

FORZIONS



Market Conditions Q4 2023

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About this report



At the beginning of 2023, we released our first Horizons: Market Conditions report in hopes that it would bring industry leaders useful data for making informed decisions about business investments and capital planning.

Nine months later, in our fourth edition of Horizons: Market Conditions, we'll look back on a year that defied recessionary fears. We'll also delve into the future because there are still plenty of economic factors to keep an eye on.

The Federal Reserve has signaled a halt in interest rate hikes but cost of financing remains high and lending standards are strict. Most analysts expect a brighter 2024, in fact, [Dodge](#) predicts that manufacturing starts will increase in dollar value by 16% and square footage by 10% in 2024.

However, according to [Associated Builders and Contractors \(ABC\)](#), many contractors are reporting declines in backlog, indicating that the increase in dollar value is due to the cost of construction, not an increase in demand.

Labor is likely to be the continuing challenge for the construction industry. ABC predicts the industry needs to add more than 300,000 workers on top of normal hiring to meet industry demand. Recently, an increasing number of projects have had to be delayed due to labor shortages and permitting issues.

As always, we hope the data and insights in this report will serve as helpful tools for your project planning. We welcome and look forward to your feedback.



Mike Barrett

Vice President, Project Delivery Services, CRB



CRB's procurement team works with our trusted strategic trade partners and suppliers to keep a database of lead times for equipment and materials. Many of the products in this database are specific to the life sciences and food + beverage (F+B) industries, while others are key building components. We frequently add new equipment and materials to our database to better support our clients with information and options.

FIGURE 1

Database of lead times for equipment and materials

CRB Lead Time Database

● Improving ● Stable ● Increasing

CURRENT LEAD TIMES FOR EQUIPMENT AND MATERIAL: Q4 2023		
Equipment/Material	Lead Time (wks)	Trend
F+B Equipment – CIP Skid	30	●
F+B Equipment – Ribbon Blender	30	●
Media Prep & Hold Skids-316SS	52	●
Media Prep & Hold Skids-AL6XN	58	●
Buffer Prep & Hold Skids-316SS	52	●
Buffer Prep & Hold Skids-AL6XN	58	●
Purified Water Skids	30	●
WFI Distribution Skids	30	●
USP Water Distribution Skid	30	●
Pure Steam Generators	32	●
Stainless Steel Vessels - ID > 98"	46	●
Stainless Steel Vessels - ID < 98"	24	●
Single Use Bioreactors	28	●
Single Use Bioreactor Bags	18	●
Stainless Steel Bioreactors - ID > 98"	56	●
Stainless Steel Bioreactors - ID < 98"	48	●
Chromatography Skids	40	●
Stainless Steel Tubing 316L	0	●
Stainless Steel Tubing AL6XN SF4	0	●
Modular Cleanroom Panels	12	●
Roof Joists	12	●
Metal Decking	12	●

Source: CRB

(continued)



FIGURE 1 (CONT.)

Database of lead times for equipment and materials

● Improving ● Stable ● Increasing

CURRENT LEAD TIMES FOR EQUIPMENT AND MATERIAL: Q4 2023		
Equipment/Material	Lead Time (wks)	Trend
Medium Voltage GIS Switchgear (35kV class, 1200A)	52	●
Medium Voltage Fused Switchgear (15kV class, 1200A)	66	●
Medium Voltage Fused Switchgear (4160V class, 1200A)	66	●
Medium Voltage Transformer - 3Ph - 45-500kva	130	●
Medium Voltage Transformer - 3Ph - 501-1500kva	160	●
Medium Voltage Transformer - 3Ph - 1501-3000kva	160	●
Medium Voltage Transformer - 3Ph - 3001-5000kva	65	●
Medium Voltage Transformer - 3Ph -5001+ kva	65	●
ANSI Switchgear (3000-4000A)	50	●
Switchboard (3000A-4000A)	50	●
Switchboard (2000A-2500A)	50	●
Panelboards (480V, Any ampacity)	12	●
Panelboards (208V, Any ampacity)	12	●
Dry Type Transformers (112.5kVA and below)	6	●
Busway (Any Ampacity)	18	●
Standard MCC	35	●
Smart MCC	47	●
Copper Tubing and Fittings	0	●
Standard Packaged RTUs	32	●
Cooling Towers	16	●
Water-Cooled Centrifugal Chillers	25	●
Air-Cooled Chillers, < 250 Tons	38	●
Air-Cooled Chillers, > 250 Tons	45	●
Boilers, 500 HP Water Tube	26	●
Boilers, 800 HP Fire Tube	26	●
Large-diameter Control Valves-Modulating	10	●
Stainless Steel Zero-Static/Block Body Valves	10	●
HEPA Filters & Housings: 1 Rd Housings	20	●
HEPA Filters & Housings: Multi Rd Housings	22	●
HEPA Filters & Housings: Orticlean	22	●

(continued)

Source: CRB



FIGURE 1 (CONT.)

