CSI CONSTRUCTION SURVEY INSIGHTS ANNUAL & MARKET REPORT 2024

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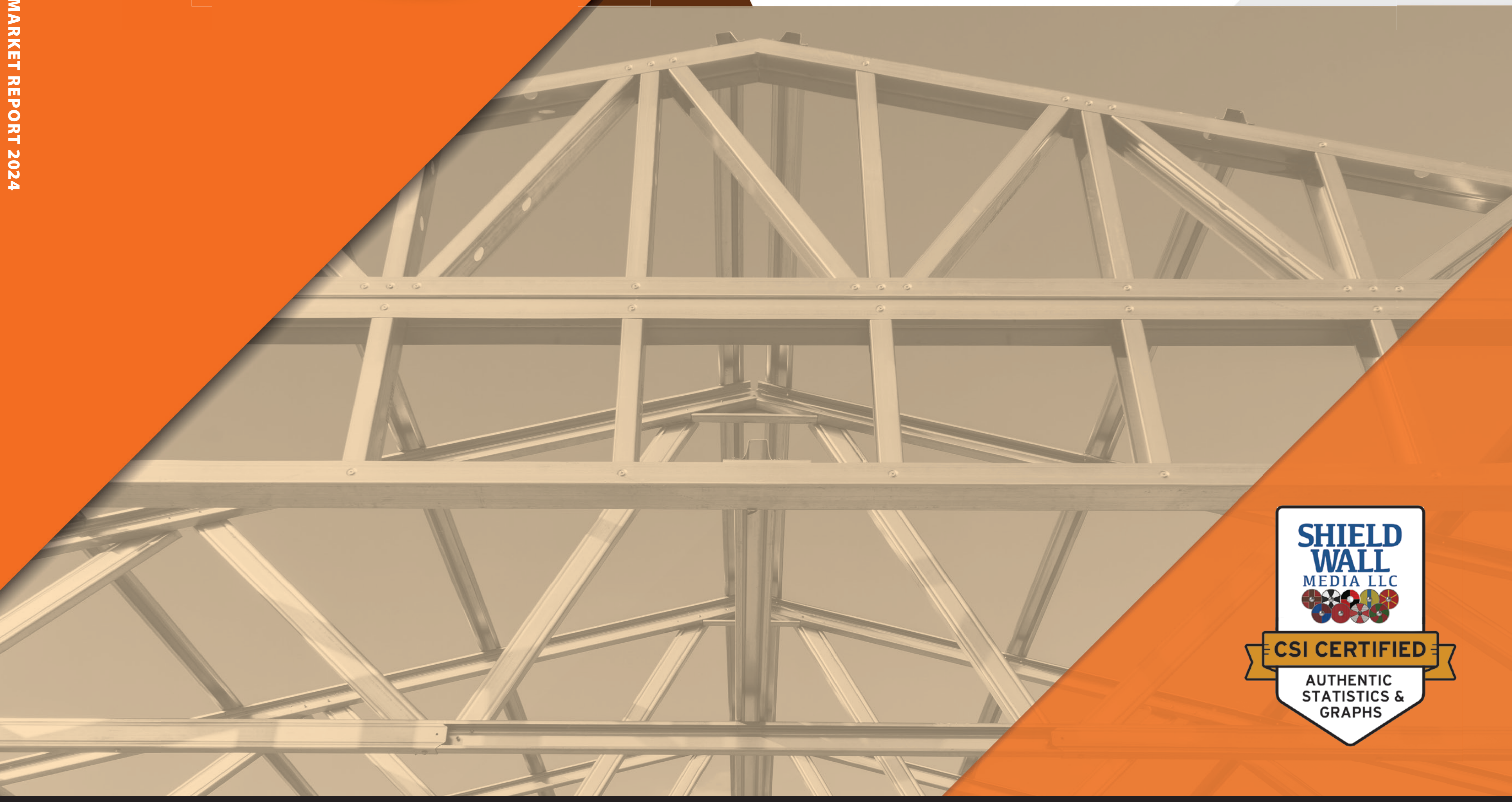

SHIELD WALL MEDIA LLC
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AUTHENTIC STATISTICS & GRAPHS

Economy Trends & Data for the Construction Trade

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BY GARY REICHERT

2024 CSI ANNUAL REPORT

When possible, I avoid writing publisher's letters. For new magazines, new shows, supporting charities and significant developments, it is unavoidable.

Being the first CSI-Annual & Market Report, it is too early to recognize if this is significant. But there is no doubt it is new.

We have owned Shield Wall Media for five years. In that time, we have expanded into multiple related markets. These include roll forming, sheds and portable buildings, and cold formed metal. Adding these to the audiences from our legacy magazines, there seemed to be one frustrating point spread across the markets: a lack of actionable data.

We were asked to participate in market surveys by sharing our lists. Performing the due diligence revealed that some of the surveys had contact lists of under 100 people. Not under 100 responses, but under 100 people on the list to receive the survey. Our experience told us there had to be a better way.

We experience about a 6% completion rate for the recipients of the survey; naturally, the more the better. Our surveys are still growing, and we are refining our best practices regarding survey content and generating responses.

This year we received 302 responses to our survey. Not earth shattering, but enough to generate data with a reasonable confidence level.

Typically, market reports are sold as proprietary and cost recipients several hundred to several thousand dollars. We are providing it to all our subscribers free of charge.

If you see value in data for our markets and use this information in any way, please help us improve for the 2025 CSI Annual. There are a few simple things you can do:

First and foremost, take the survey. The more responses we have the more complete the data. The 2024 Annual is admittedly weaker in some geographic regions and some market segments. More responses solve this concern.

Second, tell people and share this information. The more people who know about this, the more people who will take the survey. We are putting this out free to subscribers so the information can be shared and help grow our corner of the construction industry.

Third, suggest topic areas or questions we should add to the survey. My email and phone number are all over our publications and I appreciate feedback.

Last, but certainly not least, consider sponsoring a section. If you look at the metrics (cost per thousand) this is the most cost-effective product we have to reach our audience.

Collecting, curating, printing, and distributing the data is expensive. I personally want to express sincere gratitude to the sponsors who helped us make this possible. Without your support, we could not make this type of investment in the industries we all serve.

Thank you for your confidence and support as we continue to grow and support our industries.

Gary Reichert, Publisher

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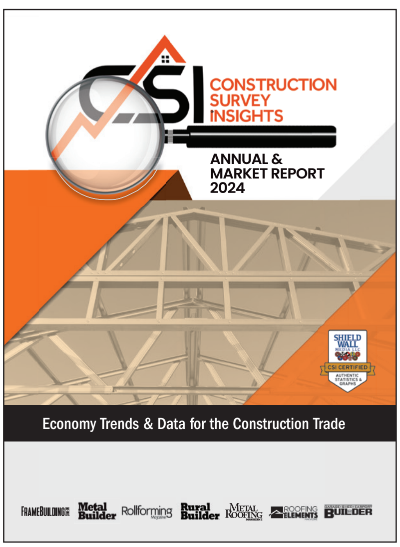

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CSI ANNUAL

SHIELD WALL MEDIA LLC

Managing Editor
Linda Schmid
linda@shieldwallmedia.com

Editorial Staff
Karen Knapstein
Dan Brownell

Circulation/Subscriptions
Barb Prill
barb@shieldwallmedia.com
920-471-4846

Publisher/CEO
Gary Reichert
gary@shieldwallmedia.com
715-252-6360

Director of Events
Missy Beyer
missy@shieldwallmedia.com
920-216-3007

Executive/Advertising Assistant
Kathy Budsberg
kathy@shieldwallmedia.com

Advertising/Show Assistant
Cari Ullom
cari@shieldwallmedia.com

Graphic Designers
Tom Nelsen
Kevin Ulrich

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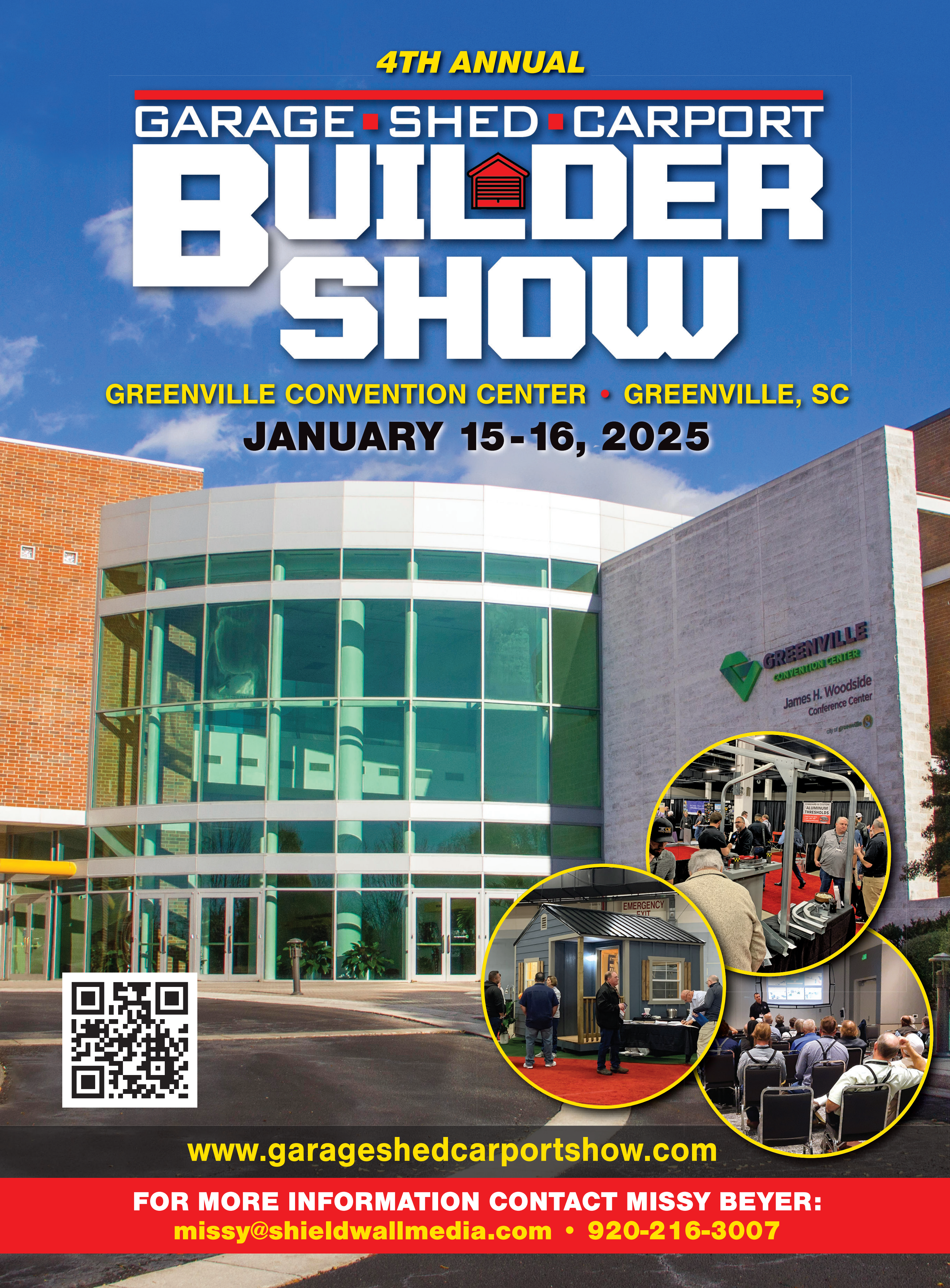
Gary Reichert,
Publisher, Shield Wall Media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SECTION 1

GENERAL ECONOMY TRENDS AND DATA

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SECTION 1

GENERAL ECONOMY TRENDS AND DATA

Since Spring 2020, the world economy has been roiled by the pandemic, supply chain disruptions, inflation, and a host of other economic issues. Today's economic environment is formed by those wild fluctuations, and the uncertainty we see today can be attributed in part to what has happened in the recent past. Only in the last few months has a more predictable pattern emerged.

Still, as Mark Twain famously said, "There are lies; there are damned lies; and there are statistics." In today's political environment, those statistics are being used to support a wide variety of conclusions, some at distinct odds with others. The University of Michigan Survey of Consumer Sentiment (see below) points this out more specifically.

How We Got Here

The following is a snapshot of what has happened in the overall U.S. Economy since the pandemic began in 2020. It gets us to the current economic environment with low unemployment, high inflation, high interest rates, and rising wages. Of those markers, none are close to historic levels. Unemployment has been lower, inflation has been higher, and wages have increased much more rapidly in the past than we're experiencing now. And anyone who was around the construction industry in the early 1980s remembers that interest rates have been much higher.

GDP

The U.S. passed through a tumultuous economic journey from 2020 to 2023, largely shaped by the COVID-19 pandemic's impact. In 2020, the GDP took a sharp downturn due to widespread lockdowns and disruptions across industries, resulting in a contraction of approximately

Table T1 – REAL GDP

	ESTIMATED VALUE – PERCENT CHANGED FROM PRECEEDING QUARTER			
YEAR	Q1	Q2	Q3	Q4
2020	-5.3	-28	34.8	4.2
2021	5.2	6.2	3.3	7
2022	-2	-0.6	2.7	2.6
2023	2.2	2.1	4.9	3.2

Source: U.S. Bureau of Economic Analysis

Table T2 – TOTAL COMPENSATION

	CIVILIAN WORKERS – PERCENT CHANGED FROM PRECEEDING 12 MONTHS			
YEAR	Q1	Q2	Q3	Q4
2020	2.8	2.7	2.4	2.5
2021	2.6	2.9	3.7	4.0
2022	4.5	5.1	5.0	5.1
2023	4.8	4.5	4.3	4.2

Source: U.S. Bureau of Economic Analysis

Table T3 – MONTHLY CIVILIAN UNEMPLOYMENT RATE

	RATE BY MONTH											
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2020	3.6	3.5	4.4	14.8	13.2	11	10.2	8.4	7.8	6.8	6.7	6.7
2021	6.4	6.2	6.1	6.1	5.8	5.9	5.4	5.1	4.7	4.5	4.1	3.9
2022	4.0	3.8	3.6	3.7	3.6	3.6	3.5	3.6	3.5	3.6	3.6	3.5
2023	3.4	3.6	3.5	3.4	3.7	3.6	3.5	3.8	3.8	3.8	3.7	3.7

Source: U.S. Bureau of Labor Statistics

3.5%. However, as the economy gradually reopened and stimulus measures were implemented, the nation saw a notable rebound in 2021, with annual GDP growth reaching around 5.7%. T1

In 2022, recovery momentum persisted, albeit at a slightly slower pace, with GDP expanding by approximately 4.2%. Various factors including increased consumer spending, infrastructure investments, and business expansions contributed to this growth. By 2023, the economy continued its upward trajectory, albeit with moderation, achieving a growth rate of around 3.8%. While challenges such as supply chain disruptions and inflationary pressures persisted, overall economic resilience and adaptive policies played pivotal roles in steering the U.S. economy towards gradual recovery throughout this period.

Wages

Total compensation for civilian workers since 2020 were influenced by various economic factors and policy changes. Amidst the onset of the COVID-19 pandemic, many workers faced uncertainty as businesses shuttered and unemployment rates soared. Consequently, compensation growth was modest or stagnant in some sectors as employers grappled with financial challenges. T2

However, as the economy gradually rebounded in 2021 and 2022, compensation trends showed signs of improvement. Labor markets tightened and competition for talent intensified. Employers began offering more competitive wages and benefits to attract and retain skilled workers. This trend was particularly notable in industries experiencing rapid growth or facing shortages in specific skill sets, such as construction.

Inflationary pressures during this period also influenced compensation dynamics, as workers sought higher wages to offset rising living costs. Employers responded by adjusting compensation packages to keep pace with inflation with varying degrees of success depending on industry and geographic location.

By 2023, total compensation for civilian workers had generally increased, but it was uneven across sectors and regions. Government policies, such as minimum wage adjustments and changes to labor regulations, also played a role in shaping compensation trends during this period. Overall, the trajectory of total compensation reflected the broader economic conditions and workforce dynamics experienced during these years.

Unemployment

In early 2020, the unemployment rate skyrocketed to levels not seen since the Great Depression, peaking at around 14.8% in April 2020. Lockdowns and restrictions to curb the spread of the virus forced many businesses to shutter temporarily, leading to mass layoffs and furloughs across various sectors. T3

Throughout 2020 and into 2021, concerted efforts were made to mitigate the economic fallout of the pandemic. The

Table T4 – U.S. MANUFACTURING JOBS

	RATE BY MONTH (in thousands)											
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2020	12,785	12,780	12,721	11,419	11,652	11,982	12,019	12,047	12,102	12,124	12,154	12,194
2021	12,188	12,217	12,272	12,232	12,264	12,285	12,353	12,401	12,439	12,497	12,534	12,575
2022	12,602	12,649	12,717	12,768	12,787	12,817	12,852	12,882	12,899	12,930	12,935	12,934
2023	12,942	12,940	12,932	12,941	12,936	12,945	12,939	12,941	12,954	12,923	12,948	12,960

Source: U.S. Bureau of Labor Statistics

Table T5 – U.S. FABRICATED METAL EMPLOYMENT

	RATE BY MONTH (in thousands)											
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2020	1,467	1,465	1,454	1,345	1,367	1,370	1,356	1,361	1,361	1,360	1,360	1,366
2021	1,361	1,362	1,371	1,372	1,374	1,377	1,386	1,387	1,391	1,395	1,404	1,405
2022	1,408	1,416	1,422	1,423	1,430	1,431	1,436	1,439	1,440	1,446	1,446	1,448
2023	1,450	1,450	1,446	1,450	1,451	1,454	1,452	1,456	1,457	1,457	1,460	1,464

Source: U.S. Bureau of Labor Statistics

implementation of stimulus measures such as the CARES Act provided financial relief to individuals and businesses, and vaccination efforts gradually allowed for the easing of restrictions. Consequently, the unemployment rate began to decline steadily from its peak, although at varying rates across different states and industries.

As 2021 progressed, the unemployment rate continued its downward trend, though the pace of improvement slowed compared to the initial stages of recovery. Structural shifts in the labor market, such as increased remote work and shifts in consumer behavior, also influenced employment dynamics during this period.

By 2022 and into 2023, the U.S. economy had largely rebounded from the depths of the pandemic-induced recession. The unemployment rate stabilized at pre-pandemic levels, hovering around 3-4%. While this represented a significant improvement from the peak of the crisis, challenges such as labor shortages in certain industries and disparities in employment opportunities persisted, highlighting the ongoing need for targeted policy interventions to foster inclusive economic growth and job creation.

Manufacturing

Employment in the manufacturing sector followed the same patterns as overall private employment was shaped by the repercussions of the COVID-19 pandemic, economic policies, technological advancements, and shifting consumer behaviors. [T4]

The pandemic-induced lockdowns led to widespread layoffs and furloughs across the manufacturing sector as factories halted operations to comply with containment measures.

Table T6 – MANUFACTURING PURCHASING MANAGERS INDEX

	RATE BY MONTH											
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2020	50.9	50.1	49.1	41.5	43.1	52.6	54.2	56	55.4	59.3	57.5	60.5
2021	58.7	60.8	64.7	60.7	61.2	60.6	59.5	59.9	61.1	60.8	61.1	58.8
2022	57.6	58.6	57.1	55.4	56.1	53	52.8	52.8	50.9	50.2	49	48.4
2023	47.4	47.7	46.3	47.1	46.9	46	46.4	47.6	49	46.7	46.7	47.1

Source: Institute of Supply Management

Table T7 – UNIVERSITY OF MICHIGAN CONSUMER SENTIMENT INDEX

	RATE BY MONTH											
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2020	99.8	101.0	89.1	71.8	72.3	78.1	72.5	74.1	80.4	81.8	76.9	80.7
2021	79.0	76.8	84.9	88.3	82.9	85.5	81.2	70.3	72.8	71.7	67.4	70.6
2022	67.2	62.8	59.4	65.2	58.4	50.0	51.5	58.2	58.6	59.9	56.7	59.8
2023	64.9	66.9	62.0	63.7	59.0	64.2	71.5	69.4	67.9	63.8	61.3	69.7

Source: University of Michigan

Table T8 – GENERAL BUSINESS SENTIMENT

	PROJECTIONS FOR 2024 ACROSS THE INDUSTRY			
Sentiment	Improve	Same	Decline	Unsure
Percentage	32.4%	40.9%	18.9%	7.8%

Source: CSI Certified, Shield Wall Media

Uncertainty and decreased demand further exacerbated job losses, resulting in a significant downturn in manufacturing employment globally.

As economies gradually reopened and adapted to the new normal in 2021, manufacturing employment began to recover. Stimulus measures, government support programs, and increased consumer spending contributed to the rehiring of workers and the stabilization of employment levels in some regions.

By 2022, as vaccination campaigns progressed and supply chains adapted to disruptions, manufacturing employment saw a modest uptick. However, automation and digitalization trends also influenced the job landscape, leading to a restructuring of roles within the sector.

In 2023, while manufacturing employment showed signs of improvement, challenges such as skills gaps and labor shortages persisted. Efforts to reskill workers and invest in workforce development became increasingly crucial for sustaining

Table T9 – GENERAL BUSINESS SENTIMENT: by Location

	PROJECTIONS FOR 2024 ACROSS THE INDUSTRY			
LOCATION	**Improve**	**Same**	**Decline**	**Unsure**
East	34.9%	47.0%	13.6%	4.6%
South	29.0%	41.9%	18.3%	10.8%
Midwest	28.0%	40.0%	22.7%	9.3%
West	46.0%	29.7%	16.2%	8.1%
Canada	50.0%	33.3%	16.7%	0.0%

Source: CSI Certified, Shield Wall Media

Table T10 – GENERAL BUSINESS SENTIMENT: by Primary Area of Construction

	PROJECTIONS FOR 2024 ACROSS THE INDUSTRY			
PRIMARY AREA OF CONSTRUCTION	**Improve**	**Same**	**Decline**	**Unsure**
General Roofing	46.5%	36.6%	12.7%	4.2%
Metal Roofing	46.2%	28.2%	20.5%	5.1%
Post-Frame	22.2%	27.8%	33.3%	16.7%
Metal Building (cold-formed)	33.3%	50.0%	16.7%	0.0%
Rollformimg	30.0%	50.0%	20.0%	0.0%
Sheds and Carports	22.2%	33.3%	22.2%	22.2%
Other Buildings	12.5%	75.0%	12.5%	0.0%

Source: CSI Certified, Shield Wall Media

employment growth amidst evolving industry dynamics.

Fabricated Metal

The COVID-19 pandemic disrupted the fabricated metal employment sector just as it did every other sector. But in 2021, increases in demand in construction, automotive, and infrastructure sectors boosted employment and the sector began to recover. Despite supply chain challenges and inflationary pressures, employment in fabricated metal industries in 2022 showed signs of stabilization. In 2023, as the economy continued to adapt to post-pandemic realities, fabricated metal employment remained relatively steady, reflecting resilience amidst ongoing uncertainties and evolving market dynamics. T5

Purchasing Managers Index

The manufacturing Purchasing Managers Index (PMI) is a key indicator reflecting the health of the manufacturing sector within an economy. The index is based on a survey of manufacturing supply executives conducted by the Institute of Supply Management. A PMI above 50 designates an overall expansion of the manufacturing economy whereas a PMI below 50 signifies a shrinking of the manufacturing economy. T6

In 2020, the PMI plummeted as the pandemic disrupted supply chains, halted production, and dampened demand worldwide. Many countries witnessed PMI readings well below the threshold of 50, indicating contraction.

As economies gradually reopened and adapted to new norms, the manufacturing PMI showed signs of recovery in 2021. Stimulus packages, vaccination campaigns, and pent-up demand spurred a resurgence in manufacturing output, leading to PMI readings moving back towards expansionary levels.

By 2022, despite ongoing challenges such as supply chain disruptions and inflationary pressures, the manufacturing sector exhibited resilience. PMI figures stabilized, reflecting improved business confidence and sustained growth momentum.

In 2023, while uncertainties persisted, particularly surrounding geopolitical tensions and environmental concerns, the manufacturing PMI dropped a little, then remained relatively steady, underlining the sector's adaptability and stability amidst evolving global dynamics.

Consumer Sentiment

The fluctuations in the University of Michigan Consumer Sentiment Index – a widely recognized gauge of consumer confidence – from 2020 to 2023 reflect the tumultuous economic and social landscape during this period. T7

The index plummeted in 2020 but as the economy gradually recovered in 2021, the sentiment index began to rebound unevenly. Government stimulus measures and vaccine rollouts bolstered optimism, but persistent challenges such as inflationary pressures and supply chain disruptions tempered consumer confidence.

In 2022, the index stabilized as the economy adapted to the new reality. However, geopolitical tensions, such as the Russian invasion of Ukraine, and lingering economic vulnerabilities continued to influence consumer sentiment, leading to fluctuations throughout the year.

By 2023, the sentiment index reflected a cautiously optimistic outlook as the economy regained momentum and uncertainties eased. Since May 2022 when it was at its lowest point, the index has trended upward.

Construction Survey Insights Attitudes Toward the Future

In the Shield Wall Media survey of contractors, designers, manufacturers, and material suppliers and distributors, we found a generally positive attitude toward the general economy in 2024. Often during presidential election years, there is enough uncertainty and political strife that positive sentiment about the economy can be undermined. In this election year, the concern is even greater. T8

In February 2024, the University of Michigan's Joanne Hsu, director of its Surveys of Consumers, and her research team reported on an investigation into how partisan differences post-COVID have led to huge gaps in attitudes toward the economy that outpaces the gaps in income, age, and education.

