabin

WITT CONSTRUCTION



**BUILDER:** Witt Construction

### **BUILDING PACKAGE:**

Wick Building

SPECS: 36'x42'x10.5'

## **ROOFING AND SIDING METAL:**

Wick Steel Grey Wood and Matte Black

TRUSSES AND COLUMNS: Wick

WINDOWS AND DOORS: Plyco

OTHER UNIQUE ITEMS: Cedar timberframe accents in gable, cedar shutters and window planter boxes his building is one of the backlot buildings built by Witt Construction on Lake Poinsett in South Dakota. The family is at the lake on weekends and in the summer, but this is not a permanent residence, said Casey Witt of Witt Construction. Witt said this building is in an area with strict covenants for its portion of the lake. The height restriction of the main floor is the same height of the overhead door at 10'6". Witt explained how this became possible. "The first truss bay spacing is 12 feet apart. By doing this we were able to allow the door radius to clear by raising the ceiling in this area, almost like a tray ceiling." The ceiling being raised also raised the second level floor in the bedroom above. This type of construction would not be possible with a traditional stud frame where your trusses are on 2-foot centers.

The main level is a storage garage until the weekend comes. This area then becomes a large indoor/outdoor gathering area when the extended family shows up with room for everyone. Upstairs is where you find the guest cabin complete with two bedrooms, full bath, full kitchen, laundry and a small commons area.



## **BARNDOMINIUM**

## **FATHER & SON BARNDOMINIUMS**

## TRUF METAL SUPPLY

### **BUILDERS:**

True Metal Supply and Homeowners

**TRUSSES:** Buffalo River Parallel Chord Steel Trusses

BOARD AND BATTEN, CONCEALED-FASTENED STEEL SIDING:

True Metal Supply

TUFF-RIB, THROUGH-FASTENED
METAL ROOFING: True Metal Supply

FRAME GRIP STRUCTURAL FRAMING SCREWS:

Levi's Building Components

**TRIANGLE FASTENERS:** 

Sturdi-Wall Drillset Anchors

**WOOD ULTIMATE® FASTENERS:** 

Atlas Bolt and Screw Company

**WEATHERXL® COIL COATING:** 

Sherwin Williams Coil Coatings

#1 SOUTHERN YELLOW PINE, STRUCTURAL #1 6"X6" POST

**COLUMNS:** Old South Wood Preserving



Il lumber was #1 Southern Yellow Pine provided by Old South Wood Preserving with structural #1 6"x6" post columns. True Metal's parallel chord steel trusses are specifically designed for post-frame applications and constructed with Grade 50 2"x2" angle iron. Perma-Column Sturdi-Wall Drillset Anchors were also used to anchor the buildings to the concrete foundations. For additional strength, Frame Grip Structural Framing Screws were used to construct the walls. The homeowners achieved the desired aesthetic by upgrading from traditional metal siding to Board and Batten, Concealed-Fastened Steel Siding.

These traditional-style father and son post-frame barndominiums in Louisville, Tenn., were built at the same time on the same land. The steel trusses have a clear span of 30' in the center bay, with custom bay widths. The son's building pairs dark colors with Textured Charcoal Board and Batten Steel Siding and a Signature Black Tuff-Rib Metal Roof. The father's build features Textured Light Gray Board and Batten Steel Siding and a Charcoal Tuff-Rib Metal Roof. The layouts perfectly accommodate both families' space and utility needs while paying close attention to aesthetic details.

The barndos feature an attached two-car garage, a gable porch on the front, a lean-to porch on the back, and bold trim. With steel siding and metal roofing, these barndominiums are very energy efficient. The Board and Batten Steel Siding and Tuff-Rib Metal Roofs are coated with Sherwin Williams Weather XL Crinkle Finish, providing a lifetime of energy efficiency and durability. Additionally, the trusses provide the builds with superior strength and longevity.



## What Makes Wood Rot?

And Which Woods Are Best for Ground Contact and Wet Conditions

■ By Jacob Prater

utting a post in the ground is something most of us have done at one point or another, and it has been an important aspect of construction since the dawn of time. Whether it is a post for a building or a fence you might wonder, "Why does it work out well sometimes and not others?" Or more plainly, "Why does that post rot?" The three essential ingredients to making wood rot are oxygen, water, and fungi. Our experience will be our guide in looking at each of these factors that make wood rot.

## The Science Behind Wood Rot

Have you ever seen a post that has rotted from about the ground level down maybe 10 or 12 inches, but deeper it was fine and looked fine above ground? Deeper there isn't enough oxygen, so the process of rotting is much slower. Above the ground line, there isn't enough water (the soil holds water next to the post). But the fungus that eats wood dwells in the soil near the surface. When you see a rotten log in the woods, you may have noticed but not registered a thing or two.

First, you may have noticed that some rotten logs look brown, and some rotten logs look whiteish. These are two broad types of fungi acting, which gives us an idea about what the wood is made from as well. The fungi that leave brown rotten logs are referred to as brown rot fungi and are eating cellulose (a component of wood) and leaving lignin (another component of wood) behind. The fungi that leave rotten logs looking whiteish are referred to as white rot fungi and they are eating lignin and leaving cellulose behind.

You may have also noticed that not all logs rot at the same speed or in the same way in the forest. Oak rots from the bark inward (as many types of wood do), but birch leaves untouched bark tubes with rotten wood in them. That birch thing is quite interesting. It turns out that birch bark is waterproof and antifungal. In fact, that birch bark was and still is used to prevent wood rotting at ground contact points, for cabin beams in particular. One just wraps the beams in birch bark at the ground contact points so the bark contacts the ground instead of the wood. (It has to be protected and dry for this to work, though.)

