

HITT



# Market and Input Pricing Report

2022 REVIEW AND 2023 OUTLOOK

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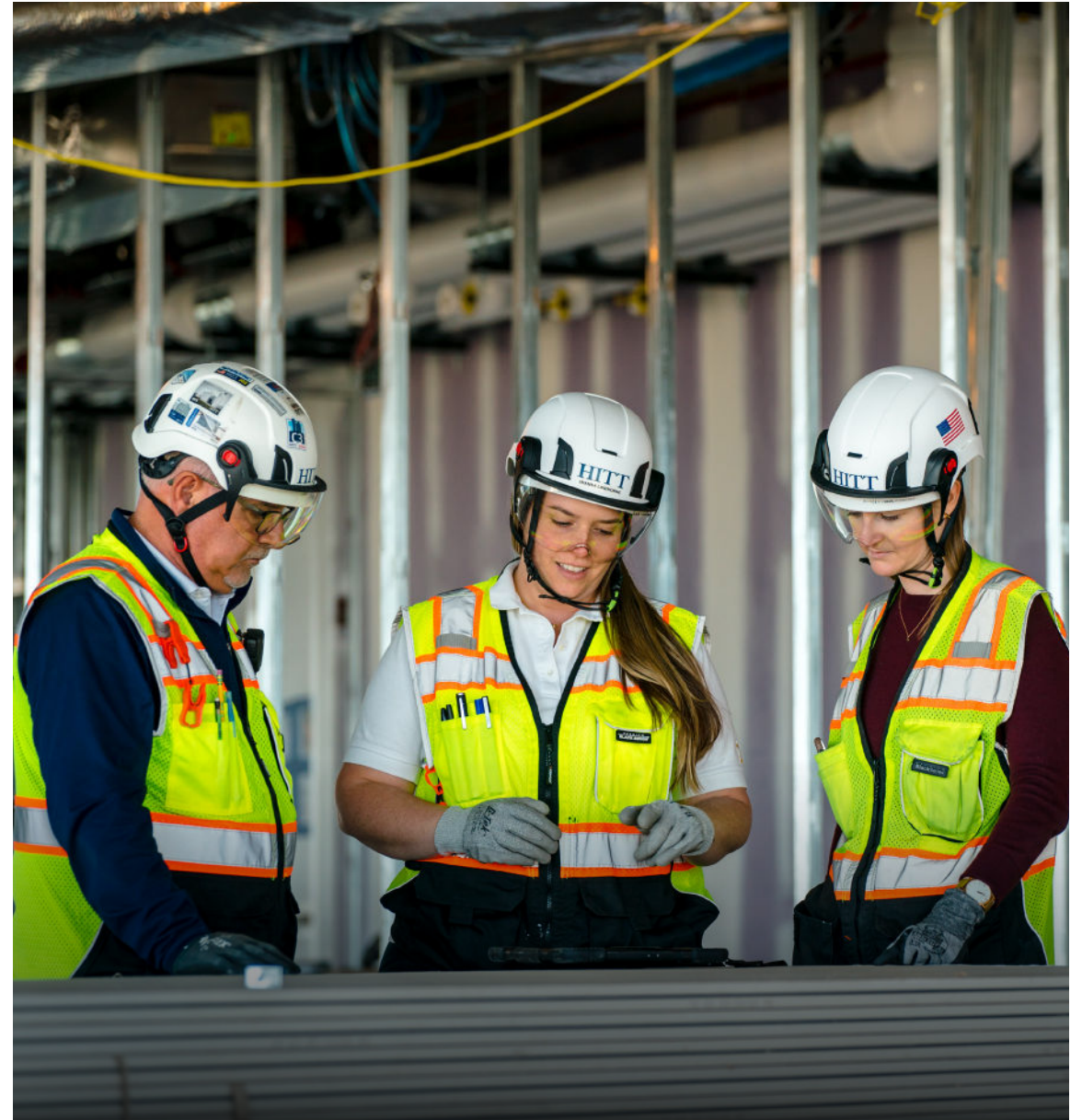
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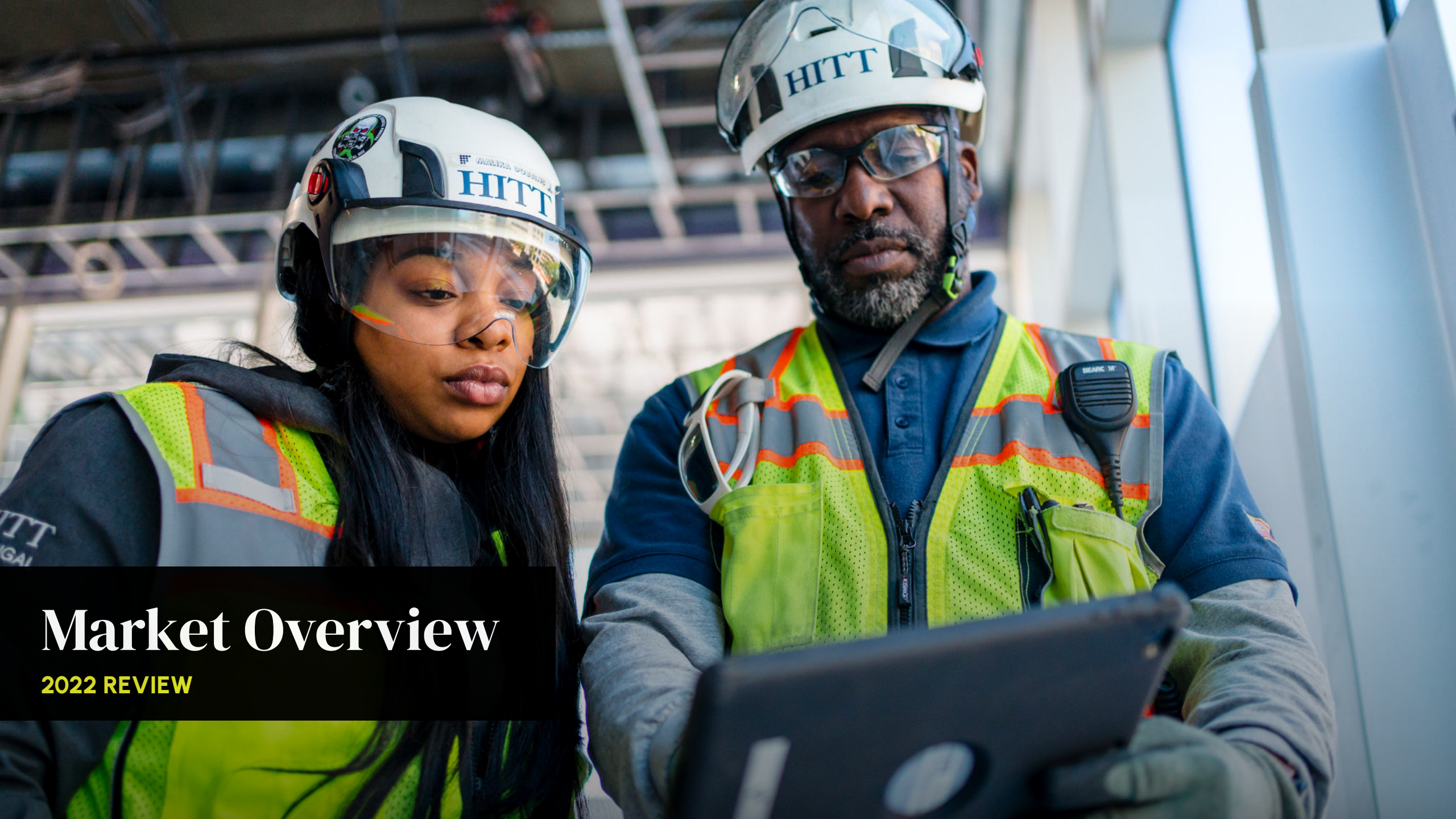
# Executive Summary

Major economic reports were filled with mixed signals throughout 2022. The year began with back-to-back quarters of economic contractions, yet by the end of the fourth quarter gross domestic product (GDP) grew 2.9 percent annually. Increased inflation and reduced personal savings gave way to the idea of an economic downturn in late 2022. But persistent consumer spending fueled by wage growth and a tight labor market pushed talks of a recession into 2023.

As the Federal Reserve proceeded with multiple interest rate hikes to cool the economy, some activity slowed in the second half of 2022. Higher borrowing costs curbed investor appetites for residential projects, and the rising price of goods slowed consumer demand. The slow in residential projects led to a dip in net inputs to construction pricing, while curbed demand for goods alleviated some supply chain bottlenecks that reduced material lead times. Overall, the U.S. economy grew in 2022, at 2.1 percent annually, albeit much slower than the 5.9 percent annual growth experienced in 2021. However, fiscal policies, geopolitical conflicts, and union and trade wars could potentially derail the U.S.' return to a pre-pandemic economy.

Looking forward, 2023 will look much like the last 12 months—filled with uncertainty. Although business conditions improved in the second half of 2022, the future path of inflation, unemployment, and other economic indicators is still unclear and provides an ambiguous outlook for consumers and corporations alike.





# Market Overview

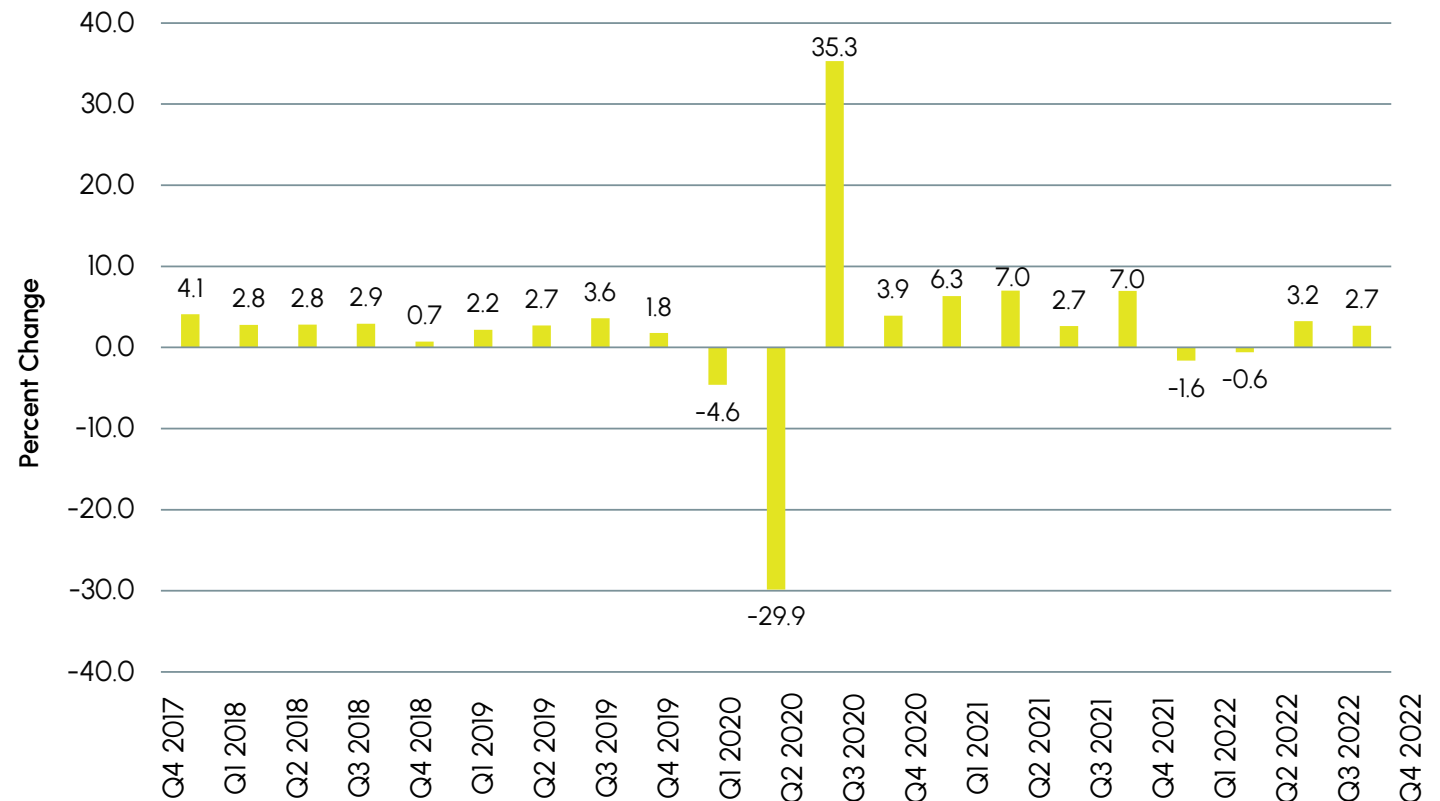
2022 REVIEW

# Gross Domestic Product

According to the gross domestic product (GDP), the value of goods and services produced in the U.S. contracted in the first half of 2022. Sectors impacted heavily by interest rates, such as residential assets like new single-family construction and nonresidential structures like healthcare, power, and communication, slowed demand. Additionally, inventories rose in the year's first half, subtracting 1.8 percentage points (pp) from GDP due to supply chain disruptions.

Despite slowing in the first half of the year, GDP rebounded in the second, increasing 2.7 percent in Q4, beating out economist expectations of 2.6 percent. Increased manufacturing and vigilant consumer spending on services pushed annualized GDP into the positive territory of 2.1 percent at year-end, while a curb in demand for goods eased supply chain issues at ports.

### Real GDP: Percent Change from Preceding Quarter

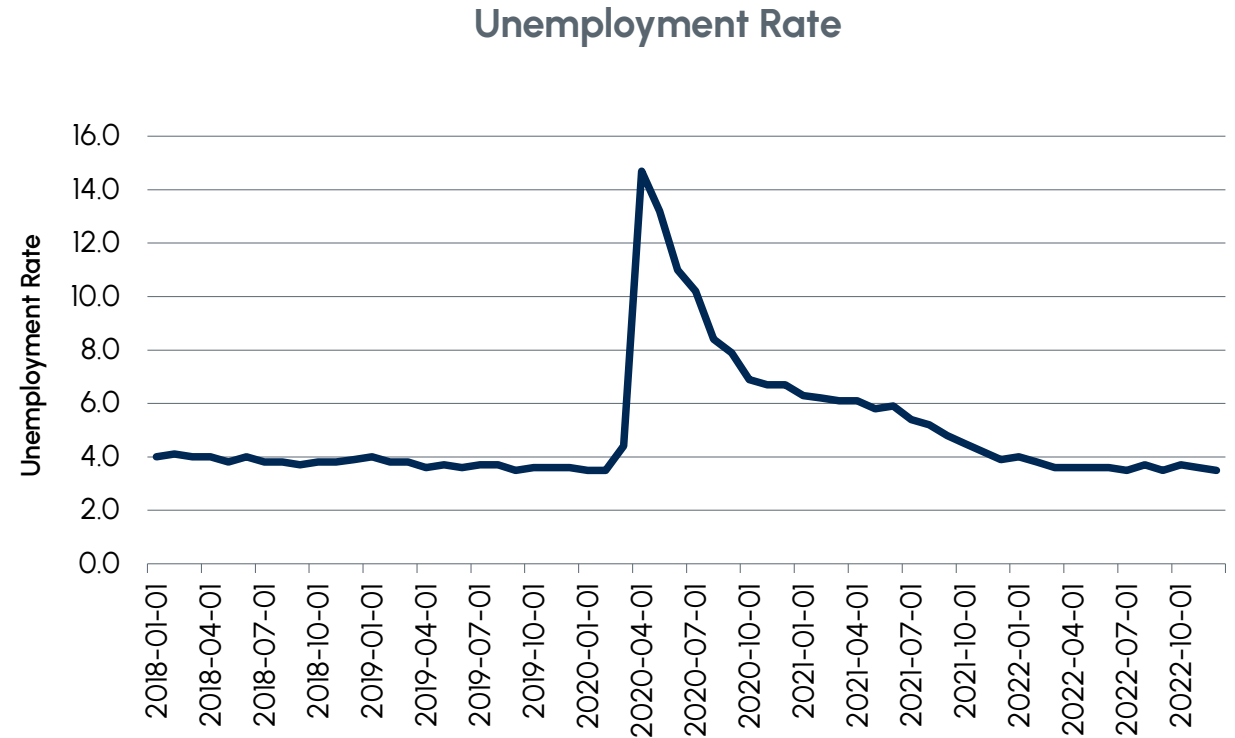


Note: Seasonally adjusted annually

Source: U.S. Bureau of Economic Analysis

# Unemployment

The U.S. unemployment rate edged down 0.4 pp year-over-year (YOY) to 3.5 percent in December 2022. Surprisingly, the flurry of tech layoffs in the second half of 2022 did little to weaken the market as weekly jobless claims hit a three-month low at 206,000 in the week ending December 31, 2022.



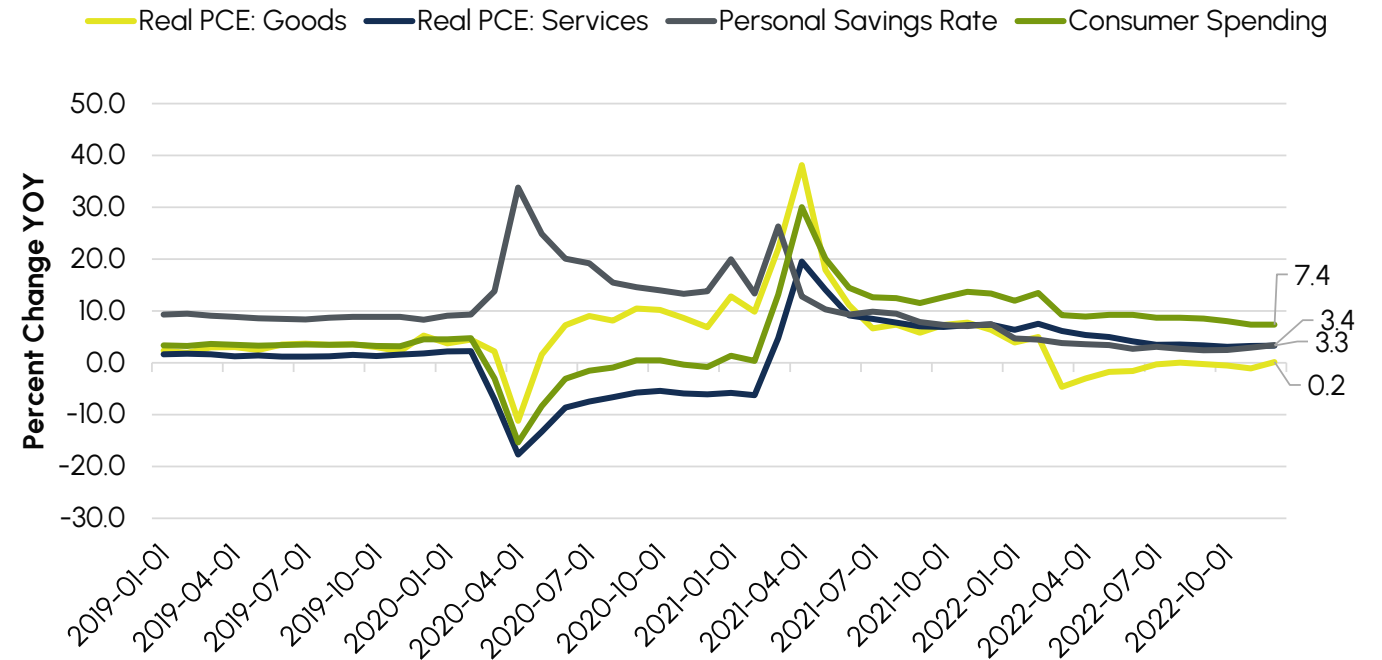
Source: U.S. Bureau of Labor Statistics

# Consumer Spending

At the height of consumer spending, demand for goods was up 38.1 percent YOY in April 2021, significantly higher than personal consumption expenditures (PCE) on services which was 19.5 percent during the same period. As the world returned to normal, consumer appetites shifted from goods towards services. However, the Fed's battle with inflation slowed consumer demand for goods. At year-end 2022, PCE for goods dipped 0.5 percent from the previous year, 4.0 pp lower than the PCE for services annual growth of 4.5 percent.