"This suggests that the way consumers interpret ongoing economic trends continues to be colored by partisan perspectives," said Hsu. "The size of the partisan divide in expectations has completely dominated rational assessments of ongoing economic trends. This situation is likely to encourage poor decisions by consumers and policymakers alike. While there have always been partisan differences in preferred policies, the overwhelming size and persistence of the partisan gap has generated substantial economic uncertainty."

That nearly three-quarters of the respondents to the CSI survey expected the general economy to improve or at least stay the same is indicative of the strong feelings within the construction industry about the health of the business

Table T11 – GENERAL BUSINESS SENTIMENT: by 2023 Gross Sales

	OVERALL ACROSS THE INDUSTRY IN 2024, GENERAL BUSINESS WILL:			
GROSS SALES	Improve	Same	Decline	Unsure
Less than $2 million	23.2%	42.9%	22.3%	4.2%
$2 million to $5 million	32.8%	42.2%	21.9%	5.1%
$5 million to $10 million	38.3%	36.2%	14.9%	16.7%
$10 million to $20 million	56.0%	32.0%	8.0%	0.0%
$20 million to $50 million	35.0%	45.0%	15.0%	0.0%
Over $50 million	38.5%	42.3%	15.4%	22.2%

Source: CSI Certified, Shield Wall Media

environment. Only 18.9% of respondents thought the general economy would decline in 2024, but the 7.8% who indicated they were unsure about what might happen shows the uncertainty underlying attitudes toward the economy.

When that sentiment gets broken out by the location of the company, clear differences arise about sentiment. Companies in the West and Canada are much more positive about the general business environment with 46% of western companies and 50% of Canadian companies saying the economy will improve. T9

Respondents from the Midwest and South are the most pessimistic about the general business economy. Nearly a quarter of the Midwest (22.7%) expect the general economy to decline while 18.3% of survey-takers from the South hold that sentiment.

When you combine “Improve” with “Stay the Same,” companies based in the East are actually nearly as optimistic as those in any other region with a total of 81.9% of respondents agreeing with either of those sentiments. T10

Companies in the post frame business are far more pessimistic about the general business economy than those whose primary business is in other market segments. A third of them expect the economy to decline. Since most of those companies are based in the Midwest, that would partially explain why Midwestern sentiment is lower than other regions.

The most optimistic segments are companies whose primary business is general roofing or metal roofing. 46.5% of general roofers expect the economy to improve while 46.2% of metal roofers anticipate improvement. Only 12.7% of general roofers expect the general economy to decline.

Company size also has an influence on attitudes toward the general economy. The smallest companies are much more inclined to be pessimistic. Of companies with annual revenues in 2023 of less than $2 million, 22.3% expect to see a decline in the economy in 2024. Of those between $2 and $5 million, 21.9% hold a pessimistic view about economic growth in this presidential year. T11

The $10 to $20 million per year companies are the most optimistic. 56% of them expect the economy to improve and another 32% (for a total of 88%) see it holding steady.

Survey Participant Profile

More than 300 industry professionals shared their vision and knowledge on the annual construction insights survey. Here are the demographics for the survey participants.

Location

The largest segment of respondents comes from the South (31.9%) followed by the Midwest (25.7%) and East (22.6%). The West makes up only 12.7% of survey takers. Strength in the South and Midwest is not surprising given the significant involvement of post-frame contractors, metal roofers, and agricultural-based construction in the survey.

Primary Area Construction

Companies that engaged in roofing, either metal or general, as their primary business represented more than 40% of the respondents. Metal roofers accounted for 13.1% and general roofers for 23.9%. The other roofers (4%) provided services such as gutter installation. Manufacturing companies represented 14.5% of survey takers. It is possible that some companies identifying metal roofing or metal building as their primary business are manufacturers, so there may be more manufacturers in the survey than that percentage suggests." Respondents who selected "Other" primarily defined themselves as general contractors.

Participation in Other Areas of Construction

Companies in the construction industry seldom specialize in just one building type. General roofers also do metal roofing, for example. So we asked respondents to list other building types they did beside their primary building type. Again, the roofing categories had the highest response rate but this time, metal roofing (37.8%) surpassed general roofing (37.8%). And other categories that had low responses in the primary building type had much larger responses in this area. For this reason, when we looked into the performance of these companies, checking such things as gross sales or profitability, we identified companies who participated in these categories, not just those who listed them as their primary building type.

Primary Market Segment

Few of our respondents work in the industrial sector (7.2%) and most work in single-family residential (40.3%). When combined with multifamily (20%), the residential sector provided the largest complement of survey takers.

Other Market Segments

As with the primary building type and other building types, we wanted to identify companies who worked within market segments, not just those who specialized in them. It's common for multifamily companies also to do commercial work or single-family residential work. The residential market produced the largest number of survey takers. More than 50% of respondents say they work in single-family residential. When combined with the 36% who do multifamily, the residential market segment has a participation rate of more than 86%.

2023 Gross Sales

Nearly 40% of respondents had gross annual sales of less than $2 million in 2023. A few (8.8%) report sales over $50 million. There are manufacturers who participated in the survey and it's likely they represent a significant number of those along with material suppliers. Contractors and designers seldom have firms that large.

Percentage of New Construction vs. Remodel

There is a tendency in the construction industry to think companies engage in either new construction or remodeling. The two segments present significantly different challenges and have different motivators and economics. However, in our survey of this niche, we found the largest segment of respondents (31.5%) did work between 40% and 60% new construction. At either end of the spectrum, those doing almost all or all new construction represented just 11.9% of the respondents, while those doing almost all or all remodeling work ticked in at 19%.

Roles in Construction

About half of the respondents to the survey identified as builders or contractors. Nearly 20% were designers and the remaining 30% were split roughly evenly between manufacturers (15.1%) and material dealers, distributors or suppliers (16.4%).

Purchasing Design Involvement

The final profile we asked of survey respondents was their involvement in the purchasing decisions. For smaller firms of less than $2 million this is almost always the owner, but for larger firms there is often a purchasing manager. About two-thirds of the respondents were either the sole decision maker (36.3%) or were involved in purchasing decisions (32.5%). Only about 15.3% of respondents report no involvement in product purchasing. Given the low involvement of designers in purchasing decisions (they specify but don't purchase) this number is not surprising.

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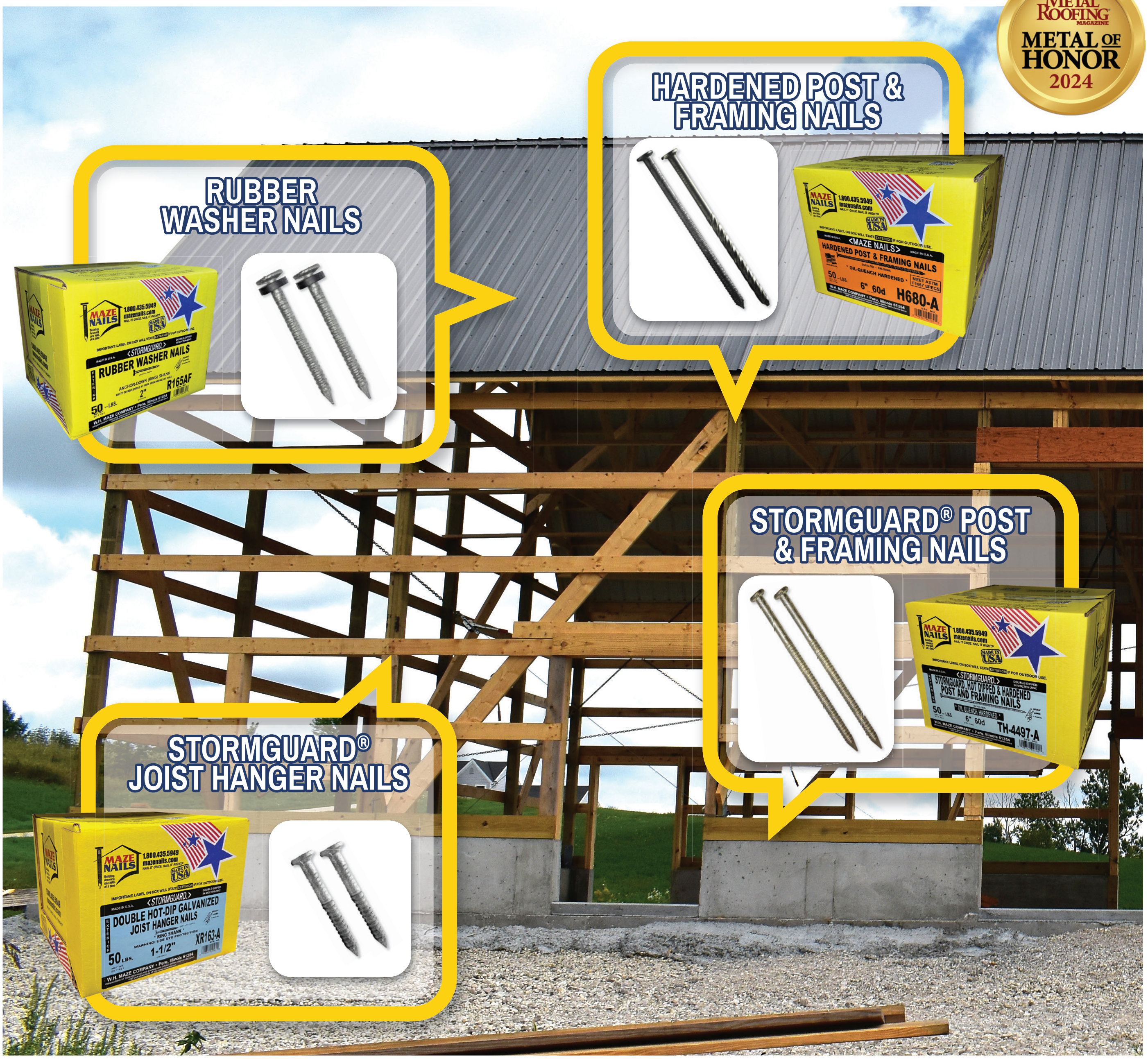

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SECTION 2

GENERAL CONSTRUCTION INDUSTRY DATA

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SECTION 2

GENERAL CONSTRUCTION INDUSTRY DATA

Over the last few years, the construction industry has been a leading economic driver of the overall U.S. economy. Housing construction has been soaring, recuperating from the devastation of the housing recession in 2009 to 2011. Commercial construction, too, has been a force of economic improvement, providing millions of jobs and offering workers a way up to the middle-class.

There have been winners and losers, of course. Online shopping, for example, has hurt the retail industry but has been a shot in the arm to the warehouse market. Federal government infrastructure investments as well as improved state and municipal budgets that were gutted by the COVID-19 pandemic have helped lift the public construction sector.

The following tables provide an overall view of the construction industry as well as some predictions for 2024.

Characteristics of General Construction

Total construction spending from 2022 through 2023 was buffeted by a variety of economic factors. Initially, as the global economy began to recover from the impacts of the COVID-19 pandemic, there was a surge in construction spending as governments and businesses invested in infrastructure projects and real estate development. This period saw a heightened demand for residential housing, spurred by low interest rates and changing housing preferences due to remote work trends. T1

As the supply chain disruptions intensified and inflationary pressures mounted, construction costs soared, leading to project delays and cancellations. Additionally, labor shortages in the construction industry further constrained output and drove up wages, adding to the cost escalation.

Overall, while the construction sector demonstrated resilience and adaptability during this period, navigating through unprecedented challenges, the volatile economic landscape underscored the importance of agility and strategic planning for construction firms to sustain growth and profitability amidst uncertainty.

When asked what in the last year had surprised him, Jim Bush, vice president of sales and marketing, ATAS International, Allentown, Pa., pointed to this issue specifically. "The

Table T1 – ANNUAL RATE OF TOTAL CONSTRUCTION SPENDING

YEAR	MONTHLY SPENDING (In Millions of Dollars)					
	JAN	FEB	MAR	APR	MAY	JUN
2022	$1,796,460	$1,823,728	$1,849,637	$1,882,753	$1,880,896	$1,873,184
	JUL	AUG	SEP	OCT	NOV	DEC
2022	$1,869,262	$1,847,285	$1,836930	$1,830,477	$1,842,206	$1,840,896
	JAN	FEB	MAR	APR	MAY	JUN
2023	$1,882,199	$1,889,562	$1,901,401	$1,907,837	$1,946,733	$1,956,226
	JUL	AUG	SEP	OCT	NOV	DEC
2023	$1,969,005	$2,010,143	$2,017,510	$2,058,903	$2,082,923	$2,105,791

Source: U.S. Census Bureau

Table T2 – ANNUAL RATE OF PRIVATE CONSTRUCTION SPENDING

YEAR	MONTHLY SPENDING (In Millions of Dollars)					
2022	JAN	FEB	MAR	APR	MAY	JUN
	$1,434,593	$1,457,624	$1,480,891	$1,510,860	$1,513,742	$1,502,210
	JUL	AUG	SEP	OCT	NOV	DEC
	$1,488,871	$1,469,063	$1,455,529	$1,445,835	$1,450,489	$1,448,326
2023	JAN	FEB	MAR	APR	MAY	JUN
	$1,483,271	$1,483,539	$1,491,518	$1,490,594	$1,523,977	$1,526,503
	JUL	AUG	SEP	OCT	NOV	DEC
	$1,534,185	$1,568,166	$1,565,336	$1,591,086	$1,608,894	$1,622,263

Source: U.S. Census Bureau

resilience of the construction economy continues to be somewhat of a surprise," he said. "Overall things seemed stable in the past year versus the turmoil that occurred in the preceding few years."

Looking to 2024, the Dodge Data and Analytics forecast expects total construction to increase 7% to $1.2 trillion after growth slowed to just 1% in 2023, which is actually a decline of 2% when adjusted for inflation. Single-family residential construction will increase 9% and multifamily 14%, according to the forecast. Commercial construction is expected to actually decline 2%, while manufacturing goes up 16%.

The private construction sector grew during 2022 and 2023. Low interest rates fueled the early growth as well as pent-up demand, and government stimulus measures. The housing market was a significant driver, with robust activity in both residential and non-residential sectors. The supply chain disruptions and labor shortages probably hindered the pace of growth. Overall, the period showcased the adaptability of the construction sector amidst fluctuating market conditions, underlining its essential role in economic recovery and development. T2

Associated General Contractors (AGC) anticipates declines in three sectors of the private construction industry in 2024. Lodging down 3%, retail down 15%, and private office down 24%. None of those are surprising considering the lingering impacts of the COVID-19 pandemic and the continued shift to online retail.

Big increases in the private sector, according to AGC, will come from hospitals (up 23%), other healthcare (up 22%), data centers (up 20%), manufacturing (up 15%), and warehouses (up 10%).

The national assessment is supported by reports from individual markets. Todd Carlson, president of A.J. Manufacturing Inc., Bloomer, Wis., says, "In Western Wis., we see demand for affordable housing booming along with related construction of infrastructure and construction related to general services such as restaurants, hospitality, retail,

Table T3 – ANNUAL RATE OF PUBLIC CONSTRUCTION SPENDING

YEAR	MONTHLY SPENDING (In Millions of Dollars)					
2022	JAN	FEB	MAR	APR	MAY	JUN
	$361,867	$366,104	$368,746	$371,893	$367,154	$370,975
	JUL	AUG	SEP	OCT	NOV	DEC
	$380,391	$ 378,222	$381,400	$384,642	$391,718	$392,570
2023	JAN	FEB	MAR	APR	MAY	JUN
	$398,928	$406,023	$409,882	$417,243	$422,756	$429,723
	JUL	AUG	SEP	OCT	NOV	DEC
	$434,820	$441,978	$452,174	$467,817	$474,028	$483,528

Source: U.S. Census Bureau

and medical facilities. We serve industrial and commercial markets as well as all aspects of the post-frame market and expect strength and growth certainly in revenue for our customers, despite some building fewer buildings or units. T2

There was a lot of talk about shovel ready projects during the pandemic, but the U.S. had not been investing in infrastructure over the last several years at a rate to replace its deterioration so there was little that was shovel ready. Some of that has been addressed with the Infrastructure Investment Act, signed into law in November 2021. The act authorized $1.2 trillion dollars in infrastructure spending, of which $550 billion was new spending beyond what Congress had already planned to authorize.

AGC reports large increases in public construction, largely as a result of increased investment in infrastructure. Water/sewer, bridge and highway, transportation, and power sectors will see significant increases. For this audience, three sectors stand out: K-12 schools (up 18%), public building (up 15%), and higher education (up 15%), although higher education can include both public and private construction. T3

As interest rates have risen, the housing market has cooled after being red hot in 2020—2021. The year 2022 ended with 1.55 million starts, which was 3% lower than 2021. Single-family starts ended 2022 at 1.01 million, down 10.6%, which was not enough to offset the 15.1% increase in multifamily starts to more than 500,000. T4

The following year, 2023, the drop continued as housing starts declined to 1.42 million or 8.6% lower compared to 2022. Single-family starts declined 6% in 2023 compared to 2022, ending at 945,000 units. Multifamily finished 2023 with 469,000 units, well below the 548,000 started in 2022.

The National Association of Home Builders (NAHB) forecasts total housing starts for 2024 to clock at 1.37 million. That includes a 4.7% increase in single-family units to 988,000. The multifamily front is not as robust, though, starts are expected to fall 19.7% in 2024 to 379,000.

Table T4 – SEASONALLY ADJUSTED RATE OF HOUSING

	2022 MONTHLY HOUSING STARTS (In Thousands of Dollars)											
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Single-family	1,157	1,211	1,179	1,176	1,067	1,010	898	919	887	858	804	887
Multifamily	502	528	519	614	447	543	458	566	559	560	609	461
Total	1,669	1,771	1,713	1,803	1.543	1,561	1,371	1,505	1,463	1,432	1,427	1,357

	2023 MONTHLY HOUSING STARTS											
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Single-family	823	835	843	847	1,012	930	988	948	966	974	1,126	1,064
Multifamily	506	588	515	489	563	473	454	350	376	384	388	417
Total	1,340	1,436	1,380	1,348	1,583	1,418	1,451	1,305	1,356	1,376	1,525	1,460

Source: U.S. Census Bureau

Much of that activity is predicated on an NAHB prediction that mortgage rates will decline to below 6.5% by the end of 2025. "We expect rates to be in the high 5% range," said NAHB Chief Economist Robert Dietz. "This is good news for builders, housing demand, and housing affordability."

He also points out the country needs more than 1.15 million single-family homes a year to reduce its housing deficit. Demand is greater than supply.

NAHB produces the NAHB/Westlake Royal Remodeling Index, which is based on a quarterly survey of remodelers. They are asked to rate the remodeling market on five aspects. A rating above 50 is good, below is poor. T5

Table T5 – NAHB/WESTLAKE ROYAL REMODELING MARKET INDEX (RMI)

National Index, Components & Subcomponents – Seasonally Adjusted

	NAHB/WESTLAKE ROYAL RMI			
QUARTER	Q1	Q2	Q3	Q4
2020	47	73	81	82
2021	83	86	87	87
2022	83	77	77	69
2023	70	68	65	67

Source: NAHB Economics Group: Remodeling Market Index quarterly survey of remodelers

The index through 2020 and 2021 was exceptionally high, which reflected the hot market created by low interest rates and people suddenly having to spend more time in their houses. Rising interest rates have cooled activity since, but the index remains high.

NAHB expects residential remodeling activity to remain relatively flat in 2024 followed by a 2% gain for 2025 as the existing home sales market improves.

If there has been a story driving the construction industry for the last several years, it is the persistent shortage of

Table T6 – 2022-2023 CONSTRUCTION EMPLOYMENT: by Marketing Segment

	2022 EMPLOYMENT (In Thousands)											
MARKET SEGMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Construction	7,590	7,669	7,692	7,698	7736	7,749	7,773	7,781	7,797	7,814	7,833	7,859
Residential Building	902	911	914	918	925	921	924	925	925	930	934	936
Nonresidential Building	816	822	826	828	826	828	829	828	830	834	844	852
Heavy & Civil Engineering Construction	1,043	1,062	1,066	1,068	1,073	1,077	1,079	1,075	1,074	1,074	1,078	1,082
Residential Specialty Trade Contractors	2,248	2,274	2,286	2,287	2,297	2,298	2,305	2,309	2,317	2,323	2,322	2,325
Nonresidential Specialty Trade Contractors	2,581	2,601	2,601	2,598	2,613	2,624	2,638	2,644	2,652	2,653	2,659	2,667

	2023 EMPLOYMENT (In Thousands)											
MARKET SEGMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Construction	7,885	7,899	7,890	7,901	7,926	7,955	7,967	7,997	8,006	8,031	8,033	8,120
Residential Building	936	932	932	928	928	930	923	926	931	935	934	938
Nonresidential Building	861	862	859	857	863	867	874	877	877	883	882	905
Heavy & Civil Engineering Construction	1,088	1,097	1,104	1,096	1,105	1,116	1,120	1,127	1,130	1,132	1,135	1,125
Residential Specialty Trade Contractors	2,316	2,323	2,315	2,330	2,336	2,348	2,355	2,356	2,359	2,368	2,370	2,394
Nonresidential Specialty Trade Contractors	2,685	2,685	2,681	2,690	2,694	2,696	2,696	2,712	2,708	2,713	2,712	2,774

Source: U.S. Bureau of Labor Statistics

Table T7 – GROSS SALES GROWTH: 2023 YOY vs. 2022 & Projection of 2024 YOY vs. 2023

	SALES GROWTH				
YEARS	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 YOY to 2022	16.3%	33.2%	34.2%	11.9%	4.4%
2024 YOY to 2023	16.0%	31.7%	36.5%	14.0%	1.7%

Source: CSI Certified, Shield Wall Media

Table T8 – PROFITABILITY GROWTH: 2023 YOY vs. 2022 & Projection of 2024 YOY vs. 2023

	PROFITABILITY GROWTH				
YEARS	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 YOY to 2022	15.0%	31.0%	38.8%	10.9%	4.4%
2024 YOY to 2023	18.0%	28.9%	36.7%	12.9%	3.4%

Source: CSI Certified, Shield Wall Media

skilled labor. When you look at the boom in the growth of construction employment from 2022 to 2023, it's hard to believe there could have been even more employment if companies had been able to fill open spots. Since the beginning of 2022, the number of jobs in the construction industry has increased from 7.6 million to 8.1 million. [T6]

Over 5 million of all construction jobs are with specialty trade contractors and just under half of those fall in the residential market. The other three segments, residential building, nonresidential building, and heavy and civil engineering construction account for about 3 million of the total jobs.

Wayne Troyer, Acu-Form, Millersburg, Ohio, speaks to the flexibility of the construction workforce today. "In our area, in a lot of construction," he says, "crews work in at least three of these: residential, agriculture, commercial, or industrial."

Among the challenges companies in the industry face is filling these position, and that is borne out in the CSI survey where finding and retaining employees rank as the second and third most difficult challenges in 2024 after managing the rising cost of materials. (See below.)

CSI Survey Attitudes

The markets served by *Metal Roofing, Rural Builder, Frame Building News, Rollforming, and Garage, Shed, Carport Builder* among the other publications and industry shows from Shield Wall Media serve a unique niche across the construction industry. Getting information about the performance of these markets and their audiences is essential to serving them.

Shield Wall Media surveyed their audience in November and December 2023. About 300 respondents across the industry completed the form. The following tables look at how these unique market segments have performed since 2022 and look forward to the next year. T7

For all intents and purposes, the expected gross sales growth of companies for 2024 is roughly the same as they reported the previous year. The number of companies who saw increases in sales in 2023 (49.5%) is roughly the same as those who say they will see increases in sales in 2024 (48.7%).

There is more difference in those who expect to see a significant decline in gross sales in 2024 compared to what was experienced in 2023. Only 4.4% of companies experienced a greater than 25% reduction in sales 2023, but an even smaller number (1.7%) anticipate a similar decline.

That matches the reports and predictions of the overall construction economy, which did see a slight decline of 1% in 2023 according to Dodge Data and Analytics. But Dodge anticipates a rebound this year with a 7% jump.

Maintaining profitability while experiencing significant in-

Table T9 – 2023 GROSS SALES: Compared to 2022 by Role in Construction

	2023 GROSS SALES				
CONSTRUCTION ROLE	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Designer	26.3%	33.3%	29.8%	10.5%	0.0%
Builder or Contractor	14.0%	34.3%	33.6%	14.0%	4.2%
Manufacturer	11.6%	32.6%	44.2%	7.0%	4.7%
Material Dealer, Distributor or Supplier	16.7%	29.2%	31.3%	12.5%	10.4%

Source: CSI Certified, Shield Wall Media

Table T10 – 2024 PREDICTED GROSS SALES: Compared to 2023 by Role in Construction

	PREDICTED GROSS SALES				
CONSTRUCTION ROLE	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Designer	26.8%	28.6%	33.9%	10.7%	0.0%
Builder or Contractor	14.0%	31.5%	36.4%	16.8%	1.4%
Manufacturer	4.8%	42.9%	45.2%	4.8%	2.4%
Material Dealer, Distributor or Supplier	18.8%	25.0%	33.3%	18.8%	4.2%

Source: CSI Certified, Shield Wall Media

Table T11 – 2024 EXPECTED CONSTRUCTION INDUSTRY GROWTH: by Market Segment

	INDUSTRY GROWTH		
MARKET SEGMENT	Increase	Same	Decrease
Residential	37.8%	46.0%	16.2%
Agricultural	32.9%	53.9%	13.2%
Commercial	38.9%	44.3%	16.9%
Industrial	38.5%	47.3%	14.2%

Source: CSI Certified, Shield Wall Media

creases or declines in sales can be a struggle for any business. Across the industry, according to our survey, companies were substantially able to hold the line in 2023. Just over 16% of companies report declines in sales in 2023, but only about 15% report a decline in profitability. In fact, 38.8% of respondents say their companies maintained profitability in 2023. [T8]

Looking forward, as with most surveys on the construction industry, respondents are both optimistic and pessimistic. Fewer expect profits to remain the same in 2024 (36.7%), but that is almost identical to the percentage of survey takers who think gross sales will remain the same (36.5%).