Without oxygen, wood may be stable for a long time. I have some slabs from a tamarack log cut in the late 1800s, and it is in fine shape after being reclaimed from where it was embedded in a creek bank for over 100 years below the current water table. I know

this because the log still bore the stamp from the now defunct logging company that cut it so many years ago. When we milled it, the log still had that characteristic Pine Sol smell that tamarack has!

This preservation due to high moisture and low oxygen is true of some of these old logs pulled from where they lay in deep water after sinking during the logging boom of the early U.S. These old growth logs are often reclaimed and milled up for specialty wood products due to their tight growth rings and exceptional durability for their species. Essentially in that low or no oxygen environment, there isn't much of anything present that wants to eat wood. While you can prevent wood

rotting by excluding oxygen in a watersaturated environment, this isn't a useful method for most construction unless you are building a dock.

For most construction purposes, your best bet to avoid wood rotting is to keep it dry. You have probably seen and maybe experienced an old barn slowly caving in. This is a process that usually begins when the roof fails. Once that roof begins to leak, the structure will start to fail and rot wherever that water gets in and wets the wood. With this lesson learned, you now know how critical that roof is, including overhangs, to keep that structure standing for a long time. Next to the roof, the grading of the building site to shed water away

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877-WONT RO1

from the base is also important to prevent any wood with ground contact from rotting, as it keeps the soil around the base of the structure drier. (Drains and gutters are of import here too.)

## **Rot-Resistant and Treated Wood**

Another way to set the odds in your favor of not having your post in the ground rot is to treat that wood or select a wood species that is rot resistant. Where I grew up, there was a method to treat the bottom of posts that I later heard a friend in Wisconsin refer to as the Tennessee method (I am from eastern Tennessee). Basically, you would char the bottom of the post in a

fire. Posts treated this way were mostly of white oak to start with, so this was tough, durable timber and already resistant to water intrusion into the wood. (White oak has closed pores, while red oak does not, so it rots easily.). The char coating then was all around the outside of the post on the ground contact portion.

Char is resistant to fungal growth and insect attack. (Those pesky buggers can speed up or facilitate the entry of fungi.) The char may also function to seal out moisture to some degree. Charred oak posts like this lasted quite a while, pushing past a century sometimes, especially if they had the additional protection of a

roof over them. Selecting a wood species that is resistant to rot can really increase the longevity of a post in the ground. Wood species such as Osage orange, black locust, white oak, and various others are rot-resistant on their own.

Outside of hard-to-get woods such as cypress, redwood, teak, and some tropical woods, Osage orange may be one of the most rot-resistant woods available in the Midwest for fence posts. Osage orange, commonly called "hedge" in Kansas, will make what amounts to a 500-year post. Yes, you read that correctly. It will outlast steel and concrete most of the time.

It is hard to find a straight piece of Osage orange for a pole, but you can find plenty of fence posts from the Osage or-



## The Chain of Decay

There are four links to the chain of decay. Decay fungi need oxygen, a suitable temperature, moisture, and a food source to survive and thrive. To stop decay, at least one of these links needs to be broken. When wood is pressure-treated, the food source link is broken by a chemical preservative to envenom the wood fiber, so decay fungi can't feed. Oxygen, a suitable temperature, and moisture may still be present, but without fungal activity, there will be no decay. The issue with relying on chemical protection alone is that it doesn't last. That's why you see the utilities adding preservative to utility poles every six to eight years. Through weathering, aging, chemical migration, and volatility, the preservative loses its toxicity, making the wood fiber a suitable, desirous food source for the decay fungi. Like pressure treating, a plastic post protector targets the food source link by permanently separating posts from soil and soil-dwelling decay fungi.

> -Ken McDonnell, Owner, Post Protector

ange tree. This tough, durable wood was used for bows for native people and even sparks when you cut it with a chainsaw! The high density of the wood, large silica content, and some rot-resistant chemicals in the heartwood make hedge or Osage orange the king of fence posts where it's available.

Black locust is another inherently rotresistant wood species. You are more likely to find straight trees for poles with this wood, and you may even find commercially available black locust poles, but it is still most common to find fence posts. Black locust is also dense wood, although not quite as dense as Osage orange, and it also benefits from some rot-resistant chemicals in its heartwood. A black locust post might last up to 100 years.

The "go to" in the construction world is treated wood. Basically, you have all the wonderful advantages of southern yellow pine (strength to weight, high productivity, low cost) but you add your own industrially applied rot resistance. And so we have treated southern yellow pine. We love this stuff! It is treated to resist rot and it is light, strong, and cheap. A pressure -treated post will last five to ten years in the ground without anything special done to it.

For most construction purposes, the first line of defense against wood rotting is to keep it dry and away from soil contact. If that isn't completely possible, then treating that wood (or selecting a rot-resistant wood) that will contact soil is the next best step. Beyond this, making the site shed water with a roof over it and grading the site around it will go a long way in preserving that wood from rot. **FBN** 