Overall, the PCE was resilient, ticking up 7.4 percent as of December 2022 compared to December 2021. But the significant shift in demand from goods to services will help ease supply distortion.

### Personal Consumption Expenditures



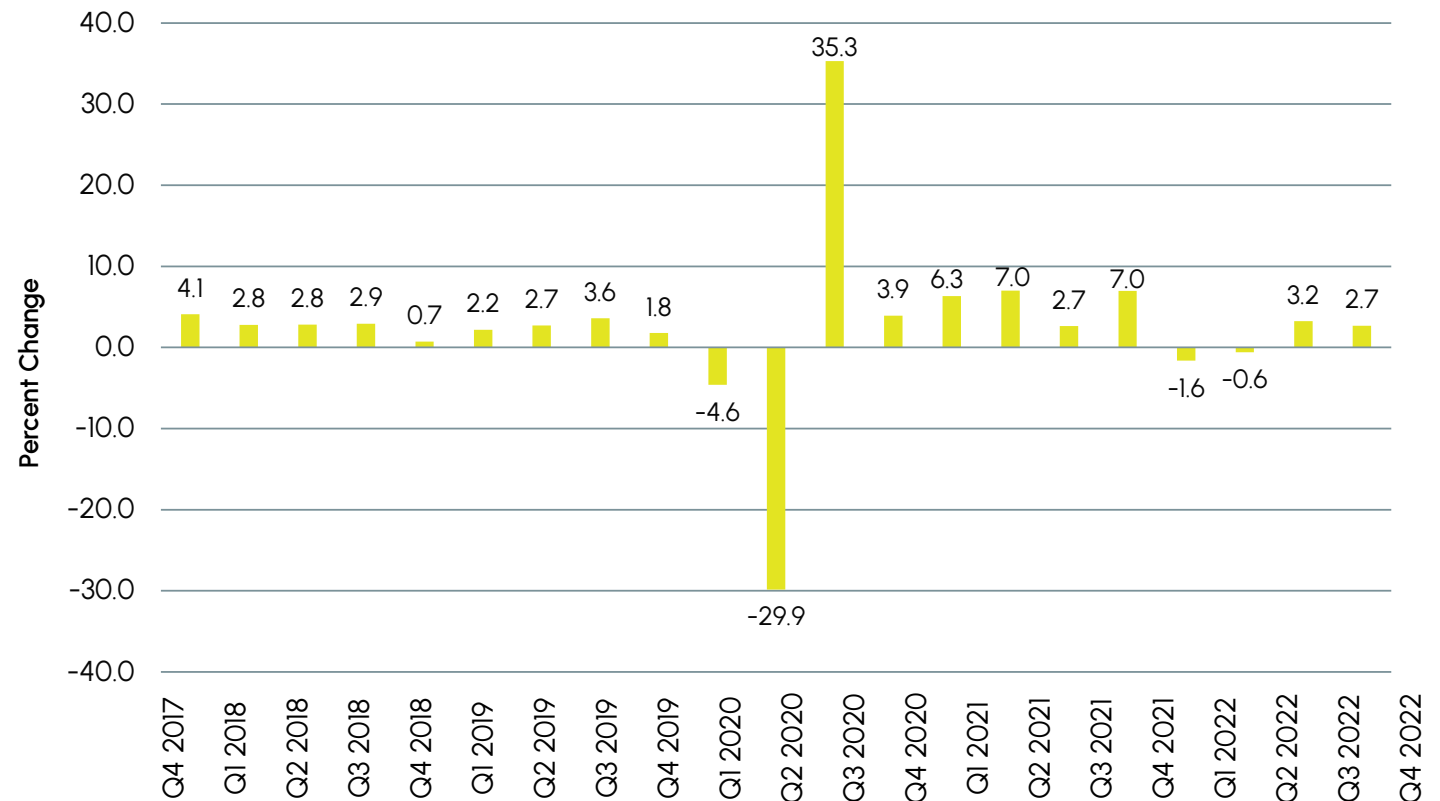
Source: U.S. Bureau of Economic Analysis

# Inflation and Interest Rates

To stabilize prices, the Fed hiked interest rates four times in the second half of 2022 to combat record-high inflation of 8.9 percent at mid-year. In response, the consumer price index (CPI) moderated slightly in the second half of 2022, falling 2.5 pp to 6.4 percent as of December 2022. Hovering 4.4 pp above the Fed's target, year-end inflation rates will continue to erode consumer buying power—making this a vital indicator to watch.

Additional rate hikes are expected in 2023 to slow inflation within the Fed's target range of 2.0 percent. In the meantime, the impact of both high-interest rates and high-inflation rates will stifle consumer spending on goods and services, reducing corporate profits and businesses' ability to hire staff—thus increasing the likelihood of a recession.

Real GDP: Percent Change from Preceding Quarter



Note: Seasonally adjusted annually

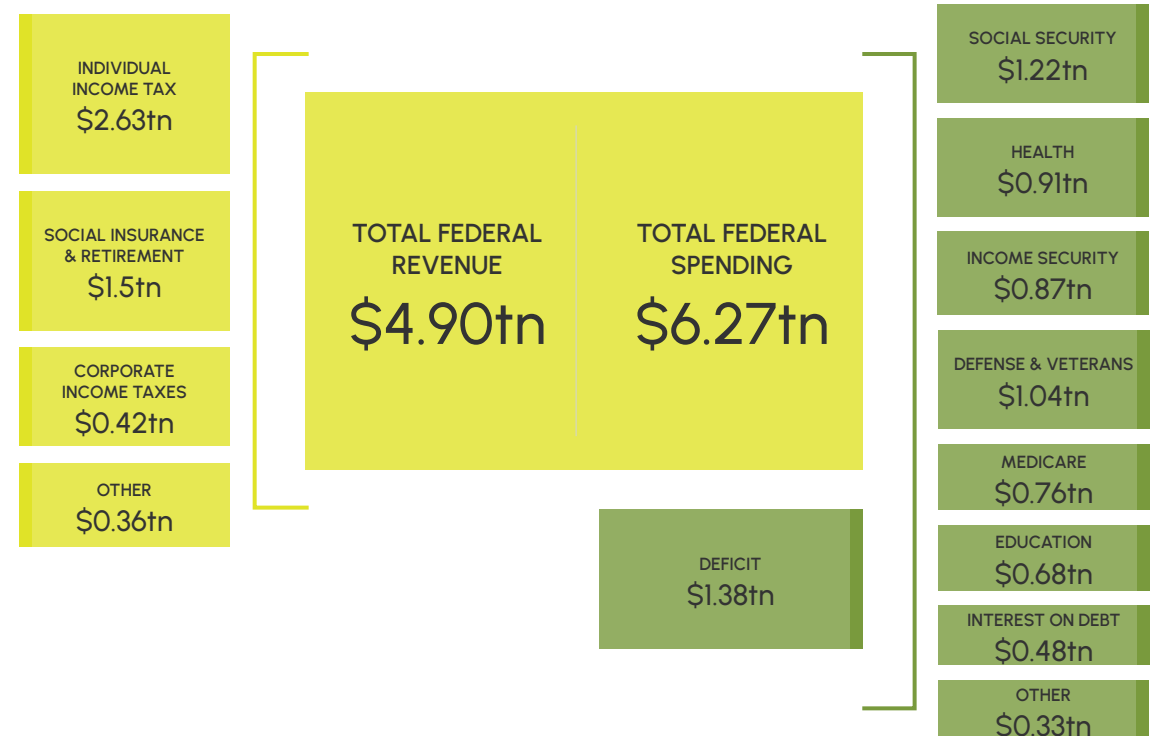
Source: U.S. Bureau of Economic Analysis



# Government Spending

In the fiscal year 2022, the U.S. government debt levels rose \$1.4 trillion, nearing the \$31.4 trillion debt limit set in 2021. To avoid a national debt crisis, restructuring the national debt would require both political parties to agree on a limit increase or extension by June 2023. Against high interest rates, negotiations will be complex as Congress weighs the rising costs of borrowing.

As of December 2022, interest cost accounted for 1.9 percent of GDP, an increase of 0.4 pp from December 2021. Due to the Fed's tightening monetary policies, the cost of borrowing would undoubtedly grow and add to the national debt. On the other hand, the U.S. defaulting on its debt could have ripple effects throughout the global economy. A failure to repay the national debt could weaken the U.S. dollar and increase the price of imports. Additionally, downgrading the U.S. credit rating would increase consumer interest rates—a balancing act Americans are currently navigating with the Fed that could result in a recession, making this a critical indicator to watch.



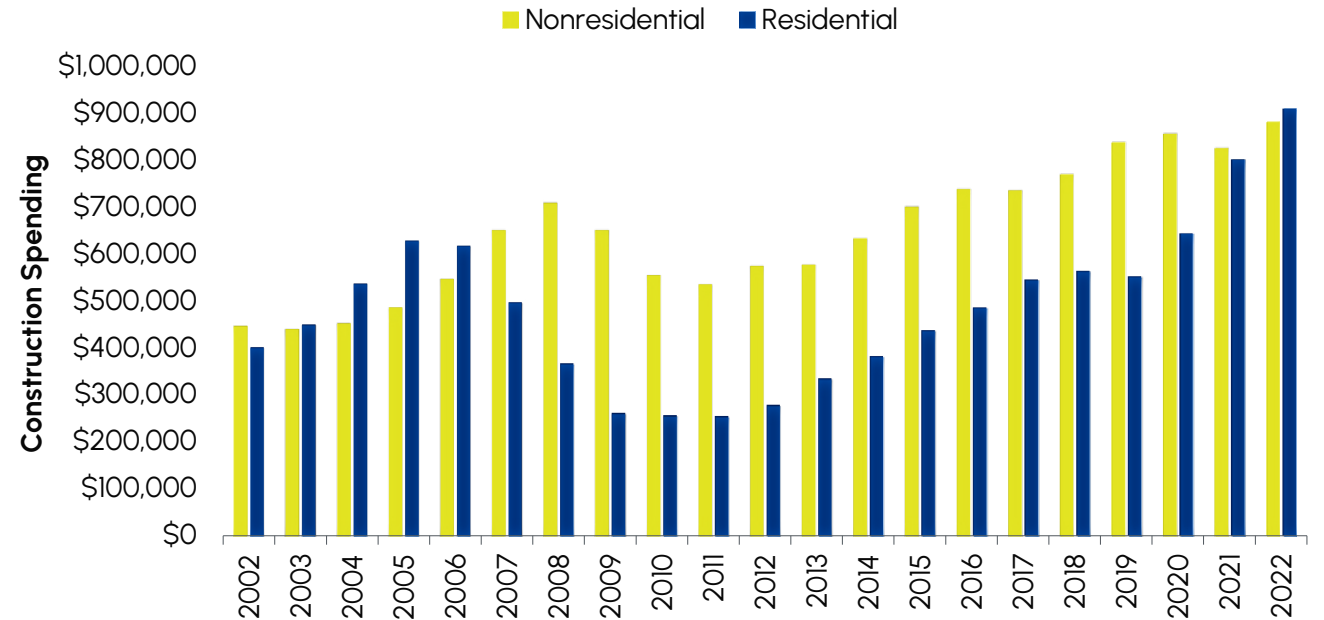
Source: U.S. Treasury, February 2023

# Construction Spending

Construction spending increased by 10.2 percent from 2021 to \$1.79 trillion in 2022. Both residential and nonresidential construction spending increased by 13.5 percent and 6.8 percent, respectively, from the previous year. To further secure the nation's economy and stabilize the supply chain, the push for onshoring drove manufacturing spending up 34.8 percent YOY. Commercial spending also increased significantly (21.4 percent) due to the uptick in warehousing projects.

Despite the overall increase in residential spending, the rise in interest rates and elevated material prices weakened growth. December marked the seventh consecutive decline in residential spending, averaging -1.4 percent a month during this period.

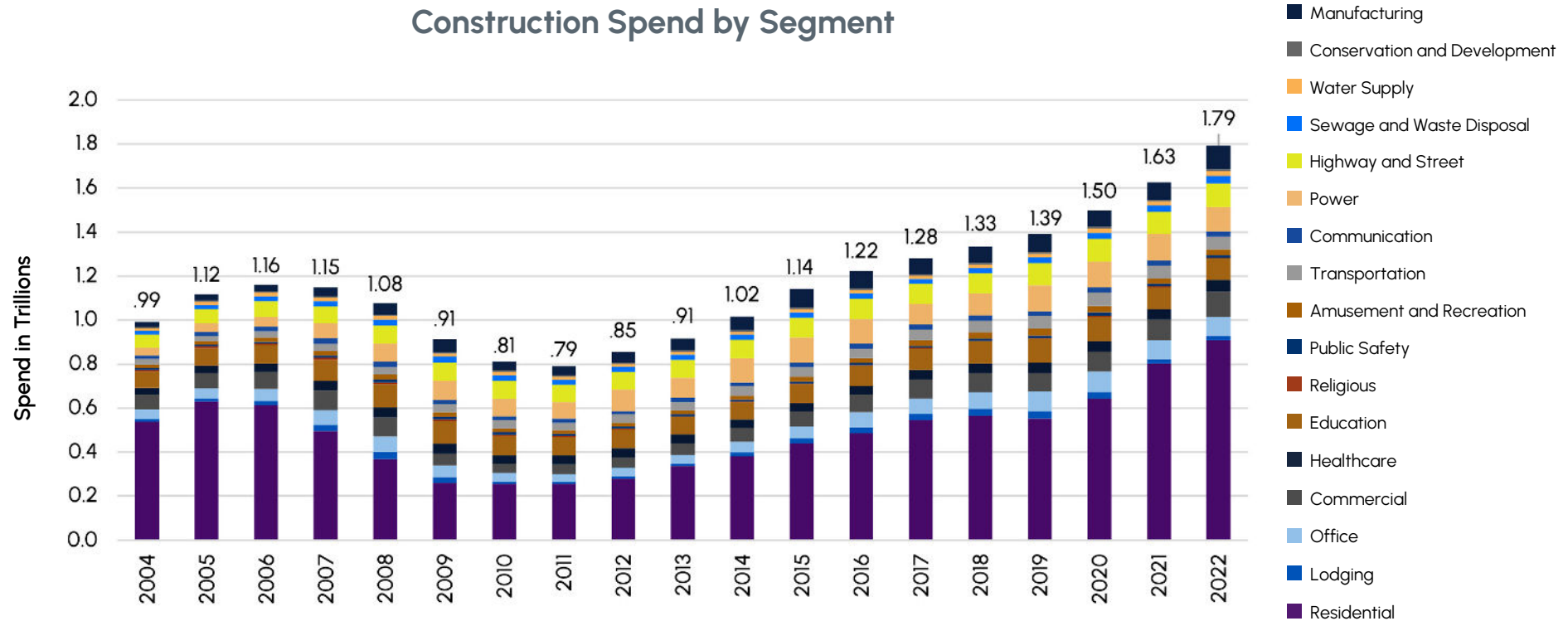
## Nonresidential vs. Residential Spending



Source: Federal Reserve Bank of St. Louis

# Construction Spend by Segment

Actual construction spending increased by 10.2 percent from 2021 to \$1.79 trillion in 2022. The manufacturing sector (35 percent) had a strong showing YOY due to onshoring, followed by commercial (21 percent) and multifamily (21 percent). Very few sectors saw a decline in spending; however, power declined the most over the last year at -9 percent, followed by public safety at -7 percent, religious at -2 percent, and communication at -1 percent.



Source: U.S. Census Bureau Annual Value of Construction Put in Place

# Supply Chain



# Supply Chain Disruption Timeline

## MARCH 2018

### The United States issues tariffs on steel and aluminum

To protect America's steel and aluminum industries, the Trump Administration imposed tariffs of 25 percent on steel and 10 percent on aluminum, effectively placing a tax on every foreign shipment of those metals into the United States.

## MAY 2019

### The United States lifts tariffs on Canada and Mexico

One year after imposing tariffs, the United States announced an agreement with Canada and Mexico to remove the tariffs for steel and aluminum imports from those countries.

## MARCH 2020

### The pandemic shuts down the United States

On March 11, the World Health Organization (WHO) declared the COVID-19 virus a pandemic. The announcement followed a rising sense of alarm in the preceding months resulting in a shortage of personal protective equipment (PPE), businesses shutting down, massive layoffs, and numerous deaths.

## FEBRUARY 2021

### Winter storm shuts down Southeast Texas

An unexpected winter storm wreaked havoc on Texas' power grid. The Texas freeze shut down semiconductor manufacturers, oil and gas refineries, and major transportation hubs.

## AUGUST 2021

### Hurricane Ida strikes Texas and Louisiana

The devastation of Hurricane Ida to Texas and Louisiana added major strains to an already overwhelmed supply chain.

## FALL 2021

### Increased imports

Panic buying wreaked havoc on global supply. Increased imports left cargo ships awaiting berths at record highs.

## JANUARY 2022

### China's zero COVID-19 shutdown

In order to protect China's war against COVID-19, they posed strict restrictions on travel and exports. The bans are predicted to be lifted in Q2 2023.

## FEBRUARY 2022

### Russia invades Ukraine

With the escalation of the Russo-Ukrainian war, disruptions have impacted food supply, fuel, and other raw materials. Ukraine and Russia account for nearly one-third of the world's wheat production, and Russia dominates the palladium production at 40 percent of world production.

## OCTOBER 2022

### Hurricane Ian makes landfall in Florida

Hurricane Ian wreaked havoc among waterfront communities in the southwest. The storm wiped out major infrastructure impacting that region for years to come.

## NOVEMBER 2022

### Tension with China escalates

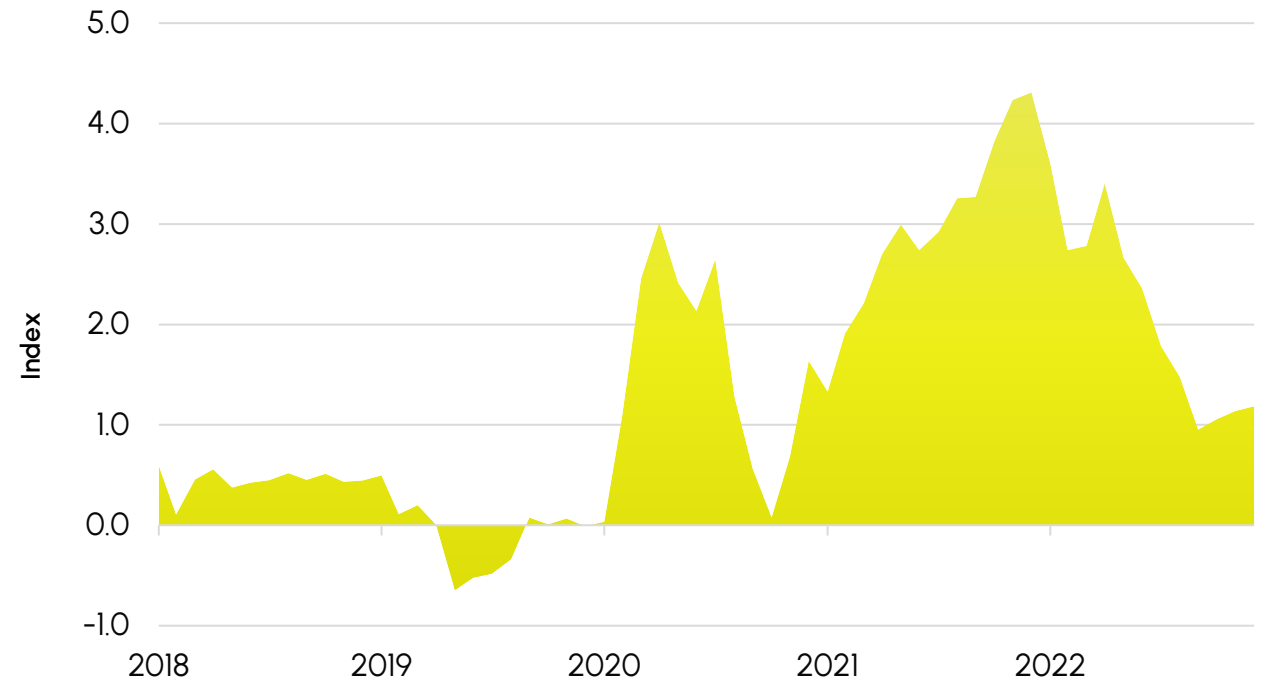
Tension between the U.S. and China increased as China conducts military exercises in the Taiwan Strait, causing blockages to international shipping lanes and the region, which is crucial to global trade.