Still, when you look at significant increases in profitability, 18% of respondents expect to see more than 25% increase in profits in 2024 compared to the 15% who reported a similar increase in 2023.

More designers report significant sales growth in 2023 compared to 2022 than any other participant in the construction process. More than 26% of designers said their sales increased more than 25% in 2023. The next closest cohort is distributors where only 16.7% say they saw significant sales growth. [T9]

When you add the significant sales growth to some sales growth (less than 25%) designers again far outstripped the others with 59.6% reporting an increase. Manufacturers are far more likely to report sales in 2023 (44.2%) that were approximately the same as those in 2022. Interestingly, manufacturers were less likely to report a decline in sales, with only 11.7% doing so. Although no designers report declines greater than 25%.

Distributors and contractors fall mostly in lockstep with roughly the same reporting increases and declines with the exception that contractors (4.2%) are less likely to report a significant decrease in sales than distributors (10.4%) .

It is often said sales growth in the design part of the construction industry is a leading indicator for the industry since those building contracts land on designers' desks first. Designers again lead the optimism parade in their expectations for 2024 with 26.8% expecting significant sales growth and another 28.5% (for a total of 55.3%) saying sales will grow. While manufacturer respondents don't think their sales will grow significantly in 2024, they do think sales will grow with about the same percentage reporting growth in 2024 as they had in 2023. [T10]

Distributors (23%) and contractors (18.2%) are most likely to anticipate gross sales declines in 2024 but no one expected significant declines to be as likely as occurred in 2023.

The following charts look at the overall expected growth in different market segments, then dig into the expected growth in specific regions by each market segment. [T11]

Overall, our respondents generally agree on the growth of the residential, commercial, and industrial market segments. Just around 38% of them see those segments increasing in 2024. However, only 32.9% expect the agricultural market to increase.

While that sounds less than optimistic, when you identify which segments our survey takers expect to decline, the agricultural market is the strongest with only 13.2% anticipating a cooling of the segment. Overwhelmingly, survey takers think the agricultural market will remain the same in 2024 with 53.9% selecting that option.

About the same number of respondents feel the residential and commercial market segments will see a de-

Table T12 – 2024 AGRICULTURAL MARKET GROWTH: by Region

	GROWTH		
REGION	Increase	Same	Decrease
East	47.0%	45.5%	7.6%
South	25.0%	60.9%	14.1%
Midwest	29.3%	56.0%	14.7%
West	35.1%	54.1%	10.8%
National	13.3%	60.0%	26.7%

Source: CSI Certified, Shield Wall Media

Table T13 – 2024 COMMERCIAL MARKET GROWTH: by Region

	GROWTH		
REGION	Increase	Same	Decrease
East	43.9%	47.0%	9.1%
South	35.5%	47.3%	17.2%
Midwest	29.3%	48.0%	22.7%
West	56.8%	29.7%	13.5%
National	26.7%	33.3%	40.0%

Source: CSI Certified, Shield Wall Media

Table T14 – 2024 INDUSTRIAL MARKET GROWTH: compared by Region

	INDUSTRIAL MARKET GROWTH		
REGION	Increase	Same	Decrease
East	45.5%	48.5%	6.1%
South	36.6%	52.7%	10.8%
Midwest	30.7%	45.3%	24.0%
West	37.8%	46.0%	16.2%
National	33.3%	40.0%	26.7%

Source: CSI Certified, Shield Wall Media

Table T15 – EXPANSION PLANS

PLANS	Immediate plans to expand in 2024	Future plans to expand (in 2025 or later)	No expansion plans
PERCENTAGE CHANGING	28.8%	29.5%	41.7%

Source: CSI Certified, Shield Wall Media

cline this year (16.2% and 16.9% respectively). And slightly fewer are more optimistic about the industrial market, where 14.2% anticipate a slowdown.

Companies in the East are much more optimistic about the growth of the agricultural market segment than other regions or the national companies. 47% of our respondents from the East anticipate an increase in the agricultural construction segment. Only 13.3% of national companies or companies with locations in more than one region think this segment will grow. T12

The majority of respondents think it will stay the same. On average about 55.3% of surveyed companies expect it to remain the same with only 45.5% of those in the East suggesting this market segment will remain constant.

More than a quarter (26.7%) of national companies see a decline coming in 2024 while the East once again shows its optimism with a mere 7.6% of respondents thinking the agricultural segment will slow this year. Looking at the commercial market segment, the responses from the different regions again vary widely. The only region where more than half of the survey takers think this segment will increase are from the West (56.8%). Approximately the same number of respondents in the East, Midwest, and South think the segment will remain the same. T13

Survey takers representing national companies (40%) are again pessimistic about the prospects for growth in the commercial segment in 2024, while those in the East are the least pessimistic with only 9.1% anticipating a decline.

The survey takers from the East again show their optimism with only 6.1% anticipating a slowdown in the industrial market segment. On average, 36.8% of respondents think this market will grow in 2024, but 45.5% of those from East see the possibility of growth. Of those in the Midwest though, only 30.7% believe industrial construction will grow. T14

Midwestern respondents (24%) along with those representing national companies (26.7%) are most likely to see a decline in this market segment.

One of the great ways to determine how optimistic people really are about the future is to ask if they have expansion plans. Nearly 30% of respondents expect to expand in 2024. Considering that only 47.7% of all respondents are anticipating sales growth in 2024, that is a remarkable number and shows a very high confidence in the growth of the industry and their businesses. T15

Looking beyond the immediate future, another 29.5% of respondents have plans to expand and only 41.7% don't have plans. That doesn't mean those companies won't expand; they just don't have immediate plans.

Expansion requires a significant amount of planning as well as investment of capital. But companies can show positivity about the future in other ways, including how they will add resources to their companies. When asked "Which of the following (if any) do you plan to add or increase in 2024," respondents selected from a variety of options. T16

Adding support employees (34.9%) is the most likely area

Table T17 – CHALLENGES IN 2024

	BUSINESS TYPE				
CHALLENGES	Designer	Builder or Contractor	Material Dealer, Distributor or Supplier	Manufacturer	Average
Material Costs	38.6%	48.3%	41.7%	34.9%	40.9%
Finding Employees	49.1%	35.0%	33.3%	44.2%	40.5%
Retaining Employees	38.6%	35.7%	45.8%	37.2%	39.3%
Inflation	26.3%	32.9%	35.4%	44.2%	34.7%
Rising Employee Related Expenses	31.6%	30.8%	33.3%	23.3%	29.7%
Interest Rates	21.1%	24.5%	25.0%	41.9%	28.1%
Material Availability	26.3%	24.5%	22.9%	16.3%	22.5%
Energy and Transportation Costs	14.0%	21.0%	16.7%	25.6%	19.3%

Source: CSI Certified, Shield Wall Media

Table T16 – PLANS TO ADD PLANS TO ADD RESOURCES IN 2024

RESOURCES	PERCENTAGE CHANGE
Employees (Support)	34.9%
New Products or Building Types	31.9%
Employees (Construction)	31.5%
Jobsite Equipment	22.0%
Manufacturing Equipment	14.2%
Trucks	13.2%
Real Estate of Facilities	12.9%
Metal Forming Equipment	12.5
Material Handling Equipment	9.8%
Other	2.4%

Source: CSI Certified, Shield Wall Media

chosen to increase the size of a company, but when you add construction employees to the list (31.5%) it becomes clear that survey takers are aggressively looking for workers to handle an increase in business.

New business may come through diving into a new building type to offer or new products. The likelihood of adding those products to the mix for our respondents was 31.9%.

On the non-human resources side of the capital equation, respondents also expect to add jobsite equipment (22%), manufacturing equipment (14.2%), trucks (13.2%), real estate or facilities (12.9%), metal forming equipment (12.5%) and material handling equipment (9.8%).

For years, one of the biggest challenges the construction industry faced was securing enough skilled labor, and then came the COVID-19 pandemic. That changed everything. The skilled labor shortage didn't disappear, but new challenges arose. Supply chain issues caused material shortages and increased lead times. T17

Today, though, according to our survey respondents, the biggest issues facing designers, contractors, distributors, and manufacturers are related to the recovery from the pandemic. On average, 40.9% of our survey takers said controlling cost of materials is the biggest challenge they face. For contractors, that is the leading issue; almost half identified it as the biggest challenge.

Add in inflation (34.7% average), rising employee-related expenses (29.7% average), interest rates (28.1% average),

Table T18 – NEW PRODUCTS OR TECHNOLOGY IMPACT

	MARKET SEGMENT				
PRODUCTS & TECHNOLOGY	Designer	Builder or Contractor	Material Dealer, Distributor or Supplier	Manufacturer	Average
Design and Engineering Software	45.6%	32.9%	29.2%	25.6%	33.3%
Manufacturing Automation	33.3%	27.3%	29.2%	41.9%	32.9%
Artificial Intelligence	45.6%	25.9%	16.7%	20.9%	27.3%
Manufacturing Software	21.1%	20.3%	20.8%	23.3%	21.4%
Business Management Software	12.3%	17.5%	16.7%	4.7%	12.8%
Drone or Other Imagery	12.3%	14.7%	10.4%	11.6%	12.3%

Source: CSI Certified, Shield Wall Media

and cost of energy and transportation (19.3% average) and you see that of the eight biggest challenges facing our survey takers, five of them are related to rising costs.

But it's different for different players in the industry. Designers are much more likely to identify finding employees (49.1%) as their biggest challenge than distributors (33.3%). Distributors see retaining employees (45.8%) as the biggest challenge.

After designers, manufacturers experience the most difficulty finding employees (44.2%) but they don't rate that much more of a challenge than either inflation (44.2%) or interest rates (41.9%).

While identifying the average is helpful in ranking overall attitudes about challenges, there are significant differences among the companies in the building product supply chain. Understanding those specific challenges will make it easier for companies wanting to engage designers, contractors, distributors, or manufacturers.

On average, our respondents say design and engineering software will have the greatest impact on their business with a third identifying it as most important. However, the heavy selection of that by designers (45.6%) weights it higher than others. The same is true with artificial intelligence (AI) which 45.6% of designers identify as having a heavy impact on their businesses, but no other cohort – contractor, distributor, or manufacturer – rates it higher than 26%.[T18]

Understandably, manufacturers (41.9%) think manufacturing automation will have the biggest impact on their businesses, but surprisingly high percentages of the other cohorts in the survey also understand innovation in this area will significantly impact their businesses.

(AI is the topic of the day ever since ChatGPT launched in November 2022. It is already being used in design software, so the high ranking (45.6%) for that new technology is not surprising from designers. Only 16.7% of distributors see AI as having an impact.

Both manufacturing software and drone imagery technology ranked relatively evenly among all the participants in the construction process. The only other significant outlier is the low rating of business management and sales software among manufacturers. A mere 4.7% see that technology as having an impact. That would likely be because those companies have already invested heavily in that technology.

SECTION 3

THE RURAL BUILDER: AGRICULTURAL, RESIDENTIAL, AND LIGHT COMMERCIAL CONSTRUCTION DATA

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SECTION 3

THE RURAL BUILDER: AGRICULTURAL, RESIDENTIAL, AND LIGHT COMMERCIAL CONSTRUCTION DATA

Companies that work in rural areas need to learn how to be flexible. Large metropolitan areas give companies the opportunity, especially contractors, to focus on very narrow niches. But there just isn't enough of a specific kind of work in rural areas to grow a company, provide career paths for employees, and generate the revenue and profit that small businesses can contribute to the well-being of a community.

The Shield Wall Media CSI survey looked at companies serving the rural builder market by focusing on companies engaged in single-family, multifamily, commercial, and agricultural construction. As is shown later, there is considerable crossover among these market segments within one company.

In many markets, it's not unusual to find a commercial contracting company also doing multifamily work, but it is unusual to find a company that fits in all four of these segments. Unless it's a rural builder.

Characteristics of Rural Builders

Companies engaged in agricultural construction are far more likely than other construction companies to build post-frame buildings or use metal roofing. That's according to the survey of nearly 300 designers, contractors, distributors, and manufacturers. In agricultural construction, the table shows half of them use metal roofing compared to only 30.8% who are engaged in single-family residential work. The table also shows that a high proportion of companies engaged in commercial construction use metal roofing (44.4%). T1 & T2

Interestingly, agricultural companies are less likely to do general roofing work (22.5%) than other companies serving these construction markets. Multifamily companies are most likely; 46.6% of them say they do general roofing work.

When looking at cold-formed metal buildings, the rate of involvement by role in the construction is remarkably consistent. Across all cohorts, between 15% and 19% do this building type. For pre-engineered metal buildings, commercial contractors are most likely to specify and construct this building type (31.5%) than any other, while single-family contractors (12%) are least likely.

Two other building types show significant variations depending on the type of company doing them. Companies in the single-family residential arena are most likely to construct wood-framed buildings (33.3%) while no other cohort raised to the 25% likelihood of usage rate. This isn't surprising given that the residential construction market has never made a transition from wood framing to light-gauge steel framing at a significant degree.

The final building type with variation is sheds and carports. (See Section 7 for more information on this building type.) Multifamily companies are least likely to sell and install sheds and carports (8.6%), and both agricultural (17.5%) and single-family (16.2%) companies are most likely.

The flexibility rural builders need to develop is shown in how companies who are engaged in specific market segments also cross over to execute in other market segments. About a third of single-family residential builders also do multifamily projects, 27% do agricultural work, 30.4% do commercial construction, and 18.9% work in the industrial market segment. T2

Companies engaged in commercial construction are the most likely to work in the other market segments. In every segment, the commercial companies participate at the highest level of all types of companies.

The most common type of additional segment agricultural builder contractors move to is single-family residential. About half of the companies engaged in agricultural

(48.8%), multifamily (46.7%), and commercial (51.1%) also work in single-family residential. This may include new home construction and residential remodeling. The only similar level of crossover is 53.4% of commercial contractors also do multifamily, but those two market segments are very tightly entwined and demand similar design and construction expertise.

Companies doing single-family construction are least likely to do industrial construction. Again, there are such wide disparities in requirements – from codes, product familiarity, to construction techniques – that it takes a remarkably large or flexible company to handle both kinds

Table T1 – BUILDING TYPE: by Role in Construction

	MARKET SEGMENT				
RESOURCES	Single-Family Residential	Multifamily	Agricultural	Commercial	Average
General Roofing	39.3%	46.6%	22.5%	27.8%	34.0%
Metal Roofing	30.8%	36.2%	50.0%	44.4%	40.4%
Other Roofing	20.5%	39.7%	25.0%	18.5%	25.9%
Post-Frame	23.9%	20.7%	35.0%	24.1%	25.9%
Metal Building (cold-formed)	15.4%	17.2%	17.5%	18.5%	17.2%
Metal Building (pre-engineered)	12.0%	19.0%	17.5%	31.5%	20.0%
Roll forming or metal forming	12.8%	5.2%	20.0%	20.4%	14.6%
Wood framed (stick built)	33.3%	17.2%	20.0%	22.2%	23.2%
Temp or Modular Building	6.8%	12.1%	5.0%	3.7%	6.9%
Shed and Carports	16.2%	8.6%	17.5%	13.0%	13.8%
Other Buildings	8.6%	8.6%	10.0%	13.0%	10.0%
Subcontractor	18.0%	13.8%	5.0%	16.7%	13.4%
Manufacturing	14.5%	13.8%	12.5%	18.5%	14.8%

Source: CSI Certified, Shield Wall Media

of work.

Agricultural work is often viewed as a kind of specialty niche, making it more difficult for companies to cross over to that market segment. Only 27% of single-family companies. 27.6% of multifamily, and 38.6% of commercial companies pick up agricultural work. The building types, the customer base, and the product knowledge are nearly as specific as the industrial sector. However, for rural builders, agricultural work is a mainstay of their business.

In May 2022, the American Architectural Institute's (AIA) Billing Index reported reconstruction projects exceeded new construction. Typically, 30% of billings are recon-

Table T2 – INDUSTRY ROLE: by Market Segment

	MARKET SEGMENT				
INDUSTRY ROLE	Single-Family Residential	Multifamily	Agricultural	Commercial	Industrial
Agricultural	48.8%	35.4%	100%	41.5%	29.3%
Single-Family Residential	100%	36.2%	27.0%	30.4%	18.9%
Multifamily	46.7%	100%	27.6%	44.8%	29.5%
Commercial	51.1%	53.4%	38.6%	100%	39.8%

Source: CSI Certified, Shield Wall Media

Table T3 – PERCENTAGE OF NEW CONSTRUCTION VS. REMODEL

MARKET SEGMENT	Over 90% New	60-90% New	40-60% New	10-40% New	Less than 10% New
Single-Family Residential	15.5%	25.0%	25.7%	14.2%	19.6%
Multifamily	12.4%	34.3%	30.5%	13.3%	9.5%
Agricultural	14.6%	18.3%	41.5%	14.6%	11.0%
Commercial	12.5%	23.9%	34.1%	19.3%	10.2%
Average	13.8%	25.4%	32.9%	15.4%	12.6%

Source: CSI Certified, Shield Wall Media

Table T4[1] – 2024 PROJECTED CONSTRUCTION GROWTH: by Market Segment

	PROJECTED CONSTRUCTION GROWTH			
MARKET SEGMENT	Increase	Same	Decrease	Unsure
Single-Family Residential	31.8%	40.5%	19.6%	8.1%
Multifamily	45.7%	35.2%	15.2%	3.8%
Agricultural	30.5%	39.0%	22.0%	8.5%
Commercial	35.2%	33.0%	25.0%	6.8%
Average	35.4%	37.7%	19.9%	7.1%

Source: CSI Certified, Shield Wall Media

Table T4[2] – 2024 PROJECTED AGRICULTURAL GROWTH: by Market Segment

	PROJECTED AGRICULTURAL GROWTH		
MARKET SEGMENT	Increase	Same	Decrease
Single-Family Residential	35.1%	51.4%	13.5%
Multifamily	40.0%	50.5%	9.5%
Agricultural	39.0%	51.2%	9.8%
Commercial	34.1%	56.8%	9.1%
Average	37.1%	52.5%	10.5%

Source: CSI Certified, Shield Wall Media

Table T4[3] – 2024 PROJECTED RESIDENTIAL GROWTH: By Market Segment

	PROJECTED RESIDENTIAL GROWTH		
MARKET SEGMENT	Increase	Same	Decrease
Single-Family Residential	39.2%	42.6%	18.2%
Multifamily	47.6%	41.0%	11.4%
Agricultural	35.4%	40.2%	24.4%
Commercial	38.6%	39.8%	21.6%
Average	40.2%	40.9%	18.9%

Source: CSI Certified, Shield Wall Media

Table T5 – 2024 PROJECTED COMMERCIAL GROWTH: by Market Segment

	PROJECTED COMMERCIAL GROWTH		
MARKET SEGMENT	Increase	Same	Decrease
Single-Family Residential	43.2%	41.9%	14.9%
Multifamily	47.6%	40.0%	12.4%
Agricultural	46.3%	29.3%	24.4%
Commercial	40.9%	39.8%	19.3%
Average	44.5%	37.7%	17.7%

Source: CSI Certified, Shield Wall Media

struction, but the trend is changing, and AIA Chief Economist Kermit Baker, Hon. AIA, Ph.D., said at the time, "We are going to move toward an increased share in reconstruction and a decreased share in new construction." T3

On average, companies engaged in single-family and multifamily residential, commercial, and agricultural construction do about half of their work in new and half in reconstruction. 32.9% of these companies do between 40 and 60% of their business in new construction, the rest in remodeling.

About 34% of multifamily companies do between 60 and 90% new construction and when you combine that with those that do more than 90% new construction (12.4%) for a total of 46.7%, it is the segment most likely to do new construction. The least likely to do new construction are companies engaged in the agricultural segment, with only 32.9% saying more than 60% of their work is new construction.

The most likely to do remodeling work are companies engaged in single-family construction, where 33.8% do less than 40% of their work in new construction. The likelihood of a company to do almost all new construction,

Table T6 – 2023 ANNUAL GROSS SALES: by Market Segment

	ANNUAL GROSS SALES					
MARKET SEGMENT	Less than $2 million	$2 million to $5 million	$5 million to $10 million	$10 million to $20 million	$20 million to $50 million	Over $50 million
Single-Family Residential	45.3%	21.6%	10.1%	6.8%	9.5%	6.8%
Multifamily	28.9%	26.0%	15.4%	14.4%	9.6%	5.8%
Agricultural	25.6%	24.4%	22.0%	6.1%	9.8%	12.2%
Commercial	31.0%	16.1%	14.9%	14.9%	13.8%	9.2%

Source: CSI Certified, Shield Wall Media

Table T7 – 2023 GROSS SALES: Compared to 2022 by Market Segment

	GROSS SALES				
MARKET SEGMENT	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-Family Residential	17.6%	34.5%	35.1%	8.1%	4.7%
Multifamily	23.1%	37.5%	28.9%	6.7%	3.9%
Agricultural	13.4%	40.2%	22.0%	19.5%	4.9%
Commercial	14.9%	39.1%	27.6%	13.8%	4.6%
Average	17.3%	37.8%	28.4%	12.0%	4.5%

Source: CSI Certified, Shield Wall Media

more than 90%, is roughly equal across all cohorts with companies engaged in multifamily and commercial construction being the least likely.

Projected Industry Growth

Attitudes toward the prospects for the construction industry can vary by what a person sees from their vantage point. For example, companies engaged in multifamily construction are far more likely to see improvement coming for the construction industry than other cohorts. 45.7% of multiple-family companies think the industry will improve in 2024, but on average, only 35.4% of all cohorts see an improvement coming. Every other group – single-family, agricultural, and commercial – are less positive. [T4-1,2,3 & T5]

Generally, these companies feel the status quo will continue, but 25% of commercial companies and 22% of agricultural companies project a decline.

When you look at this group of tables for specific market segments, a different story begins to emerge, and you can see where companies engaged in residential, agricultural, and commercial work believe the growth will occur.

Almost without exception, these types of companies expect agricultural construction to remain the same in 2024 with more than half saying it will. Just more than a third think it will increase, and none of the cohorts is significantly different from that.

But the residential and commercial construction market garner a much more positive attitude with 40.2% saying residential activity will increase in 2024 and 44.5% projecting commercial activity increases. For residential projections, part of that is driven by the very strong belief among companies engaged in multifamily work (47.6%) that it will go up. This positive attitude toward the prospects for the industry among multifamily companies will arise in other areas of this report as well.

While companies serving these markets are generally bullish about the commercial and residential markets either staying the same or improving, they are not nearly as confident that they won't decline. On average, 18.9% of these companies think the residential market will shrink, and 17.7% project a decline in commercial activity.

Those stand in stark contrast to projections for the agricultural market where only 9.8% of companies doing this kind of work expect the market to decrease.

Table T8 – 2024 PROJECTED SALES GROWTH:
Compared to 2023 by Market Segment

MARKET SEGMENT	PROJECTED SALES GROWTH: Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-Family Residential	16.3%	34.0%	33.3%	14.3%	2.0%
Multifamily	23.1%	35.6%	33.7%	7.7%	0.0%
Agricultural	11.1%	43.2%	18.5%	25.9%	1.2%
Commercial	17.2%	33.3%	33.3%	14.9%	1.2%
Average	16.9%	36.5%	29.7%	15.7%	1.1%

Source: CSI Certified, Shield Wall Media

Company Size and Growth Projections

The rule of thumb in construction is that 80% or more of the firms are small companies. They often have one owner and that person may also work on the jobsite. This is especially true on the residential construction side where small home improvement contractors dominate the number of total contractors.

Looking at the CSI survey of companies doing single-family, multifamily, commercial, or agricultural work, you can plainly see the smallest firms – those with gross sales less than $2 million – are dominated by the single-family residential companies. More than 45% of single-family companies have revenues at the low end of the scale. The other segments are grouped relatively closely. T6

But differences do begin to appear among commercial, agricultural, and multifamily participants. Companies doing agricultural work are far more likely to have revenues in 2023 greater than $50 million. And there seems to be a high complement of agricultural companies with between $5 and $10 million in gross sales with 22% reporting sales from last year in that range. That far exceeds the other cohorts.

For the most part, the companies decrease in size in lockstep with a couple of exceptions. There is noticeable drop in the revenue range $10 to $20 million for single-family and agricultural companies.