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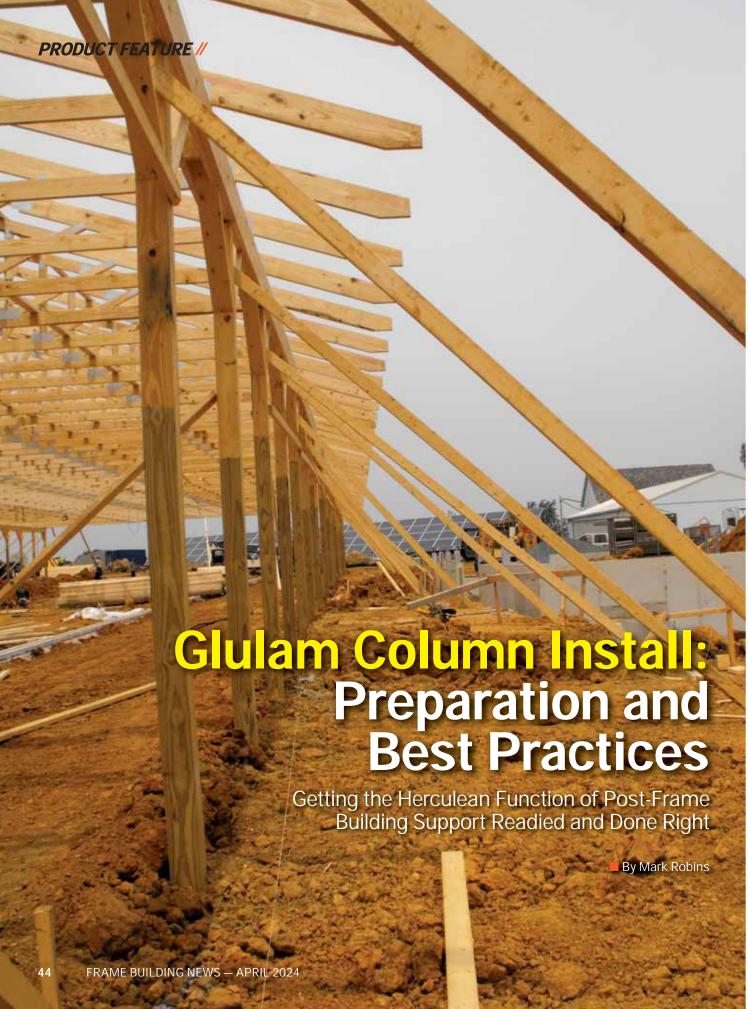
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lulam columns manufactured from specially selected and positioned lumber laminations are designed for strength and performance. They function well in post-frame column applications because they remain straight and true in cross-section. Providing very high compression strength and architectural appearance, this framing can run from floor to ceiling with one continuous piece. But to attain this load-bearing capacity and structural stability, it must be prepared and installed correctly. Here are tips on how to do that.

## Handling and Storage

Even before installation there are best practices for glulam column handling and storage. According to Mike Momb, "The Pole Barn Guru" and technical director at Hansen Pole Buildings, "If the glulam columns are not used immediately, store them in a dry place. Moisture may cause decay to untreated column portions over time. Avoid direct sunlight."

Momb said other important guidelines for them include:

- Do not unload columns on rough terrain or uneven surfaces, as these could cause product damage.
- Do not walk on flat lying product. It is extremely dangerous and could result in injury.
- Columns should be stored in a horizontal position. Use support boards of equal dimensions no more than four feet apart for support and to prevent them from sitting directly on ground.
- If bunks or units of columns are stacked on top of each other, support boards must line up vertically (i.e. no staggered placement).

"If outdoor storage cannot be avoided, protect with a waterproof barrier. Leave the bottom of cover loose to allow air movement," Momb said. "Protect columns from weather, corrosion, bending, damage, insects, and any other deterioration when stored. It is your responsibility to properly receive, unload, store, handle,

install and brace to protect life and property. If improperly handled, installed or braced, columns can become dangerous and can cause property damage and/or bodily injury."

Clay Erb, outside sales representative at Timber Technologies said like any wood product glulam has a tendency to acclimate to surrounding conditions, so moisture, humidity, and support will influence the appearance and overall long-term condition of the columns. "All dunnage should be aligned while being stored to prevent warping. Material should be kept wrapped or covered, dry and level while being stored on edge to keep the columns in the best like new condition possible. When shipping, the load should be tarped if the units are not wrapped."

## Moved, Lifted, Inspected

Typically, glulam columns are transported in bundles similar to a lumber pack and should be handled with the appropriate equipment. "Any skid loader, forklift, or other equipment must be rated for more than the bundle weight being handled," said sources in the engineering group at Rigidply Rafters Inc. "Lifting should always occur at the balanced center — or the balanced lifting points, if appropriate — of the bundle length to balance the weight and avoid tipping of the unit.

If a glulam column bundle is being stored outside, it should be stored on



blocks to provide air flow from under the bundle and to allow easy access for forklifts if it is moved. "Bundles being stored outside should be covered with a waterproof material to protect the material from direct moisture due to rain, snow, or dew," said sources at Rigidply Rafters. "Length of storage outside should be lim-

## **After Installation**

APA – The Engineered Wood Association offered these guidelines for glulam column post-installation:

- Limit glulam exposure to weather conditions prior to building enclosure by keeping beams and columns covered and protected as long as practical after installation.
- Remove wrapping after installation in the enclosed space so the moisture content of glulam members is allowed to stabi-

lize naturally during construction.

- Avoid rapidly drying glulam members with temporary heating units.
- After the building is enclosed, it is important to reduce the relative humidity gradually.
- Design permanent heating outlets to deflect heat away from glulam members.
- Avoid rapid changes in temperature that can affect the rate of drying during the first full heating cycle.

## Notching Glulam Columns

Notching should only be performed under the direction of the engineer of record. Notches in glulam members affect the bending capacity, as well as the shear capacity of a column. Chapters 3 & 5 of the 2018 National Design Specification for Wood Construction provide design parameters for the use of notches in glulam columns. Any special cutting or drilling of holes in a glulam column should be as directed by the engineer of record for the project in question.

Information supplied by Rigidply Rafters Inc.

ited to prevent the propagation of mold," they added. "In areas plagued by termites or other wood-borers, the term of outdoor storage should also be limited with periodic checks on the condition of the columns."

When inspecting columns at time of delivery and before installation, Momb said to inspect for:

- Quantities and lengths to correspond with shipping ticket and material takeoff.
- Cracked, dislodged, or broken members.
- Any other damage possibly impairing columns' structural integrity.