# Supply Chain Index

The Global Supply Chain Pressure Index (GSCPI) was created by the Federal Reserve Bank of New York to measure supply chain conditions across the world. By the end of Q3 2022, the GSCPI neared pre-pandemic levels after falling five straight months to 0.9 percent in September. However, in Q4, additional COVID-19 outbreaks in China caused a turnaround in the downward trend. An increase in Asia's outbound air freight costs and the uptick in Korean delivery times due to union strikes also impacted year-end supply chain pressures. From Q3 to Q4 2022, the index increased one-fourth of a pp to 1.1, the fourth lowest reading in 26 months.

As enhancements to technology and contingency plans are deployed to minimize global supply chain disruptions, political conflicts are imperative to watch as the Taiwan strait handles more than 80 percent of the world's largest ships by tonnage and more than 40 percent of the world's container fleet.

## Supply Chain Pressures



Source: The Federal Reserve Bank of New York

# Port Activity: Real Imports of Goods

The year began with a 20.4 percent annual increase in imports totaling \$3.4 billion in Q1 2022, as delayed inventories from 2021 holiday spending poured into ports. Supply chain hiccups continued to push inflation higher; the Federal Reserve increased rates in response. As a result, quarterly annual figures for real imports declined significantly in Q2 (-0.4 percent), Q3 (-8.6 percent), and Q4 (-5.5 percent).

In addition to the Federal Reserve reducing demand, China's COVID-19 lockdowns, tensions in the Taiwan strait, and the Russo-Ukraine war lessened U.S. imports.

**Real Imports of Goods  
(Compounded Annually)**



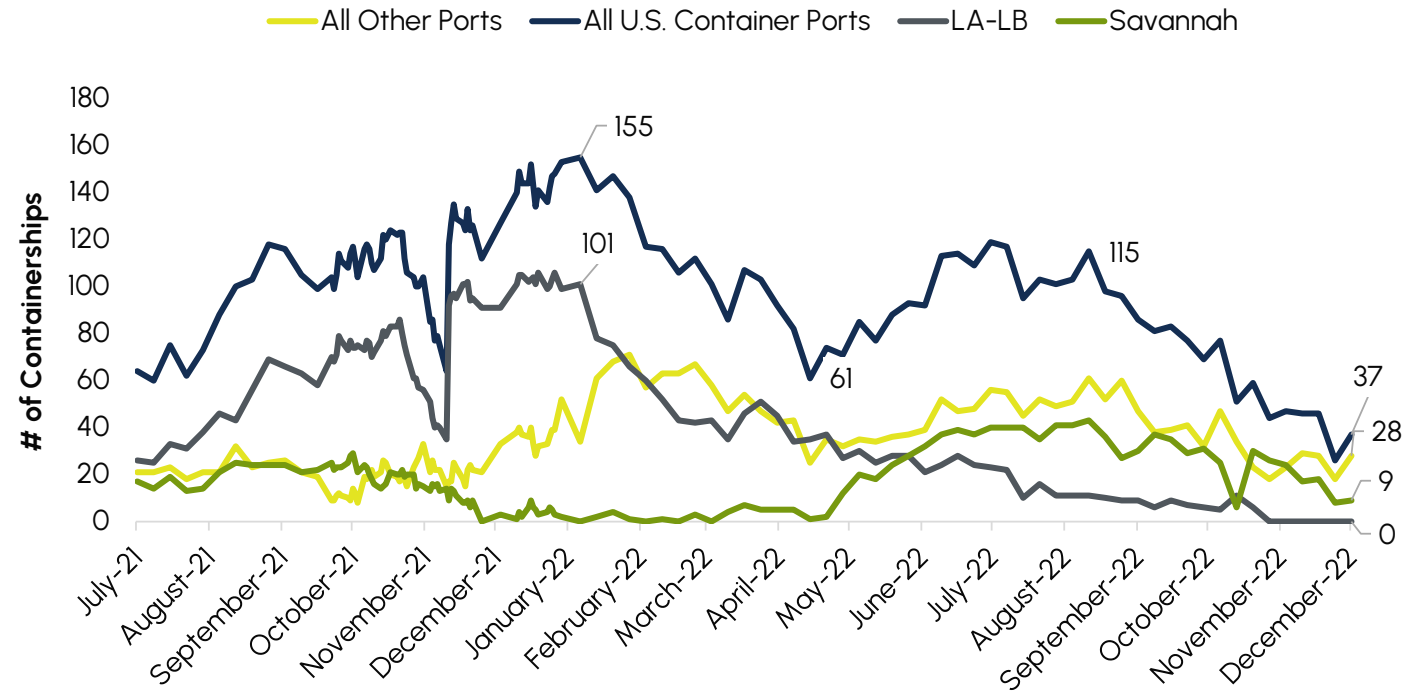
Source: U.S. Bureau of Economic Analysis

# Port Activity: Weekly Containerships Awaiting Berths

Stressed supply chains due to two years of robust consumer demand remained at the beginning of 2022, as 155 U.S. containerships awaited berths in February 2022. The Biden Administration's call for a supply chain taskforce and 24/7 operations at the ports would help improve supply chain bottlenecks. Cooling demand and doubling unloading hours at the port dropped containerships awaiting berths by 61 percent to 68 at mid-year.

Containerships awaiting berths climbed to 115 in September as geopolitical challenges arose, easing of China lockdowns increased imports, and West Coast port labor discussion broke down. Despite pending challenges, there were signs of progress in the U.S. goods movement chain. Ultimately, the Fed's cooling of the economy and importers' rerouting shipments to East Coast ports (along with measures mentioned earlier) reduced U.S. ports awaiting berths by 68 percent from September to 37 percent in December 2022.

Containerships Awaiting Berths at U.S. Ports



Note: Datapoints are weekly observations of anchored container ships, typically made each Tuesday

Source: MARAD Office of Policy and Plans / Marine Exchange of Southern California

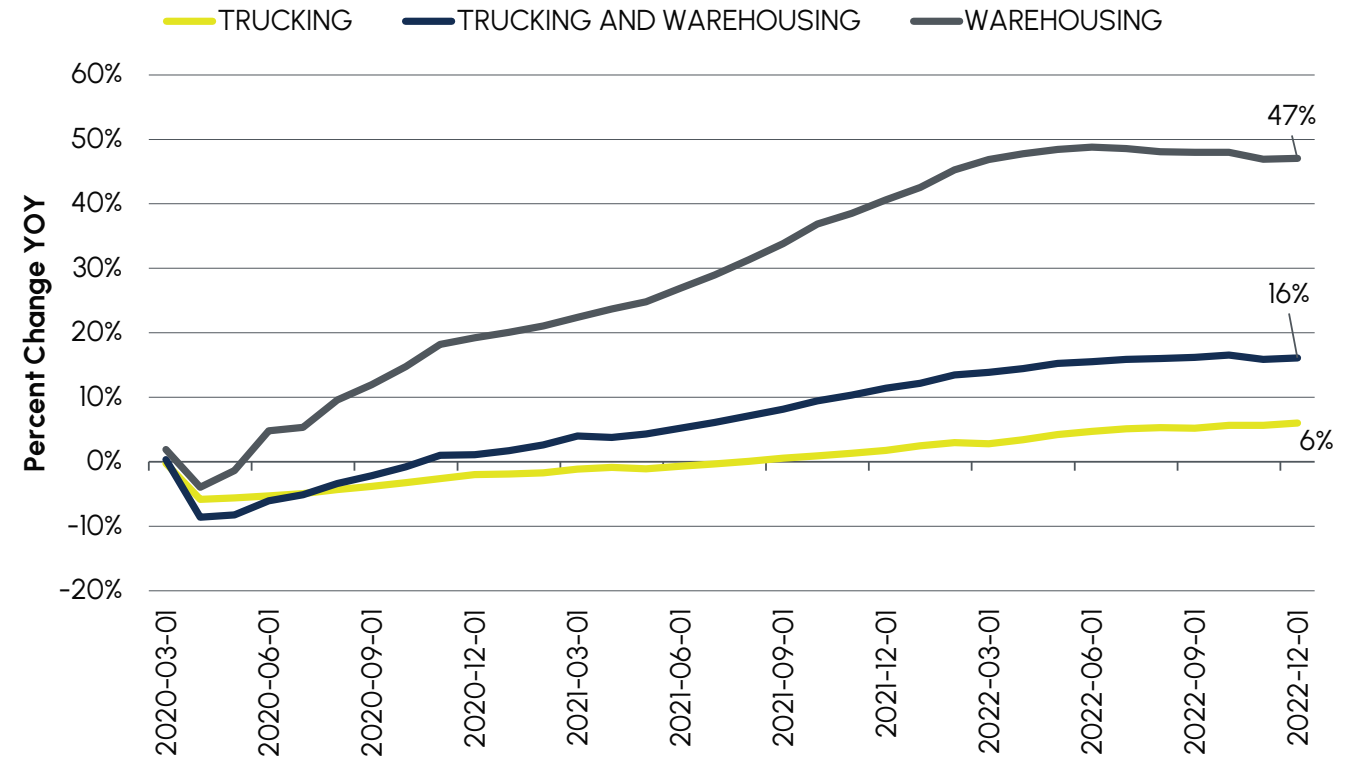


# Labor Force: Trucking and Warehousing

As of year-end 2022, the trucking and warehousing industry added 932,000 jobs, or roughly 27,000 a month, since February 2020. However, the consumer shift in demand for services and the slowdown at ports caused employment growth to ease in 2022. Month-over-month (MOM) job growth totaled 19,000 a month, a 60 percent decline, compared to 47,000 a month in 2021. As the job-to-hire ratio inches closer to 1.0, at 1.3 at year-end, 0.5 pp lower than the previous year, the slowdown indicates it has more to do with the erosion in demand and less to do with employers' ability to find qualified workers.

Employment for transportation and warehousing were up 4 percent and 5 percent, respectively, from the previous year. However, both sectors experienced slipping in MOM growth. At 4,900 a month, the warehousing sector had the largest dip in hiring, while the transportation sectors declined 5 percent during the same period by adding 4,400 a month. The warehousing sector experienced a significant uptick in employment since the pandemic (47 percent), so a fall due to weakened demand was expected. The transportation sector witnessed milder growth (4 percent) during this period due to a driver shortage before the pandemic.

Trucking and Warehousing Employment Since the Pandemic



**Note:** Data in this chart represents wage and salary workers only, and excludes owner operators and independent contractors.

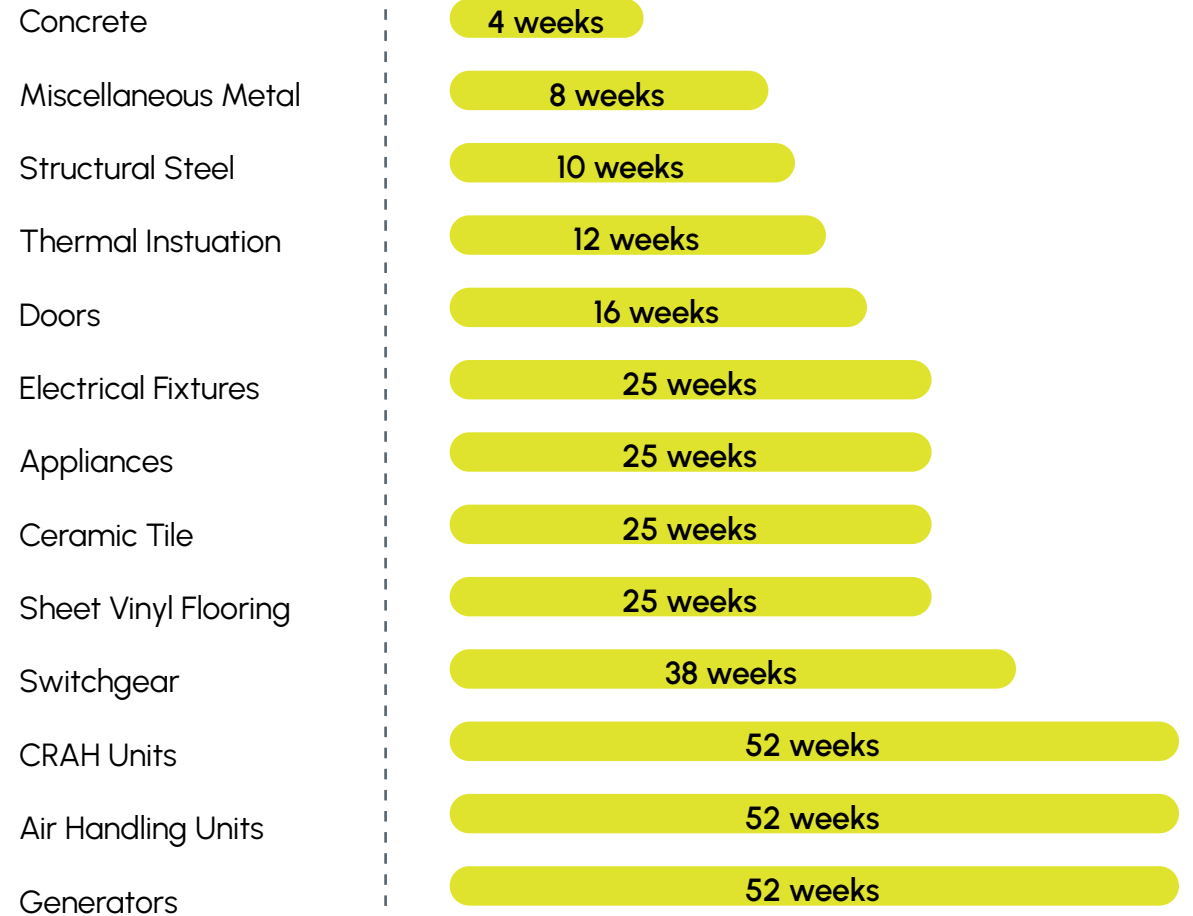
**Source:** U.S. Bureau of Labor Statistics: Job Openings and Labor Turnover Survey (JOLTS)

# Material Lead Times

Labor shortages, political conflict, and the lingering impacts from the COVID-19 pandemic have led to longer lead times, which is measured by the difference in time from which an order for materials is placed and when it arrives on site. The reliability of delivery dates continues to be inconsistent, posing challenges for many projects. Much of the research demonstrates that the global supply chain pressures are easing, which in turn should trickle down to the project level over the next few quarters. It will be critical to watch the material lead time shifts over the next few quarters as an indication that recovery is in motion.

## Material

## Lead Time in Weeks





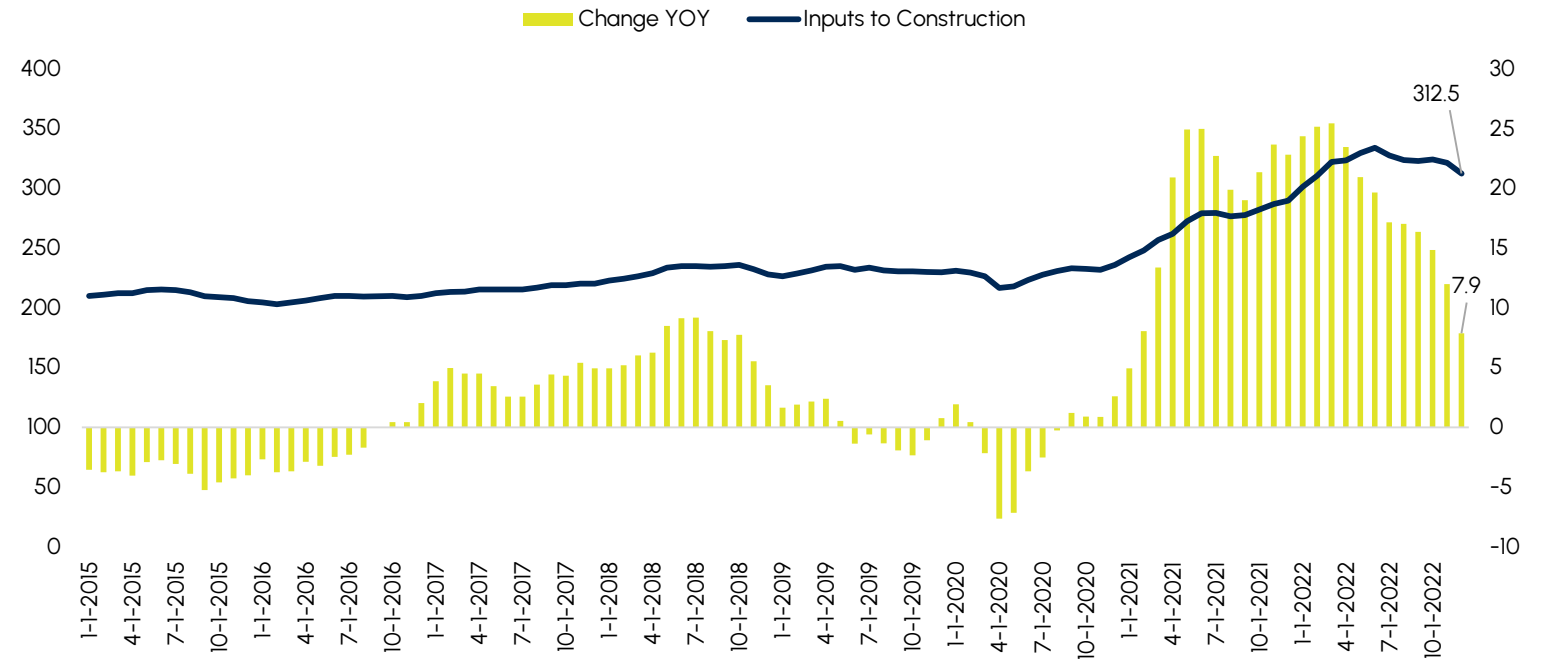
# Construction Input Pricing

# Producer Price Index (PPI): Net Inputs to Construction

The Producer Price Index (PPI) for construction from the Bureau of Labor Statistics tracks price fluctuations from the industry, which directly correlates to the cost of construction. Construction input prices increased 7.9 percent in December 2022 compared to December 2021, according to the Bureau of Labor Statistics, a big change from indices increases of 22.8 percent experienced from 2020 to 2021. Slowing demand and the clearing of supply chain bottlenecks resulted in a six month decline in PPI of -1.1 percent on average. December marked the biggest dip of 2.7 percent from the previous month, bringing relief to firms still reeling from the overall increase of 36.1 percent in PPI since the pandemic.

Throughout 2022, steel mill products experienced the most significant decline YOY of 28.7 percent. Gypsum products and brick and structural clay tile saw the most considerable increase of 16.2 percent and 14.2 percent due to inflationary impacts from raw materials, freight costs, and the war in Ukraine.