In 2023, the vast majority of companies engaged in single-family, multifamily, commercial, and agricultural construction report sales that were the same or higher than in 2022. On average, only 16.5% report a decline, and of those, only 4.5% report a decline greater than 25%. T7

The multifamily cohort reports that 23.1% of them experienced significant sales growth of greater than 25%. That might also help explain why this cohort was the most bullish about the growth of the construction industry over all in 2024. More than 45% of them said 2024 would be a good year for construction.

Companies serving the agricultural market tended to be somewhat pessimistic on the prospects for the construction industry in 2024, but not in excess of the other cohorts. However, they do report a decline in gross sales for 2023, with 19.5% of them saying they were down less than 25% and another 4.9% reporting a drop of greater than 25%.

When asked to project sales for 2024, companies serving the agricultural market again were less optimistic than the other cohorts. More than a quarter of them expected declines of less than 25%. However, that is somewhat offset by the expectation that gross sales will increase among this cohort with 43.2% saying they will rise less than 25% and 11.1% projecting a significant increase of greater than 25%. T8

Of all the cohorts, multifamily companies are, again, the most optimistic about 2024. More than 58% say gross sales will increase this year, with 23.1% predicting a significant increase of greater than 25%. Only 7.7% of companies engaged in multifamily work expect to see declines.

To put this in another context, Dodge Data and Analytics projects a 7% increase in the construction industry for 2024 after only a 1% increase in 2023. That includes the entire industry – infrastructure, sewer and water, transportation, etc. – and this smaller sampling of the industry may have a very different response to market conditions than the entire industry. This group does not get a lot of Federal infrastructure money flowing into its projects.

In 2023, 21% of companies engaged in single-family residential construction reported having a job size of less than $5,000. There isn't much that can be done these days for

Table T9 – AVERAGE 2023 JOB SIZE

MARKET SEGMENT	Less than $5,000	$5,000 to $10,000	$10,000 to $25,000	$25,000 to $100,000	$100,000 to $500,000	$500,000 to $1 million	Over $1 million
Single-Family Residential	21.0%	15.5%	16.2%	25.7%	16.2%	3.4%	2.0%
Multifamily	10.6%	16.4%	17.3%	29.8%	19.2%	5.8%	1.0%
Agricultural	7.3%	17.1%	24.4%	29.3%	13.4%	3.7%	4.9%
Commercial	6.9%	13.8%	11.5%	34.5%	17.2%	11.5%	4.6%
Average	11.4%	15.7%	17.4%	29.8%	16.5%	6.1%	3.1%

Source: CSI Certified, Shield Wall Media

Table T10 – PROJECTED 2024 AVERAGE JOB SIZE

MARKET SEGMENT	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-Family Residential	18.9%	26.4%	46.0%	5.4%	3.4%
Multifamily	21.9%	36.2%	29.5%	10.5%	1.9%
Agricultural	13.4%	29.3%	41.5%	11.0%	4.9%
Commercial	20.5%	29.6%	39.8%	6.8%	3.4%
Average	18.7%	30.3%	39.2%	8.4%	3.4%

Source: CSI Certified, Shield Wall Media

that low price other than things like a new water heater installation, front door remodel, or a repair project. But those are exactly the kinds of jobs that companies working in this segment might have. (And they can be quite profitable if managed correctly.) T9

The highest percentage of jobs done by companies engaged in single-family, multifamily, commercial and agricultural construction fall in the $25,000 to $100,000 range, but even that doesn't represent a plurality of the work. On average, only 29.8% of companies do that work, with 34.5% of commercial companies reporting job sizes in this range.

With a couple of exceptions, the average job size for these companies fits a traditional bell curve. Most of the jobs fall in the middle with declining participation as the jobs get either larger or smaller. The first exception is that companies doing commercial work (34.5%) are more likely to have average job sizes between $25,000 and $100,000 than the other cohorts. But that difference isn't notably significant. That's only about 15% higher than the next highest.

Commercial companies are far less likely to have projects between $10,000 and $25,000 with only 11.5% of them working in this range, while 24.4% of agricultural companies have an average job size in that range.

Companies doing agricultural work did report a greater instance of doing reconstruction work than other cohorts, and that could explain the smaller job size.

The other big outlier is the 11.5% of commercial companies with average job sizes between $500,000 and $1 million, and for the most part that does sound like the sweet spot for a lot of light commercial work.

It would be unusual for companies to suddenly see a change in average job size unless one or two things happen. The company may have moved into new services, such as adding large warehouses to it's mix of traditional retail work. It could have added a maintenance and repair division to the company, reducing the average job size. Or it might be a small company that had an exceptionally large job that threw off the average job size. T10

For the most part, that is borne out in the projects companies engaged in single-family, multifamily, commercial, and agricultural report about their expected average job sizes in 2024. Very few report declines in job size with 8.4% on average saying they will be down somewhat and 3.4% on average saying they would be down significantly.

Companies reporting increases in average job size could be in large part due to increases in material costs and overall inflation, which are driving up prices.

The unique points to be made in projection of job size for 2024 is that multifamily companies are far less likely to predict the status quo will remain; fewer than 30% report that, and they are slightly more likely to expect an increase with a total of 58.1% projecting an increase in average job size.

Future Opportunities and Challenges

The true test of a company's feelings about the future are its plans to expand or add resources. About a third of the companies doing single-family, multifamily, commercial, or agricultural construction report they have no plans to expand. The firms engaged in single-family work are more adamant about that with 45.3% saying no to expanding, but only 22.1% of multifamily companies don't have expansion plans. The multifamily companies have been the most optimistic in every aspect of the survey, so this isn't surprising. T11

About a third of companies have plans to expand in 2024, which is also pretty optimistic, and again multifamily companies are leading the way with 40.4% of them expecting to expand in 2024.

We asked CSI survey respondents to tell us what resources they planned to add in 2024. When you look at the companies who serve the single-family, multifamily, commercial, and agricultural markets you see a clear need for more employees. As much as the industry talks about the shortage of skilled labor, it is support employees (skilled in their own way) that are most in demand among these companies. T12

Table T11 – EXPANSION PLANS

	PLANS		
MARKET SEGMENT	Immediate plans to expand in 2024	Future plans to expand (in 2025 or later)	No expansion plans
Single-Family Residential	30.4%	24.3%	45.3%
Multifamily	40.4%	37.5%	22.1%
Agricultural	34.2%	36.6%	29.3%
Commercial	33.3%	27.6%	39.1%
Average	34.6%	31.5%	33.9%

Source: CSI Certified, Shield Wall Media

Table T12 – PLANS TO ADD RESOURCES IN 2024

	MARKET SEGMENT				
RESOURCES	Single-Family Residential	Multifamily	Agricultural	Commercial	Average
Employees (support)	31.1%	49.0%	47.6%	44.8%	43.1%
New products or building types	31.1%	43.3%	43.9%	42.5%	40.25%
Employees (construction)	37.8%	43.3%	28.1%	34.5%	35.9%
Jobsite equipment	29.7%	22.1%	20.7%	29.9%	25.6%
Real estate of facilities	14.9%	21.2%	15.9%	24.1%	19.0%
Manufacturing equipment	11.5%	21.2%	15.9%	24.1%	18.2%
Capital equipment	10.1%	15.4%	18.3%	14.9%	14.7%
Metal forming equipment	10.8%	17.3%	12.2%	16.1%	14.1%
Trucks	16.2%	12.5%	12.2%	14.9%	14.0%
Material handling equipment	10.1%	14.4%	12.2%	13.8%	12.6%

Source: CSI Certified, Shield Wall Media

Adding new products and building types (average 40.2%) ranked second with construction employees (35.9%) coming in third. It should be noted, though, that the very low reaction from single-family companies to adding these resources are pulling the averages down. Only 31.1% of single-family companies plan to hire support employees, and only 31.1% plan to add new products or building types. The other cohorts are roughly grouped at the same percentages.

More than 37% of single-family companies do report a plan to add construction employees, and 43.3% of multifamily companies expect to put more people on the jobsite, which jibes with residential construction industry's claimed need of skilled workers.

When it comes to investments in capital equipment, companies working in these market segments still have plans to add resources, but not at as high a rate as they would human resources. About a quarter of the companies plan to get more jobsite equipment, 18.2% are looking at manufacturing equipment, and around 14% expect to add metal forming equipment and trucks.

Across the board, single-family companies are less likely to indicate they plan to add resources with 20.3% on average reporting they will add resources compared to 26% on average for multifamily and commercial companies.

According to our survey, companies working in the multifamily construction market are far more likely to think design and engineering software will impact their businesses than the those working in commercial, single-family, or agricultural. Fully 52.9% of those companies expect to see an impact from that software, but only 33.8% of single-family companies expect to see it. It is a little surprising, given how close commercial and multifamily companies have tracked in this survey that they are not in lockstep here. T13

Manufacturing automation and manufacturing software

Table T13 – NEW PRODUCTS OR TECHNOLOGY IMPACT

	MARKET SEGMENT				
PRODUCTS & TECHNOLOGY	Single-Family Residential	Multifamily	Agricultural	Commercial	Average
Design and Engineering Software	33.8%	52.9%	35.4%	37.9%	40.0%
Manufacturing Automation	32.4%	41.4%	34.2%	37.9%	36.5%
Manufacturing Software	17.6%	30.8%	32.9%	31.0%	28.1%
Artificial Intelligence	29.1%	31.7%	23.2%	25.3%	27.3%
Business Management Software	11.5%	22.1%	17.1%	19.5%	17.6%
Drone or Other Imagery	10.8%	16.4%	12.2%	19.5%	14.7%
Automation to Save Labor	13.5%	15.4%	9.8%	19.5%	14.5%
Structural Material Products	16.9%	9.6%	12.2%	12.6%	12.8%
3d Printing	8.8%	8.7%	6.1%	10.3%	8.5%
Augmented Reality	5.4%	6.7%	8.5%	9.2%	7.5%

Source: CSI Certified, Shield Wall Media

Table T14 – CHALLENGES IN 2024

	MARKET SEGMENT				
CHALLENGES	Single-Family Residential	Multifamily	Agricultural	Commercial	Average
Material Costs	46.0%	47.1%	50.00%	56.3%	49.8%
Finding Employees	50.0%	42.3%	47.6%	46.0%	46.5%
Retaining Employees	39.9%	40.4%	43.9%	43.7%	42.0%
Rising Employee Related Expenses	34.5%	39.4%	42.7%	40.2%	39.2%
Inflation	42.6%	29.8%	32.9%	48.3%	38.4%
Interest Rates	33.1%	28.9%	32.9%	44.8%	34.9%
Material Availability	28.4%	26.0%	25.6%	31.0%	27.7%
Taxes	27.0%	26.0%	25.6%	31.0%	27.7%
Energy and Transportation Costs	22.3%	23.1%	23.2%	25.3%	23.5%
Domestic politics and policy	24.3%	17.3%	20.7%	29.9%	23.1%
Suply Chain Issues	18.2%	19.2%	18.3%	24.1%	20.0%

Source: CSI Certified, Shield Wall Media

are reported to be the next most impactful innovations for these businesses. That is, of course, excepting single-family companies; 17.6% think manufacturing software will have an influence, compared to the average of 31.1%.

The fourth technology to be recognized as impacting their businesses would not even have been on this list a year ago. Artificial intelligence (AI) is sweeping across marketing and design firms as ChatGPT provides a tool for generating marketing and sales copy quickly and easily. AI also has been paired with design software to make renderings even more lifelike.

What keeps owners of companies serving single-family, multifamily, commercial, and agricultural markets awake at night? The challenges on this chart. T14

And it's clear the people in commercial companies are far more worried about these challenges than others. For four of the challenges – material costs, inflation, interest rates, and domestic politics – companies engaged in commercial construction are far more likely to be concerned about these issues than companies in other market segments. Three of those challenges are directly related. Material costs, inflation, and interest rates have strings that attach them. You can't change one without affecting the others. And, it could be argued, domestic politics is tangentially related.

For these companies, finding and retaining employees is the big issue after managing material costs. It's the well-worn mantra of the industry that there is a labor shortage. However, even in best of times, managers worry about human resources because managing employees is never easy.

Other than commercial companies serving as an outlier, there is very little difference among these cohorts. Single-family companies are concerned about inflation and domestic politics at a higher rate than average, but not as high as commercial companies.

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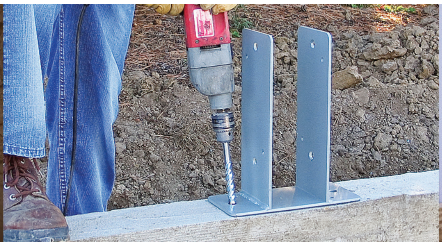

SECTION 4

POST-FRAME CONSTRUCTION DATA

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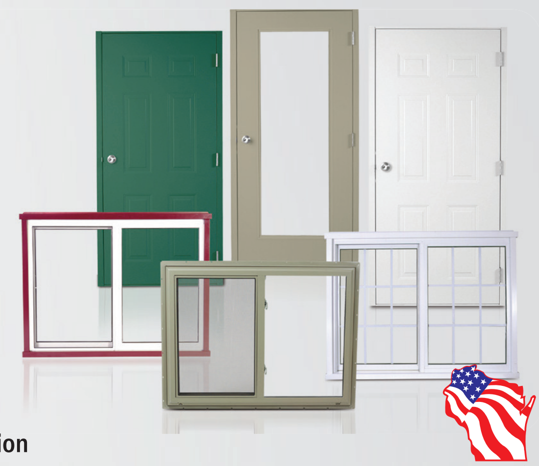

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SECTION 4

POST-FRAME CONSTRUCTION DATA

Post-frame construction is the modern descendent of timber framing, but it offers far more functionality and design flexibility. The growth of this market segment shows clearly in the data from the Shield Wall Media Construction Survey Insight (CSI) data, as well as reports from people working in the market, such as Todd Carlson, president, A.J. Manufacturing Inc., Bloomer, Wis., and Mark Stover, president, Perma-Column LLC, Ossian, Ind., who says, "It appears the post-frame industry … has continued to outpace the market even with high but steady interest rates."

Carlson says, "The overall economy has provided both opportunity and challenge. The negative impacts of policies that are more globally friendly and a less fair playing field has been difficult for our raw material suppliers and our intentions to remain substantially American made and sourced. The opportunities have come from our consumer economy and the flow of resources during the pandemic."

Characteristics of Post Frame Industry

Companies that work in post-frame construction, whether they are contractors, distributors, designers, or manufacturers serve all the market segments. For those who say they are primarily in post-frame construction, the markets they served more specifically are single-family residential (61,1%), agricultural (61.1%), and commercial (44.4%). Very few of these more specialized companies serve multifamily, industrial, or other market segments. Respondents didn't specify which other market segments, but often companies – especially rural builders – have an additional trade specialty such as concrete work, landscaping, or site preparation, among others.

For respondents who say they are engaged in post-frame construction, those who work in post-frame but don't identify it as their primary business, the numbers shift mildly. They are slightly less likely to be involved in single-family (57.8%) and commercial (39.4%), and far less likely to be involved in agricultural work (47.9%). This group is far more likely to work in multifamily with 36.6% of them saying they work in that segment compared to 22.2% of respondents whose primary business is post-frame construction. The same is true in industrial construction, where companies engaged in post-frame construction (25.4%) are more likely to do industrial work than those whose primary business is post-frame construction (16.7%). T1

Companies engaged in post-frame construction tend to be grouped in the South and Midwest, according to the CSI data. Nearly two-thirds of post-frame companies are in those regions, split evenly with 30.1% in each region. The next largest representation comes from the East region with 20.6% identifying that as their location, while 12.3% claim the West region as their location. Only 1.4% were from Canada. There are about 5.5% of national companies who responded, and the largest proportion of them are manufacturers. T2

Most of the companies who responded to the survey and were engaged in post-frame construction were contractors (45.1%), but that was still less than half the total of survey takers. Distributors represent 26.8% of respondents while designers' clock in at 19.7% of all respondents. The smallest faction represented were manufacturers with only 8.5% of respondents. T3

Of the work companies who are engaged in post-frame construction do, less than a third is remodeling. About 11% of those companies do more than 90% of their work in new construction. The predominant number, though, are either roughly half new and half remodel (31.5%) or between 60% and 90% new construction (28.8%). T4

The average job size for companies engaged in post-frame construction works out on a classic bell curve with

Table T1 – MARKET SEGMENTS SERVED: Primary Markets Served vs. All Markets

	MARKET SEGMENT BY COMPANIES PRIMARILY IN POST-FRAME CONSTRUCTION					
MARKET ENGAGEMENT	Single-Family Residential	Multifamily	Agricultural	Commercial	Industrial	Other
Post-Frame is Primary Market	61.1%	22.2%	61.1%	44.4%	16.7%	5.6%
Engage in Post-Frame Construction	57.8%	36.6%	47.9%	39.4%	25.4%	11.3%

Source: CSI Certified, Shield Wall Media

Table T2 – COMPANY LOCATION

Location	East	South	Midwest	West	Canada	National
Percentage	20.6%	30.1%	30.1%	12.3%	1.4%	5.5%

Source: CSI Certified, Shield Wall Media

Table T3 – ROLE IN CONSTRUCTION PROCESS

Roles	Designer	Builder or Contractor	Material Dealer, Distributor or Supplier	Manufacturer
Percentage	**19.7%**	45.1%	26.8%	8.5%

Source: CSI Certified, Shield Wall Media

Table T4 – PERCENTAGE OF NEW CONSTRUCTION VS. REMODEL

New VS. Remodel	Over 90% New	60-90% New	40-60% New	10-40% New	Less than 10% New
Percentage	11.0%	28.8%	31.5%	15.1%	13.7%

Source: CSI Certified, Shield Wall Media

Table T5 – AVERAGE JOB SIZE

Average Job Size	Less than $5,000	$5,000 to $10,000	$10,000 to $25,000	$25,000 to $100,000	$100,000 to $500,000	$500,000 to $1 million	Over $1 million
Percentage	17.5%	15.0%	12.5%	37.5%	5.0%	7.5%	5.0%

Source: CSI Certified, Shield Wall Media

26% of them doing work between $25,000 and $100,000. At either end of the curve are the companies doing more than $1 million jobs (5.5%) and those doing less than $5,000 jobs 13.7%). The smallest jobs are likely repair work or materials supplied by a distributor or manufacturer. T5

When you look at the median point, companies averaging job size greater than $25,000 are 50.7% of the total companies. Half the companies have job sizes less than that. Since distributors and manufacturers are included in this mix, representing 35.3% of the total respondents, the job size will be much lower than the put-in-place construction cost of a project.

The rule of thumb for construction costs are that materials represent between 30% and 35% of the job, labor between 30% and 40%, totaling between 60% and 70% of a job cost. The rest is company overhead and profit. It is reasonable to calculate that the average job costs for put-in-place construction for companies engaged in post-frame construction are significantly higher because about a third of the respondents are only supplying material.

Data for the East region in this chart are a little volatile, so those results should be taken cautiously. When looking at regions where companies engaged in post-frame construction had revenues under $2 million, the East region is significantly lower than other regions. At the other end, for revenues over $50 million, it is significantly higher. That could be attributed to those companies being manufacturers as opposed to contractors or distributors, making the likelihood of their revenues higher. T6

But there are some conclusions we can draw from looking at the gross sales by region for companies engaged in post-frame construction. About half or slightly fewer of the companies had gross sales under $2 million.

Above that, distribution among the different sales ranges was relatively even with the averages for each range running between 7% and 18%. Companies in the South do report a much higher likelihood of having gross sales between $5 and $10 million (27.3%) than the others, and well above the range's average of 13.6%.

Projected Industry Growth

Among companies engaged in post-frame construction, the outlook for 2024 is generally positive. 31.5% of our respondents report they expect the construction industry business climate to improve in 2024, and 37% tell us they expect it to remain the same. There are some doubters, of course, and during a presidential election year there is always concern about the state of the economy as a whole. More than a quarter of respondents anticipate a decline in the industry in 2024. T7

These respondents are a cross-section of the industry and a lot of variables can be attributed to this. Overall, Dodge Data and Analytics expects the commercial and industrial construction industries to increase about 7%, while the National Association of Home Builder anticipates an 4.7% increase in single-family starts, but a 19.7% decline multifamily starts. So, it depends on which market segment a company works in. And, as Carlson and Stover make clear in their comments at the top, it depends on what type of construction your company does.

The bottom line is that far more companies engaged in post-frame construction expect the 2024 industry to grow or remain constant than expect it to decline. At a ratio of approximately three to one.

Expectations for growth in 2024 are generally optimistic

Table T6 – 2023 ANNUAL GROSS SALES: by Region

	ANNUAL GROSS SALES					
REGION	Less than $2 million	$2 million to $5 million	$5 million to $10 million	$10 million to $20 million	$20 million to $50 million	Over $50 million
East	20.0%	26.7%	6.7%	13.3%	13.3%	20.0%
South	54.6%	9.1%	27.3%	0.0%	0.0%	9.1%
Midwest	52.4%	14.3%	9.5%	4.8%	9.5%	9.5%
West	0.0%	22.2%	11.1%	11.1%	11.1%	0.0%
Average	42.8%	18.1%	13.6%	7.3%	8.5%	9.7%

Source: CSI Certified, Shield Wall Media

Table T7 – 2024 SENTIMENT: About the Construction Industry

Sentiment	Improve	Same	Decline	Unsure
Percentage	31.5%	37.0%	28.8%	2.7%

Source: CSI Certified, Shield Wall Media

Table T8 – 2024 GROWTH SENTIMENT by Market Segment

	PERCENTAGE GROWTH (compared to 2023)		
MARKET SEGMENT	Increase	Same	Decrease
Residential	37.0%	41.1%	21.9%
Agricultural	36.1%	52.8%	11.1%
Commercial	34.3%	41.1%	24.7%
Industrial	34.3%	46.6%	19.2%

Source: CSI Certified, Shield Wall Media

across the different market segments. About a third of respondents, regardless of the segment they operate in, expected the construction market to increase in 2024. T8

Stover expects the post-frame niche to grow even better than the industry as a whole. "In our industry, growth continues due to barndominiums and increased awareness of post-frame construction versus stud frame, steel, and block construction materials," he says. "Architects and engineers are starting to seriously look at our construction methods as a new way to build structures both residential and commercial, which is something we have always known. But now the market is realizing what we have and the advantages of Post-Frame."

The agricultural market, in contrast to other sections of this report, is projected to be more robust in growth compared to single-family, multifamily, or residential. Only 11.1% of companies engaged in post-frame construction expect the agricultural market to decline in 2024.

According to Dodge Data & Analytics, In 2023, the commercial construction market grew about 1% compared to 2022, and the residential market declined 8.6% compared to 2022. Among our respondents, we see a much better reaction to the marketplace among companies engaged in post-frame construction. Another caveat about companies from the East who again show significant differences to those from other regions and well off the averages for growth. More than half of those companies reported a greater than 25% increase in gross sales in 2023 compared to 2022. More than half of the companies in the West report gross sales increases of less than 25%. T9

Can this be attributed to a better reaction to the marketplace among companies engaged in post-frame construction. Carlson would agree. "Our customers in the post-frame marketplace were active and growing during that period," he says. He offers a characteristic for his company, though, that may differentiate it from others, saying, "We were able to produce within reasonable lead times using our domestic sourcing." Keeping customers happy is a great way to increase sales.

Companies based in the Midwest were less likely to report year-over-year growth in 2023 compared to other regions. Only 4.6% saw significant growth. 77.8% of companies in the West grew in 2023, and overall, 55.9% of companies reported increased sales in 2023.

Projections for growth among companies engaged in post-frame construction for 2024 were not as positive as the growth they experienced in 2023. Companies in the West especially had cooled on growth with only a third expecting this year to grow and none of those significantly. In fact, 22.2% project a decline. T10

The volatility of companies in the East who are engaged in post-frame construction continues with 40% saying they expect gross sales to rise significantly this year. Other regions are more tempered. Surprisingly no region other than the West expect to be down significantly in 2024.

Sales growth and profit growth do not necessarily go hand in hand. Companies may take on more overhead to support sales and see profitability decline until the sales meet the new capacities of the company. T11

Table T9 – 2023 GROSS SALES: Compared to 2022 by Region

	GROSS SALES				
REGION	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
East	53.3%	20.0%	20.0%	6.7%	0.0%
South	13.6%	27.3%	31.8%	18.2%	9.1%
Midwest	4.6%	27.3%	40.9%	13.6%	13.6%
West	22.2%	55.6%	11.1%	11.1%	0.0%
Average	23.4%	32.5%	26.0%	12.4%	5.7%

Source: CSI Certified, Shield Wall Media

Table T10 – 2024 PROJECTED GROSS SALES: Compared to 2023 by Region

	PROJECTED GROSS SALES				
REGION	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
East	40.0%	26.7%	13.3%	20.0%	0.0%
South	13.6%	36.4%	40.9%	9.1%	0.0%
Midwest	13.6%	27.3%	36.4%	13.6%	9.1%
West	0.0%	33.3%	44.4%	22.2%	0.0%
Average	16.8%	30.9%	33.8%	16.2%	2.3%

Source: CSI Certified, Shield Wall Media

Table T11 – 2023 PROFITABILITY: Compared to 2022 by Region

	PROFITABILITY GROWTH				
REGION	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
East	46.7%	20.0%	13.3%	20.0%	0.0%
South	9.1%	27.3%	36.4%	18.2%	9.1%
Midwest	9.1%	36.4%	27.3%	18.2%	9.1%
West	11.1%	33.3%	33.3%	22.2%	0.0%
Average	19.0%	29.2%	27.6%	19.6%	4.5%

Source: CSI Certified, Shield Wall Media

Ignoring the companies that are engaged in post-frame construction who are based in the East for a moment, you can see from the chart that companies in the other regions all experienced similar profitability changes in 2023. About 10% of them saw profits rise more than 25%, while a quarter to a third experience increases less than 25%. And between 18% and 20% were down slightly in profits in 2023 compared to 2022. Only the South and Midwest report significant profitability declines.