Database of lead times for equipment and materials

● Improving ● Stable ● Increasing

CURRENT LEAD TIMES FOR EQUIPMENT AND MATERIAL: Q4 2023		
Equipment/Material	Lead Time (wks)	Trend
Sterile Pass-Thrus	20	●
Sanitary Heat Exchangers	50	●
Custom AHUs (Small Indoor Units)	50	●
Custom AHUs (Large Outdoor Units)	50	●
DOAS AHUs (Dedicated Outdoor Air System)	32	●
Semi-Custom AHUs (Small Indoor Units)	32	●
Semi-Custom AHUs (Large Outdoor Units)	32	●
HDPE Piping <4"	4	●
HDPE Piping >4"	14	●
Insulated Metal Panels (IMP)	14	●
RO Skids	40	●
BloWaste Kill Skids	30	●
Waste Neutralization Skids, 100 GPM	26	●
Waste Neutralization Skids, < 25 GPM	20	●
Diesel Generators, <200kW	50	NEW
Diesel Generators, 230kW - 1 MW	85	NEW
Diesel Generators, >1MW	90	NEW

Source: CRB

LOOKING FOR SOMETHING ELSE?

[REQUEST LEAD TIME DETAILS](#)

Process utility equipment still presents ongoing challenges. Major electrical equipment, such as switch gear, and some mechanical equipment, such as chillers, remains challenging to procure. The demand for these items is sustained by the continued demand of data centers, electric vehicle (EV) battery-related products, and other large investments, contributing to capacity constraints. There is not an anticipated change to supply and demand for these items in the near term, and it is advisable to continue to be diligent in planning long lead process utility equipment.



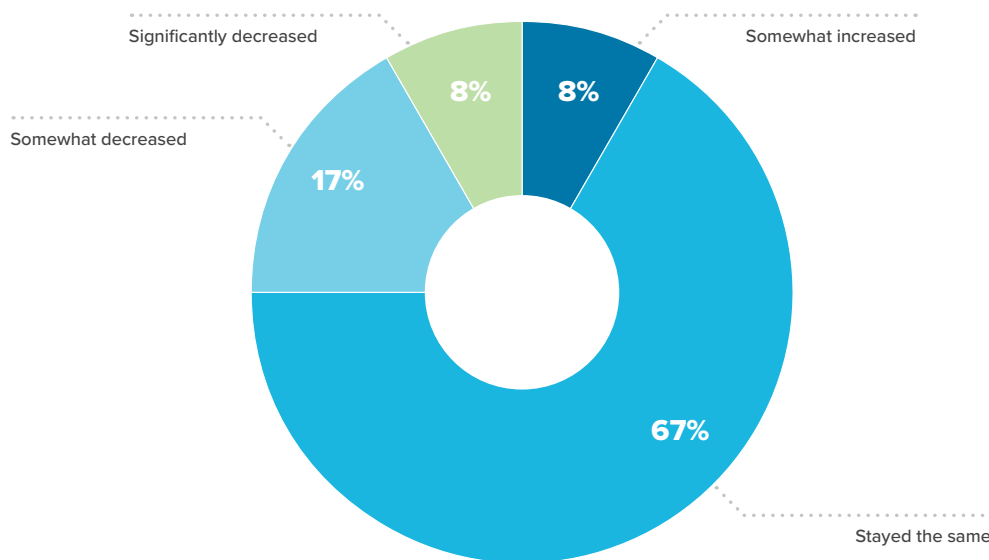
For commodities, both pricing and availability remain stable or slightly decreasing going into the new year. There are no major scarcities in commodity materials, such as steel and PVC, establishing a prevailing trend that is anticipated to extend into the next quarter.

Our survey results showed the largest overall decrease in lead times, 25% of respondents (Figure 2), since we started this report series. This can likely be attributed to the proactive measures companies took throughout the year to add skilled personnel and expand vendor sourcing. This strategic move allowed for a more diversified and efficient sourcing of materials, contributing to the positive trend in lead times.