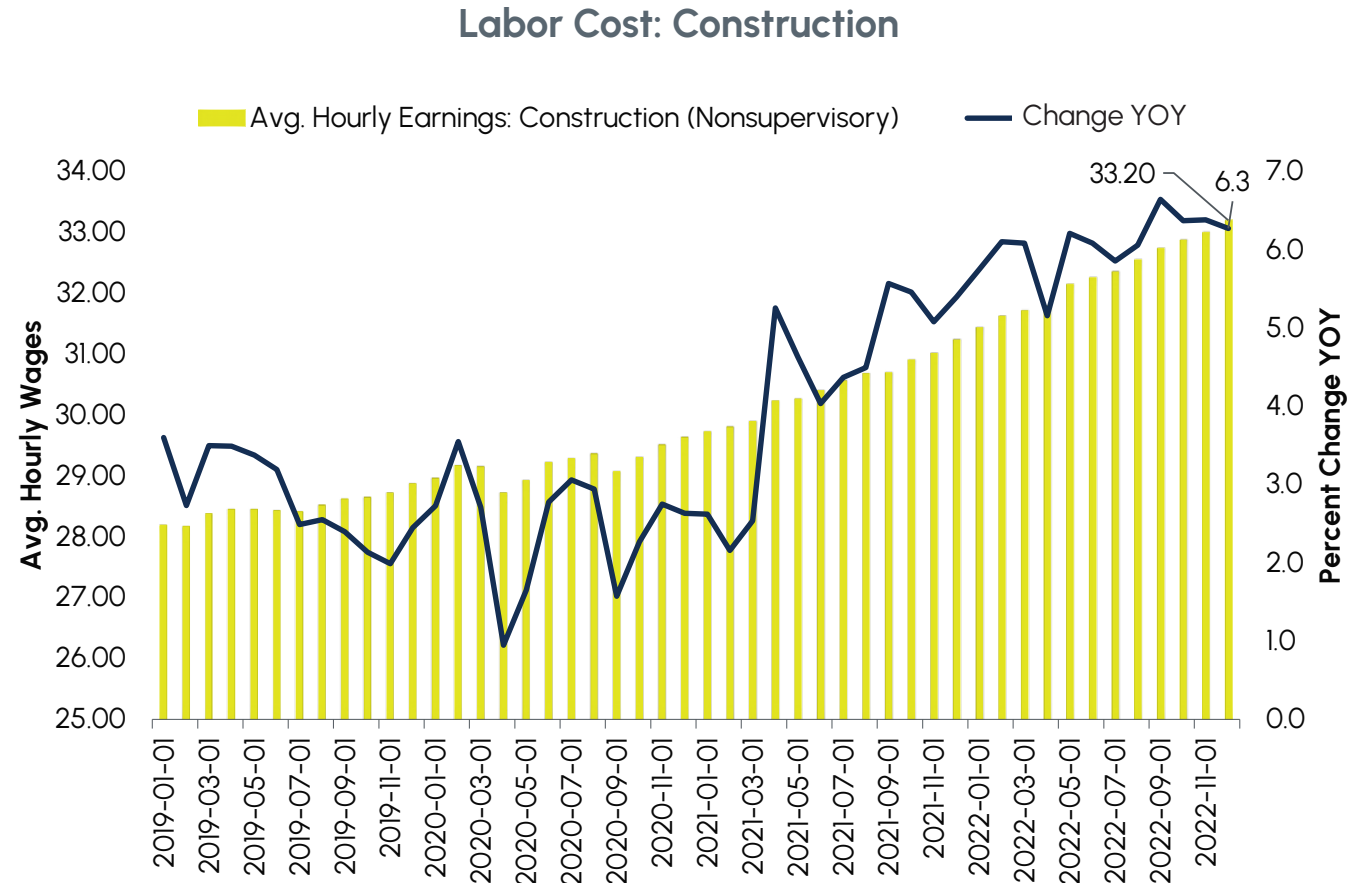
## Net Inputs to Construction YOY



Source: U.S. Bureau of Economic Analysis

# Labor Cost: Construction

In addition to material prices, labor is a significant input to construction bid prices that continues to rise YOY at a faster pace. According to the Bureau of Labor Statistics, average hourly wages for nonsupervisory construction employees increased, on average, 0.5 percent monthly in 2022, compared to 0.4 percent monthly in 2021, and 0.2 percent monthly in 2020. In December 2022, average hourly earnings were up 6.3 percent or \$2.14 per hour from the previous year at \$33.20—the highest rate on record. Weakened demand may result in a slowdown in employment wages, but it is not likely, as 34,000 construction jobs remained unfilled in December 2022.



Source: U.S. Bureau of Labor Statistics

# Producer Price Index (PPI): Material Increases YOY



**12.5%**  
Nonmetallic Products

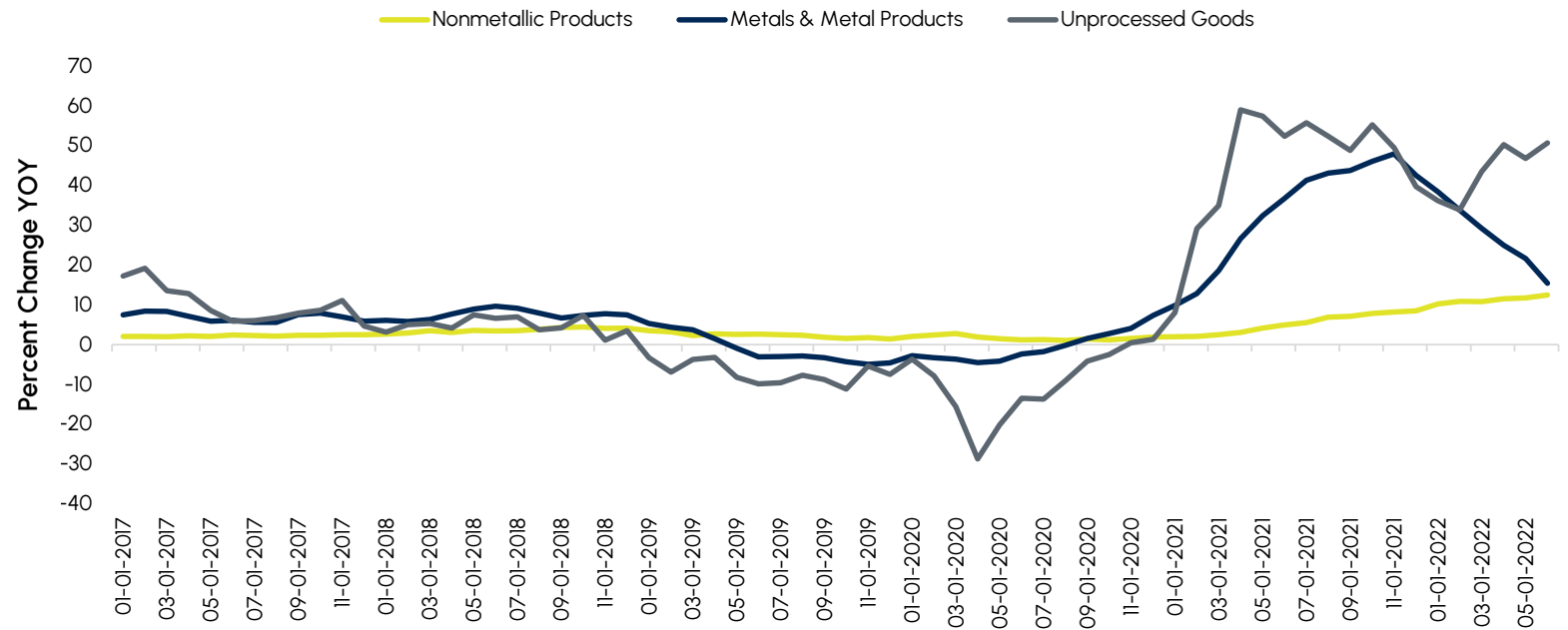


**-70%**  
Metals & Metal Products



**11.7%**  
Unprocessed Goods

## Materials Increases



Source: U.S. Bureau of Labor Statistics

# Nonmetallic Products

- Nonmetallic products had the most significant increase of 2022, up nearly 13 percent YOY. Some products such as rubber and plastic, gypsum products, and insulation products far exceeded the average increase of nonmetallic products.

Index	December 2022 YOY	December 2022	December 2022 vs. 2021 Average	2002-2022 Average
Ready-mix concrete	13.6	345.8	16.8%	227.8
Precast concrete products	12.9%	366.2	18.6%	229.7
Brick and structural clay tile	14.2%	252.9	17.6%	191.3
Rubber and plastic products	8.3%	353.7	<b>23.9%</b>	204.6
Flat glass	11.0%	169.8	15.8%	123.2
Gypsum products	16.2%	462.4	23.5%	267.6
Insulation products	114.0%	262.0	20.5%	169.3
Lumber and plywood	-19.9%	269.2	<b>-22.0%</b>	206.3

RUBBER AND PLASTIC PRODUCTS



Biggest increase of

**23.9%**

over 2021 average

LUMBER AND PLYWOOD



Biggest decline of

**-22.0%**

over 2021 average

*\*Individual input pricing data can be found in the appendix*

# Metallic Products

- Metallic products price index fell consistently throughout 2022, after experiencing considerable price increases the year before. At the end of 2022, the price index declined at -7.0 percent YOY, with steel mill products witnessing the most significant decline of -28.7 percent YOY. Sheet metal products and fabricated structural metal remained elevated YOY.

Index	December 2022 YOY	December 2022	December 2022 vs. 2021 Average	2002-2022 Average
Steel mill products	-28.7%	32.4	-8.9%	197.2
Steel pipe and tube	-4.8%	489.1	21.2	245.7
Sheet metal products	8.0%	317.2	22.2%	198.5
Fabricated structure metal	7.8%	360.5	25.6%	204.7
Bar joists and concrete bars	2.2%	346.8	20.0%	195.3
Fabricated iron and steel	2.0%	201.2	21.0%	126.5
Prefabricated metal buildings	-4.4%	511.0	7.8%	286.8

*\*Individual input pricing data can be found in the appendix*



Biggest increase of  
**25.6%**  
over 2021 average



Biggest decline of  
**-8.9%**  
over 2021 average




# Unprocessed Goods


- Unprocessed goods price index witnessed significant increases throughout the pandemic. At year-end 2022, the price index was still elevated at 11.7 percent YOY, but price pressures eased throughout the year.

Index	December 2022 YOY	December 2022	December 2022 vs. 2021 Average	2002-2022 Average
Asphalt	-24.5%	189.2	-17.9%	194.0
Sand, gravel, and crushed stone	11.8%	427.1	12.7%	277.7
Iron and steel scrap	-27.7%	534.2	-22.5%	438.0
Alloy steel scrap	-21.6%	497.2	-8.9%	477.8
Copper base scrap	-7.6%	600.1	-3.6%	435.1

*\*Individual input pricing data can be found in the appendix*

**SAND, GRAVEL, AND CRUSHED STONE** 

**Biggest increase of 23.9% over 2021 average**

**IRON AND STEEL SCRAP** 

**Biggest decline of -22.5% over 2021 average**



# 2023 Market Outlook

# Supply Chain: Top Issues to Watch

In 2022, the supply chain experienced less pandemic-fueled volatility. Demand eroded and retreated to near pre-pandemic levels providing relief along the tight global supply chain. However, with the numerous moving parts along the road from manufacturer to consumer, it's important to highlight issues that persist and potentially threaten the recovering network. While infrastructure investment is expected to increase significantly over the next two years, additional demand will strain materials, labor, and equipment that haven't fully recovered from pandemic demand. Additionally, geopolitical conflict poses a significant threat to commodities sourced from Russia, Ukraine, and China which can result in future delays and price increases.

Investment in technology, alternative materials, and skilled workers to manage the complexities of the supply chain will help diminish the likelihood of a future supply chain crisis. However, the proposed solutions must be scalable, sustainable, and competitive, ensuring usefulness beyond a single project's scope.



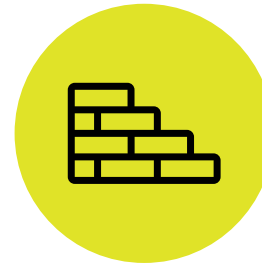
Infrastructure  
Investment



Geopolitical  
Conflict



Warehousing



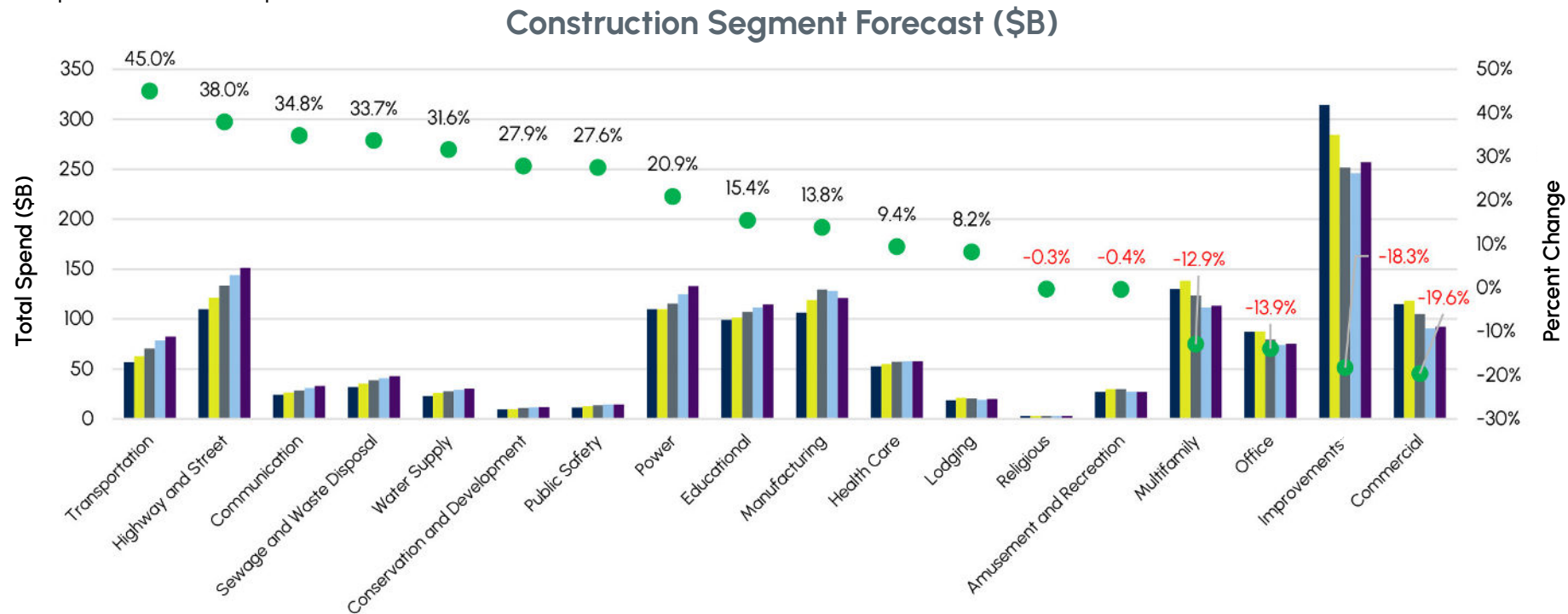
Material  
Shortages



Labor and  
Equipment

# Construction Segment Forecast

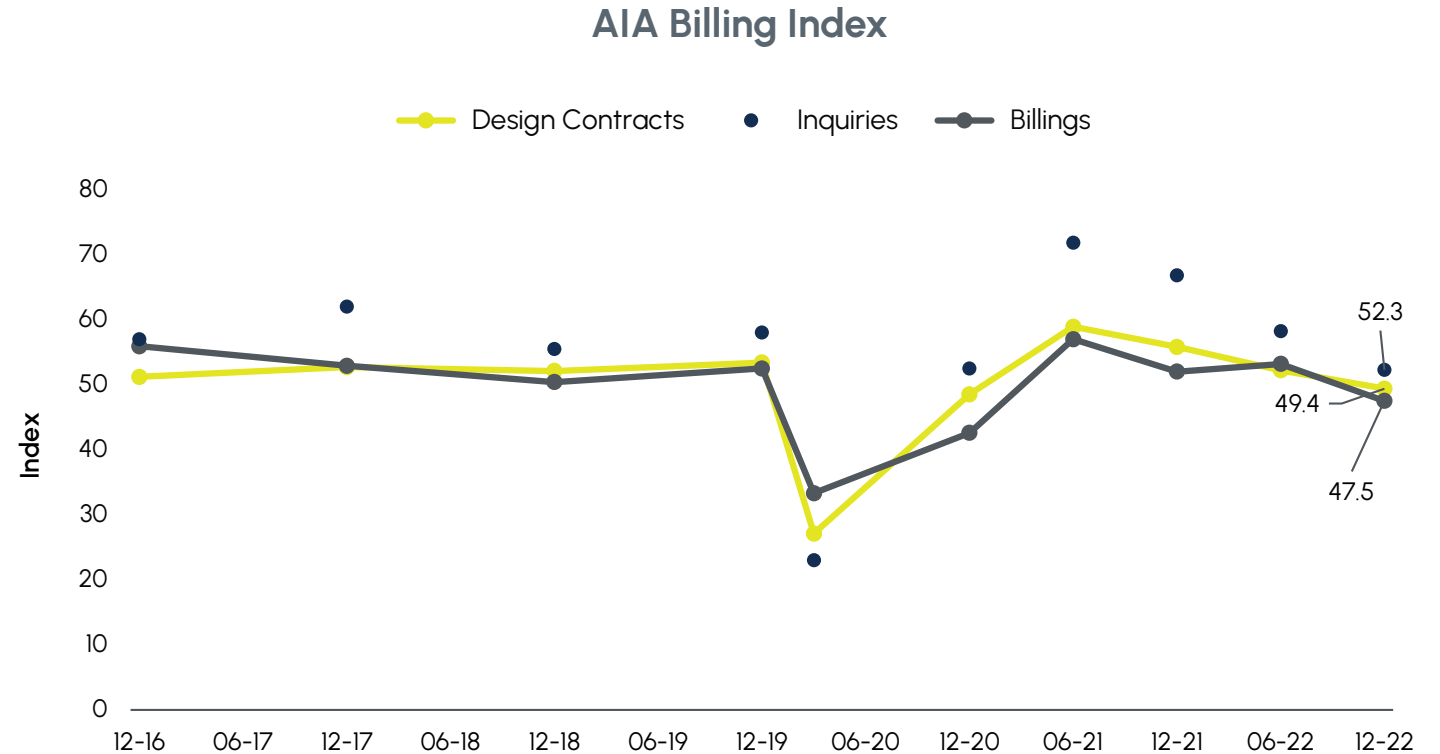
In 2023, FMI Consulting, a leading consulting and investment banking firm for companies working within the built environment, is forecasting total construction spending to fall -3.8 percent to \$1.73 trillion due to a decrease in spending in the residential sector (-13.6 percent), primarily single-family (-21.9 percent), and improvements (-9.6 percent). Reduced spending in the religious segment of -3.5 percent is also expected. Despite the forecasted decline in overall spending, 14 out of 19 segments tracked will experience significant growth, led by lodging (13.3 percent), public safety (12.9 percent), and water supply (12.7 percent). Construction spending is expected to flatline in the office (0.1 percent) and power (-0.2 percent) segments over the next year. The chart illustrates expected growth through 2026. Consistent with the above projections, the residential sector will experience the most significant decline of -22.0 percent, while nonbuilding structures experiencing the most significant growth of 30 percent, led by transportation at 45.0 percent.