## Preparing to Install

What are some best practices for preparing to install glulam columns in postframe buildings? Verify that column layout is correct, Erb said. "If using brackets, verify brackets are correct for the columns being used. Almost all manufacturers end up with different final sizes. Nail lams and glulam final sizes will vary significantly because of the manufacturing process. Verify brackets are properly anchored per engineer of record. If in the ground, verify hole depth and frost line per engineer of record. Verify substrate is adequate for support or concrete cookies, pads, or poured concrete will be utilized per engineer of record. Determine uplift requirements such as rebar, blocks, or uplift plates per engineer of record."

An important first best installation practice is to select a glulam column that is (1) adequately designed and sized to handle the design loads of that particular structure, and (2) uses a preservative treatment and treatment process that matches the use of the column.

Properly selected glulam columns will perform their required function for the life of the structure. Sources at Rigidply Rafters said that if the columns are to be embedded below grade, "The post holes must be augered to the proper depth and cleaned out, installed on a clean (no debris), adequately sized level footing, and installed on the center of the footing (unless the building plans specify otherwise).



## **Wrong Orientation**

A possible glulam column installation error is to set the column in the wrong orientation. Every column has a strong axis and a weak axis, depending on the direction of the laminations. For example, a 4-ply 2" x 6" glulam column has similar dimensions in both directions. If it is turned 90 degrees from the prescribed placement, then the primary wind loads will be applied to the weak axis, which has a lower bending capacity than the strong axis.

Information supplied by Rigidply Rafters Inc.

If they are to be installed on a pier or concrete wall, the bearing surface must be clean and level. In addition, the columns must be installed with direct bearing (no gaps) on a concrete surface or base bracket. This ensures that the column is not 'suspended' by the bolts or fasteners and it transfers the axial loads directly to the wall or to the base of the bracket and then into the wall."

## Alignment and Positioning

Laser levels or lasers are a great tool for aligning and plumbing glulam columns, because they can project a horizontal or vertical line. They also can be used to provide precise measurements for spacing and placement of columns. If a laser level is not available, a string line and 4' or longer level will serve as adequate tools for aligning and plumbing columns in a wall line.

Erb said string lines generally are still the "go-to for setting columns regardless of how perfect and straight your columns are. Corner chain sets and come-alongs are the simplest square-up method for final squaring your project before setting trusses."

## Resources

APA – The Engineered Wood Association

Tacoma, Washington (253) 565-6600 www.apawood.org

## Rigidply Rafters Inc.

Oakland, Maryland (717) 866-6581 www.rigidply.com

## **Timber Technologies**

Colfax, Wisconsin (715) 962-4242 www.timber-technologies.com

Mike Momb, "The Pole Barn Guru" and technical director at Hansen Pole Buildings

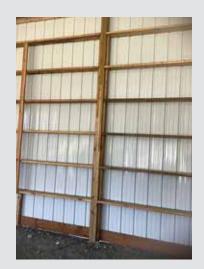
Browns Valley, Minnesota (866) 200-9657 www.hansenpolebuildings.com Another best practice is a column plan showing the exact locations of the columns, as well as the proper orientation of the columns. "A building section showing the proper embedment depth (if applicable) and wall height is key to properly installing glulam columns," said sources at Rigidply Rafters. "Detailing of column base connections to footings or walls, truss connections to columns, wall girt spacing, and any other connections to a column are critical in order to ensure the load path through the column to the footing is completed."

## Hole Depth: Too Shallow or Too Deep

Sources at Rigidply Rafters said the most common error in embedded glulam column applications occurs when the hole depth for the footing is drilled too shallow or too deep; typically, the error is on the shallow side. A hole that is shallower than specified can result in the any of the following conditions:

- The bottom of the column may be above the frost line, resulting in possible shifting or heaving of the column during extremely cold winters.
- If a concrete collar or treated wood collar is used at the bottom of an embedded column, the uplift capacity generated by the collar due to the soil cone above it will be reduced.
- The structural mechanics of a column change with embedment depth, and a shallower-than-specified embedment will cause the bending moment capacity to be reduced at the critical section of the column, changing the location of the inflection point due to lateral wind loads.

If a glulam column with partial treatment is placed too deeply, Rigidply Rafters said it "may result in the untreated joist/girt/plate/etc. between treated and untreated lumber being too close to the groundline and can make it susceptible to termite damage. According to most industry documents related to lumber treatment, for example, the minimum distance from grade to the lowest untreated wood is recommended to be at least 12". Check your project requirements for verification of this distance." FBN



## Don't Make These Mistakes

I have seen columns that were set upside down, leaving the untreated portion in contact with the soil. This is rare, but it does happen. Do not do this! The treated portion goes in the ground. I have seen columns installed turned incorrectly so the weak axis is toward the windward side. This mainly happens on the end walls where the framer wants to avoid a long column notch if the building has flush framing wall girts. This is not correct. The strong axis should always be turned towards the windward side. If you're setting a three-ply glulam, you should see the individual plies, but there are exceptions. We manufacture a lot of specialty columns for very large rough openings or extended spacing. Glulam columns can be manufactured to be turned 90 degrees in application to get the strength of the larger section. The depth is where you get your strength on a 7-ply column for example. This application will not work with a nail lam column. Consult the engineer of record when in doubt.

Clay Erb, outside sales representative at Timber Technologies

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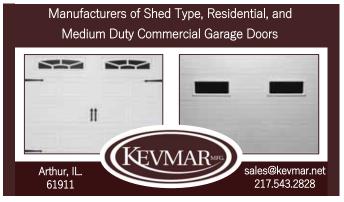
























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## From Backyard Barns to Barndominiums and Beyond

ince the first telephone poles were stuck in the ground to build an inexpensive agricultural building...a pole barn, these post frame buildings have undergone a fascinating evolution. From humble beginnings these barns have given to the rise of luxurious barndominiums, commercial and industrial gems and backyard beauties to be proud of. These structures have captured the imagination of homeowners, builders, and designers alike. In this article let's explore the history, versatility, and modern applications of post frame buildings, tracing their journey from utilitarian structures to stylish living spaces and beyond.