FIGURE 2

How would you describe the lead times for your products in the fourth quarter (Q4) as compared to the third quarter (Q3)?

Lead Time Changes



Source: CRB

Timely decision-making on long lead items remains crucial in maintaining and capitalizing on this favorable trend in 2024. Geopolitical tensions, climate change impacts and migration dynamics will continue to pose [uncertainties to the supply chain](#) in the new year.

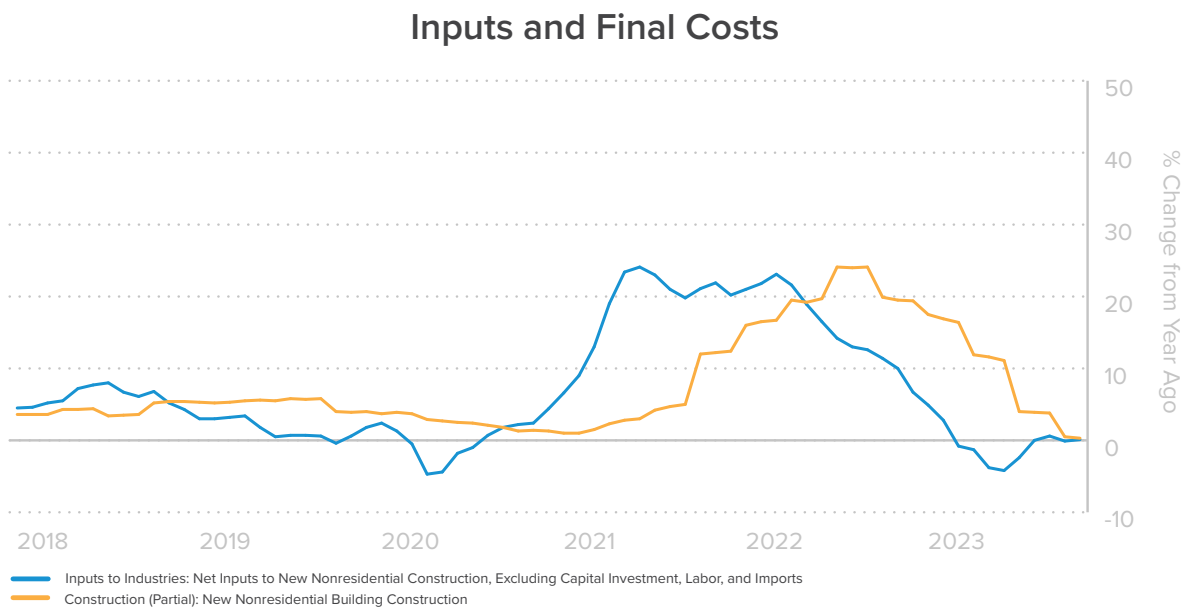


Producer price indexes (PPI) are a family of indexes that measure the average change over time in selling prices received by domestic producers of goods and services. The price information is provided to the U.S. Bureau of Labor Statistics by over 16,000 establishments, providing approximately 64,000 price quotations per month. CRB uses data from PPIs to measure price movement specific to the construction industry and the products we purchase for our projects.

Figure 3 shows two different types of indexes. The blue line is an input index that represents the most common composition of materials used in non-residential building construction projects. The yellow line is considered a selling-price index, or, in other words, an index that measures the change to final construction costs for consumers, inclusive of labor, material, overhead and profit costs. For this figure, each data point shows the percentage of change in the index value over the preceding twelve months.