Source: U.S. Engineering and Construction Outlook: Q1 2023, U.S. Census Bureau Annual Value of Construction Put in Place (2022 Data)

# Indicator: AIA Billings Index

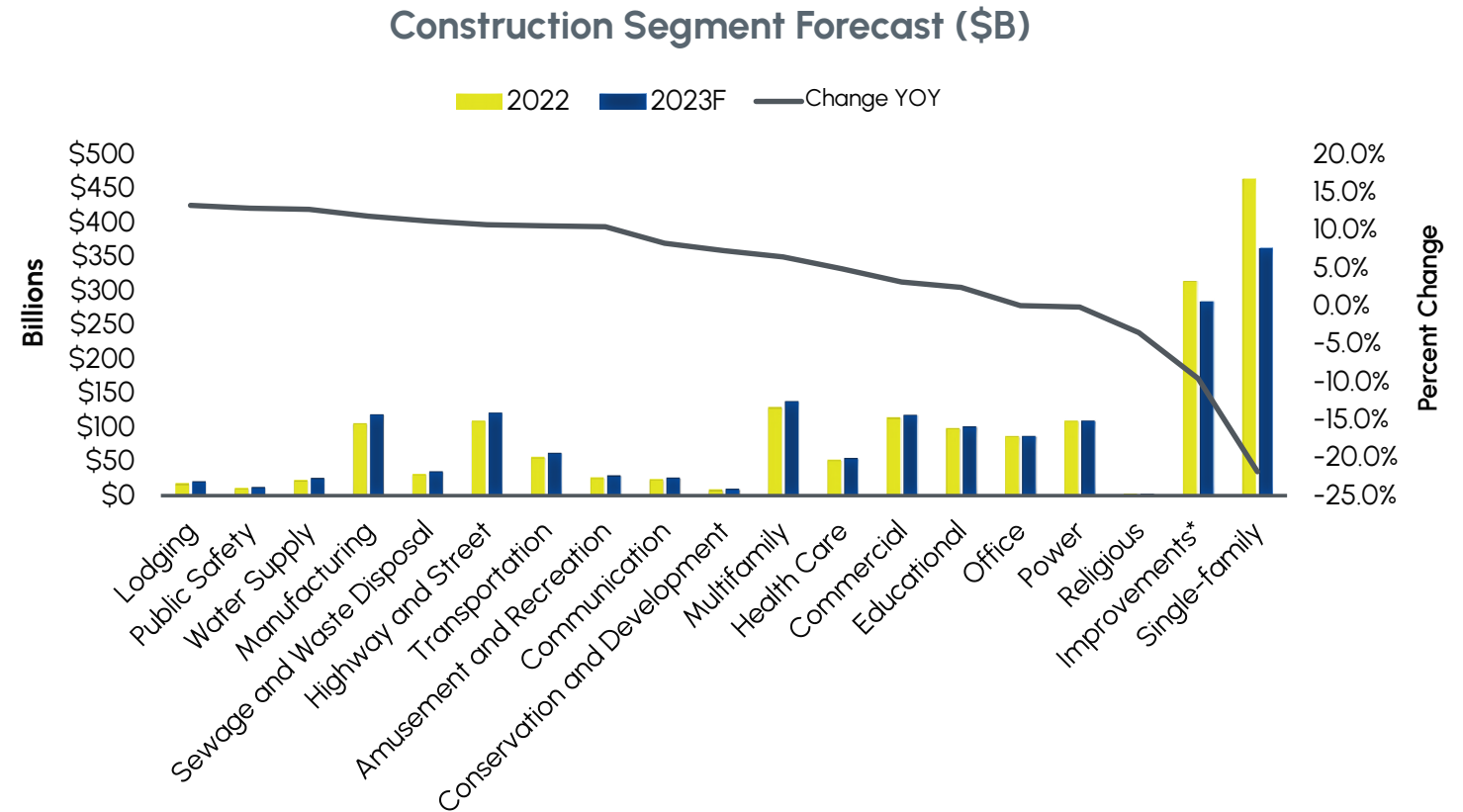
The American Institute of Architects (AIA) Architecture Billings Index (ABI) measures nonresidential building activity via its work-on-the-boards survey as a leading indicator. As a continued sign of softening, AIA reported billings at 47.5 in December, marking the third consecutive month billings have contracted. Despite a slight improvement from the previous month, this is a marked difference from where the market stood last year at 57.0. The cancellation of projects and delays impacted every region, although the West (45.5) and the Northeast (46.5) have fared the worst, while the Midwest has held steady, contracting slightly (49.4) over the last six months. Residential and commercial projects have felt the most significant pinch at 44.3 and 45.2, respectively; however, there has been a considerable slowdown in institutional projects, which fell from 58.9 in September to 47.3 in December.



Source: The American Institute of Architects (AIA)

# Indicator: Construction Backlog

Economic uncertainty and the Fed's continued battle with inflation is expected to erode construction spending. In 2023, FMI is forecasting total construction spending to tick down -3.8 percent to \$1.73 trillion due to a decrease in spending in the residential sector (-13.6 percent), primarily single-family (-21.9 percent), and improvements (-9.6 percent). Reduced spending in the religious segment of -3.5 percent is also expected. Despite the forecasted decline in overall spending, 14 out of 19 segments tracked will experience significant growth, led by lodging (13.3 percent), public safety (12.9 percent), and water supply (12.7 percent). Construction spending is expected to flatline in the office (0.1 percent) and power (-0.2 percent) segments over the next year.



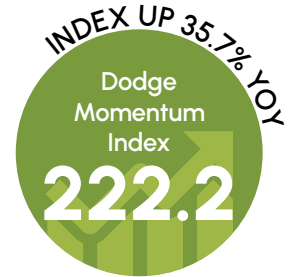
Source: FMI Consulting U.S. Engineering and Construction Outlook, Q1 2023

# Indicator: Dodge Momentum Index (DMI)

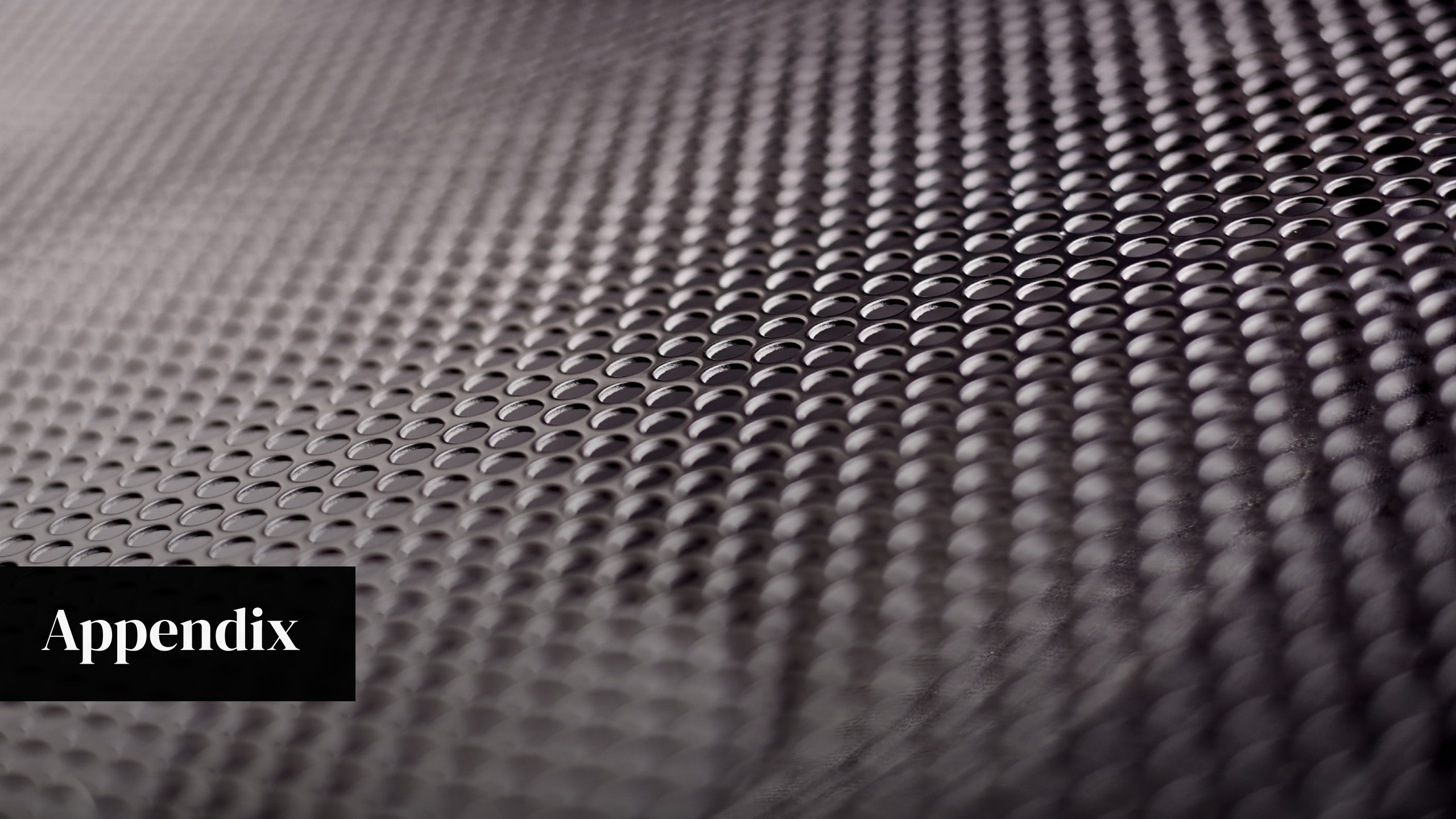
Despite multiple challenges throughout 2022, the index expanded 35.7 percent YOY. Commercial planning had a breakout year ticking up 44.8 percent over the last year, continuing to grow 8.4 percent from November 2022 to December 2022 due to a strong showing with data centers and hotel projects. At the same time, institutional planning advanced by 18.3 percent over the last year. Yet growth was more tempered during the final month of 2022, increasing 2.7 percent from November due to fewer healthcare and education projects entering the planning phase stemming from the lingering effects and recovery of the pandemic.

Despite emerging economic troubles, the Dodge Momentum Index's expansion for the fourth consecutive month in December of 6.6 percent indicates the construction industry may continue to show signs of growth, as the Dodge Momentum Index suggests construction activity 12 months ahead.

**Dodge Momentum Index**  
(2000=100, Seasonally Adjusted)



Source: Dodge Construction Network



# Appendix



# Nonmetallic Products

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Flat glass	11.0%	169.8	15.8%	123.2
Gypsum products	16.2%	462.4	23.5%	267.6
Insulation products	114.0%	262.0	20.5%	169.3
Lumber and plywood	-19.9%	269.2	<b>-22.0%</b>	206.3

RUBBER AND PLASTIC PRODUCTS



Biggest increase of  
**23.9%**  
over 2021 average

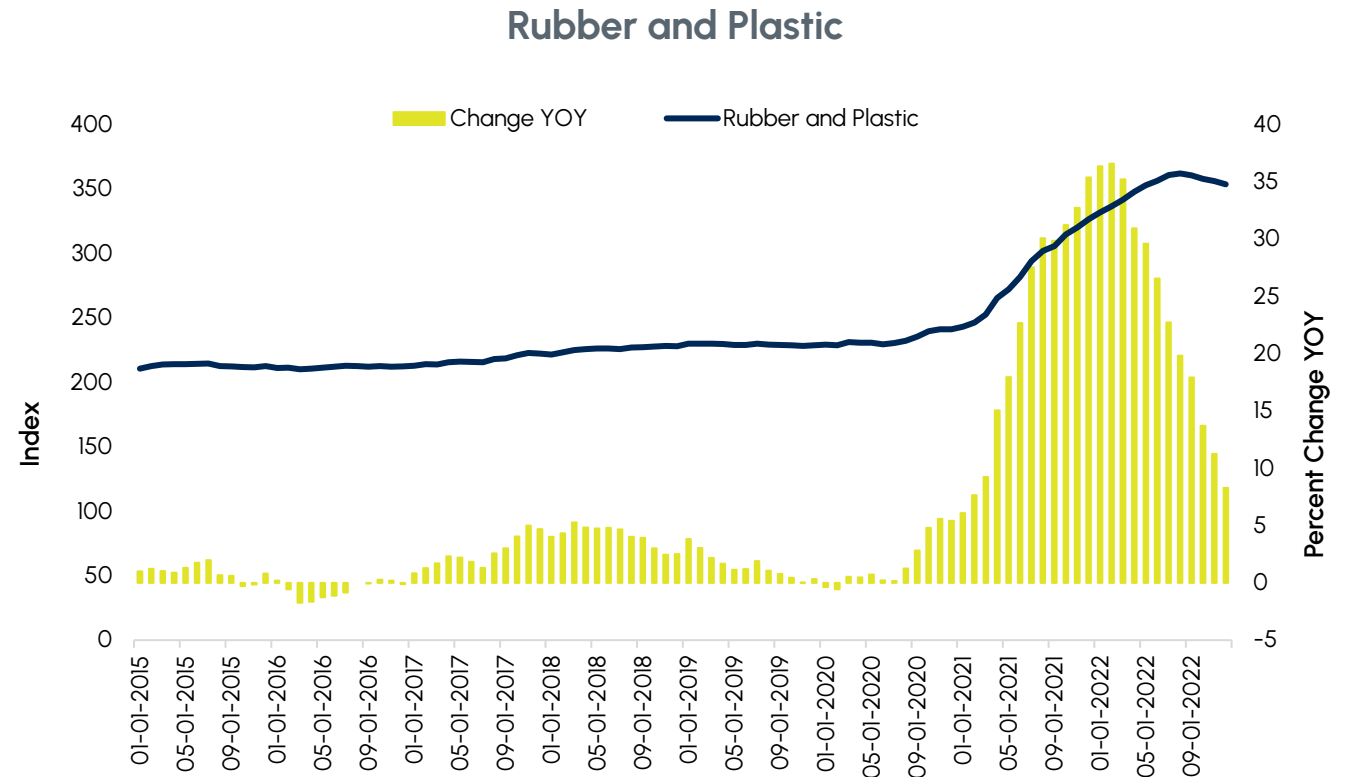
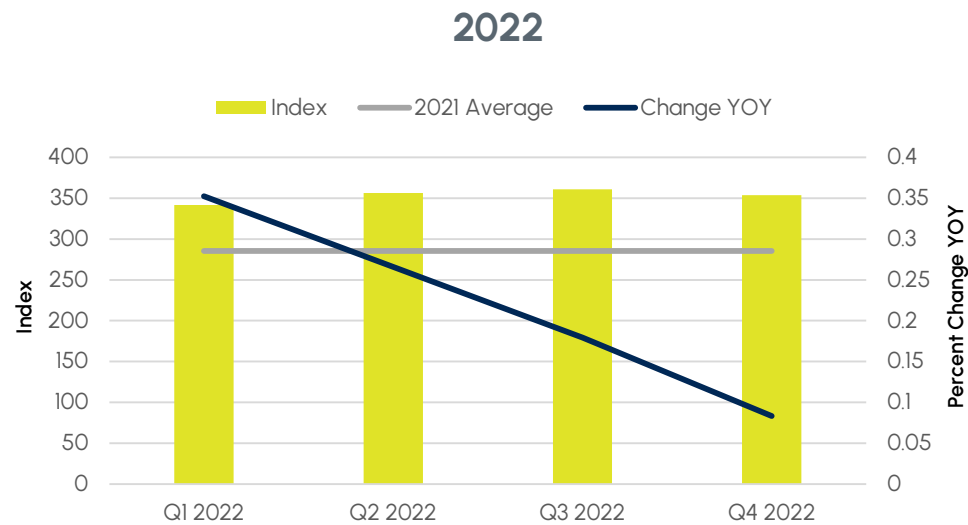
LUMBER AND PLYWOOD



Biggest decline of  
**-22.0%**  
over 2021 average

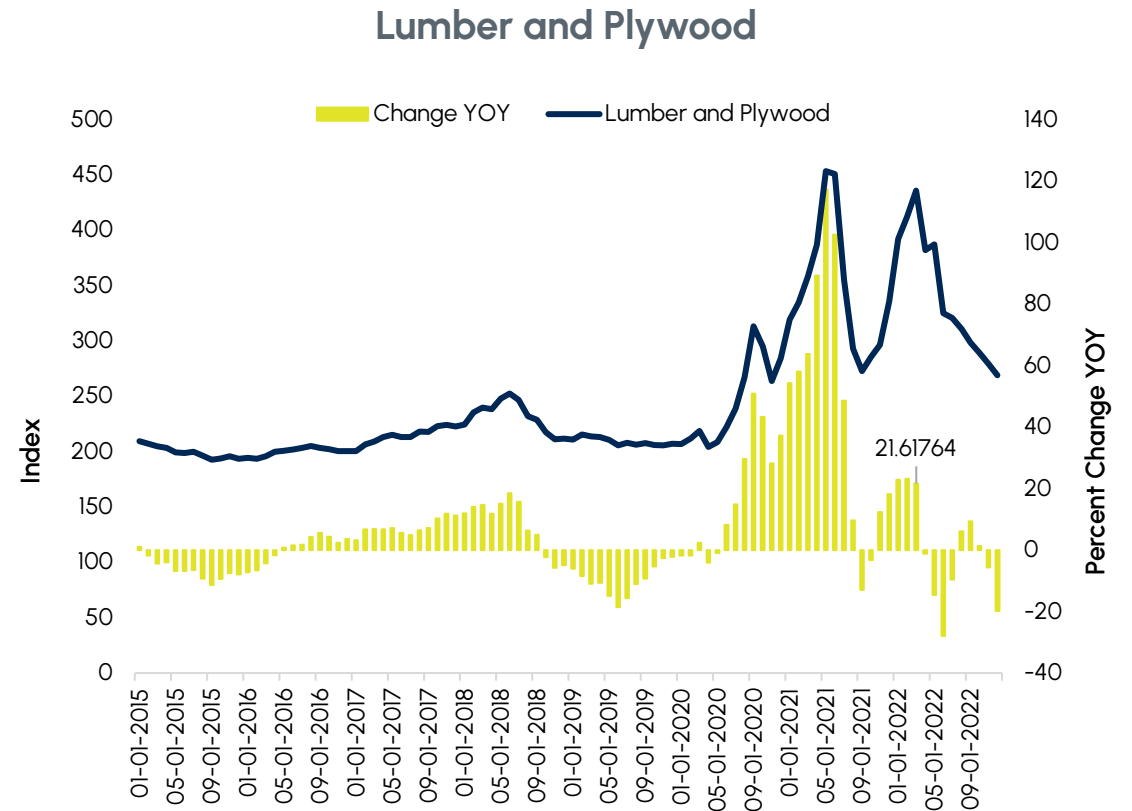
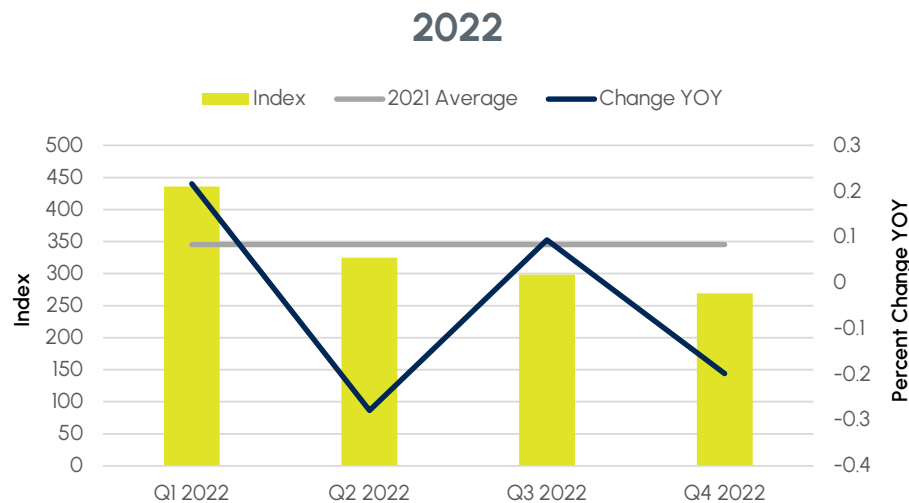
# Rubber and Plastic

- Rubber and plastic index increased 8.3 percent YOY at 353.7 as of December 2022, and 23.9 percent above 2021 average. Although prices are beginning to retreat, inventories are still recovering from the Texas freeze causing production to be offline amidst rising data center and infrastructure demand.