## **Origins of Post Frame Construction**

Post frame construction, also known as pole barn construction, has its roots in agricultural settings. Historically, farmers needed cost-effective and efficient ways to build shelters for livestock, store equipment, and protect crops. Traditional methods of construction, such as stick framing, proved to be time-consuming and expensive. Post frame construction offered a solution.

The concept is simple yet ingenious. Large wooden poles were set deep into

the ground to serve as the foundation and structural support for the building. Horizontal beams, known as girts, are then attached to the posts to form the framework. This method eliminates the need for a continuous foundation and allows for quick and flexible construction.

## **Evolution and Adaptation**

Over time, post frame construction techniques evolved to meet the changing

needs of builders and property owners. What began as basic agricultural structures soon found applications in commercial and industrial settings. Warehouses, storage facilities, retail outlets, and even aircraft hangars began to incorporate post frame construction due to its affordability, durability, and versatility.

As the demand for more adaptable and aesthetically pleasing structures grew, architects and designers began to explore cre-

## **Barndos & Bargains**

One thing that has become apparent with the barndominium craze is that prospective buyers often have unrealistic price expectations. Somewhere along the line, the affordability of post-frame sheds or storage buildings has gotten confused with what a post-frame residence or barndo might cost.

"One of the advantages of post-frame is its versatility," said Shield Wall Media Publisher Gary Reichert. "It can be used in a structure with exposed (or no) insulation, amounting to a vast open space with a slab or a dirt floor. Or it can be used for an elaborate custom home. But that versatility has led some people to expect their custom home to cost the same price per square foot as a post-frame shed on a slab."

Reichert said part of the challenge is salespeople who use low-cost options as hooks to generate leads or interest. "Builders need to evaluate whether this is a viable sales process for barndos," he said. "When people house-shop, they are often already at the upper end of their spending limit, and the process of upselling can potentially price a liveable finished product out of their budget."

Shield Wall Media has launched a new consumer website for barndos at BuildMy-Barndo.com. During its creation, one barndominium manufacturer told us to stress to website visitors "that you can't build a big, nice barndo for \$300,000. They're often off by half."

ative ways to enhance the visual appeal of post frame buildings. This led to the emergence of the barndominium—a unique hybrid of a barn and a condominium. Barndominiums retain the spaciousness and functionality of traditional barns while offering modern amenities and stylish living spaces. Easily adapted floor plans with a faster shell completion added to the allure.

## The Rise of Barndominiums

Barndominiums have become increasingly popular in recent years, particularly in rural and suburban areas. These structures offer homeowners the opportunity to combine rustic charm with contemporary design elements, creating one-of-akind living spaces that are both practical and visually pleasing.

One of the key advantages of barndominiums is their flexibility. With their open floor plans and expansive interiors, these buildings can be customized to suit a wide range of lifestyles and preferences. Whether used as a primary residence, a vacation home, or a weekend retreat, barndominiums offer endless possibilities for personalization and creativity.

## **Modern Applications and Innovations**

In addition to residential properties, post frame construction continues to find new applications in a varied cross section of applications. From commercial and industrial buildings to recreational facilities

and agricultural structures, the versatility of post frame construction makes it an attractive choice for a wide range of projects

One notable trend in modern post frame construction is the incorporation of eco-friendly materials and sustainable design practices. As concerns about environmental conservation and energy efficiency continue to grow, builders and designers are exploring ways to minimize the environmental impact of their projects. From using recycled materials to implementing energy-efficient systems, sustainable post frame buildings are leading the way towards a greener future.

## **Future of Post Frame Buildings**

Looking ahead, the future of post frame construction appears bright and promising. Advances in technology, materials, and design techniques are opening up new possibilities for innovation and creativity. From smart homes equipped with cutting-edge automation systems to eco-friendly structures built with renewable materials, the potential applications of post frame construction are virtually limitless. It really is a great time to be involved in the post frame industry.

As the demand for affordable, durable, and sustainable building solutions continues to grow, post frame construction is poised to play an increasingly important

role in the construction industry. Be it for residential, commercial, industrial, agricultural or equine purposes, the versatility and adaptability of post frame buildings make them a practical choice for a wide range of projects.

In conclusion, from their humble beginnings as agricultural and backyard barns to the rise of luxurious barndominiums and beyond, post frame buildings have come a long way. What began as a simple and practical construction method has evolved into a versatile and innovative building solution that continues to inspire architects, builders, and homeowners around the country. With their timeless appeal, durability, and adaptability, post frame buildings are sure to remain a staple of the construction industry for many years to come. FBN

Randy Chaffee brings four-plus decades of experience to the postframe and metal roofing industries. A board member for the Buckeye Frame Builders Association and the Na-



tional Frame Builders Association, follow his podcast at facebook.com/BuildingWins. No web access? Call (814) 906-0001 at 1 p.m. Eastern on Mondays to listen.



## Industry Forecast 2024

## Estimating the Possibilities and Pitfalls

■ By Linda Schmid

Shield Wall Media and METALCON conducted an industry survey that generated a lot of information, and we are providing a few of the basics here. Watch for our new Construction Survey Insights — Annual (a stand-alone magazine mailing in April) for more in-depth construction industry insights.

ou wouldn't begin a build without previewing the project, considering what will be needed and any foreseeable obstacles, then making a plan. Starting a new year of business requires the same precaution.

Let's begin our preview by seeing what industry economists have to say.

## **Economists Have Their Say**

Economist Anirban Basu regularly reviews the state of the economy and its likely impact on the construction industry. He has provided a mixed outlook for 2024.