FIGURE 3

Construction inputs and bid price producer price indexes



Source: U.S. Bureau of Labor Statistics

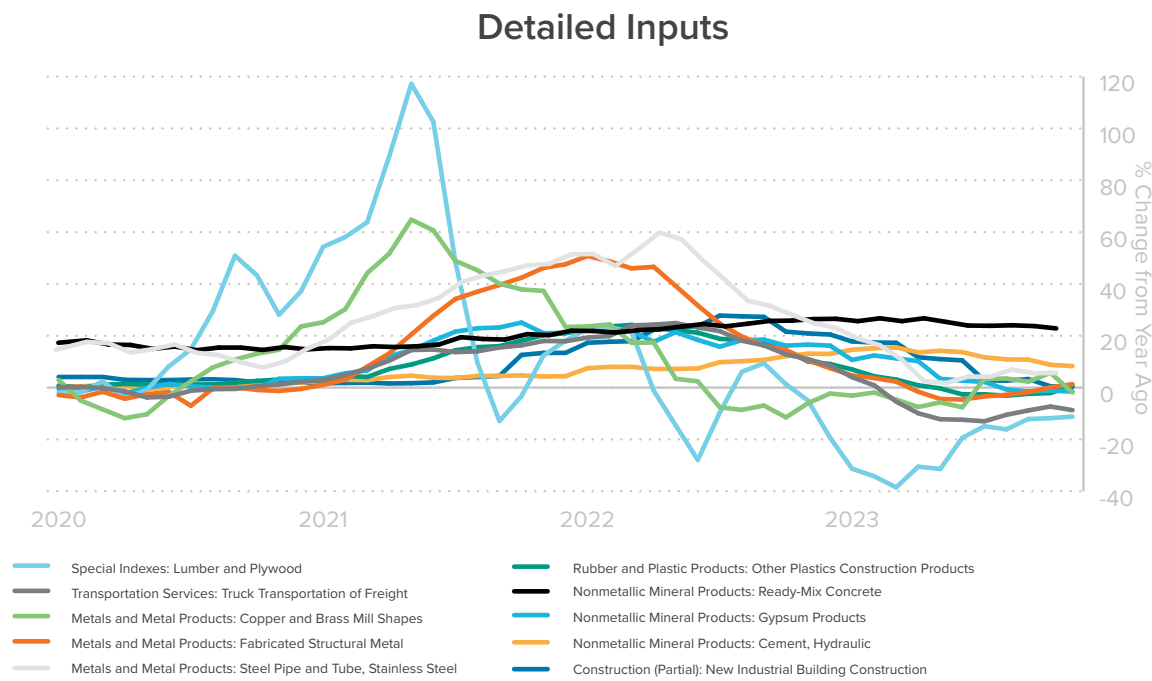
Viewing from the context of the last few years, it is certainly a welcome change to have final cost and composite inputs for new nonresidential buildings both hovering near 0% change year-over-year for the current period. Looking forward, annual final cost escalation for 2024 is predicted to land between 3.5%–4%.



Figure 3 overlays individual input indexes for common materials with the selling price index for new industrial building construction, presented as a percentage of change over the last year. This quarter, we have added two new inputs based on reader requests—stainless steel and ready-mix concrete. Both of these markets are expected to grow considerably over the next few years.

FIGURE 4

Construction inputs and bid price producer price indexes



Key takeaway:

Inflation of the cost for cement and ready-mix concrete continues to pull upward on the overall composite inputs trend.



According to vendors surveyed by CRB, 25% saw price increases in Q4. This is an improvement from 44% in Q3 and 29% in Q2.

Looking ahead, we also asked what our vendors are preparing for the coming year. 58% of respondents said they are preparing for prices to somewhat increase in 2024 and 42% said they are preparing for prices to stay the same.