Companies reporting expectations for profitability in 2024 are closely matched to expectations for gross sales. When you compare projected profitability to projected gross sales by region, the averages from companies engaged in post-frame construction are nearly identical. 16.8% of companies across the regions expect to see sales growth in excess of 25%. 17% of companies expect profits to rise equally. There is no statistically significant difference between companies' projections for growth of profitability in 2024 than those for gross sales when averaged across region. T10 & T12

There are, though, significant differences within a region. Of companies based in the West, 44.4% expect sales to stay the same, while a similar number expect profits to increase somewhat.

Company Size and Growth Projections

If you look at gross sales by companies engaged in post-frame construction broken out by market segment, you get a much more stable picture than if you look at them on a regional basis. Most companies only work in one region (unless they're national) but they do work in multiple market segments, so the data is more reliable. T13

The obvious first conclusion is that in 2023 gross sales for companies engaged in post-frame construction in general, the multifamily sector was far above other sectors. This matches the overall report on multifamily from other sections, such as the rural builders. (See Section 3) More than 30% of these companies report increased sales of greater than 25% in 2023 compared to 2022. But that is outstripped by companies serving the industrial sector, a third of whom report such an increase.

When averaged across sectors, the largest reported change in gross sales was that companies were up less than 25%. On average, 30.7% of companies serving these sectors who are engaged in post-frame construction saw an increase.

About a third of companies serving the commercial market report sales were even year over year and the companies in the agricultural market who report a slight decline totaled 26.5%.

Table T12 – 2024 PROJECTED PROFITABILITY: Compared to 2023 by Region

	PROJECTED PROFITABILITY				
REGION	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
East	40.3%	33.3%	20.0%	6.7%	0.0%
South	4.8%	28.6%	38.1%	23.8%	4.8%
Midwest	18.2%	22.7%	31.8%	18.2%	9.1%
West	22.2%	44.4%	22.2%	11.1%	0.0%
Average	17.0%	30.8%	32.4%	17.0%	2.8%

Source: CSI Certified, Shield Wall Media

Table T13 – 2023 GROSS SALES: Compared to 2022 by Market Segment

	GROSS SALES				
MARKET SEGMENT	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-family Residential	19.5%	34.2%	26.8%	9.8%	9.8%
Multifamily	30.8%	30.8%	23.1%	7.7%	7.7%
Agricultural	14.7%	32.4%	17.7%	26.5%	8.8%
Commercial	17.9%	28.6%	32.1%	10.7%	10.7%
Industrial	33.3%	27.8%	16.7%	16.7%	5.6%
Average	23.2%	30.7%	23.3%	14.3%	8.5%

Source: CSI Certified, Shield Wall Media

Looking to 2024, multifamily companies also projected another significant increase in gross sales with 30.8% expecting to see such a climb. That matches the percentage of multifamily companies who experienced a similar increase in 2023. [T14]

Only 5.9% of companies engaged in post-frame construction who serve the agricultural market project a steep increase in gross sales in 2024 even though 14.7% saw such an increase in 2023. Averaging the increases across market segments show that 17.3% of companies expect a sales jump of greater than 25% in 2024 while 23.2% say they saw a greater than 25% increase in 2023. [T14 & T13]

The big outlier for projecting an increase is the industrial market where 55.6% of companies engaged in post-frame

Table T14 – 2024 PROJECTED GROSS SALES: Compared to 2023 by Market Segment

	PROJECTED GROSS SALES				
MARKET SEGMENT	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-family Residential	17.1%	31.7%	26.8%	19.5%	0.0%
Multifamily	30.8%	30.8%	30.8%	7.7%	0.0%
Agricultural	5.9%	44.1%	29.4%	17.7%	2.9%
Commercial	17.9%	39.3%	21.4%	17.9%	3.6%
Industrial	16.7%	55.6%	22.2%	5.6%	0.0%
Average	17.3%	40.3%	26.1%	13.7%	1.6%

Source: CSI Certified, Shield Wall Media

Table T15 – 2023 PROFITABILITY: Compared to 2022 by Market Segment

MARKET SEGMENT	PROFIT				
	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-family Residential	19.5%	34.2%	26.8%	12.2%	7.3%
Multifamily	30.8%	19.2%	26.9%	19.2%	3.9%
Agricultural	17.7%	29.4%	32.4%	14.7%	5.9%
Commercial	14.3%	25.0%	32.1%	21.4%	7.1%
Industrial	22.2%	27.8%	27.8%	22.2%	0.0%
Average	20.9%	27.1%	29.2%	18.0%	4.8%

Source: CSI Certified, Shield Wall Media

Table T16 – 2024 PROJECTED PROFITABILITY: Compared to 2023 by Market Segment

MARKET SEGMENT	PROJECTED PROFITABILTY				
	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-family Residential	17.5%	35.0%	27.5%	15.0%	5.0%
Multifamily	32.0%	32.0%	24.0%	8.0%	4.0%
Agricultural	21.2%	27.3%	24.2%	21.2%	6.1%
Commercial	25.9%	29.6%	22.2%	18.5	3.7%
Industrial	27.8%	27.8%	16.7%	22.2%	5.6%
Average	24.9%	30.3%	22.9%	17%	4.9%

Source: CSI Certified, Shield Wall Media

construction expect to see some increase in 2024. The average of companies expecting a slight increase is 40.3%. Single-family (48.8%) and agricultural (50%) are not nearly as positive about seeing increases in gross sales – either slight or significant – in 2024 as the other market segment companies. T14

Very few companies expect a significant decline, with on average only 1.6% projecting decreases in excess of 25%. Year over year from 2023 to 2022, 8.5% of companies report a significant decline.

As was mentioned on the regional comparisons, profits and sales growth don't automatically trend together. The residential sector, though, experienced strong profit growth in 2023 compared to 2022 among companies engaged in post-frame construction. Just over 53% of post-frame companies engaged in single-family market sector saw profits increase, and half of the multifamily companies saw increases. T15

Roughly 30% of all companies engaged in post-frame construction reported profitability staying the same in 2023 regardless of the market segments they served.

Having to deal with rapid inflation, rising material costs, and rising employee costs can outstrip a company's ability to remain profitable, and those were the realities of 2023. Consequently, about 23% of all companies engaged in post-frame construction averaged across all market segments experience a decline in profitability.

For the most part, companies engaged in post-frame construction are more positive about 2024 profitability. On average, 55.2% of the companies across market segment expect to see an increase in profitability in 2024 with 24.9% of those projecting a significant increase of greater than 25%. In 2023, 48% on average showed increased profits over 2022. About the same percentage anticipate a decline in profitability in 2024 as experienced a decline in 2023. T16

Continuing the overall story of positivity, the companies engaged in post-frame construction working in the multifamily market segment are much more optimistic about their profitability prospects than the other market segments. 32% of them expect a significant increase in profitability in 2024. Only 12% expect any decline in profitability.

The other side of the residential coin, single-family construction, feels good about profitability in 2024, although not as fully as on the multifamily market. Only 20% of companies engaged in post-frame construction working in the single-family market segment anticipate a decline of profitability in 2024.

Future Opportunities and Challenges

Across market segments, there is remarkable agreement about the immediate plans to expand in 2024 by companies engaged in post-frame construction. About 39% of each four segments have plans while the agricultural market segment is being more cautious with only 32.4% of companies saying they have immediate plans. T17

After that, different segments tend to break off into different attitudes. The multifamily segment says at a 46.2% rate that it plans to expand in the future with only 15.4% of those companies expressing no expansion plans.

Companies engaged in post-frame construction in the single-family market are least likely (39%) to say they have plans to expand while about a third of companies in the other segments – agricultural, commercial, and industrial – suggest they have no plans to expand.

Companies engaged in post-frame construction who work in the commercial and industrial segments are far more likely to want to add support employees than companies in the other sectors. In fact, companies in the single-family sector

Table T17 – EXPANSION PLANS

	PLANS		
MARKET SEGMENT	Immediate plans to expand in 2024	Future plans to expand (in 2025 or later)	No expansion plans
Single-family Residential	39.9%	22.0%	39.0%
Multifamily	38.5%	46.2%	15.4%
Agricultural	32.4%	32.4%	35.3%
Commercial	39.3%	25.0%	35.7%
Industrial	38.9%	27.8%	33.3%
Average	37.6%	30.6%	31.7%

Source: CSI Certified, Shield Wall Media

point show support-employee hiring as the fourth most important thing to add.

In another change from industry wisdom, the shortage of skilled labor ranks fourth among the plans to add. That may be because companies are pessimistic about their ability to do it, or it could be slower growth makes this less important.

Many companies engaged in post-frame construction plan to add new products or building types to their mix in 2024, and are nearly as likely to add jobsite equipment, although for multifamily companies' jobsite equipment is a lower priority than adding field employees or real estate or facilities. The same is true with commercial companies. T18

When ranking the needs for companies in the future, after the fifth ranked real estate or facilities plans, the average of the following resources are mostly propped up by the high interest in either the industrial segment or single-family segment Companies engaged in post-frame construction who serve the industrial market are far more likely to plan to add

Table T18 – PLANS TO ADD RESOURCES IN 2024

	MARKET SEGMENT					
RESOURCES	Single-family Residential	Multifamily	Agricultural	Commercial	Industrial	Average
Employees (support)	31.7%	53.9%	41.2%	46.4%	55.6%	45.7%
New products or building types	39.0%	38.5%	32.4%	39.3%	44.4%	38.7%
Jobsite equipment	36.6%	30.8%	35.3%	39.3%	44.4%	37.3%
Employees (construction)	41.5%	34.6%	26.5%	32.1%	27.8%	32.5%
Real estate of facilities	26.8%	38.5%	23.5%	35.7%	27.8%	30.5%
Capital equipment	22.0%	15.4%	17.7%	21.4%	33.3%	21.9%
Material handling equipment	19.5%	15.4%	14.7%	14.3%	27.8%	18.3%
Trucks	26.8%	11.5%	14.7%	21.4%	11.1%	17.1%
Manufacturing equipment	17.1%	7.7%	11.8%	14.3%	27.8%	15.7%
No additional plans	24.4%	7.7%	11.8%	10.7%	11.1%	13.1%
Metal forming equipment	9.8%	3.9%	8.8%	7.1%	16.7%	9.2%

Source: CSI Certified, Shield Wall Media

Table T19 – CHALLENGES IN 2024

	MARKET SEGMENT				
CHALLENGES	Single-family Residential	Multifamily	Agricultural	Commercial	Average
Cost of Materials	58.5%	57.7%	55.9%	57.1%	58.1%
Finding employees	53.7%	34.6%	52.9%	53.6%	49.0%
Retaining employees	46.3%	50.0%	47.1%	60.7%	48.6%
Rising employee related expenses	48.8%	38.5%	44.1%	53.6%	47.0%
Inflation	51.2%	30.8%	41.2%	50.0%	45.7%
Interest rates	43.9%	38.5%	44.1%	50.0%	44.2%
Material availability	36.6%	38.5%	29.4%	39.3%	38.8%
Taxes	24.4%	26.9%	29.4%	42.9%	37.5%
Domestic politics and policy	36.6%	19.2%	32.4%	32.1%	33.0%
Supply chain issues	24.4%	23.1%	26.5%	25.0%	29.8%
Cost of Energy & Transportation	26.8%	19.2%	26.5%	21.4%	25.5%

Source: CSI Certified, Shield Wall Media

capital equipment, material handling equipment, manufacturing equipment, or metal forming equipment than companies in the other market segments.

Meanwhile, companies working in the single-family market segment are more likely than other segments to be planning to add trucks or have no addition plans.

The construction industry is difficult in the best of times. For 30 years, it has tried to resolve the shortage of skilled labor, turning for the most part to immigrant help to meet demands. But recent economic tides have shifted those challenges and among companies engaged in post-frame construction the biggest challenge they face is the rising cost of materials. [T19]

With lengthening lead time due to regulatory reviews, the cost of materials can change significantly from when job estimates have been completed. As costs rise, building owners can get squirrely about their own plans, so managing those rising costs are an essential part of a company's ability to get to job completion.

Todd Carlson, president, A.J. Manufacturing Inc., Bloomer, Wis., says, "The biggest challenges affecting our business are those outside of our control. They include regulatory standards such as trucking and logistical regulation, the assault on our fossil fuel and energy sources from one perspective and not understanding the implications of unplanned and too rapid pace of change."

That sentiment is reflected in how respondents reacted to the list of challenges given in the survey. Cost of materials, interest rates, taxes, inflation, material availability, domestic politics, supply chain issues, and the cost of energy and transportation are all outside the control of most companies engaged in post-frame construction.

They are all on the list and rank highly. But the labor shortage continues in spite of the efforts of so many to address it. For Mark Stover, president, Perma-Column LLC, Ossian, Ind., "Labor continues to be the biggest challenge."


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SECTION 5

METAL ROOFING DATA

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SECTION 5

METAL ROOFING DATA

Who are metal roofers? It's hard to say. They are general roofing contractors who offer metal roofing services. They are metal roof specialists in commercial and industrial construction. They are residential roofers who have metal roofing as a service. They may be suppliers or distributors who offer installation services. They are metal roofers who specialize in residential retrofits, which is becoming a much larger industry. Dodge Data and Analytics reports that demand for residential metal roof retrofits reached 18 percent of market share in 2022, which is a 6 percent leap in three years.

There are difficulties the industry faces, though, and Jim Bush, vice president of sales and marketing for ATAS International, Allentown, Pa., cites the competition from other building products in talking about the sustainability of their products. "Competitive building materials are pushing sustainable attributes of their products in a much better way than those of us in the metal arena," he says. "As an industry we must do a better job communicating a universal message on the green and environmental benefits of metal building products."

Characteristics of the Metal Roofing Industry

Of the companies who identify their primary business as metal roofing, half work in the residential construction market, evenly divided between single-family and multifamily. Slightly more (27.8%) serve the agricultural, and the remainder work in commercial (13.9%) and industrial market segments (8.3%). T1

It's not shown on this chart, but the data from the Shield Wall Media Construction Survey Insights show that of respondents who identified metal roofing as their primary building type, 60% are contractors, 18% are distributors, and 10% manufacturers.

In keeping with the nature of the metal roofing market, far more companies actually are engaged in metal roofing than have that as their primary business. Among that group, more than half (53.7%) serve the single-family market. The next most common market segments served by companies engaged in metal roofing were multifamily (43.5%) and commercial (42.6%). About a third of companies worked in agriculture and a quarter worked in the industrial market segment.

About 80% of metal roof shipments are for residential installation, according to the Metal Construction Association, with standing seam metal roofing representing about 65% of that total.

For our purposes, we were interested in companies that were engaged in metal roofing, and of that group 28.2% were based in the East and a similar percentage in the South. A quarter (24.6%) of these companies were based in the Midwest and only 10% came from the West. We did have a small number of companies reporting out of Canada (4.6%) and working nationally (4.6%). There were not enough survey takers from those areas to include them in much of the reporting because the data was too unsteady. T2

Most of the survey takers who were engaged in metal roofing (47.7) described their role as builder or contactor. Another quarter (24.8%) were designers. That may have been independent architectural firms or designers who were part of a design-build contracting company. Smaller numbers came from the distributor role (16.6%) but as mentioned previously, some companies might do installation as well as material distribution. The remainder (11.9%) were manufacturers. T3

The Metal Roofing Alliance reports that metal roofing represents about 18% of all residential roofing retrofits, and there are companies very specifically working in that segment. They tend to be single-line remodeling companies who operate similarly to traditional roofing and siding remodeling companies, but specialize in metal roofing. T4

Roughly a third of the survey takers do about half new construction and half remodeling work. But the trend among companies engaged in metal roofing is toward new

Table T1 – MARKET SEGMENTS SERVED: by Companies Who Do Metal Roofing

Engagement	Single-Family Residential	Multifamily	Agricultural	Commercial	Industrial
Primary Market	25.0%	25.0%	27.8%	13.9%	8.3%
All Markets	53.7%	43.5%	35.2%	42.6%	24.1%

Source: CSI Certified, Shield Wall Media

Table T2 – METAL ROOFER LOCATIONS

Location	East	South	Midwest	West	Canada	National
Percentage	28.2%	28.2%	24.6%	10.0%	4.6%	4.6%

Source: CSI Certified, Shield Wall Media

Table T3 – ROLE IN CONSTRUCTION PROCESS

Roles	Designer	Builder or Contractor	Material Dealer, Distributor or Supplier	Manufacturer
Percentage	24.8%	47.7%	16.6%	11.9%

Source: CSI Certified, Shield Wall Media

construction, with 36.6% doing more than 60% new work and 30.4% doing less than 40% new work.

Among our respondents, about 44% have an average job size less than $25,000 which would include the typical metal roof retrofit on a residence. A quarter have a job size between $25,000 and $100,00 and 30.6% have an average job size of more than $100,000. That would entail large commercial projects and retrofit roofs for institutions, such as public schools. T5

A job size of less than $5,000 is likely a repair project. Although, since manufacturers and distributors are included in the make-up of companies engaged in metal roofing, that number could include simply the cost of the materials shipped.

On average, 30.1% of companies engaged in metal roofing had gross sales in 2023 of less than $2 million. Compa-

Table T4 – PERCENTAGE OF NEW CONSTRUCTION VS. REMODEL

New VS. Remodel	Over 90% New	60-90% New	40-60% New	10-40% New	Less than 10% New
Percentage	10.7%	25.9%	33.0%	15.2%	15.2%

Source: CSI Certified, Shield Wall Media

Table T5 – AVERAGE JOB SIZE

Average Job Size	Less than $5,000	$5,000 to $10,000	$10,000 to $25,000	$25,000 to $100,000	$100,000 to $500,000	$500,000 to $1 million	Over $1 million
Percentage	11.7%	13.5%	18.9%	25.2%	15.3%	7.2%	8.1%

Source: CSI Certified, Shield Wall Media nies from the South represented the most significant portion of that, with 41.9% of those companies reporting sales below $2 million. T6

Companies based in the East tend to be much larger with 19.4% of those reporting 2023 gross sales of greater than $50 million. As we have seen in other areas of this report, the data from these companies is more volatile than other regions and may be driving up the average number of companies reporting sales greater than $50 million.

The region where you are least likely to find small companies engaged in metal roofing is the West (18.2%), and those companies tend to be clustered between $2 and $10 million in 2023 gross sales.

Projected Industry Growth

Companies engaged in metal roofing are generally feeling good about the prospects for the construction industry in 2024. Just over 40% expect conditions to improve compared to 2023 and 34.8% anticipate things staying the same. T7

Richard King is product manager for Steelscape, Kalama, Wash. He has a relatively positive view of industry growth, but expresses reservations. "I think on the whole it is ok and better than expected," he says. "But it is very varied by sub sector – commercial, residential, public – and building type sub sectors, such as warehouses, schools, etc. Some sectors are strong whereas others are weak due to interest rates. A lot of commercial schedules are moving out, which is contributing to industry volatility and difficulty in projecting demand."

Bush says, "I have been anticipating a minor downturn due to construction starts being off in the range of 25% in the 2020 time frame. The overall impact has been spread out over a broad time frame and really has not affected the daily business activity in the construction markets. I still anticipate a slight softening in 2025 due to the high interest rates over the last year or so. However, I do not see any major changes in the health of the economy that will affect the use of metal in construction."

There are other, larger forces affecting the construction industry and the U.S. economy as a whole. Societal changes are having an impact at all levels of our industry. King points to one specific thing that everyone in the industry recognizes. "Expectations are shifting in terms of how quickly we must respond to change, communicate, and provide solutions," he says. "So we must continue to improve our agility through technology and people investments."

When asked about how individual market segments will do in 2024 compared to 2023, companies engaged in metal roofing were generally positive. About 50% of respondents thought each of those segments would improve, although they were slightly less enthusiastic about the agricultural market's growth with 45.1% suggesting it would improve. T8

But 46% thought the agricultural market would hold the same and only 9% predicted a decline. So, overall, the agriculture market reveals stronger expectations than the

Table T6 – 2023 ANNUAL GROSS SALES: by Region

	ANNUAL SALES					
REGION	Less than $2 million	$2 million to $5 million	$5 million to $10 million	$10 million to $20 million	$20 million to $50 million	Over $50 million
East	25.8%	19.4%	12.9%	16.1%	6.5%	19.4%
South	41.9%	29.0%	19.4%	6.5%	3.2%	0.0%
Midwest	34.6%	19.2%	23.1%	11.5%	3.9%	7.7%
West	18.2%	27.3%	27.3%	0.0%	18.2%	9.1%
Average	30.1%	23.7%	20.7%	8.5%	7.9%	9.0%

Source: CSI Certified, Shield Wall Media

Table T7 – 2024 SENTIMENT: About the Construction Industry

Sentiment	Improve	Same	Decline	Unsure
Percentage	41.1%	34.8%	16.1%	8.0%

Source: CSI Certified, Shield Wall Media

Table T8 – 2024 GROWTH SENTIMENT: by Market Segment

MARKET SEGMENT	PERCENTAGE GROWTH (compared to 2023)		
	Increase	Same	Decrease
Residential	48.2%	36.6%	15.2%
Agricultural	45.1%	46.0%	9.0%
Commercial	50.9%	33.9%	15.2%
Industrial	50.0%	33.9%	16.1%

Source: CSI Certified, Shield Wall Media

other market segments.

Survey takers thought the other three markets – residential, commercial, and industrial – all held about the same prospects with generally a third thinking they would hold steady and 15% expecting them to decline in 2024.

The good news among companies engaged in metal roofing is that 2023 was, on average, a better year than 2022. A total of 64.3% of respondents say their business improved year over year with 90% of the companies in the West showing an increase. Of those companies, 63.6% saw an increase less than 25%. T9

Companies in the East (our most volatile region) say their businesses increased more than 25% in 2023 with 32.3% of them reporting a significant jump. Very few companies engaged in metal roofing in the Midwest (3.7%) report a large leap in gross sales in 2023. They were far more likely (40.7%) to say their gross sales had remained the same during this period.

Table T9 – 2023 GROWTH: by Region

REGION	PERCENTAGE GROWTH (compared to 2022)				
	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
East	32.3%	35.5%	12.9%	19.4%	0.0%
South	19.4%	38.7%	22.6%	16.1%	3.2%
Midwest	3.7%	37.0%	40.7%	11.1%	7.4%
West	27.3%	63.6%	9.1%	0.0%	0.0%
Average	20.6%	43.7%	21.3%	11.6%	2.7%

Source: CSI Certified, Shield Wall Media

No respondents from the West report a decline while 19.4% in the East say their revenues declined but not significantly or less than 25%. The region where the most survey takers who are engaged in metal roofing say they had significant declines was the Midwest with 7.4% of them reporting greater than 25% drops in 2023 over 2022.

Looking to projected gross sales for the 2024 time frame, about the same number of respondents engaged in metal roofing on average say their gross sales will increase in 2024 as saw increases in 2023. This year, 61.3% expect an increase while 64.3% reported an increase last year. T10

Companies based in the Midwest were generally both more positive and more negative about growth this year with a third expecting a slight increase while 11.1% anticipating gross sales jumping more than 25%. A total of 40% of respondents report an increase last year, and this year 44.4% expect an increase. The real change was the number of companies who reported flat sales in 2023 (40%) shrank as now 33.3% anticipate gross sales remaining the same in 2024. Those in the Midwest projecting a decline in 2024 totaled 22.2%. Only 18.5% of respondents from the Midwest say they say declines in 2023.

While companies in the West who are engaged in metal roofing report no declines in gross sales in 2023 compared to 2022, 18.2% anticipate a slight decline in 2024.