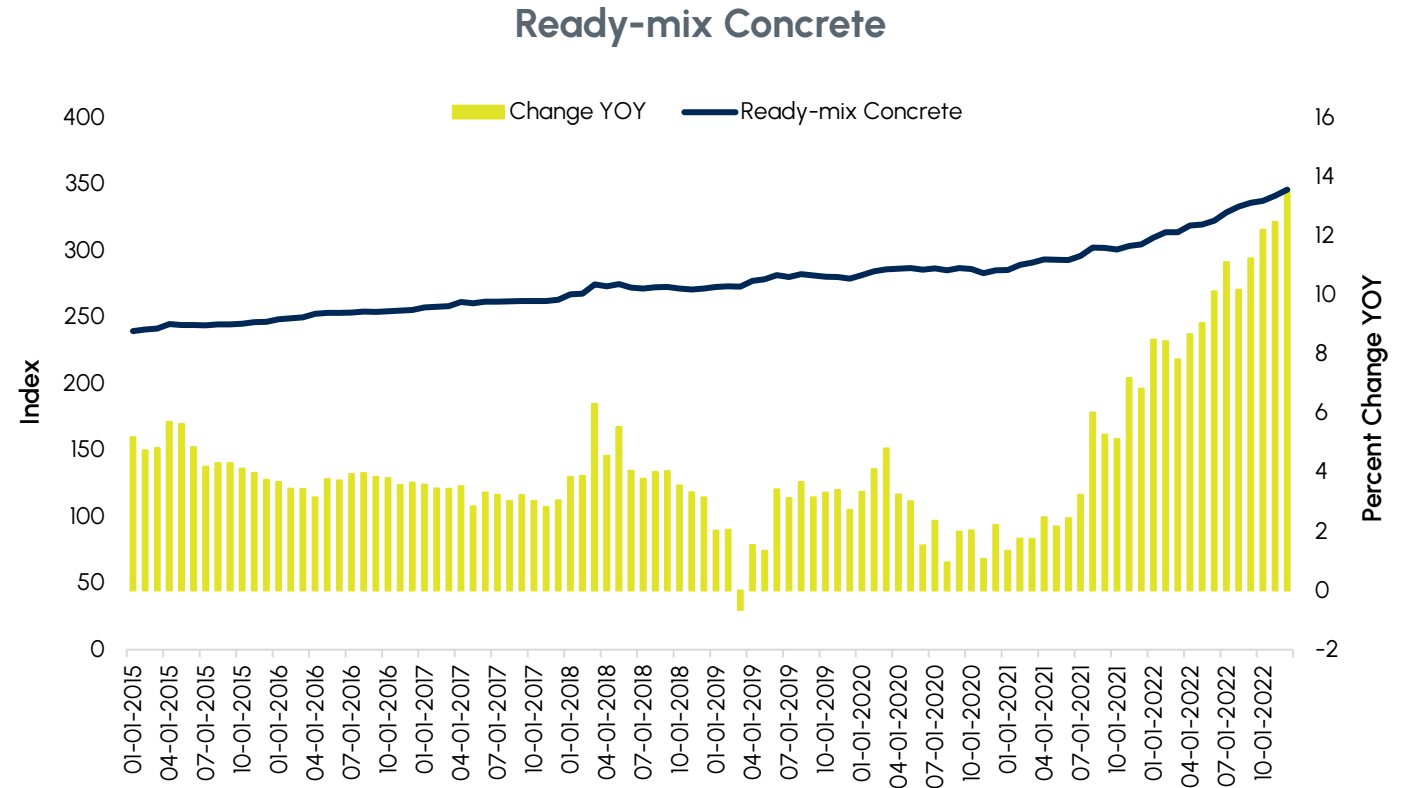
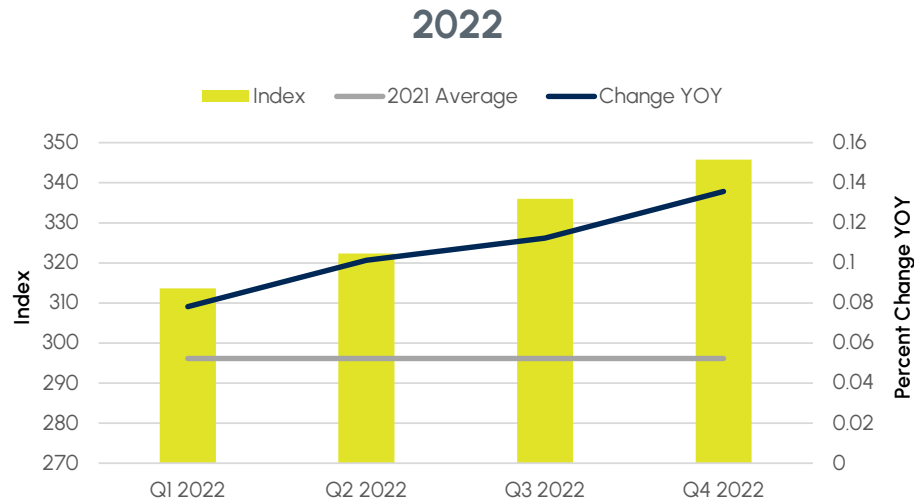
# Lumber and Plywood

- Lumber and plywood index declined at -19.9 percent YOY to 269.1 as of December 2022, and -22.0 percent below 2021 average. Curbed demand due to high interest rates and fewer housing starts pushed lumber buyers to the sidelines and pricing downward.



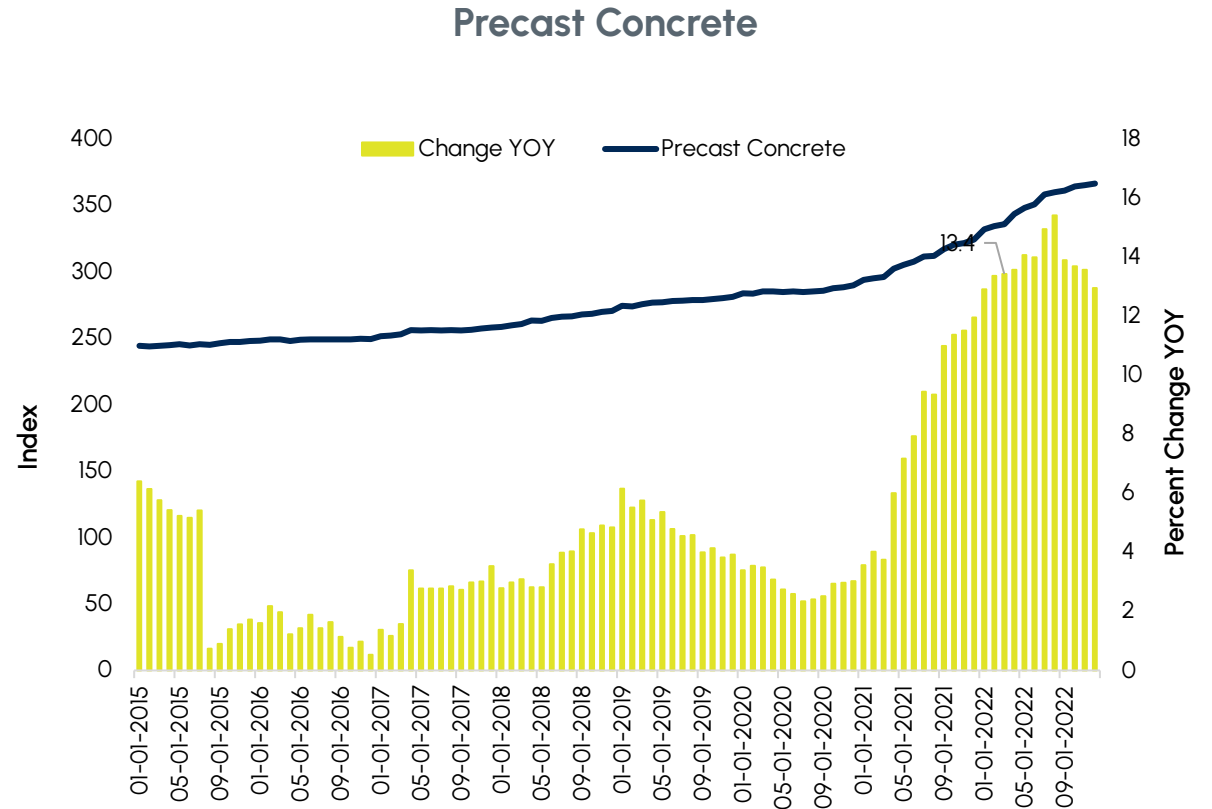
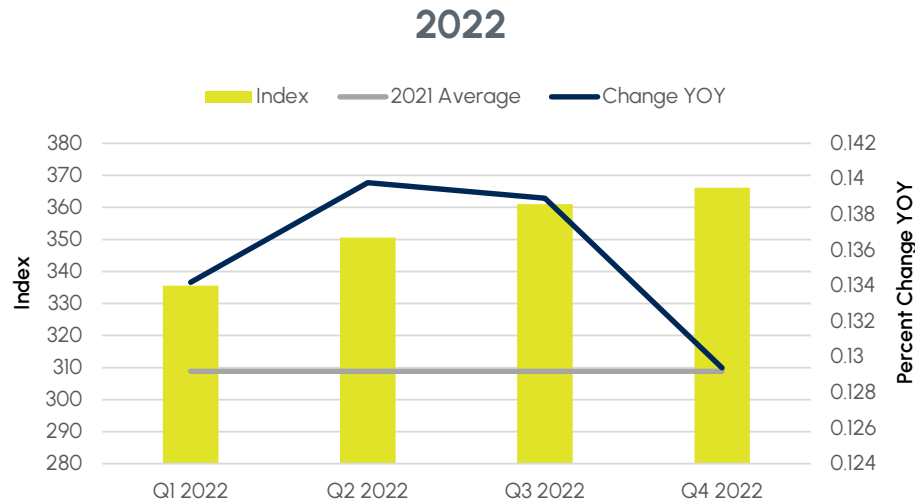
# Ready-mix Concrete

- Ready-mix concrete index increased at 13.6 percent YOY to 345.8 as of December 2022, and 16.8 percent above 2021 average.



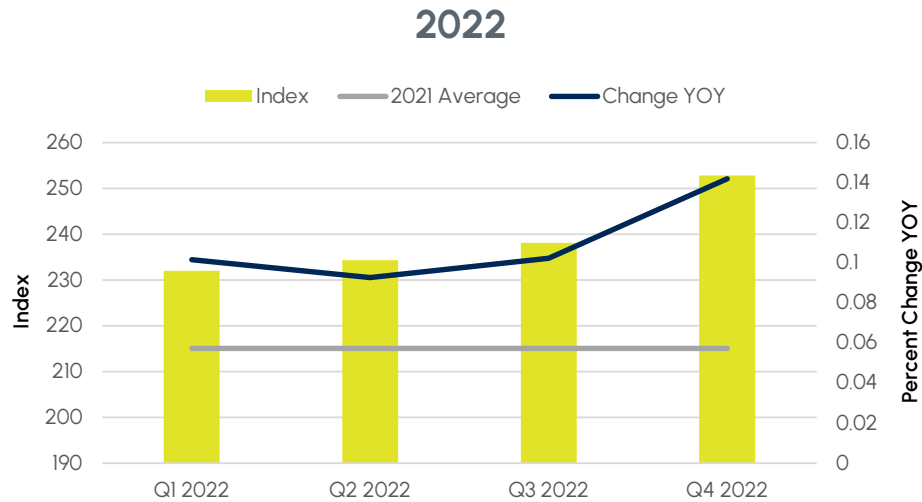
# Precast Concrete

- Precast concrete index increased at 12.9 percent YOY at 366.2 as of December 2022, and 18.6 percent above 2021 average.

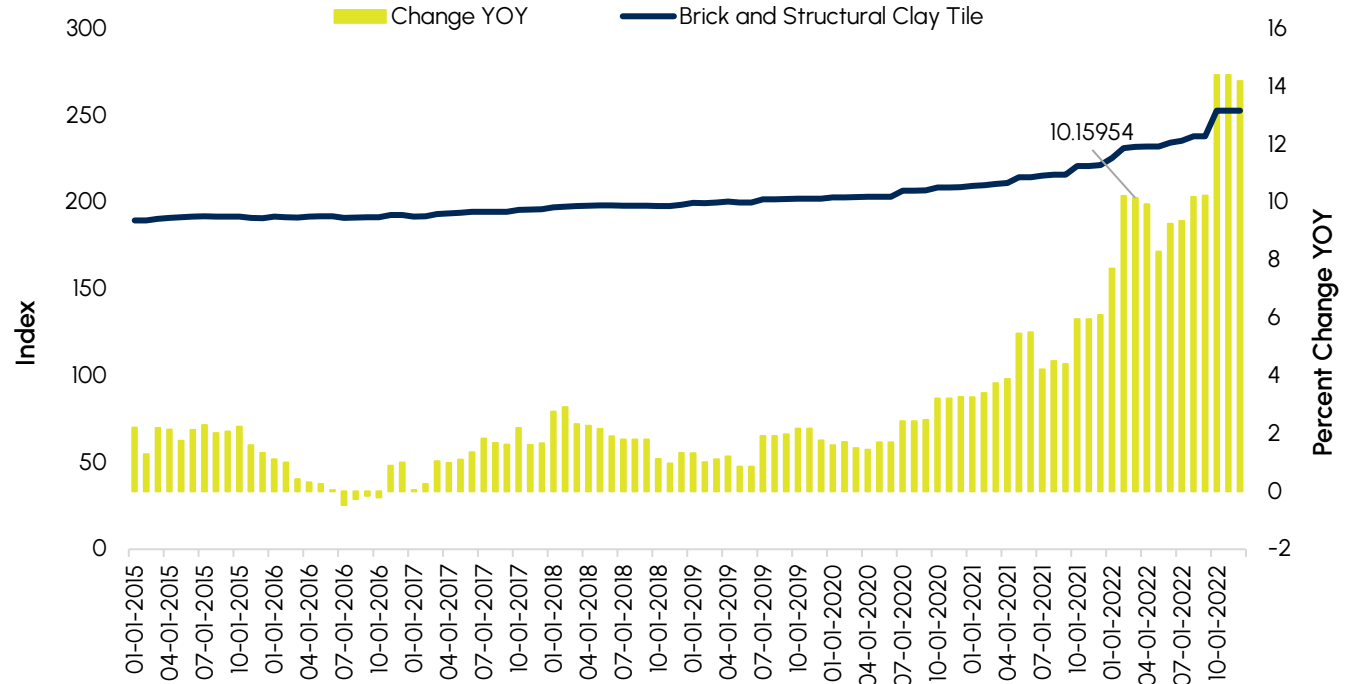


# Brick and Clay Tile

- Brick and clay tile index increased at 14.2 percent YOY at 252.9 as of December 2022, and 17.8 percent above 2021 average.

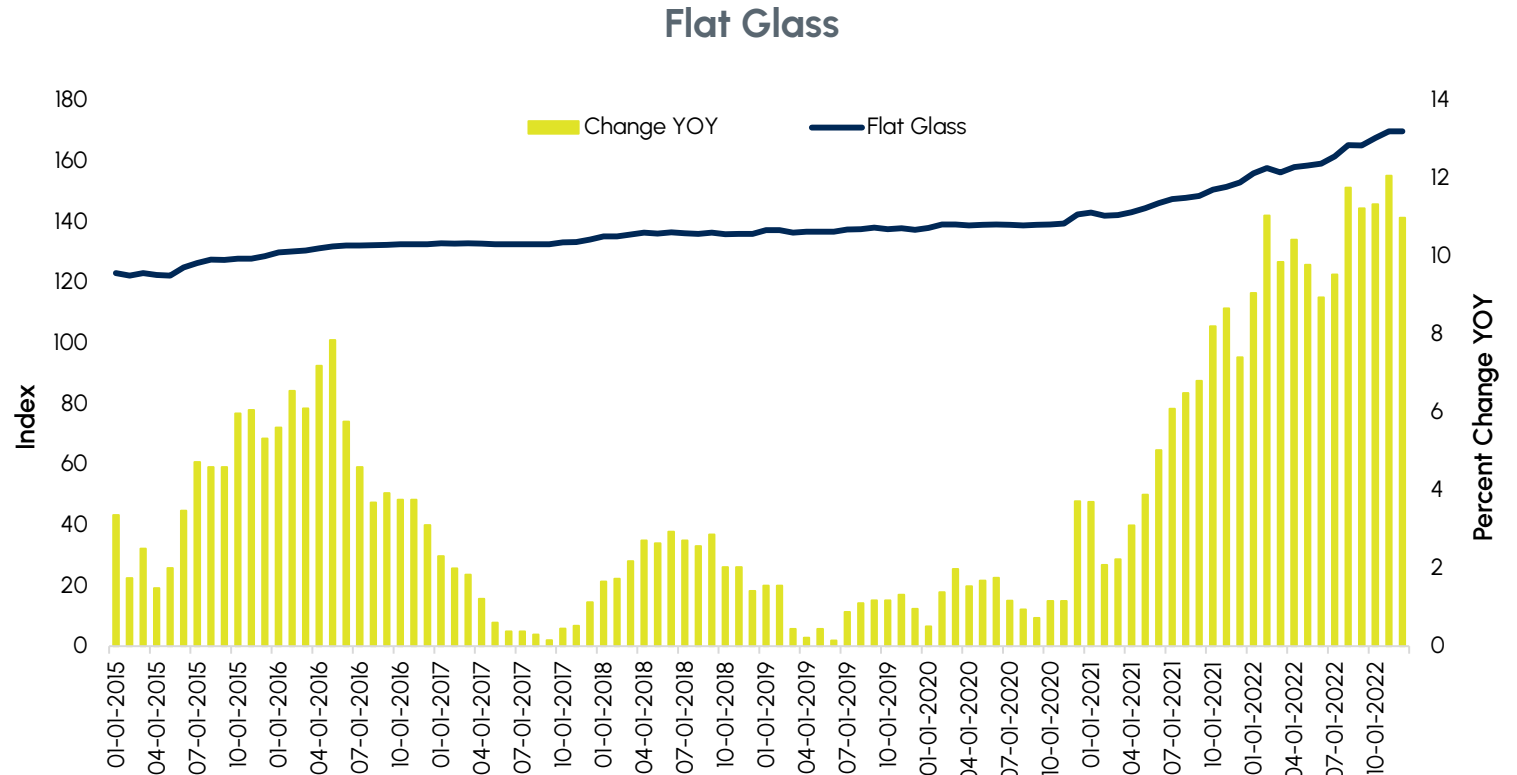
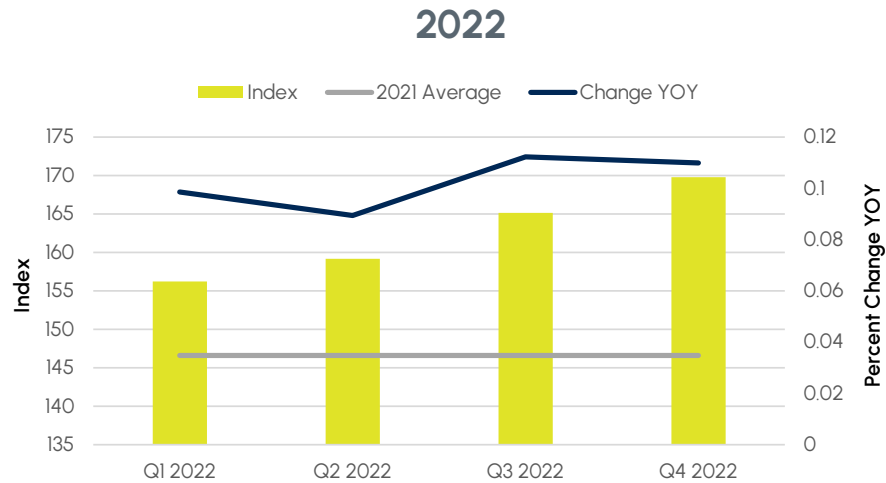