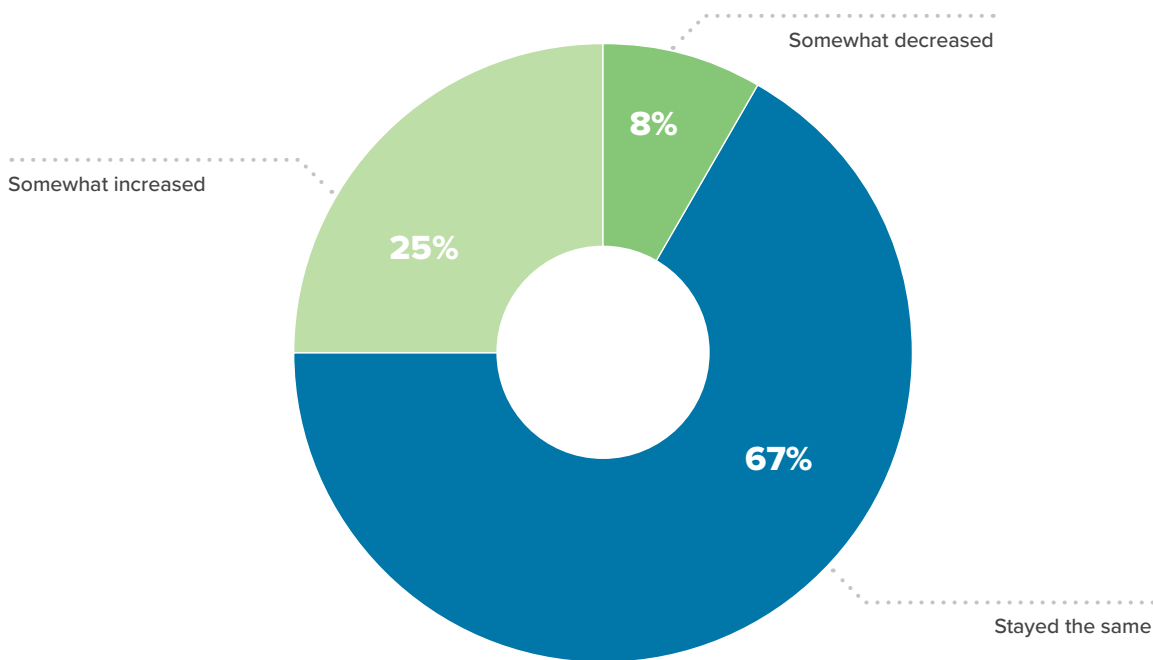
58%

of respondents are preparing for prices to somewhat increase in 2024

FIGURE 5

How would you describe the prices of your products in the fourth quarter (Q4), as compared to the third quarter (Q3)?

Price Changes



Source: CRB



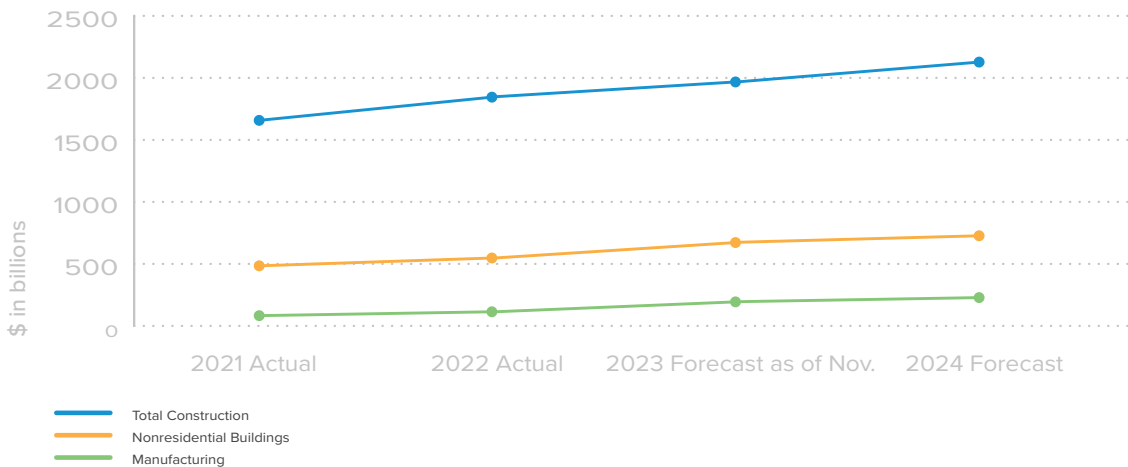
According to [Dodge Construction Network’s Outlook 2024](#), total construction starts will increase by 7% in 2024, reaching \$1.2 trillion. This comes after a meager 1% growth in 2023, which further diminishes to a 2% decline when adjusted for inflation. Manufacturing starts will continue to outperform other sectors, increasing 16%, mainly due to the continued investment from The CHIPS Act and the Inflation Reduction Act.

According to the current forecast by [Construction Analytics](#), total construction spending will increase by 8% in 2024, to \$2.1 trillion.

FIGURE 6

Total construction spending forecast (\$ in billions)