Profit can be a tricky thing to manage for small companies. On average, 30.1% of the companies engaged in metal roofing had gross sales below $2 million in 2023. At the same time 69.3% of companies engaged in metal roofing had an average job size of less than $100,000, and 25.2% had job sizes between $25,000 and $100,000. Small companies running large jobs can create significant shifts in profitability if one job goes bad or another is a home run. T11

Table T10 – 2024 PROJECTED GROSS SALES: by Region

	PROJECTED GROSS SALES (compared to 2023)				
REGION	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
East	32.3%	35.5%	9.7%	22.6%	0.0%
South	16.7%	43.3%	30.0%	10.0%	0.0%
Midwest	11.1%	33.3%	33.3%	18.5%	3.7%
West	18.2%	54.6%	9.1%	18.2%	0.0%
Average	19.6%	41.7%	20.5%	17.3%	0.9%

Source: CSI Certified, Shield Wall Media

Table T11 – 2023 PROFITABILITY: by Region

	PROFITABILITY (compared to 2022)				
REGION	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
East	35.5%	29.0%	25.8%	9.7%	0.0%
South	13.3%	40.0%	33.3%	10.0%	3.3%
Midwest	7.4%	40.7%	33.3%	11.5%	7.4%
West	9.1%	63.6%	27.3%	0.0%	0.0%
Average	16.3%	43.4%	29.9%	7.7%	2.7%

Source: CSI Certified, Shield Wall Media

Comparing 2023 to 2022, 29.9% of companies engaged in metal roofing saw profitability hold and 10.4% saw it decline with 2.7% seeing a decline of greater than 25%. Considering 14.5% saw declines in gross sales during that same period, the profitability picture for these companies remained pretty strong. Yes, there will be lean years, but if companies can manage resources to hold profit and mitigate risk, they have long-term survivability. By the number in our survey, that seems to be what companies engaged in metal roofing did in 2023. T9, T11 & T13

Breaking it out by region, companies in the West were more likely to see profit increases (72.7%) than other regions and none of them report a profit decline in 2023. The South and Midwest survey takers were more aligned with each other with relatively equivalent percentages showing profits up less than 25%, the same, or down less than 25%. T11

When projecting 2024 profitability increases over 2023 profitability increases, the respondents from the West came back down to earth a bit. 63.6% of companies engaged in metal roofing from this region reported their

Table T12 – 2024 PROJECTED PROFIT: by Region

	PROJECTED PROFITABILITY (compared to 2023)				
REGION	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
East	29.0%	41.9%	16.1%	12.9%	0.0%
South	20.0%	36.7%	20.0%	20.0%	3.3%
Midwest	14.8%	18.5%	40.7%	18.5%	7.4%
West	36.4%	45.5%	0.0%	18.2%	0.0%
Average	25.1%	35.6%	19.2%	17.4%	2.7%

Source: CSI Certified, Shield Wall Media

Table T13 – 2023 GROSS SALES: by Market Segment

	GROSS SALES (compared to 2022)				
MARKET SEGMENT	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-family Residential	25.9%	39.7%	20.7%	10.3%	3.5%
Multifamily	28.3%	41.3%	21.7%	6.5%	2.2%
Agricultural	15.8%	34.2%	29.0%	18.4%	2.6%
Commercial	17.8%	42.2%	20.0%	15.6%	4.4%
Average	21.9%	39.3%	22.8%	12.7%	3.2%

Source: CSI Certified, Shield Wall Media

profits up less than 25% in 2023 and only 45.5% anticipate a similar increase in 2024. But the initial blush falls apart with companies in this region when you look at respondents who expect a greater than 25% increase in profitability. Of companies from the West, 36.4% project significant profit increases in 2024 while only 9.1% of them showed such a year-over-year increase in 2023. None of these companies expect profits to hold steady. T11 & T12

On average, though, 60.7% of companies engaged in metal roofing expect to see a profit increase in 2024, and 20.1% project a decline. Whereas South and Midwest companies were very similar in reporting on 2023 profits compared to 2022, they vary considerably in their expectations for 2024. Of companies in the South, 56.7% expect an increase in profitability and 23.3% project a decline, leaving only 20% who predict profitability will remain steady. Of those from the Midwest, though 40.7% project profits to remain the same in 2024 and only 25.9% anticipate a decline. T12

Company Size and Growth Projections

In 2023, companies engaged in metal roofing who served the multifamily market were more likely to report an increase in gross sales over 2022 than those serving other market segments. 69.6% survey takers in the multifamily market reported an increase in sales with 28.3% of those saying the increase was greater than 25%. T13

The other side of the residential market, single-family construction, also had respondents who said sales jumped in 2023 with 65.6% of the total coming in with higher sales and 25.9% showing gains of greater than 25%.

The agricultural market, according to companies engaged in metal roofing, was least likely to see an increase in sales in 2023 compared to 2022. Half of the companies serving that market report an increase and they were the fewest (15.8%) of any market segment to show a significant increase of greater than 25%.

They were also the most likely to report gross sales as the same (29%) or down (21.1%), although 20% of companies in the commercial market saw gross sales decline in 2023.

When you look at the totals of companies engaged in metal roofing across market segment, there isn't a lot of difference from the percentage who reported increases in 2023 and those who project increases in 2024. Nearly the same percentages hold for multifamily (69.6% in 2024, 69.6% in 2023) and single family (65.5% in 2023, 63.8% projected in 2024). The agricultural market is projected to rise about 10 percentage points from 50% to 60.5% and commercial drops about 4 points from 60% to 55.6%. T13, T14

Table T14 – 2024 PROJECTED GROSS SALES: by Market Segment

	PROJECTED GROSS SALES (compared to 2023)				
MARKET SEGMENT	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-family Residential	22.4%	41.4%	20.7%	13.8%	1.7%
Multifamily	23.9%	45.7%	21.7%	8.7%	0.0%
Agricultural	7.9%	52.6%	15.8%	23.7%	0.0%
Commercial	13.3%	42.2%	26.7%	15.6%	2.2%
Average	16.9%	45.5%	21.2%	15.4%	1.0%

Source: CSI Certified, Shield Wall Media

There are shifts in the optimism about growth with companies being much more diffident about anticipating significant growth. Among companies engaged in metal roofing, the average who report more than 25% growth in 2023 over 2022 was 21.9%, and 39.3% report slight growth. Those numbers shift when looking at projections for 2024. Only 16.9% of companies, on average across market segment, expect significant growth while 45.5% project slight growth. About the same percentage anticipate either the same gross sales or declining gross sales in 2024 that they reported in 2023. T13 & T14

About the same percentage of companies engaged in metal roofing believed that the decline of gross sales would be similar to what they experienced the previous year (15.9% in 2023 and 16.4% projected in 2024). But there was a shift in attitudes. Respondents were less likely to think there would be significant declines across market segments served. On average, only 1% of companies expect significant declines in 2024 compared to 3.1% who reported significant declines in 2023.

Across the board, companies engaged in metal roofing were able to hold profitability in spite of changes in gross sales across market segments. 15.9% of respondents reported 2023 sales declines but only 10.4% reported a profitability decline. For all the respondents who reported their sales were roughly the same as 2022 across these market segments (22.8%) there were far more (33.9%) who reported their profitability was the same. T13, & T15

The market segment where companies engaged in metal roofing saw the biggest profit increases in 2023 was multfamily with 65.3% of survey takers who say their profits increased year over year. Of the other segments, they all averaged just slightly more than 50%. Those in the agricultural market (13.2%) were less likely to report a significant increase than the ones working in other market segments. T15

Of those reporting declines in profitability, companies serving the multifamily (6.5%) and agricultural (7.9%) were the least likely to show a decline, with none of the multifamily respondents reporting a decline of greater than 25% in this segment.

In 2023, 17.8% of companies engaged in metal roofing reported an increase in profitability greater than 25% over the previous year. In 2024, 23.3% of companies projected a profit increase of greater than 25%. Clearly, companies were much more optimistic about their prospects in 2024 compared to their experiences in 2023. T15 & T16

About the same percentage reported a significant decline in profitability in 2023 (3.1%) as they projected in 2024 (2.6%), but the total of companies reporting any decline in 2023 (10.4%) was similar to the number who project a de-

Table T15 – 2023 PROFITABILITY: by Market Segment

	PROFITABILITY (compared to 2022)				
MARKET SEGMENT	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-family Residential	20.7%	31.0%	34.5%	8.6%	5.2%
Multifamily	19.6%	45.7%	28.3%	6.5%	0.0%
Agricultural	13.2%	39.5%	39.5%	5.3%	2.6%
Commercial	17.8%	35.6%	33.3%	8.9%	4.4%
Average	17.8%	37.9%	33.9%	7.3%	3.1%

Source: CSI Certified, Shield Wall Media

Table T16 – 2024 PROJECTED PROFITABILITY: by Market Segment

MARKET SEGMENT	PROJECTED PROFITABILITY (compared to 2023) Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
Single-family Residential	22.4%	36.2%	27.6%	10.3%	3.5%
Multifamily	27.7%	42.6%	19.2%	8.5%	2.1%
Agricultural	23.7%	34.2%	18.4%	21.1%	2.6%
Commercial	19.6%	37.0%	26.1%	15.2%	2.2%
Average	23.3%	37.5%	22.8%	13.8%	2.6%

Source: CSI Certified, Shield Wall Media

cline in 2024 (16.4%). T15 & T16

For companies engaged in metal roofing, the prospects of a 2024 decline in profitability were least among multifamily companies (10.6%) and greatest among agricultural (23.7%). Three segments – single-family, agricultural, and commercial -- all projected profits to increase at about the same percentage of likelihood (about 57%). T16

Companies engaged in metal roofing who work in the multifamily segment market were most likely (70.2%) to project increasing profits in 2023.

Future Opportunities and Challenges

In keeping with the theme throughout this report, respondents working in the multifamily sector were the most optimistic, and that includes companies engaged in metal roofing. More than half (52.2%) of these companies have expansion plans for 2024 and another 28.3% expect to expand in the future. Only 19.6% have no expansion plans. T17

Firms working in the commercial segment are least likely to have plans to expand. Not quite half (44.4%) of companies engaged in metal roofing in the commercial sector have no plans to expand although about a third (37.8%) do have immediate plans.

Companies serving the agricultural segment were evenly divided with about a third each having immediate plans to expand (31.6%), future plans (31.6%), and no expansion plans (36.8%). T18

For companies in the roofing market and for those in metal roofing, the ability to add new products or building types is relatively easy and a strong business practice. If you're do-

Table T17 – EXPANSION PLANS

MARKET SEGMENT	PLANS Immediate plans to expand in 2024	Future plans to expand (in 2025 or later)	No expansion plans
Single-family Residential	43.1%	24.1%	32.8%
Multifamily	52.2%	28.3%	19.6%
Agricultural	31.6%	31.6%	36.8%
Commercial	37.8%	17.8%	44.4%

Source: CSI Certified, Shield Wall Media

ing metal roofing, why not add modified bitumen or built-up membrane? The same can be said about adding metal roofing to the existing mix of products and services. Employees can be trained easily to work on different roof types and many distributors already carry a full complement of materials, so there would be little need to find new suppliers.

It's no surprise then, that the companies engaged in metal roofing report they are most likely to add new products or building types in 2024. This goes across all segments, with respondents in single-family, multifamily, agricultural, and commercial all saying they are most likely to add new products than add any other resources. T18

The next areas of expansion companies are considering are both support and field employees, although companies engaged in metal roofing serving the single-family market are less likely to look at support employees than field employees or even jobsite equipment. Survey takers in the agricultural segment are least likely to be looking for

Table T18 – PLANS TO ADD RESOURCES IN 2024

	MARKET SEGMENT				
RESOURCES	Single-family Residential	Multifamily	Agricultural	Commercial	Average
New products or building types	51.7%	50.0%	60.5%	48.9%	52.8%
Employees (support)	39.7%	47.8%	52.6%	42.2%	45.6%
Employees (construction)	46.6%	50.0%	31.6%	40.0%	42.0%
Jobsite equipment	43.1%	17.4%	31.6%	31.1%	30.8%
Real estate of facilities	25.9%	28.3%	18.4%	28.9%	25.4%
Metal forming equipment	19.0%	21.7%	13.2%	24.4%	19.6%
Manufacturing equipment	15.5%	23.9%	13.2%	20.0%	18.1%
Material handling equipment	12.1%	15.2%	15.8%	11.1%	13.5%
Trucks	19.0%	10.9%	10.5%	13.3%	13.4%
No plans to add resources	13.8%	8.7%	7.9%	20.0%	12.6%

Source: CSI Certified, Shield Wall Media

Table T19 – CHALLENGES IN 2024

CHALLENGES	MARKET SEGMENT				
	Single-family Residential	Multifamily	Agricultural	Commercial	Average
Finding employees	67.2%	56.5%	60.5%	55.6%	60.0%
Cost of materials	50.0%	56.5%	52.6%	68.9%	57.0%
Rising employee related expenses	50.0%	41.3%	63.2%	44.4%	49.7%
Retaining employees	50.0%	47.8%	50.0%	40.0%	47.0%
Inflation	48.3%	34.8%	36.8%	55.6%	43.9%
Interest rates	43.1%	37.0%	36.8%	51.1%	42.0%
Material availability	39.7%	32.6%	34.2%	40.0%	36.6%
Domestic politics and policy	32.8%	26.1%	23.7%	33.3%	29.0%
Cost of energy and transportation	29.3%	30.4%	31.6%	24.4%	28.9%
Taxes	27.6%	30.6%	26.3%	26.7%	28.3%
Suply Chain Issues	24.1%	17.4%	23.7%	24.4%	22.4%

Source: CSI Certified, Shield Wall Media

field employees and multifamily companies are least likely to be planning to add jobsite equipment.

Many expansion plans require capital expenditures, including real estate, metal forming equipment, manufacturing equipment, material handling equipment and trucks. About 12.6% of companies engaged in metal roofing have no plans to add resources.

Among companies engaged in metal roofing, finding employees (60% on average) ranked as the highest challenge, and companies serving the residential market segments reported finding employees is the biggest challenge or tied with cost of materials for the biggest challenge, while commercial companies believe dealing with the rising cost of materials is a bigger challenge. Agricultural companies pointed to the rising cost of employee-related expenses as their biggest challenge. T19

Jim Bush of ATAS International says, "Finding qualified employees across all levels of the organization is still difficult, although it appears to be getting somewhat better."

Richard King of Steelscape agrees. "I think the health [of the industry] is good, although we face future issues in terms of our ability to attract and retain talent, and to transfer knowledge between the generations as one leaves and the other takes over."

There are other challenges for companies engaged in metal roofing; all make controlling cost of construction more difficult and can push building owners to slow or cancel plans. It's a bit surprising to see supply chain issues still getting as much attention as they are in both material availability and general supply chain issues several years after the pandemic disrupted the global supply chain.

SECTION 6

ROLLFORMING AND METAL FORMING CONSTRUCTION DATA

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SECTION 6
ROLLFORMING AND METAL FORMING CONSTRUCTION DATA

Rollforming or metal forming are essential parts of any construction project that involves the use of metal components. Whether it's done at the manufacturer plant, distributor facility, or on the job by the contractor, today's machinery is much more sophisticated than those used just a few years ago. Computer technology and improved designs have made them easier to use and capable of delivering metal materials that are a far cry from the simple crimp of old. There are difficulties the industry faces, though, and Jim Bush, vice president of sales and marketing for ATAS International, Allentown, Pa., cites the competition from other building products in talking about the sustainability of their products. "Competitive building materials are pushing sustainable attributes of their products in a much better way than those of us in the metal arena," he says. "As an industry we must do a better job communicating a universal message on the green and beneficial environmental aspects of metal building products."

A lot has changed in the industry and much of that is in the details.

We should begin, though, with a reminder of the larger picture. Metal fabrication is a growing market. According to the U.S. Bureau of Labor Statistics, employment in the metal fabricating sector has increased from 1.36 million jobs in Jan. 2021 to 1.46 million in Dec. 2023, which is almost a 7% increase. Much of that growth will be in the automobile industry but the construction industry is growing as metal building materials begin to increase in market share. In residential roofing, for example, metal roofing now has 18% of the retrofit market as of 2022, according to the Metal Roofing Alliance. [T1]

Characteristics of the Rollforming and Metal Forming Industry

Filed under the category of not much of a surprise, companies engaged in rollforming serve all the construction segments about equally. They are slightly more likely to be involved in single-family residential (56.4%) and slightly less likely to be involved in industrial (46.2%). The total spread among the five market segments is less than 10 percentage points. [T2]

In the CSI data, we found most of our respondents came from the East (22.5%), South (25%), and Midwest (22.5%). There were a few Canadian survey takers, and 12.5% of respondents identified as national or in multiple regions. Those latter companies could be manufacturers or distributors with locations in more than one region. [T3]

The percentage of companies identifying as being in multiple regions may be explained by the large percentage of respondents who reported they were manufacturers (27.5%). Among companies engaged in rollforming, 37.5% of them are builders or contractors and 35% were material dealers, distributors or suppliers. That data generally matches our assumptions about who is using rollforming or metal forming equipment in the construction industry. [T4]

Given the larger market share metal roofing now has in the residential retrofit market, you would expect a large percentage of companies to be doing remodeling work. But a significant amount of the retrofit market is metal shingles, so only manufacturers would be involved in that portion. Still, only about 26.8% of survey takers say a majority of their work is in remodeling. 41.4% percent say more than 60% of their work is new construction, and the remainder (31.7%) report they are

Table T1 – U.S. FABRICATED METAL EMPLOYMENT

	MONTHLY CHANGE (in thousands)											
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2021	1360.9	1362.0	1371.4	1372.1	1374.2	1377.6	1385.9	1386.5	1391.1	1394.9	1404.1	1404.9
2022	1407.8	1415.9	1421.5	1423.3	1429.7	1430.7	1436.4	1438.5	1440.1	1445.9	1445.8	1447.6
2023	1450.0	1449.8	1445.9	1450.2	1450.5	1453.9	1452.0	1455.5	1457.2	1457.0	1460.0	1464.3

Source: U.S. Bureau of Labor Statistics

Table T2 – MARKET SEGMENTS SERVED

	Single-Family Residential	Multifamily	Agricultural	Commercial	Industrial
Percentage	56.4%	53.9%	48.7%	53.9%	46.2%

Source: CSI Certified, Shield Wall Media

Table T3 – ROLLFORMER COMPANY LOCATIONS

Location	East	South	Midwest	West	Canada	National
Percentage	22.5%	25.0%	22.5%	12.5%	5.0%	12.5%

Source: CSI Certified, Shield Wall Media

Table T4 – ROLE IN CONSTRUCTION PROCESS

Roles	Builder or Contractor	Material Dealer, Distributor or Supplier	Manufacturer
Percentage	37.5%	35.0%	27.5%

Source: CSI Certified, Shield Wall Media

Table T5 – PERCENTAGE OF NEW CONSTRUCTION VS. REMODEL

New VS. Remodel	Over 90% New	60-90% New	40-60% New	10-40% New	Less than 10% New
Percentage	14.6%	26.8%	31.7%	19.5%	7.3%

Source: CSI Certified, Shield Wall Media

about half and half new construction and remodeling. T5

The average job size for companies engaged in the rollforming and metal forming market tends to run less than $100,000. Only 24.4% say they have an average job size greater than $100,000 and 41.5% report their job size is less than $25,000. T6

As has been mentioned elsewhere in this report, building materials represent on average about 30% to 35% of a job cost, so companies that use rollforming and metal forming machinery to make materials and do not install them, will have a lower job cost than contractors or distributors who install them.

Table T6 – AVERAGE JOB SIZE

Average Job Size	Less than $25,000	$25,000 to $100,000	Over $100,000
Percentage	41.5%	34.2%	24.4%

Source: CSI Certified, Shield Wall Media

Table T7 – 2023 ANNUAL GROSS SALES: by Region

	ANNUAL SALES					
REGION	Less than $2 million	$2 million to $5 million	$5 million to $10 million	$10 million to $20 million	$20 million to $50 million	Over $50 million
East	0.0%	11.1%	11.1%	22.2%	11.1%	44.4%
South	20.0%	40.0%	10.0%	20.0%	10%	0.0%
Midwest	37.5%	25.0%	0.0%	12.5%	12.5%	12.5%
West	40.0%	20.0%	20.0%	0.0%	20.0%	0.0%
Average	24.4%	24.0%	10.3%	13.7%	13.4%	14.2%

Source: CSI Certified, Shield Wall Media

On average, about half of the respondents who are engaged with rollforming say their annual gross sales in 2023 were less than $5 million. And half of those, or 24.4% of the total, had sales less than $2 million. [T7]

A surprising number of companies reported sales greater than $50 million, and the majority (44.4%) were based in the East. As has been reported in other sections, this region's data has been volatile, and that high number may be swayed by a few respondents.

In the Midwest (37.5%) and the West (40%), the largest cohort of respondents reported annual sales of less $2 million. In the South, survey takers say they had the greatest likelihood of having annual gross sales between $2 and $5 million (40%).

Projected Industry Growth

More than half (51.2%) of companies engaged in rollforming expect the construction economy to improve in 2024 compared to 2023. There were 12.2% of survey takers who expected it to decline with another 24.4% predicting it would stay the same, and another 12.2% who aren't sure what to think.[T8]

Since rollforming is substantially spread across both residential and commercial construction, new and existing buildings, this data isn't surprising. While the single-family market is expected to be up 4.7% in 2024 according to the National Association of Home Builders (NAHB), starts in the multifamily sector are expected to drop nearly 20%. And according to Carlos Martin, project director of the Remodeling Futures Program at the Joint Center for Housing Activities, "Home

Table T8 – 2024 SENTIMENT: About the Construction Industry

Sentiment	Improve	Same	Decline	Unsure
Percentage	51.2%	24.4%	12.2%	12.2%

Source: CSI Certified, Shield Wall Media

Table T9 – 2024 GROWTH SENTIMENT: by Market Segment

	Percentage Growth (compared to 2023)		
MARKET SEGMENT	Increase	Same	Decrease
Residential	43.9%	36.6%	19.5%
Agricultural	51.2%	41.5%	7.3%
Commercial	58.5%	24.4%	17.1%
Industrial	53.7%	29.3%	17.1%

Source: CSI Certified, Shield Wall Media

remodeling will continue to suffer this year from a perfect storm of high prices, elevated interest rates, and weak home sales. These headwinds create considerable uncertainty in the economy, and remodeling spending is projected to fall from $481 billion last year to $450 billion in 2024." That's a 6.5% decrease in activity.

Even the 7% increase on the commercial side, as forecast by Dodge Data and Analytics, may not be enough to calm nerves among companies engaged in rollforming activity.

When we break out by market segment the projected growth among our survey takers, the uncertainty market by market becomes even more evident. The rise in single-family and decline of multifamily explain the predictions about the residential market with 43.9% of respondents saying the residential segment will grow in 2024 and 19.5% predicting a decline. T9

The commercial segment has a more positive feeling among companies engaged in rollforming activity. Better than half (58.5%) project an increase in this market segment, but a still significant percentage (17.1%) anticipate a decline.

In other sections of this report, we have often talked about the relative pessimism among respondents about the agricultural segment. Among companies engaged in rollforming activity, that is flipped on its head. The rollforming respondents are least likely (7.3%) to project a decline in this market compared to the other segments.

Table T10 – 2023 SALES GROWTH: Compared to 2024 Projections

	SALES GROWTH & PROJECTIONS				
YEAR	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 Growth	26.8%	51.2%	19.5%	2.4%	0.0%
Project 2024 Growth	14.6%	48.8%	26.8%	9.8%	0.0%

Source: CSI Certified, Shield Wall Media

Company Size and Growth Projections

We wanted to use the information gained in the CSI data about companies engaged in rollforming activity to compare sales and profitability by market segments served as well as by the roles played in the construction process. However, the response rate fell below a level we felt comfortable about drawing those kinds of comparative conclusions. T10

We can look at a broader view of companies engaged in rollforming activity, though, and how their growth in 2023 compared to their projections for 2024. On the sales growth side of the ledger, 2023 for these companies was generally a strong year. Nearly 80% of the respondents reported their 2023 gross sales were up over 2022, with a strong 26.8% saying they were up significantly. Only 2.4% reported a decline and none of those said sales were down greater than 25%.

The optimism borne of 2023's success isn't carrying through to projections about 2024. Only 63.4% of respondents expected their gross sales to increase and about a quarter as many (14.6%) expected them to increase more than 25%. In 2023, 26.8% of survey takers say gross sales increased more than 25%. Larger percentages of respondents project a flat sales picture (26.8%) and 9.8% anticipate a decline in gross sales.

When looking at unit sales, though, the picture is different. Companies engaged in rollforming activity on the whole expect to increase their unit sales in 2024 at about the same rate as they experienced in 2023. More than 70% reported increases in 2023, and 65.9% project an increase in unit sales in 2024, with the decline coming entirely from companies who experienced significant increases in 2023. T11

Companies engaged in rollforming activity are also less optimistic about 2024 than they reported in 2023. The percentage saying activity will stay the same is down to 22% compared to the 29.3% who reported flat activity in 2023 compared to 2022. 12.2% anticipate a decline this year, where none had reported a decline in 2023.

If gross sales don't increase at the same rate as unit sales, then profitability will suffer because costs of production increase. Sell 10% more units but only see sales go up 5%, it's clear that profits are leaking somewhere on the cost side. Among companies engaged in rollforming activity, respondents reported increases in both gross sales and unit sales in 2023 compared to 2022, and only a small fraction (2.4%) experienced a decline in gross sales, while none had a decline in unit sales. However, nearly 10% of survey takers reported a decline in profitability. For some companies, cost increases were outstripping sales growth, and it shows in these num-

Table T11 – UNIT SALES GROWTH: Compared to 2024 Projections

	SALES GROWTH & PROJECTIONS				
YEAR	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 YOY vs. 2022	29.3%	41.5%	29.3%	0.0%	0.0%
2024 Projected YOY vs. 2023	24.4%	41.5%	22.0%	12.2%	0.0%

Source: CSI Certified, Shield Wall Media

Table T12 – PROFITABILITY GROWTH: Compared to 2024 Projections

	PROFITABILITY GROWTH & PROJECTIONS				
YEAR	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 YOY vs. 2022	17.1%	46.3%	26.8%	7.3%	2.4%
2024 Projected YOY vs. 2023	24.4%	34.2%	24.4%	17.1%	0.0%

Source: CSI Certified, Shield Wall Media

bers. It also shows later when they answer questions about challenges faced, and the biggest issues are related to controlling costs. [T12]

A.J. Manufacturing Inc., Bloomer, Wis., makes windows and doors for the post-frame building industry, but president Todd Carlson addresses the difficulties of unit sales. "Top line growth is unavoidable these days with inflation of all costs of doing business and the increased prices required to maintain strong performance," he says. "Growing in the context of unit volumes and bottom-line performance is the key."