"The upcoming year will present varied challenges and opportunities for contractors," Basu said. "... those working on residential properties will likely see a shore up of projects due to a tough real estate market." In other words, with high real estate prices and lower supply than demand, residential construction isn't likely to slow down. Further, Basu sees growth opportunities in mega-projects across the country

as many manufacturers reshore supply chains. These projects will call for more employees in an industry that already offers more job opportunities than skilled/ quality workers to take them.

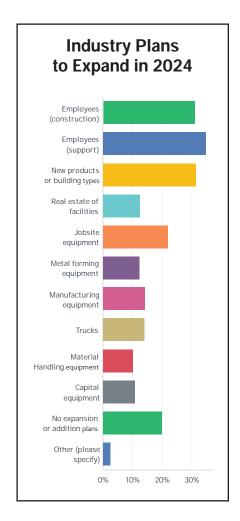
When considering what situations may negatively affect peoples' plans to build, Basu advises remembering these: high consumer debt, geopolitical uncertainty, stricter credit conditions, and the government's increasing debt. However, he believes that the bond market indicates a likely decline in interest rates by mid year. If this occurs, it could mean greater project financing and backlog generation.

Ken Simonson, Chief Economist of the Associated General Contractors of America, said that after a torrid third quarter in 2023, slower growth is expected going into 2024. Overall, he believes that unemployment will remain low.

Simonson said. "Employers in expanding industries such as construction, will continue to have trouble filling positions, and will have steadily increasing wage bills for new workers (when they can find them) and overtime or bonuses."

While most supply chain issues have been cleared up, Simonson added that there remain a few holdouts, such as electrical equipment, and it looks like these will likely remain problems throughout 2024. He expects these supply challenges along with labor shortages will stretch project completion times.

Specific niches that Simonson expects to do well in 2024 include renewable energy projects.



## According to the Survey

While no one is really sure of what lies ahead, a lot depends on people's perceptions and confidence in the market. One sign of true confidence is to be found in a company's plans to expand.

Check out the "Industry Plans to Expand in 2024" Table and you can see that only 20% of companies surveyed had no plans to expand in any way.

Basu predicted more opportunity in larger jobs this year and some insiders echo that belief. Our survey showed that many post-frame insiders expect their job sizes to increase.

## Industry Insiders Insights On 2023 and Expectations for 2024

Perma-Column had a great year President Mark Stover said. "All sectors are strong, especially agricultural. Interest rates have had an effect on barndos and on anything that requires a conventional mortgage. Otherwise, business is very good."

Buddy Pullen, Regional Manager at Amerilux, said, "The agricultural market seems to be slowing a bit with several producers closing facilities citing higher costs and decreased demands."

Paul Zimmerman, General Manager at Hixwood said, "We expect profitability to be better in 2024 than it was in 2023 because we are seeing higher demand for our products and raw material."

Stephen Keith, National Sales Manager of Stockade Buildings, said that 2023 was a difficult year due to price increases (inflation) and material shortages with long lead times. He does not expect 2024 to be any different.

Stover sees improvement in material costs. "The material cost trend is steady with some variation up or down...not the wild swings we had a few years ago.

When it comes to challenges going forward, Allan Breidenbach, President of Wick Buildings, expects field labor to continue to be the biggest challenge in 2024 followed by material and supply chain management while controlling costs.

Stover said they had experienced challenges finding people, but they have man-

aged to retain their new hires. "There is no secret formula to hiring and retaining employees," he said. "It's all about your 'culture' and paying a competitive wage in your local market."

Zimmerman believes labor costs and interest rates will be the greatest challenges in 2024.

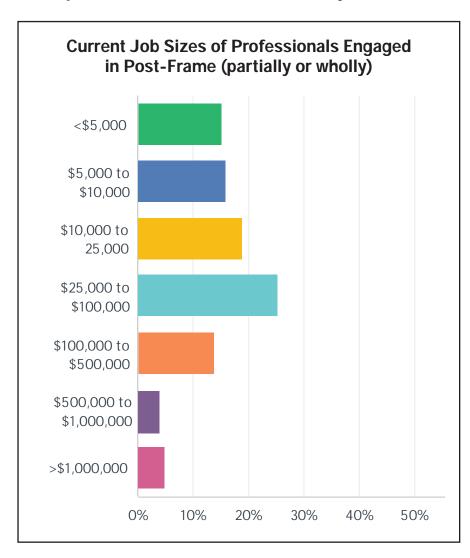
"Service centers and distribution aren't as willing to stock as much inventory as was normal pre-pandemic," Zimmerman said. "I believe this is due to the high cost of interest rates. This makes downstream manufacturers need to stock more," he added.

Keith said, "Inflation will be a challenge for builders and suppliers. It has already delayed several projects as customers wait for lower prices." "I believe the worst of the inflation is behind us," Zimmerman said. "The Fed is working diligently to keep it in check with moderate success."

Eric Veliquette, President of Lakeside Fasteners said that inflation has been a challenge, but he believes it may begin to level out in 2024. He sees signs in the market that lead him to believe that prices may begin to decelerate.

"Demand for steel in Asia is decreasing. Decreasing demand in Asia usually brings US prices down due to excess products flooding the marketplace. Also, freight has come down; we are not seeing the spikes in price that we saw before. Of course, it could all change in a flash due to geopolitical circumstances," he added.

As far as strong markets, Breidenbach



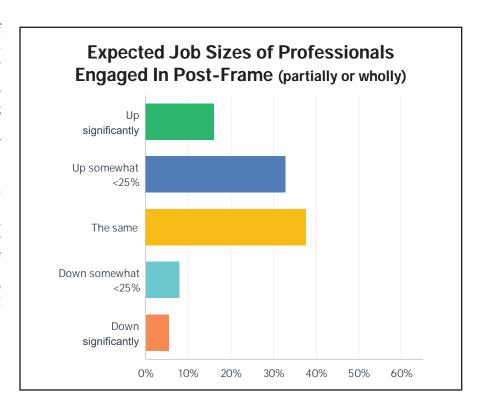
## STATE OF THE INDUSTRY //

said, "Residential remains in a state of flux. We are seeing far bigger projects with more sophisticated design requirements which leads to much larger project sizes."