Forecast Breakdown



Source: Construction Analytics

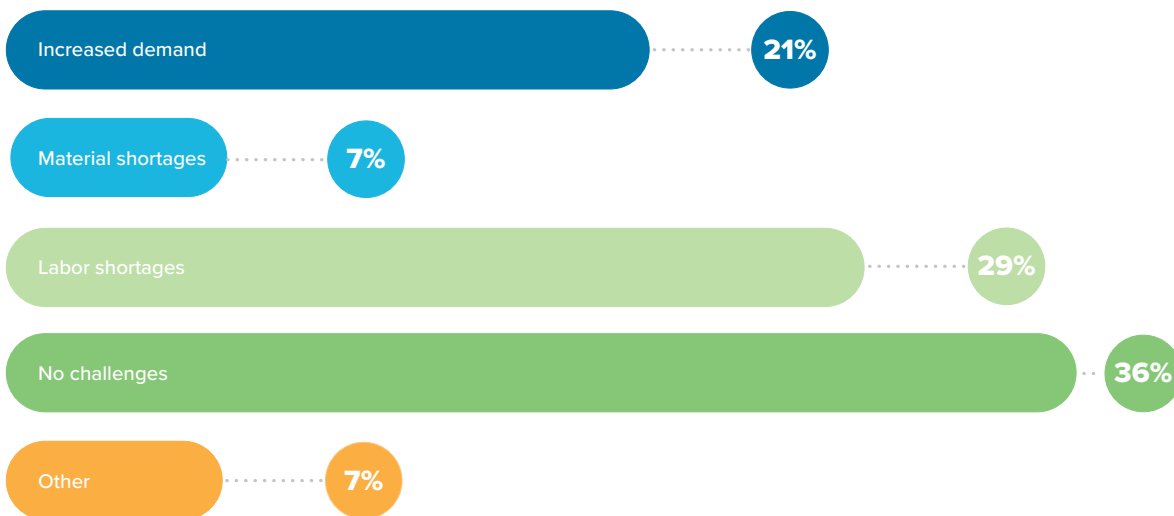


Market challenges significantly decreased over the course of 2023, according to the suppliers and subcontractors surveyed. When asked this same question (Figure 7) in Q2 2023, 46% of respondents cited increased demand challenges, and 29% faced material shortage challenges, both of which dropped by over 50% by Q4, with the majority of respondents going so far as to say they met no challenges at all at the end of the year.

FIGURE 7

What factors have contributed to any challenges or constraints in the fourth quarter (Q4)?

Current Market Challenges



Source: CRB

Key takeaway:

Multiple megaprojects have been delayed due to labor shortages in states like Arizona, South Carolina and California. It's important to consider the individual factors that may impact your metropolitan areas.

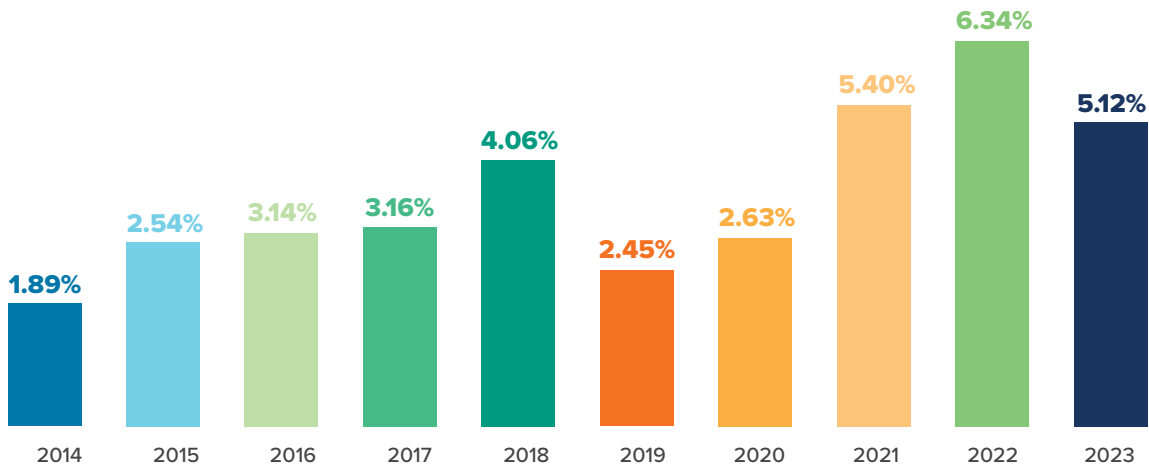


There are more construction [employees](#) than ever before, and yet the industry will need to bring in more than 342,000 new workers on top of normal hiring to meet industry demand, according to [Associated Builders and Contractors](#). Construction wages, which are up more than 5% and outpacing overall compensation increases, are likely to continue rising in 2024.

FIGURE 8

December year-over-year % change in average hourly earnings of construction employees, seasonally adjusted

Wage Trends



Source: CRB analysis of U.S. Bureau of Labor Statistics data



Greg Casper is the Director of Estimating, leading a team of estimating professionals across CRB's global offices. Greg has over 15 years of experience providing preconstruction, procurement, estimating and scheduling services for life sciences and food + beverage projects.



Valerie Silva is the Director of Procurement and has more than 15 years of experience with global cost optimization, project management and supply chain issues. She leads a team of procurement experts to offer our clients end-to-end sourcing and managing of equipment and construction services for capital projects.

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Reference Data

Much of the economic information in this report is compiled from third-party resources that are available to the public and not owned by CRB. All references are included in the body of the report.



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