## Brick and Structural Clay Tile



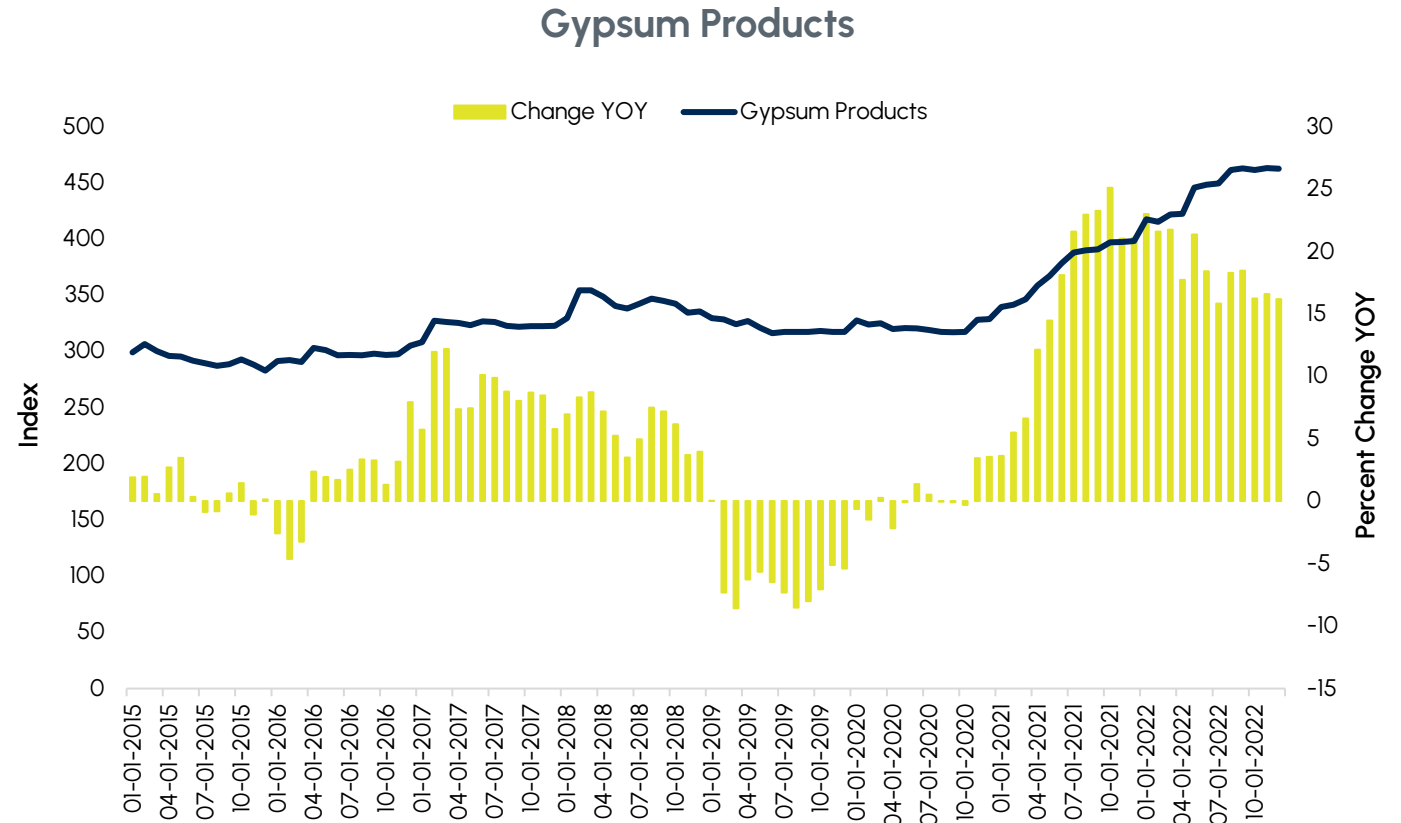
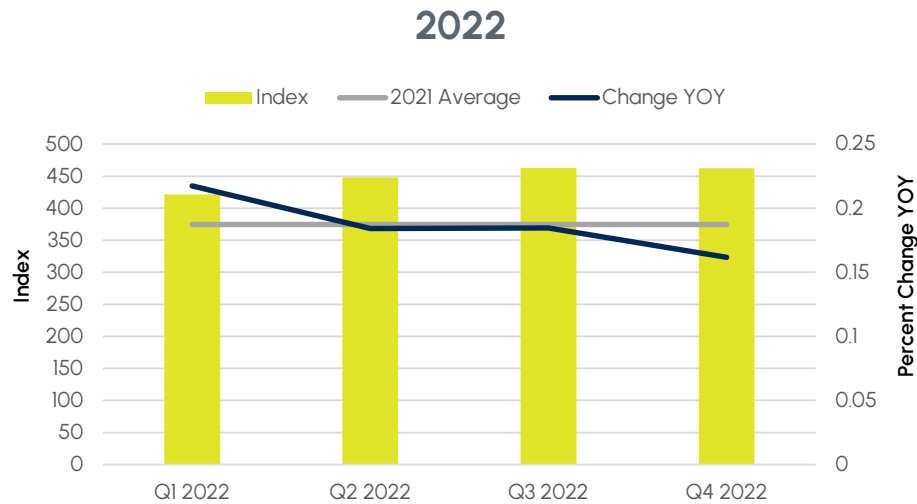
# Flat Glass

- Flat glass index increased at 11 percent YOY to 169.8 as of December 2022, and 15.8 percent above 2021 average.



# Gypsum Products

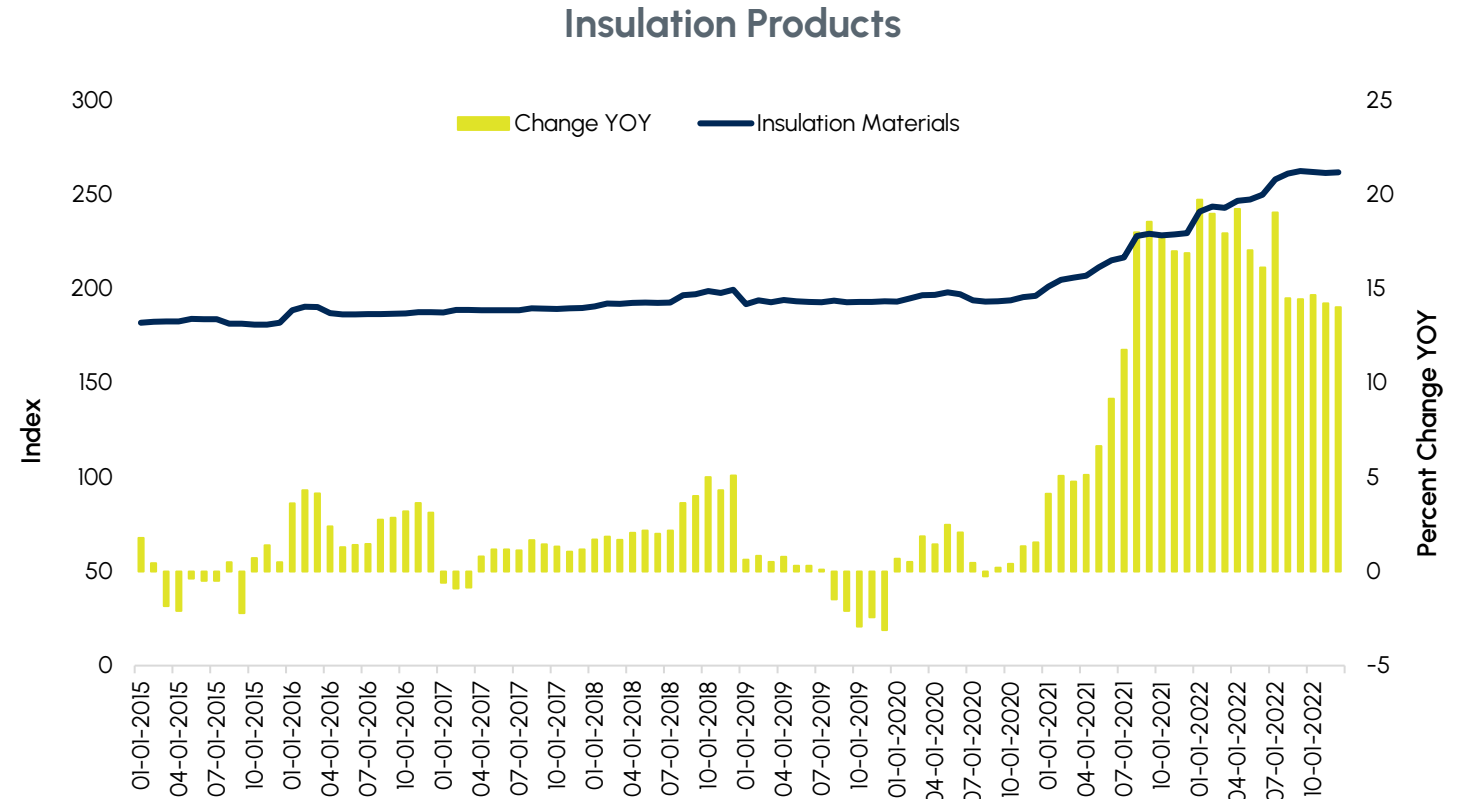
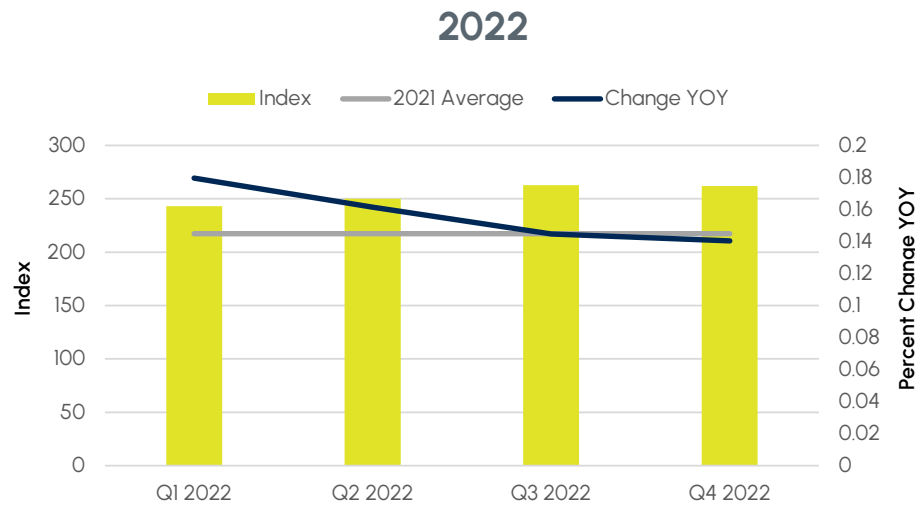
- Gypsum products index increased at 16.2 percent YOY at 462.4 as of December 2022, and 23.5 percent above 2021 average.





# Insulation Products

- Insulation products index increased at 14 percent YOY at 262.0 as of December 2022, and 20.5 percent above 2021 average.



# Metallic Products

- Metallic products price index fell consistently throughout 2022, after experiencing considerable price increases the year before. At the end of 2022, the price index declined at -7.0 percent YOY, with steel mill products witnessing the most significant decline of -28.7 percent YOY. Sheet metal products and fabricated structural metal remained elevated YOY.

Index	December 2022 YOY	December 2022	December 2022 vs. 2021 Average	2002-2022 Average
Steel mill products	-28.7%	32.4	-8.9%	197.2
Steel pipe and tube	-4.8%	489.1	21.2	245.7
Sheet metal products	8.0%	317.2	22.2%	198.5
Fabricated structure metal	7.8%	360.5	25.6%	204.7
Bar joists and concrete bars	2.2%	346.8	20.0%	195.3
Fabricated iron and steel	2.0%	201.2	21.0%	126.5
Prefabricated metal buildings	-4.4%	511.0	7.8%	286.8



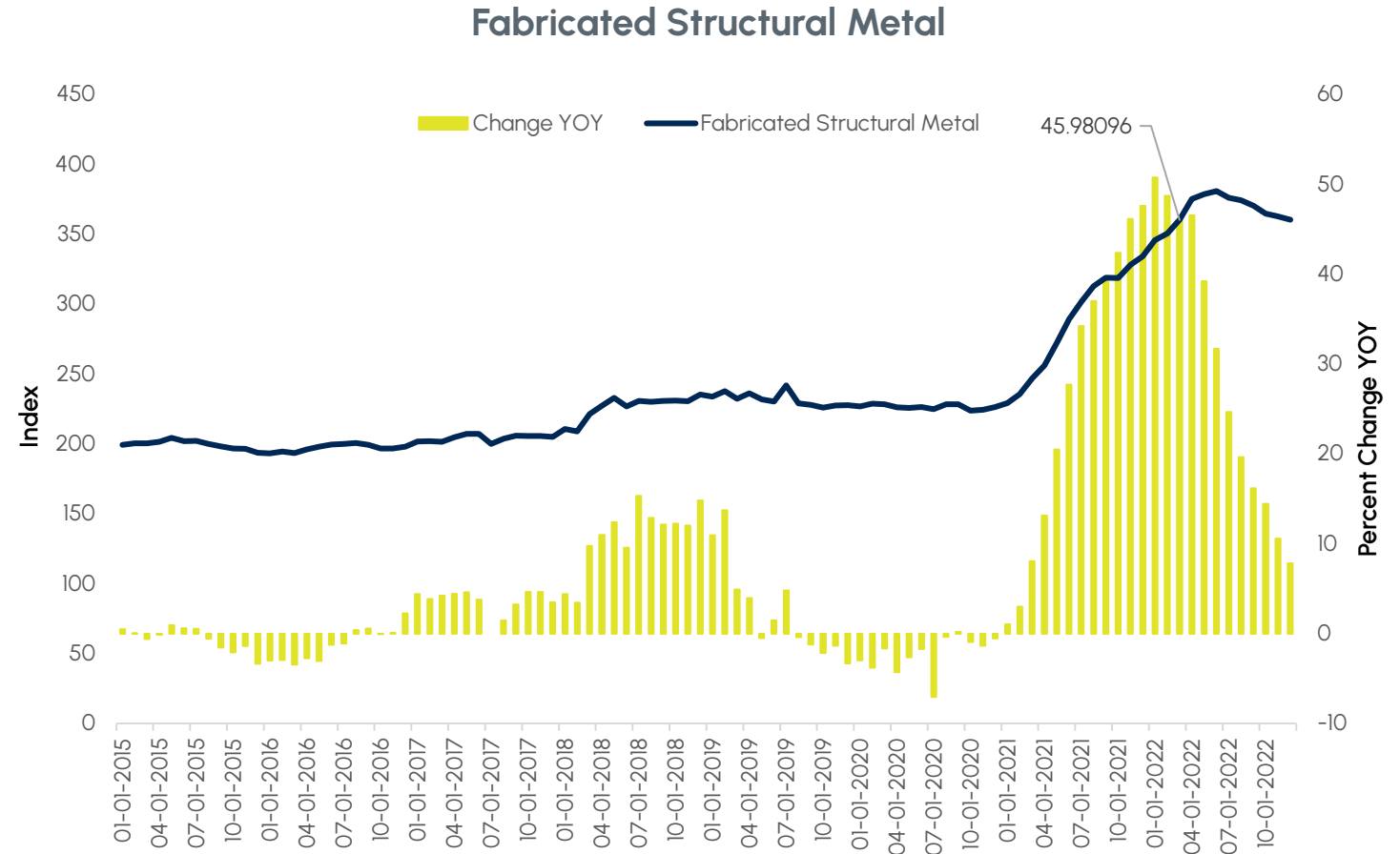
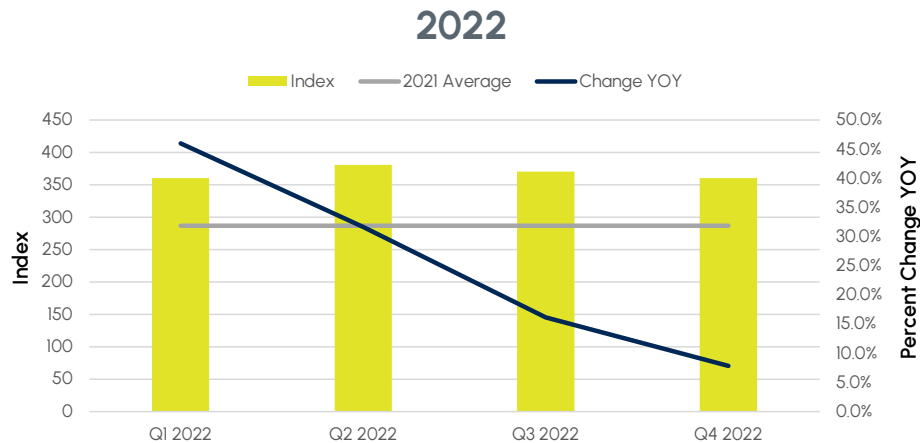
Biggest increase of  
**25.6%**  
over 2021 average



Biggest decline of  
**-8.9%**  
over 2021 average

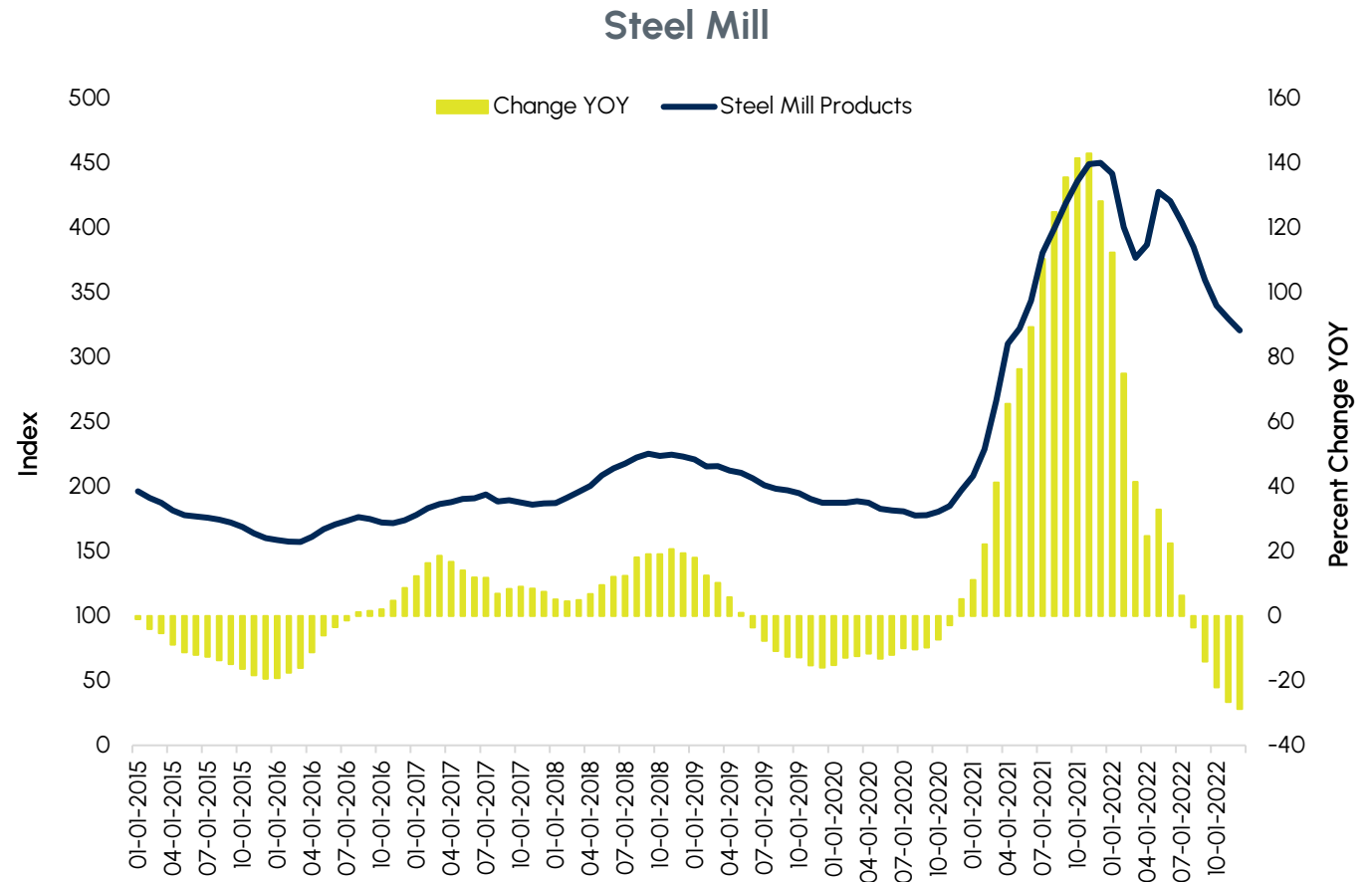
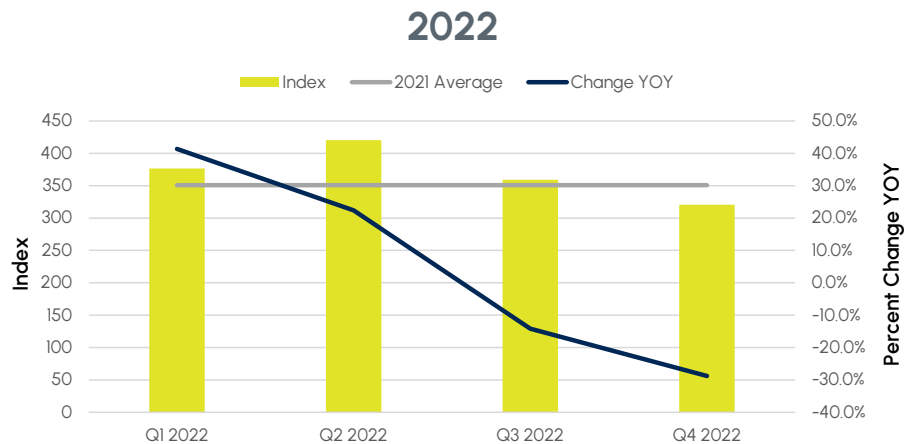
# Fabricated Structural Metal

- Fabricated structural metal index increased at 7.8 percent YOY to 360.5 as of December 2022, and 25.6 percent higher than the 2021 average. After a huge uptick in prices in April due to a spike in metal imports from South Korea, the structural metal price index has fallen for eight consecutive months due to fall in overall demand.