Projecting to 2024, an even larger number of companies anticipate a decline in profitability with 17.1% saying it will be less than 25% year over year. None report a significant decline. Interestingly, 24.4% expect to see a significant increase in profitability, indicating that some companies are adjusting pricing to meet the new cost challenges.

Future Opportunities and Challenges

When asked about their plans to expand, respondents engaged in rollforming activity were relatively consistent across market segments, although they varied by sense of urgency. Roughly, about 65% of respondents say they plan to expand, although only 57.1% of survey takers in the commercial market segment admitted to that. [T13]

Single-family (45.5%) and multifamily (42.9%) companies were more likely to have plans to expand in 2024 than the other segments. In fact, rollforming companies serving the single-family market were far less likely to have plans to expand in the future than the other segments – even commercial – with 18.2% of them reporting they will likely put off expansion. Firms in this market segment who have no plans to expand in 2024 are less likely than other segments to expand later.

There is considerable agreement about what resources are needed in the market. Far and away, rollforming companies are looking to expand into new products or building types (63.6%) and add support employees (62.5%). This matches reporting in other sections where those two plans are at the top, but what is very different is the drop off among percentages saying they plan to add other resources. [T14]

With incredible consistency, the different groups of respondents in the CSI data have plans to add support employees at a much greater rate than they plan to add field workers. For this category, though, which would have a large number of manufacturing and distribution respondents rather than contractors, that makes even more sense. Unless a company is doing product installation, field employees aren't a requirement.

Table T13 – EXPANSION PLANS

	PLANS		
MARKET SEGMENT	Immediate plans to expand in 2024	Future plans to expand (in 2025 or later)	No expansion plans
Single-Family Residential	45.5%	18.2%	36.4%
Multifamily	42.9%	23.8%	33.3%
Agricultural	36.8%	26.3%	36.8%
Commercial	33.3%	23.8%	42.9%
Industrial	38.9%	27.8%	33.3%

Source: CSI Certified, Shield Wall Media

Table T14 – PLANS TO ADD RESOURCES IN 2024

	MARKET SEGMENT					
RESOURCES	Single-Family Residential	Multifamily	Agricultural	Commercial	Industrial	Average
New products or building types	63.6%	61.9%	68.4%	57.1%	66.7%	63.6%
Employees (support)	59.1%	57.1%	79.0%	61.9%	55.6%	62.5%
Employees (construction)	40.9%	42.9%	21.1%	28.6%	33.3%	33.3%
Jobsite equipment	50.0	33.3%	31.6%	23.8%	27.8%	33.3%
Metal forming equipment	36.4%	33.3%	15.8%	33.3%	44.4%	32.7%
Real estate of facilities	36.4%	23.8%	26.3%	33.3%	38.9%	31.7%
Manufacturing equipment	27.3%	23.8%	31.6%	38.1%	33.3%	30.8%
Capital equipment	22.7%	23.8%	36.8%	19.1%	22.12%	24.9%
Material handling equipment	27.3%	23.8%	26.3%	19.1%	27.8%	24.8%
No plans to add resources	22.7%	9.5%	10.5%	14.3%	11.1%	13.6%
Trucks	18.2%	4.8%	5.3%	9.5%	16.7%	10.9%

Source: CSI Certified, Shield Wall Media

Table T15 – CHALLENGES IN 2024

	MARKET SEGMENT					
CHALLENGES	Single-Family Residential	Multifamily	Agricultural	Commercial	Industrial	Average
Finding employees	77.27%	61.90%	73.68%	76.19%	66.67%	69.6%
Cost of materials	63.64%	66.67	57.89%	76.19%	66.67%	66.9%
Inflation	72.73%	52.38%	63.16%	61.90%	61.11%	59.6%
Interest rates	63.64%	47.62%	63.16%	57.14%	50.00%	54.5%
Rising employee related expenses	63.64%	52.38%	57.89%	52.38%	44.44%	51.8%
Retaining employees	59.09%	47.62%	63.16%	47.62%	44.44%	50.7%
Domestic politics and policy	59.09%	42.86%	36.84%	52.38%	55.56%	46.9%
Material availability	45.45%	42.86%	31.58%	42.86%	44.44%	40.4%
Cost of energy and transportation	40.91%	38.10%	42.11%	38.10%	38.89%	39.3%
Suply Chain Issues	36.36%	23.81%	26.32%	28.57%	44.44%	30.8%

Source: CSI Certified, Shield Wall Media

About a third of respondents from companies engaged in rollforming activity say they plan to add field employees, jobsite equipment, metal forming equipment, real estate or facilities, and manufacturing equipment. Roughly a quarter anticipate adding capital equipment and material handling equipment.

It's all about controlling costs. That's the challenge for the respondents to the survey who are engaged in rollforming activity. They may rate finding employees (69.6%) as the biggest challenge but the next four challenges are all cost control issues with rising cost of materials (66.9%) leading the way followed by dealing with inflation (59.6%), adjusting to higher interest rates (54.5%), and managing rising employee-related expenses (51.8%). [T15]

The shortage of skilled labor comes back into the equation where 50.7% of our survey takers say retaining employees is a challenge. As employee wages increase, staff can get a wandering eye, looking for the better opportunity down the road. Keeping them happy in the workplace is becoming increasingly important. As everyone has learned, the cost of hiring a new employee far outstrips the cost of retaining an already trained one.

The other issue that seems to be on the front of respondent's minds is material availability (40.4%) and its related cousin, supply chain issues (30.8%). The days of long lead times seem to be mostly in the past, and contractors who were stockpiling supplies have begun to rely on their suppliers for their warehousing again. But the concerns don't seem to have disappeared completely.


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SECTION 7

GARAGE, SHED AND CARPORT CONSTRUCTION DATA

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SECTION 7

GARAGE, SHED AND CARPORT CONSTRUCTION DATA

There is at the end of every supply chain in the construction industry a consumer, but in the garage, shed, and carport sector of the industry, the distance between the top of the chain and the bottom is condensed. Because of that, the issues facing companies engaged in this sector are different than those in other sectors. Although financing is obviously part of almost every construction project, in this sector financing greases the wheels and helps sell the product. A lot has changed in the industry and much of that is in the details.

The garage, shed, and carport construction industry is primarily a straight to consumer business that relies heavily on a direct sales business model supported by consumer financing. In many ways, it's similar to the specialty remodeler industry that provides retrofit roofing, siding, and windows, but with a more heavily involved manufacturer component.

Characteristics of the Shed and Carport Industry

The respondents to the Construction Survey Insights (CSI) survey who are engaged in garage, shed, and carport construction work primarily in the single-family residential market segment with 71.1% of them indicating that. The next closest market segment was commercial (50%) and that was about equal to the 47.4% who identified the agricultural market segment as an area they serve. A surprising number work in multifamily (34.2%), although when we looked at companies whose identified business was garage, shed, and carport as their primary business, two thirds of them served single-family residential. T1

Our general sense of companies engaged in garage, shed, and carport construction is they tend to be more rural and more often based in the South or the Midwest. That is partially shown in the results from our survey takers, of whom about a third (32.5%) say they are in the Midwest, a quarter from the West, and 22.5% from the South. The East is not a strong market for companies engaged in garage, shed, and carport construction, and only 20% of our respondents report their companies were from that region. T2

Most of the survey respondents in the CSI data who are engaged in garage, shed, and carport construction are contractors (48.7%). There is a blending of roles in this construction sector, though, and designers could work for a contractor, distributor, or manufacturer. And, since there has been considerable consolidation of the supply chain, a company could fill all of these roles. Design the structure, make, it, distribute it, then sell and install it. All under one roof. T3

About a quarter of our respondents (25.6%) were designers, and 18% were manufacturers. Only 7.7% of our respondents engaged in garage, shed, and carport construction identified as distributors, which is the step in the supply chain that is most likely to have been consolidated in this market sector.

More than half (55%) of survey takers engaged in garage, shed, and carport construction say at least 60% of their business is new construction and 17.5% report at least 90% is new. These kinds of buildings get little remodel work done on them to speak of other than maintenance and repair, so the high percentage of respondents reporting their business is primarily new construction is not a surprise. T4

But these businesses may be involved in other aspects of construction to some extent, and it's there that they are more likely to do remodeling. Or a garage, shed, or carport was, perhaps, part of a remodeling project. To that end, only 20% say less than 10% of their work is new, and a quarter report that between 10% and 60% is new.

The average job size for companies engaged in garage, shed, and carport construction is overwhelmingly on the small side. 45% of them report an average job size of less than $25,000 and 37.5% indicate their average job size was between $25,000 and $100,000. The range between 25,000 and 100,000 is quite large, and it would be possible for a significant percentage of respondents to have an average job size at the lower end of that range. The percentages above $100,000 would seem to indicate that the percentages at the top of the $25,000 to $100,000 may be thinning considerably. The 12.5% who say they have an average job size of greater than $500,000 may be doing ad-

Table T1 – MARKET SEGMENTS SERVED

Market Segment	Single-Family Residential	Multifamily	Agricultural	Commercial	Industrial
Percentage	71.1%	34.2%	47.4%	50.0%	31.6%

Source: CSI Certified, Shield Wall Media

Table T2 – COMPANY LOCATION

Location	East	South	Midwest	West	Canada	National
Percentage	20.0%	22.5%	32.5%	25.0%	2.6%	10.3%

Source: CSI Certified, Shield Wall Media

Table T3 – ROLE IN CONSTRUCTION PROCESS

Roles	Designer	Builder or Contractor	Material Dealer, Distributor or Supplier	Manufacturer
Percentage	25.6%	48.7%	7.7%	18.0%

Source: CSI Certified, Shield Wall Media

Table T4 – PERCENTAGE OF NEW CONSTRUCTION VS. REMODEL

New VS. Remodel	Over 90% New	60-90% New	40-60% New	10-40% New	Less than 10% New
Percentage	17.5%	37.5%	12.5%	12.5%	20.0%

Source: CSI Certified, Shield Wall Media

Table T5 – AVERAGE JOB SIZE

Average Job Size	Less than \$5,000	\$5,000 to \$10,000	\$10,000 to \$25,000	\$25,000 to \$100,000	\$100,000 to \$500,000	\$500,000 to \$1 million	Over \$1 million
Percentage	17.5%	15.0%	12.5%	37.5%	5.0%	7.5%	5.0%

Source: CSI Certified, Shield Wall Media

ditional work, or their sale of a garage, shed, or carport may be part of a larger project. T5

Projected Industry Growth

Financing is tightly intertwined with selling garages, sheds, and carports. Homeowners often finance through the company making the sale, borrow against the equity in their house, or take out a line of equity loan (HELOC). As 30-year and 15-year fixed mortgage rates have risen since their low in Jan. 2021, the cost of financing has increased. A 30-year fixed mortgage rate has gone from 2.65% in Jan. 2021 to a peak of 7.79% in Oct. 2023, which is more than doubling the cost of borrowing related to home improvement. T6

While hopes for 2024 were initially promising, the latest meeting of the Federal Reserve in March 2024, put a bit of a damper on that. Policymakers had hoped to see a decline in the target interest rate but the Fed is waiting to see inflation get closer to its goal of 2%.

Following the meeting, Fannie Mae announced its earlier prediction of the 30-year fixed rate dropping to 5.9% by the end of 2024 was being revised. The organization now believes 2024 will end with a rate of 6.4%. The Fed continues to signal rate cuts are coming, but until that actually happens the cost of borrowing money will remain higher than it has been in 23 years. And the garage, shed, and carport market will need to overcome those price objections.

The concern about the cost of money could also explain why the general sentiment toward the construction industry among companies engaged in garage, shed, and carport construction is not very positive. About a third believe the industry will improve in 2024, while 30% think it will stay the same and 30% also think it will decline. The percentage who are unsure about what will happen probably speaks to the uncertainty about the economy. In spite of relatively high consumer sentiment, strong employment, and overall growth, the worries about inflation and rising costs are seeping into all of the conversations in the construction industry. This can be seen clearly in the "Challenges" part of this section below. T7

Table T6 – MORTGAGE RATES: (Jan. 2021 through Dec. 2023)

	30 YEAR FIXED RATE PERCENTAGE (Month Ending)											
YEAR	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
2021	2.73	2.97	3.17	2.98	2.95	3.02	2.80	2.87	3.01	3.14	3.10	3.11
2022	3.55	3.89	4.67	5.10	5.10	5.70	5.30	5.55	6.70	7.08	6.58	6.42
2023	6.13	6.50	6.32	6.43	6.57	6.71	6.81	7.18	7.13	7.79	7.22	6.61

	15 YEAR FIXED RATE PERCENTAGE (Month Ending)											
YEAR	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
2021	2.20	2.34	2.45	2.31	2.27	2.34	2.10	2.17	2.28	2.37	2.42	2.33
2022	2.80	3.14	3.83	4.40	4.31	4.83	4.58	4.85	5.96	6.36	5.90	5.68
2023	5.17	5.76	5.56	5.71	5.97	6.06	6.11	6.55	6.72	7.03	6.56	5.93

Source: Freddie Mac

Table T7 – 2024 SENTIMENT: About the Construction Industry

Sentiment	Improve	Stay the same	Decline	Unsure
Percentage	32.5%	30.0%	30.0%	7.5%

Source: CSI Certified, Shield Wall Media

Table T8 – 2024 GROWTH SENTIMENT: by Market Segment

	GROWTH (Compared to 2023)		
MARKET SEGMENT	Increase	Same	Decrease
Residential	35.0%	32.5%	32.5%
Agricultural	43.6%	35.9%	20.5%
Commercial	52.5%	25.0%	22.5%
Industrial	52.5%	30.0%	17.5%

Source: CSI Certified, Shield Wall Media

Table T9 – 2023 GROSS SALES: by Market Segment

	GROSS SALES (Compared to 2022)		
MARKET SEGMENT	Increase	Same	Decrease
Single-Family Residential	55.6%	29.6%	14.8%
Multifamily	69.2%	23.1%	7.7%
Agricultural	50.0%	22.2%	27.8%
Commercial	47.4%	31.6%	21.1%
Average	55.5%	26.6%	19.3%

Source: CSI Certified, Shield Wall Media

When looking at what companies engaged in garage, shed, and carport construction think will happen to individual market segments in 2024, there are clear winners. 52.5% of our respondents in this sector think the industrial market segment will see an increase in activity in 2024. There are not a lot of companies in this part of the survey who are working in the industrial segment, so this may be a case of the grass looks greener on the other side of the fence effect. T8

The same could be said about the commercial market segment, where 52.5% of survey takers believe it will increase in activity in 2024. Again this sector of the industry is less focused on commercial construction so those sentiments may be taken with a grain of sand.

Garage, shed, and carport companies are, though, heavily involved in the single-family residential market, and it is there that they see less activity. The National Association of Home Builder (NAHB) has forecast that single-family starts will increase 4.6% in 2024, which is after a decline of 8.6% in 2023. That was the prevailing view when this survey was taken, and our respondents in the garage, shed, and carport industry were far less optimistic than that forecast suggest they should be. Only 35% of survey takers expected an increase in this market segment, while a third expected a decline.

Among companies engaged in garage, shed, and carport construction, there are some market segments that performed better in 2023 than they did in 2022. In other sections of this report, we have divided the growth into five categories (up significantly, up somewhat, stayed the same, etc.) but responses to this sector only allowed us to characterize these movements as up, same, or down. T9

In keeping with other sections, the multifamily market is the area where companies engaged in garage, shed, and carport construction were the most likely to see an increase in activity in 2023 compared to 2022 with 69.2% reporting a jump in work in that market segment. Averaging across all segments, the percentage of companies reporting an increase was 55.5%, so the 55.6% percent of companies reporting an increase in the single-family market segment was right about the average.

Again, keeping with the sentiment across this CSI data, the companies serving the agricultural segment were most likely to see a decline in gross sales in 2023, with 27.8% reporting as such, but half of the companies serving this market segment also saw an increase.

Projecting gross sales in 2024 compared to 2023, companies serving the multifamily market again were the most optimistic with 53.8% expecting an increase in gross sales and none anticipating a decline. The companies engaged in garage, shed, and carport construction in the agricultural market were the most pessimistic, with 35.3% anticipating a decline, which was equal to the percentage who expect an increase in gross sales in 2024. T10

Looking at the average likelihood of decline across the market segments, it's apparent that the companies serving multifamily and agricultural are tugging the average in opposite directions, while single-family (26.9%) and commercial (26.3%)

hold almost the same likelihood of decline in those segments.

Companies engaged in this sector are less likely to see gross sales increases in the single-family market segment (42.3%) but much more likely to anticipate growth than those in agricultural (35.3%) or commercial (316%).

When addressing profitability among companies engaged in garage, shed, and carport construction, those serving the multifamily market were not nearly as likely to report increases as they did gross sales increases. Again, it sounds like a story often repeated, but across the board, we are seeing companies getting more sales but struggling to hold the line on profitability in light of rising costs. The good news here is that companies in this segment were largely able to hold their profitability the same in 2023 as 2022 with about half (48.8%) on average saying profits had remained steady. T11

The respondents serving the agricultural market segment were least likely to say profitability held steady (38.9%) and most likely to say profits declined in 2023 year over year (27.8%). The residential market was the segment where companies were most likely to report increases in profitability with 40.7% of companies serving the single-family market saying profits increased last year, and 46.2% of companies serving the multifamily market saying they will increase year over year.

You have to give it to those companies serving the multifamily market and their wild optimism. 61.5% of companies engaged in garage, shed, and carport construction who serve this market segment anticipate profits will increase in 2024 compared to 2023. And only 7.7% expect profitability to decline. T12

The companies serving the other market segments don't come anywhere near as close to being that optimistic. In fact, compared to other sectors of this report, these respondents were far less likely to believe they could hold the line on profitability in 2024. Those serving the agricultural market were the least optimistic with 38.9% expect-

Table T10 – 2024 PROJECTED GROSS SALES: Compared to 2023 by Market Segment

	GROSS SALES		
MARKET SEGMENT	Up	Same	Down
Single-Family Residential	42.3%	30.8%	26.9%
Multifamily	53.8%	46.2%	0.0%
Agricultural	35.3%	29.4%	35.3%
Commercial	31.6%	42.1%	26.3%
Average	40.8%	37.1%	21.0%

Source: CSI Certified, Shield Wall Media

Table T11 – 2023 PROFITABILITY: Compared to 2022 by Market Segment

	PROFITABILITY		
MARKET SEGMENT	Up	Same	Down
Single-Family Residential	40.7%	44.4%	14.8%
Multifamily	46.2%	53.9%	0.0%
Agricultural	33.3%	38.9%	27.8%
Commercial	26.3%	57.9%	15.8%
Average	36.6%	48.8%	13.3%

Source: CSI Certified, Shield Wall Media

Table T12 – 2024 PROJECTED PROFITABILITY: Compared to 2023 by Market Segment

	PROJECTED PROFITABILITY (Compared to 2023)		
MARKET SEGMENT	Up	Same	Down
Single-Family Residential	40.7%	37.0%	22.2%
Multifamily	61.5%	30.8%	7.7%
Agricultural	33.3%	27.8%	38.9%
Commercial	36.8%	31.6%	31.6%
Average	43.1%	31.8%	26.7%

Source: CSI Certified, Shield Wall Media

ing to see decline profitability and only a third anticipating an increase.

The single-family residential market companies, in spite of seeing the 4.8% rise in housing starts NAHB has predicted, are only likely to anticipate a rise in profitability (40.7%) in 2024 that's equal to what they experienced in 2023. More than half the companies serving the commercial market kept profitability the same in 2023 as 2022 (57.9%) but only 31.6% of them project keeping profits the same in 2024 as 2023. 15.8% of these suffered a decline in profits in 2023, but 31.6% expect to see profits decline in 2024. T11 & T12

Company Size and Growth Projections

Companies engaged in garage, shed, and carport construction generally experienced a good sales year in 2023 in spite of the increasing cost of money. Those reporting increases in gross sales last year were about half (47.5%) of the respondents, with 20% of them saying sales were up more than 25%. About a third (35%) say sales will be even year over year, and 17.5% experienced a decline, although none of the survey takers say sales dropped more than 25%. T13

As has been shown earlier, this group – companies engaged in garage, shed, and carport construction – are not as positive about 2024 prospects as others. A still decent percentage (41.1%) say sales will increase this year, but only 10.3% anticipate a significant increase. About the same percentage expect sales to remain constant in 2024 as those who experience steady sales in 2023. But a much larger percentage (23.1%) see a decline in sales coming down the road this year.

None of our respondents experienced a large decline in 2023, and none expect a greater than 25% decline in sales in 2024.

The profit story for this side of the industry is a different matter than sales. Of companies engaged in garage, shed, and carport construction, 40% report an increase in profits in 2023 compared to 47.5% who said sales were up. When you compare significant increases, only 12.5% report profits jumped more than 25% in 2023, but 20% say sales jumped more than 25%. Clearly, issues with controlling costs in light of inflation and other pressures hurt profitability in 2023. This is especially evident among the 2.5% of respondents who say they had profits decline more than 25% in 2023. None, as was said earlier, had a similar sales decline. T13 & T14

Looking to 2024, the connection between sales and profits seems to have aligned. 35% of our respondents working in the garage, shed, and carport construction sector expect 2024 profits to hold the same, which closely matches the number who expect sales to hold the same. Where 41.1% expect sales to increase in 2024, a nearly identical percentage of 42.5% expect profits to increase. But a far greater percentage (15%) expect profits to increase significantly compared to the 10.3% who anticipate a greater than 25% jump in sales.

On the other end of the spectrum, 22.5% of our survey takers think profits will decline in 2024, which is a larger percentage than those who experienced a decline in 2023 (15%). It does, though, roughly match the percentage who expect a decline in sales (23.1%). None expect a significant decline in profits.

Table T13 – SALES GROWTH

	SALES GROWTH (Compared to 2024 Projections)				
GROSS SALES/YEAR	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 YOY vs. 2022	20.0%	27.5%	35.0%	17.5%	0.0%
2024 Projected YOY vs. 2023	10.3%	30.8%	35.9%	23.1%	0.0%

Source: CSI Certified, Shield Wall Media

Future Opportunities and Challenges

Companies doing garage, shed, and carport construction are, on the whole, less likely to have expansion plans than companies in other sectors of the industry, such as metal roofing or post-frame construction. This is regardless of the market segment they serve with the exception of the growth-oriented respondents in the multifamily market where only 30.8% of companies have no plans to expand. For the other segments – single-family, agricultural, and commercial – more than half of survey-takers say they have no plans to expand. T15

There is a consistent response among all four segments when looking at plans to expand in 2024. Between 22% and 26% of companies by segment have immediate plans for expansion. The biggest difference among the market segments is that companies in multifamily are more likely to want to expand in the future (46.2%) and less likely (30.8%) to have no plans to expand.

On average, about half of the companies engaged in garage, shed, and carport construction mentioned a need to add new products or building types (49.7%) and support employees (48.8%) when asked about future resource needs. Adding new products is more likely among companies serving the multifamily market (53.5%) than it is among companies in the commercial market (42.1%). Multifamily companies are also more likely to address shortages in field employees (46.2%) than the other market segments. T16

There has been consistency from sector to sector in the responses by market segment. New products has been the resource companies are most likely to add, and adding support employees is often the second most likely resource to be identified.

In keeping with the trend, the demand for skilled labor is not the top needed resource among companies engaged in garage, shed, and carport construction. Carlson of A.J. Manufacturing digs into this issue a little deeper. "The current situation as it relates to work ethic, aspiration to improve, or achieve personal goals, in general, is of concern," he says. "Many individuals simply do not have the skills, fundamental understanding, or examples to learn from to be employees that contribute regularly while consistently improving. Many employees are good but are fewer and more difficult to find than ever."

Making an appearance on this list at a higher level than in other sectors is the option not to add any resources. About a quarter (23%) on average said they didn't plan to add resources, and among companies serving the single-family market that was 37%.