Veliquette believes that multi-family residential, commercial, and warehousing will be construction's strongest markets. "Warehousing is required for computer storage facilities like Amazon and Facebook and AI storage needs," he said. "Often these are pre-engineered buildings, like 4-5 football fields big."

Breidenbach definitely expects good things for post-frame. "What a great time to be part of the post-frame community, he said. "Innovation in technology, manufacturing and increased customer awareness has opened new doors for all of us and I am excited to see what 2024 brings. *FBN* 





## INDUSTRY NEWS //

## Cornerstone Building Brands Unveils Fortify Building Solutions

Cornerstone Building Brands has introduced its newest brand, Fortify Building Solutions.

The new brand is an integration of three of the company's heavyweights — Heritage Building Systems, Metal Depots, and Reed's Metals — creating a new leader that leverages an expansive plant network and major purchasing power.

"We're excited for customers to experience this winning formula first-hand," Ackley adds. "Our goal is to set a new standard for service in the industry."

The Fortify Building Solutions brand will serve customers with one of the largest selections of metal building products and accessories in the industry. The expansive assortment includes metal roofing systems, metal wall panels, components, pole barns, Hypersteel cold-formed buildings and pre-engineered metal buildings for an enormous array of applications.

Customers also have the added benefit of an expanded network and vast, proven expertise from a single partner, contributing to less headaches and fewer delays.

For further information, visit fortify-buildingsolutions.com.

## FastenMaster Introduces the New FrameFAST

FastenMaster has introduced the new FrameFAST fastener, now featuring the patented TORX ttap Drive system. The new design gives pros the choice of using a standard impact driver or Frame-FAST tool. FrameFAST replaces many commonly used hurricane ties, installing five times faster without the need for compressors, nailers, and hoses. The new 50-piece box and 250-piece bucket includes a free alignment guide, ensuring a code compliant connection.

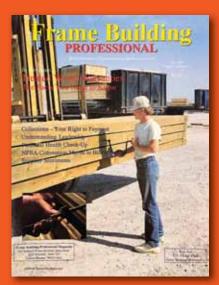
"In 2011, FastenMaster began replacing hurricane ties with structural screws and in 2017 we introduced FrameFAST,

the first system specifically designed to replace hurricane ties, said Nikki Long, Structural Business Unit Director.

The new fastener is certified for continuous load path applications, including securing roof trusses, wall studs, and plates, in addition to attaching deck joists to carrying beams. Backed by FastenMaster's exclusive ProjectLife Guarantee, Frame-FAST is guaranteed for the life of the project and is approved for use in ACQ pressure treated wood.

FastenMaster's products are engineered for structural, decking, and trim applications in residential construction. Its product line includes the LOK Line of structural wood screws, Tiger Claw Hidden Deck Clip System, TrussBRACE roof truss support system, and Cortex Hidden Fastening Systems for deck and trim applications.

For more information, contact Fasten-Master at 800.518.3569 or visit Fasten-Master.com. FBN BY FRAME BUILDING NEWS STAFF



July 1989 Frame Building Professional

Collections is one of those topics that many people don't like to talk about, but as McNeill Stokes pointed out in this article, it is very important to your business survival.

The advice dispensed here may or may not work for you. However, if you are challenged with collection issues it is worth some consideration.

FOR 30+ YEARS FRAME BUILDING NEWS has been providing the news, trends and resources builders need.

## COLLECTIONS

Your Right to Payment

he cash-flow needs of most contractors require that they vigorously pursue their right to payment. It is the nature of construction work that contractors perform dollar volumes many times in excess of their working capital. The subcontractors and those general contractors who actually perform work must pay on a weekly basis for their labor and on a current basis for their materials and overhead. If they are unable to collect payments on time, they have immediate cash-flow problems. Therefore, it is important for contractors to understand the various remedies available in the construction industry to ensure collection of money for work performed.

## **Establish Standard Procedures**

Contractors should establish standard procedures to prevent collection problems from arising. One of the best ways is to have a tough, consistent collection system - a bill collected now cannot turn into a bad account or a lawsuit later. The contract is never complete until the payment for performance is collected. The contractor should establish a "date certain" for payment of amounts as they become due. If payment does not arrive on that date, take action immediately. Set up a system where accounts are systematically supervised. Collect every single account every month. Send notices and initiate collection procedures whenever necessary. A reputation for collecting fairly and consistently every month can be of great value.

One of our clients is a subcontractor who does a business of \$4-\$5 million per year and never builds up more than \$300-\$400 worth of bad debts! Their approach is simple: They set a date in their contracts when they are to be paid. Their book-



McNeill Stokes Stokes, Shapiro, Fussel & Genburg Attorneys at Law – Atlanta, GA

keeper automatically calls the account the day after the payment date and demands payment. They're not interested in why payment has not been made. If an excuse is offered, they say: "I've heard all the excuses before and I'm not interested in your excuses. I am sending someone over to pick up the check this afternoon!" And they get it. They are even more respected by their customers because of their consistent business approach to collections and they get all the repeat work they want.

## **Pursuing Collection**

Drafting and checking contracts for legal pitfalls is the first and most important stage of collection. Contracts should be drafted to avoid the need for collection activities. Firm dates for when the contractor is to be paid should be established in the contract. A payment clause is not complete without a specific payment date. Similarly, final payment should be due within a set number of days after substantial completion of the contractor's work (less a reasonable hold back for any uncompleted items). Of course, the con-

tractor should always strive to reduce or eliminate retention to improve cash flow and cut down on the heavy risk of final payment.