While companies engaged in garage, shed, and carport construction don't have plans to add employees at the rate of companies in other sectors, they do see employee-related issues as the three largest challenges they face. On average, 62.9% of companies in this sector say retaining employees is the biggest challenge, while 57.5% say controlling rising employee costs is a challenge, and 54.7% say finding employees is a challenge. Those three challenges are interrelated. Rising employee costs have to do with increasing wage demands as wages in the economy rise and other industries can now compete with construction. If a barista can make $20 per hour with benefits, paying a laborer $40,000 per year with limited benefits is

Table T14 – YEAR-OVER-YEAR PROFITABILITY GROWTH

	PROFITABILITY GROWTH PROJECTIONS				
YEAR	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 YOY vs. 2022	12.5%	27.5%	45.0%	12.5%	2.5%
2024 Projected YOY vs. 2023	15.0%	27.5%	35.0%	22.5%	0.0%

Source: CSI Certified, Shield Wall Media

Table T15 – EXPANSION PLANS

	PLANS		
MARKET SEGMENT	Immediate plans to expand in 2024	Future plans to expand (in 2025 or later)	No expansion plans
Single-Family Residential	22.2%	25.9%	51.9%
Multifamily	23.1%	46.2%	30.8%
Agricultural	22.2%	22.2%	55.6%
Commercial	26.3%	21.1%	52.6%

Source: CSI Certified, Shield Wall Media

Table T16 – PLANS TO ADD RESOURCES IN 2024

	MARKET SEGMENT				
RESOURCES	Single-Family Residential	Multifamily	Agricultural	Commercial	Average
New products or building types	44.4%	53.9%	50.0%	42.1%	49.7%
Employees (support)	37.0%	53.9%	38.9%	47.4%	48.8%
Employees (construction)	33.3%	46.2%	22.2%	26.39%	30.6%
Real estate of facilities	25.9	30.8%	22.2%	31.6%	30.4%
Jobsite equipment	37.0%	23.1%	22.2%	26.39%	28.4%
No expansion or addition plans	37.0%	15.4%	33.3%	21.19%	23.0%
Capital equipment	18.5%	15.4%	11.1%	15.8%	18.8%
Trucks	22.2%	15.4%	11.1%	15.8%	16.2%
Manufacturing equipment	14.8%	7.7%	11.1%	15.8%	13.2%
Material handling equipment	11.1%	7.7%	5.6%	3.3%	9.3%

Source: CSI Certified, Shield Wall Media

Table T17 – CHALLENGES IN 2024

	MARKET SEGMENT				
CHALLENGES	Single-Family Residential	Multifamily	Agricultural	Commercial	Average
Retaining employees	59.3%	61.5%	72.2%	63.2%	62.9%
Rising employee related expenses	51.9%	61.5%	61.1%	63.2%	57.5%
Finding employees	55.6%	46.2%	55.6%	57.9%	54.7%
Inflation	51.9%	53.9%	50.0%	57.9%	54.4%
Cost of Materials	59.3%	53.9%	55.6%	52.6%	54.3%
Interest rates	40.7%	38.5%	50.0%	47.4%	45.3%
Domestic politics and policy	37.0%	38.5%	38.9%	36.8%	40.2%
Cost of energy and transportation	40.7%	38.5%	38.9%	47.4%	39.8%
Suply Chain Issues	33.3%	38.5%	38.9%	36.8%	39.5%
Material availability	40.7%	38.5%	38.9%	36.8%	39.3%

Source: CSI Certified, Shield Wall Media

tough competition. So, keeping employees is the most important element of human resources. Finding employees when unemployment is at record lows is also a daunting challenge. T17

Not only are those three challenges connected, they are all influenced by the other challenges companies engaged in garage, shed, and carport construction face. Inflation well above the Fed-targeted 2%, rising costs of materials, and interest rates going up impact a company's ability to plan and manage. Interest rates affect both a company's ability to borrow money for capital expansion or establish a line of credit, while making it more difficult for consumers to finance the products the company sells. Supply chain issues and material availability continue to be challenges that haunt the construction industry with roughly 39% of companies in this sector citing those as challenges.

SECTION 8

COLD-FORMED METAL BUILDINGS CONSTRUCTION DATA

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SECTION 8

COLD-FORMED METAL BUILDINGS CONSTRUCTION DATA

Versatility, ease of construction, and convenience make cold-formed steel buildings excellent options for outbuildings such as equipment sheds, garages, or machine shops. But the growing barndominium market has pushed this building type in new directions, and shown how truly versatile it can be. Clean, smart residential areas combined with flexible open-span spaces make it perfectly designed to meet the needs of these consumers.

The cold-formed metal buildings market is growing and more than half of our survey respondents expect 2024 to be a good year across all market segments with about half reporting growth and only a small percentage anticipating a decline in any of the segments. For this report, we will refer to these as metal buildings, but they should not be confused with pre-engineered metal buildings (PEMB) – also called metal building systems – which use heavy red-iron as a framing system, not cold-formed steel.

Characteristics of the Cold-formed Metal Buildings Industry

Companies engaged in metal buildings serve all the market segments across the construction industry but they are most heavily involved in single-family residential construction (56.3%) followed by agricultural (47.9%). That matches up with our general perceptions about these buildings and their uses. They fit in with single-family work and are quite popular in agricultural communities. There are far fewer companies serving the agricultural community than single-family, so it would be unlikely that these companies would serve the agricultural market at a higher percentage. T1

The commercial market (41.7%) ranks just behind agricultural in market segments served followed by a near tie between multifamily (37.5%) and industrial (35.4%).

The Construction Survey Insights (CSI) data show that the Midwest (29.2%) had the most respondents among companies engaged in metal buildings followed by the South (27.1%) and the East (22.9%). Representation from companies in the West (12.5%) was much lower. While we have been able to show breakouts by regions in other sections of this report, the lower response rate among metal building companies from the West makes that data less reliable. We also had a few survey takers reporting from Canada (2.1%) and some identified as national firms (6.3%), meaning they served more than one U.S. region. T2

Table T1 – MARKET SEGMENTS SERVED

Market Segment	Single-Family Residential	Multifamily	Agricultural	Commercial	Industrial
Percentage	56.3%	37.5%	47.9%	41.7%	35.4%

Source: CSI Certified, Shield Wall Media

Table T2 – COMPANY LOCATION

Location	East	South	Midwest	West	Canada	National
Percentage	22..9%	27.1%	29.2%	12.5%	2.1%	6.3%

Source: CSI Certified, Shield Wall Media

Table T3 – ROLE IN CONSTRUCTION PROCESS

Roles	Designer	Builder or Contractor	Material Dealer, Distributor or Supplier	Manufacturer
Percentage	29.8%	46.8%	6.4%	17.0%

Source: CSI Certified, Shield Wall Media

Table T4 – PERCENTAGE OF NEW CONSTRUCTION VS. REMODEL

New VS. Remodel	Over 90% New	60-90% New	40-60% New	10-40% New	Less than 10% New
Percentage	14.3%	32.8%	26.5%	18.4%	8.2%

Source: CSI Certified, Shield Wall Media

Table T5 – AVERAGE JOB SIZE

Average Job Size	Less than $5,000	$5,000 to $10,000	$10,000 to $25,000	$25,000 to $100,000	$100,000 to $500,000	$500,000 to $1 million	Over $1 million
Percentage	4.1%	10.2%	18.4%	22.5%	24.5%	10.2%	10.2%

Source: CSI Certified, Shield Wall Media

Since 17% of our respondents who are engaged in metal buildings are manufacturers, the representation among national companies can be explained in part by that. The largest number of respondents were builders or contractors – those doing the actual installation work. In some circles, this portion of the supply chain is called "sell, furnish, and install," meaning they are the point people for the connection with the buyer. We do have a few distributors (6.4%) survey takers, but in this market sector the contractors tend to get the materials directly from the manufacturer. Designers are involved in metal buildings, of course, but since most of these buildings are off-the-shelf solutions, the involvement of designers is more limited, and may be associated with the manufacturers or design-build construction firms. The rise of the barndominium market does bring in more designer involvement. T3

Nearly half (47.1%) of the respondents engaged in the metal building sector say more than 60% of their construction is new with 14.3% of the total saying almost all their work (more than 90%) is new. About a quarter of the respondents (26.5%) tell us their work is nearly evenly split between new and remodeling. And about a quarter (26.6%) say less than 40% of their work is new. Only 8.2% say less than 10% is new construction. Little remodeling work is done on these kinds of buildings other than maintenance and repair, but companies in this sector also have other services they provide, especially in rural areas where specializing is much more difficult. T4

Slightly over half (55.2%) of respondents engaged in metal buildings say their average job size is less than $100,000, and a third (32.7%) say it's less than $25,000. The number claiming average job size under $5,000 (4.1%) likely do mostly maintenance and repair work with some small retrofit projects. T5

The sweet spot for barndominiums is likely in the $100,000 to $500,000 range and that's where about a quarter of our respondents (24.5%) report their average job size lands. The large jobs, those over $500,000, certainly include more work than just the metal building so those projects likely include a metal building as part of the scope.

Projected Industry Growth

The companies engaged in metal buildings are actually pretty bullish on the prospects for the overall construction market in 2024 compared to other sectors. 42.9% of them think the construction market will improve and 34.7% expect it to stay the same. With Dodge Data and Analytics forecasting a 7% increase in commercial and construction work in 2024, you might expect there to be even more optimism, but the National Association of Home Builders (NAHB) has downplayed growth in residential, especially multifamily, where NAHB

Table T6 – 2024 SENTIMENT: About Construction Industry

Sentiment	Improve	Same	Decline	Unsure
Percentage	42.9%	34.7%	14.3%	8.2%

Source: CSI Certified, Shield Wall Media

expects starts will plummet 19.7%. Add remodeling activity as forecast by the Remodeling Futures Program at Joint Center for Housing Studies, and you find another 6.5% decline in construction activity, so maybe the 42.9% of respondents who think the industry will improve are very optimistic. T6

When you look at where companies engaged in metal buildings think the growth in the market will come from in 2024, the finger points clearly at the industrial segment, where 59.2% of respondents anticipate an increase in the market. But there is positive sentiment in the agricultural market with 53.1% of survey takers anticipating an increase in activity as well as the commercial market where 57.1% of respondents look for a better market. T6

Only in the residential market do less than half the companies engaged in metal buildings say the market will increase with 42.9% predicting an uptick while 46.9% of respondents think this market segment will hold the same. The variation among survey takers who think any of these market segments will decline is relatively small. Between 6% and 10% of companies engaged in metal buildings believe these segment will prove to be poorer markets in 2024 than they were in 2023.

In spite of all the disruptions to the supply chain during the COVID-19 pandemic, it wasn't until the beginning of 2021 when cold-form steel prices started to rise. Until then, the producer price index (PPI) had remained steady around 250 until the end of 2020, then it began it's sharp increase. Based on a 1982 index that equals 100, the PPI for cold-rolled steel jumped to 711.611 in Nov. 2021 then dropped over 2022 to reach a low point of 319.632 in Jan. 2023. Since then, the price has fluctuated, rising up during the Summer, coming back down in the Fall only to see another increase at the end of 2023. As of Feb. 2024, the index sits at 454.090, which is more than an 80% increase over the Jan. 2021 PPI. T8

Table T7 – 2024 GROWTH SENTIMENT: by Market Segment

	GROWTH (Compared to 2023)		
MARKET SEGMENT	Increase	Same	Decrease
Residential	42.9%	46.9%	10.2%
Agricultural	53.1%	36.7%	10.2%
Commercial	57.1%	36.7%	6.1%
Industrial	59.2%	32.7%	8.2%

Source: CSI Certified, Shield Wall Media

Table T8 – COLD-ROLLED STEEL PRODUCER PRICE INDEX

RATE BY MONTH

YEAR	JAN	FEB	MAR	APR	MAY	JUN
2021	250.100	273.500	377.900	478.900	482.600	506.700
	JUL	AUG	SEP	OCT	NOV	DEC
	621.968	634.059	650.288	701.663	711.611	707.578

YEAR	JAN	FEB	MAR	APR	MAY	JUN
2022	680.415	558.327	493.301	526.227	621.448	563.489
	JUL	AUG	SEP	OCT	NOV	DEC
	522.493	507.982	441.036	368.249	356.160	349.378

YEAR	JAN	FEB	MAR	APR	MAY	JUN
2023	319.632	329.742	339.953	377.689	396.966	409.487
	JUL	AUG	SEP	OCT	NOV	DEC
	396.537	389.174	361.759	360.958	361.070	413.808

Source: CSI Certified, Shield Wall Media

The PPI is a great indicator of the kinds of cost pressures everyone on the metal building supply chain is facing, which leads to more pressure on profits.

About three quarters (75.1%) of companies engaged in metal buildings saw an increase in gross sales in 2023, and roughly the same percentage of respondents report increases in each of the market segments with the exception of agricultural. Between 73% and 80% saw their gross sales increase in single-family, multifamily, commercial, and industrial market segments, but only 62.5% of survey takers saw an increase in gross sales in the agricultural market in 2023 compared to 2022. T9

Table T9 – 2023 GROSS SALES: by Market Segment

MARKET SEGMENT	INDUSTRY GROWTH (Compared to 2022) Increase	Same	Decrease
Single-Family Residential	80.0%	20.0%	0.0%
Multifamily	77.8%	18.5%	3.7%
Agricultural	62.5%	25.0%	12.5%
Commercial	80.0%	20.0%	0.0%
Industrial	73.7%	15.8%	10.5%
Average	75.1%	19.9%	5.3%

Source: CSI Certified, Shield Wall Media

Table T10 – 2024 PROJECTED SALES: by Market Segment

	INDUSTRY GROWTH (Compared to 2023)		
MARKET SEGMENT	Increase	Same	Decrease
Single-Family Residential	76.0%	16.0%	8.0%
Multifamily	74.1%	18.52%	7.4%
Agricultural	62.5%	5.25%	31.3%
Commercial	60.0%	30.0%	10.0%
Industrial	68.4%	21.05%	10.5%
Average	68.1%	18.4%	13.4%

Source: CSI Certified, Shield Wall Media

Very few survey takers experienced declines, with an average across all market segments of 5.3% reporting lower gross sales. Again, agriculture was the troublesome market segment where the most respondents (12.5%) said their annual sales went down in 2023.

Looking to 2024, respondents were less optimistic about their company's growth in sales in 2024 with only 68.1% of them on average expecting to see an increase while 13.4% anticipate a decline. This time, though, companies serving the commercial segment were the ones more pessimistic than the other market segments. Only 60% of them report they are planning for an increase in sales. At first glance that looks like a more negative sentiment than the other market segments until you look at which areas respondents think will decline. Overwhelmingly compared to other segments, companies serving the agricultural market expect gross sales to decline in 2024 year over year (31.3%). In fact, respondents in the agricultural market generally expect either an increase or a decline; only 5.25% think sales will remain the same. T10

The other three segments – single-family, multifamily, and industrial – all have survey-takers reporting roughly similar expectations with the residential markets having a little higher percentage who think their business will grow.

On average, 65.8% of respondents to the CSI say their profits increased in 2023 compared to 2022. That is fewer than report sales increased (75.1%) and can probably be attributed to the difficulty of controlling costs during this period of higher inflation and rising interest rates the U.S. economy has experienced. It sounds negative, so it's important to show that sales and profits did increase or stay the same for a vast majority of our respondents in 2023 compared to 2022 and only 3% saw a decline in profitability. T11

Looking at different market segments, again agriculture respondents (56.3%) were least likely to see increased profits, and multifamily were the most likely (74.1%). Only 6.3% of metal buildings serving the agricultural market report profit declines in 2023 with 5.3% of respondents in commercial seeing declines, making it the second highest segment reporting declines.

As with sales projections for 2024 among companies engaged in metal building construction, the picture of projected profitability isn't quite as rosy as 2023's profits. On

Table T11 – 2023 PROFITABILITY: by Market Segment

	INDUSTRY GROWTH (Compared to 2022)		
MARKET SEGMENT	Increase	Same	Decrease
Single-Family Residential	68.0%	32.0%	0.0%
Multifamily	74.1%	22.2%	3.7%
Agricultural	56.3%	37.5%	6.3%
Commercial	65.0%	35.0%	0.0%
Industrial	63.2%	31.6%	5.3%
Average	65.8%	31.7%	3.0%

Source: CSI Certified, Shield Wall Media

average, 67.8% of our respondents think their profits will increase in 2024 compared to 2023 and 15.1% of respondents anticipate a profit decline. While roughly the same percentage of respondents on average report planning for increased profits, the 15.1% anticipating a decline is significantly higher than the 3% who reported a decline in 2023, and in keeping with the 13.4% who anticipate a gross sales decline in 2024. T12 & T10

Breaking out responses by market segment, survey takers were roughly equal across all segments in their anticipation of increases in profitability, declines in profitability, or profits remaining constant. The exception is the commercial market segment, where 60% of companies engaged in metal buildings who serve that market anticipate an increase compared to the roughly 70% across the other segments. And 25% of them expect profits to hold steady. Only respondents in the industrial sector expect a decline in profits that is out of line with the other segments. In that segment, 21.1% think profits will decline.

Company Size and Growth Projections

When we dig deeper into the CSI data and look more specifically at how much respondents saw sales change in 2023 compared to 2022, we get a more nuanced picture. About three quarters of companies engaged in metal buildings saw sales increase in 2023, and a third of them (24.5% of all respondents) saw sales jump more than 25%. Half of all respondents experienced sales growth of less than 25%. Just under a fifth (18.4%) of respondents say gross sales held steady in 2023. (There is some small discrepancy between these percentages and the averages across market segments in the previous graphs. Some respondents identified "other" as a market segment and were not included in the averages of that data.) T13

None of these respondents report a significant decline in year-over-year sales in 2023, but 6.1% do report a decline of less than 25%.

Placing that previous actual performance against the anticipated performance of 2024, shows that respondents on the whole are not very optimistic about sales growth this year. A total of 64.6% believe sales will increase, with 20.8% saying they will jump significantly. Slightly more respondents (22.9%) report their gross sales will stay the same compared to what they experienced last year. But nearly double the number of survey takers say sales will decline in 2024 compared to 2023. Only 6.1% of survey takers say sales dropped in 2023.

If you compare the profit performance of companies engaged in metal buildings in 2023 to their sales performance, you actually get a pretty nice picture. Only 2.1% of companies reported a decline in profits in 2023 and 22.9% say they were greater than 25%. Compare that to the 6.1% who report sales declined. Only 18.4% say sales stayed even in 2023, but 27.1% report profits held steady. It's not all rosy, though, because 75.5% of respondents report sales increased in 2023, and only 70.8% report profits increasing. Given the difficulty in controlling costs in 2023, those percentages are a strong commendation of the strength of companies engaged in metal buildings. T14

When projecting profit performance for 2024, these respondents matched the slightly more pessimistic view they had about gross sales. There's a greater likelihood profits will decline in 2024, say 12.5% of survey takers, which is the same as the percentage who said sales would drop. Still, two thirds (66.7%) think profits will increase in 2024, and

Table T12 – 2024 PROJECTED PROFITABILITY: by Market Segment

	INDUSTRY GROWTH (Compared to 2023)		
MARKET SEGMENT	Increase	Same	Decrease
Single-Family Residential	72.0%	16.0%	12.0%
Multifamily	70.4%	14.8%	4.8%
Agricultural	68.8%	18.8%	12.5%
Commercial	60.0%	25.0%	15.0%
Industrial	68.4%	10.5%	21.1%
Average	67.8%	17.0%	15.1%

Source: CSI Certified, Shield Wall Media

25% think they will jump significantly. On the upper end, among those who see big increases, our respondents were more likely to see a larger jump in profits than they were sales (25% vs. 20.8%) in 2024.

Future Opportunities and Challenges

Remembering back to the last section covering the garage, shed, and carport companies when there was little interest in expansion, it's exciting to see relatively robust

Table T13 – GROSS SALES GROWTH: 2023 to 2024 Projections

	COMPARISON				
GROWTH	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 YOY vs. 2022	24.5%	51.0%	18.4%	6.1%	0.0%
2024 Projected YOY vs. 2023	20.8%	43.8%	22.9%	12.5%	0.0%

Source: CSI Certified, Shield Wall Media

enthusiasm for expansion among companies engaged in metal buildings. It's especially interesting since the two sectors have many things in common. Perhaps it's the rise of the barndominium market that has respondents feeling expansive.

In every segment, respondents are more likely to have immediate expansion plans than delayed plans or no plans with the exception of the agricultural market. In that segment, 31.3% of our respondents say they have plans to expand in 2024, but 56.3% intend to put expansion off a bit longer. Only 12.5% of respondents serving the agricultural market suggest they have no plans to expand. T15

About half of the survey takers in the other markets, though, say they plan to expand their business in 2024. Among those with no plans, though, the bag is a bit more mixed. Single-family (24%) and commercial (30%) are least likely to report expansion plans while industrial (15.8%) and multifamily (7.4%) say no expansion plans. The companies serving the multifamily market were the least likely to have no expansion plans and the most likely to plan to expand in 2024 (55.6%).

As with all the other sectors in the CSI report, companies looking to add resources are most likely to add new products or building types with an average of 49.7% of survey takers saying that's a resource they will pursue. Coming in second is adding support employees. 48.8% of our respondents look to add people in the office who can help people in the field. That could be administrative people but it could also be a desire to add sales people to help grow the business. T16

After those two options, the percentages of respondents looking to specific resources drops below 4%. Manufacturing equipment (30.6%) is the next resource respondents spotlight, which rises more highly because of the heavy involvement of manufacturers in the survey. Contractors are the largest component of survey respondents, and they have been complaining for years about the skilled labor shortage. Only 30.4% of companies engaged in metal

Table T14 – PROFITABILITY GROWTH

	COMPARISON				
GROWTH	Up significantly >25	Up somewhat <25	Same	Down somewhat <25	Down significantly >25
2023 YOY vs. 2022	22.9%	47.9%	27.1%	2.1%	0.0%
2024 Projected YOY vs. 2023	25.0%	41.7%	20.8%	12.5%	0.0%

Source: CSI Certified, Shield Wall Media

Table T15 – EXPANSION PLANS

	PLANS		
MARKET SEGMENT	Immediate plans to expand in 2024	Future plans to expand (in 2025 or later)	No expansion plans
Single-Family Residential	48.0%	28.0%	24.0%
Multifamily	55.6%	37.0%	7.4%
Agricultural	31.3%	56.3%	12.5%
Commercial	45.0%	25.0%	30.0%
Industrial	47.4%	36.8%	15.8%

Source: CSI Certified, Shield Wall Media

building construction are aiming to add field employees. Two potential reasons are that they have given up trying to add this resource or they have shifted business to rely more on subcontractors and don't need to hire field people. T16

The other four resources that about 30% of our respondents say they plan to add are real estate or facilities (28.4%), jobsite equipment (30.2%), metal forming equipment (18.8%), and material handling equipment (16.2%). Three of those resources are designed to make work on the jobsite more effi-

Table T16 – PLANS TO ADD RESOURCES IN 2024

	MARKET SEGMENT					
RESOURCES	Single-family Residential	Multifamily	Agricultural	Commercial	Industrial	Average
New products or building types	44.4%	53.9%	50.0%	42.1%	49.7%	49.7%
Employees (support)	37.0%	53.9%	38.9%	47.4%	48.8%	48.8%
Manufacturing equipment	33.3%	46.2%	22.2%	26.39%	30.6%	30.6%
Employees (Construction)	25.9	30.8%	22.2%	31.6%	30.4%	30.4%
Real Estate of Facilities	37.0%	23.1%	22.2%	26.39%	28.4%	28.4%
Jobsite Equipment	37.0%	15.4%	33.3%	21.19%	23.0%	23.0%
Metal Forming Equipment	18.5%	15.4%	11.1%	15.8%	18.8%	18.8%
Material Handling Equipment	22.2%	15.4%	11.1%	15.8%	16.2%	16.2%
Capital Equipment	14.8%	7.7%	11.1%	15.8%	13.2%	13.2%
Trucks	11.1%	7.7%	5.6%	3.3%	9.3%	9.3%

Source: CSI Certified, Shield Wall Media

Table T17 – CHALLENGES IN 2024

	BUSINESS TYPE				
CHALLENGES	Single-Family Residential	Mutifamily	Agricultural	Commercial	Industrial
Material Costs	64.0%	74.1%	62.5%	90.0%	68.4%
Finding Employees	68.0%	51.9%	62.5%	65.0%	47.4%
Rising Employee Related Expenses	56.0%	51.9%	56.3%	45.0%	42.1%
Interest Rates	48.0%	40.7%	50.0%	65.0%	42.1%
Inflation	48.0%	37.0%	50.0%	55.0%	52.6%
Energy and Transportation Costs	44.0%	37.0%	43.8%	45.0%	31.6%
Material Availability	48.0%	44.4%	31.3%	40.0%	26.3%
Retaining Employees	36.0%	33.3%	31.3%	40.0%	42.1%
Domestic Politics and Policy	40.0%	29.6%	25.0%	40.0%	36.8%
Taxes	36.0%	37.0%	18.8%	30.0%	47.4%

Source: CSI Certified, Shield Wall Media

cient and require less labor, which feels like a work-around to the skilled labor shortage. Capital equipment (13.2%) and trucks (9.3%) round out the list of top resources companies engaged in metal buildings plan to add.

Looking at the challenges CSI respondents face in 2024, it's interesting that rising costs and increasing regulations are defining elements of their ability to manage their businesses. As was seen earlier in the spiking prices for cold-rolled steel, the cost of materials has become a significant challenge, and on average 71.8% of our respondents point to it as a difficulty they're facing this year. That makes it the challenge mostly commonly selected among survey takers. T17

Other cost-related challenges are rising employee-related expenses (50.2%), interest rates (49.2%), inflation (48.5%), cost of energy and transportation (40.3%), and taxes (33.8%). Our respondents noted all of these as challenges they needed to face in 2024. There was a tangentially related item – domestic politics and policy – that 34.3% of respondents said would be a challenge. Reading between the lines is difficult, but this could be concerns about increased regulation or worries about heightened political strife during a presidential election year. It could be concerns at the federal, state, or local level. But because the construction industry is highly regulated, any issues related to regulation – code, environment, or fiscal – gets greater attention and more likely thought of as a challenge.

The challenges not mentioned so far are the issues of finding employees (58.9%) and retaining employees (36.5%). As was mentioned above when discussing what resources respondents planned to add, support employees was second on the list. Here the second most cited challenge is finding employees. It has been the bane of the construction industry for more than two decades, but now it has a new twist. Rising wages (see rising employee-related expenses) in other industries are creating new competition for workers – both support and field. That makes it even more essential, as the survey takers have noted, that they have to retain the employees they have.

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