It is amazing how a small sum of money, only a fraction of total sales or capital investment, can spell the difference between being solvent or not. The typical contractor has only enough working capital, or "net quick," to carry through 30 days of operation without revenues coming in. In fact, 60 days worth of working capital is about the most any contractor carries. So, if a few big payments are missed on contracts, it can wipe out a contractor almost overnight. Staying in business, therefore, demands as much ability to collect bills as it does ability to do the work skillfully and economically. Some contractors fail because they are not able to manage their

overnight. Staying in business, therefore, demands as much ability to collect bills as it does ability to do the work skillfully and economically. Some contractors fail because they are not able to manage their

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collections.

One family-owned firm had been doing business for over 80 years when it lost its entire net worth of \$1 million within a matter of months. Several of its contracts had fallen delinquent on very large progress payments. The company was headed for bankruptcy because of the failure of the firm to get its money. While the family was considering liquidation, a key employee asked for a chance to get the company back on its feet in return for its almost worthless stock. Figuring there was nothing to lose, the family agreed. Seven years after the employee had taken over operations, the firm's net worth was back at \$1 million, even thought the company had been forced to write off almost all the outstanding accounts receivable. The key to this remarkable accomplishment? On a sales volume of \$15 million, he had managed to collect all of his payments. Not one dollar was written off.

Credit goes to what he significantly calls his million dollar form. The bookkeeper sends this form to the firm's project managers in every situation where an account receivable has not been paid by the 20th of the month. The form is actually quite simple. It asks only three questions: (1) What efforts have you (the project manager) made to collect this account receivable? (2) What is the real reason you have not been able to collect on it? and (3) What action do you recommend – stopping work,

filing of liens, or what?

The man at the top requires that the form be back on his desk by the 25th of the month, in time for him to review it before the next bill goes out. But the fact is, the form never comes back. Rather than face the boss with their inability to collect the payment, the project managers just go and get the check.

A firm no-excuses policy like this one will always be more effective in the long run than legal action. Law suits are slow and expensive. And they are not always won. If possible, payment due dates should be written into the contract. If not, contact the customer as soon as the first invoice is received and ask whether everything is in order. If the customer says no, immediately find out why not. If everything is in order, ask for reinforcement that payment can be expected on suchand-such date. Either way, the contractor is managing and controlling the situation. And, the contractor will normally be able to make the collection before the account becomes a bad debt. A payment collected cannot become a bad debt. Collection of accounts must be managed currently and consistently. FBN

For more titles, check out Shield Wall Media online: www.shieldwallmedia.com





## The 2023 Survey Says ...

e have closed out our annual survey and are working on the CSI Annual that will mail in April. Our efforts to improve our data collection seem to be working. We roughly doubled the total number of respondents from 2022 to 2023.

Our strong areas, like post-frame, remained constant, but we gained a significant number of responses in General Roofing, Metal Building and Wood Framed (Stick Built) construction. With the roll out of Metal Builder Magazine, the gain in "Metal Building" makes sense. The gains in General Roofing and Wood Framed construction should help act as a baseline or control group to measure against the specific markets we cover.

One of the interesting aspects comparing year over year are the changes in responses, hot markets, business climates and concerns. Going through the comparison from 2022 to 2023, this is what caught my attention.

### Market Predictions

## What Market Segments of construction do you build for?

No areas increased significantly. Agricultural, Commercial and Industrial all decreased as a percentage of respondents. Agricultural from 40% to 28%. Commercial from 67% to 30%. Industrial from 44% to 19%.

When combined with results from the question "Overall, across the industry will residential construction increase or decrease in 2024 to 2023?" the obvious assumption is the change in products is in response, preparative or reactive, to the view of residential construction. In 2022,

47% predicted the market would decrease and 32% predicted the market would the same. In 2023, 37% predicted the market would increase and 47% predicted it would stay the same. The percentage predicting an increase grew by 16%, while the percentage predicting a decrease dropped by 31%.

The market predictions for Agricultural, Commercial and Industrial remained unchanged. This seems to indicate a shift in direction to take advantage of an increase in residential construction.

This is consistent with the level of concern regarding interest rates and inflation. In 2022, 58% of respondents listed interest rates as a major concern. In 2023 that percentage dropped to 27%. Inflation followed a similar path. In 2022, 67% listed it as a major concern and in 2023 that number decreased to 34%.

### **Expansion Plans**

In 2022, 18% had immediate expansion plans and 50% had future plans. In 2023, 28% had immediate plans and 29% had plans farther in the future.

The areas for expansion remained the same with adding personnel (both construction and support) and new products or building types leading the way.

The one interesting drop was in trucks. In 2022, 24% of respondents planned on adding trucks. In 2023 that number dropped to 14%.

## **Financial Outlook**

The predictions of gross sales remained consistent. Units sold remained consistent as well.

Profitability remained consistent. The only significant change was an increase of

approximately 7% predicting their profitability would increase by more than 25% in 2024.

### Concerns for 2024

One bright spot is the level of concern across the industry seems to have generally decreased. The challenges still remain but respondents seem less concerned.

Area of Concern	2022	2023	
Finding Employees	65%	39%	
Cost of Materials	59%	43%	
Material Availability	45%	24%	
General Supply Chain Issues	48%	17%	
Demand for Products and Services			

24%

12%

## Summary

Generally concerning issues seem down. Residential construction is expected to remain strong enough builders are shifting toward that market. Projections for gross sales, units sold and profitability remain stable. Which is extremely positive considering the industry is coming off of some record years.

The CSI Annual will mail in April and should provide additional insight into the above topics and much more. We will be able to isolate regions, building types and specific market niches and examine our data and combine that information with input from industry experts and economists. The CSI Annual is free to all subscribers to Shield Wall Media publications. *FBN* 

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