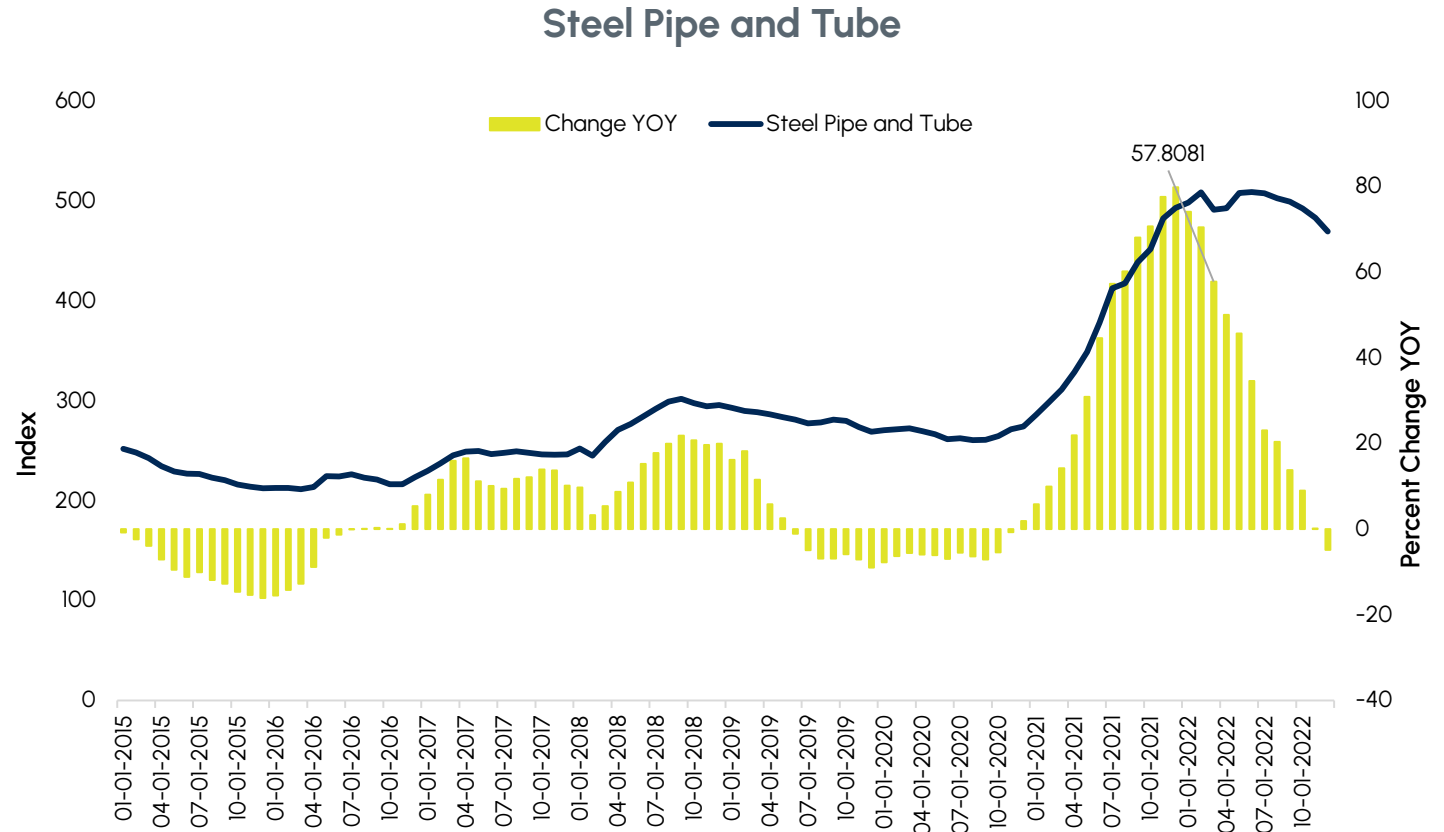
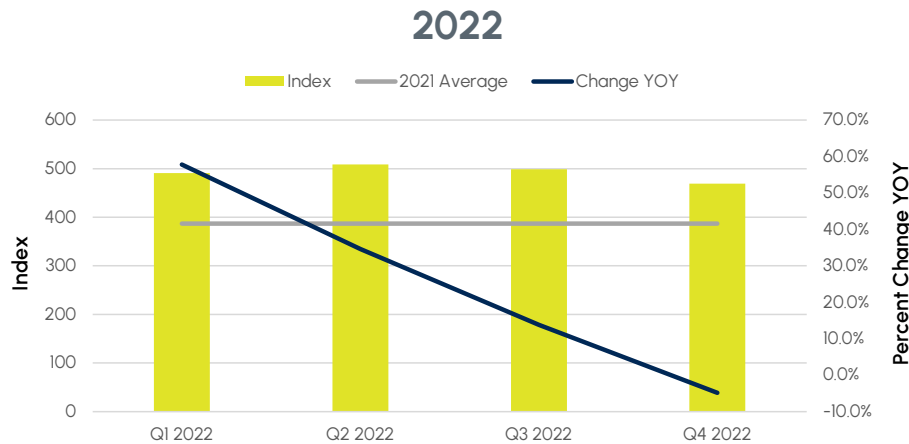
# Steel Mill

- Steel mill index declined at -28.7 percent YOY to 320.4 as of December 2022, and -8.7 percent below 2021 average. Due to higher interest rates, the decline in demand resulted in lower price index, along with the war in Ukraine and Europe's energy crisis.



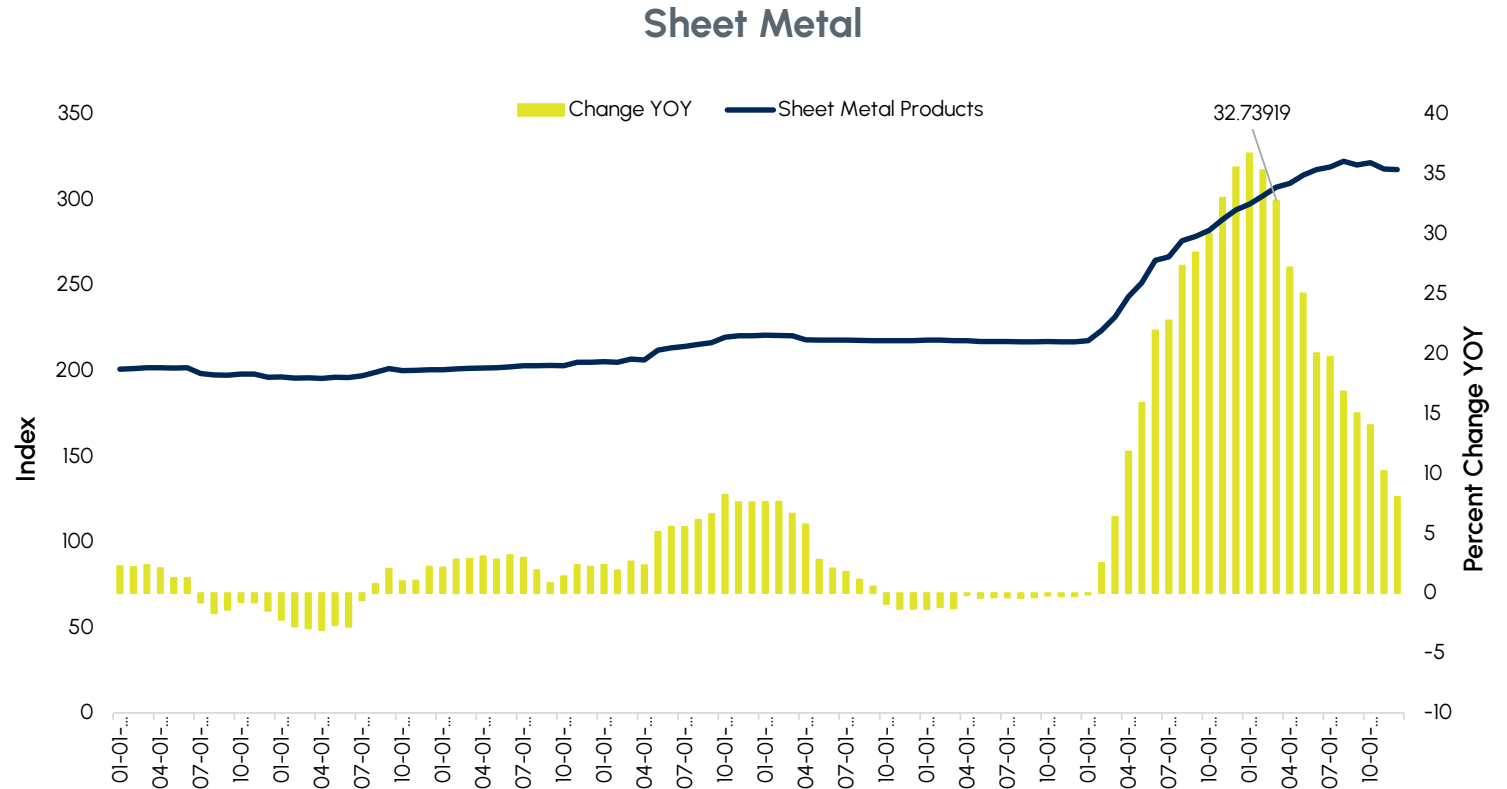
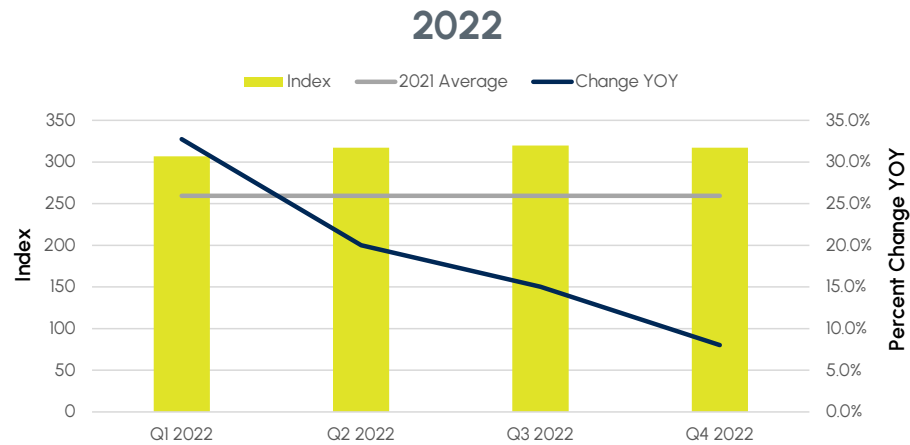
# Steel Pipe and Tube

- Steel pipe and tube index declined at -4.8 percent YOY to 469.1 as of December 2022, but still 21.2 percent above 2021 average.



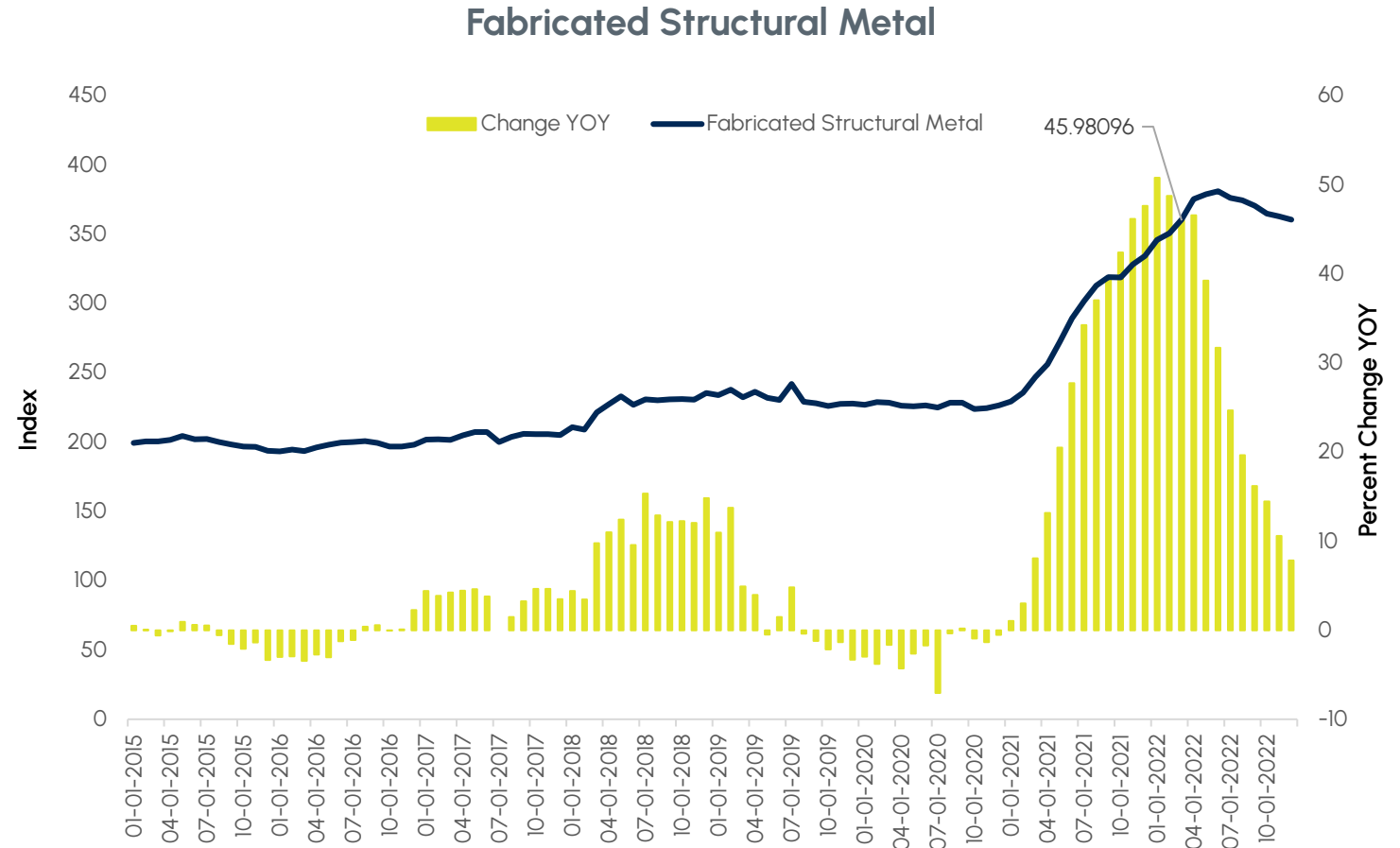
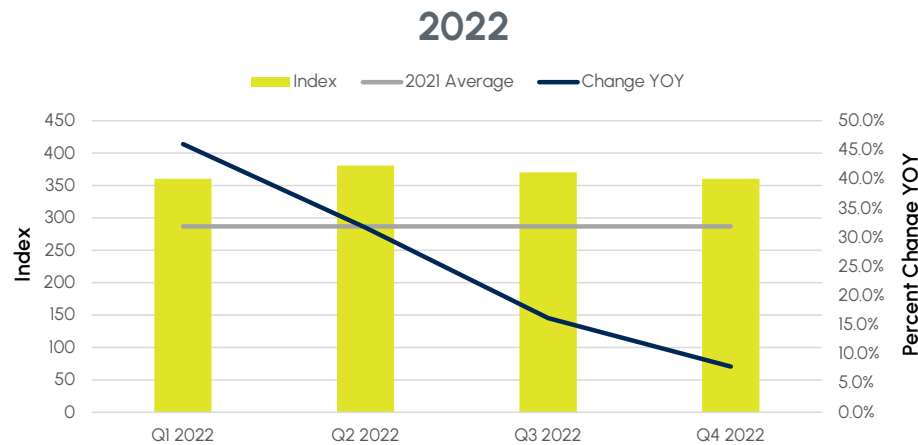
# Sheet Metal

- Sheet metal index increased at 8 percent YOY at 317.2 as of December 2022, and 22.2 percent above 2021 average.



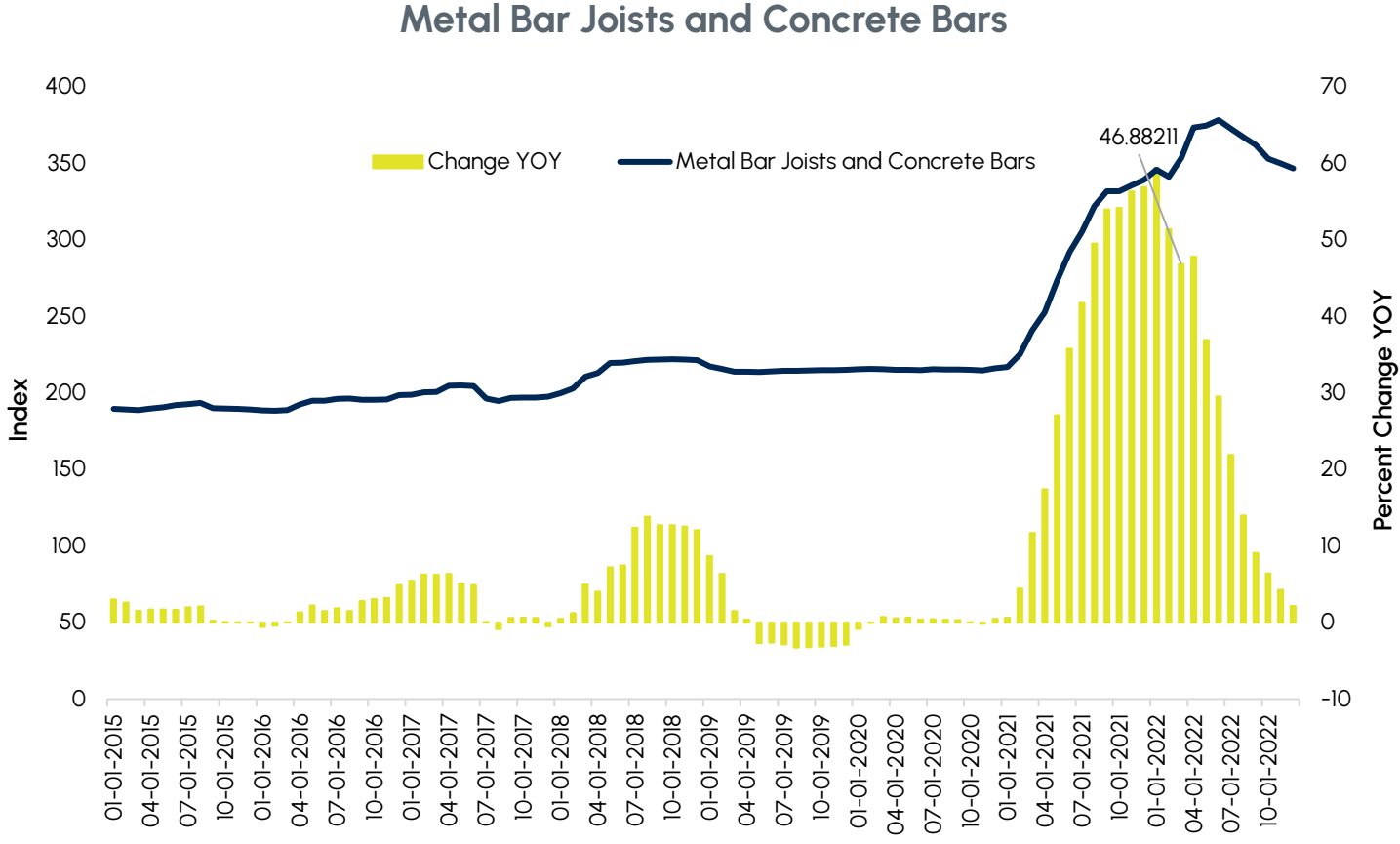
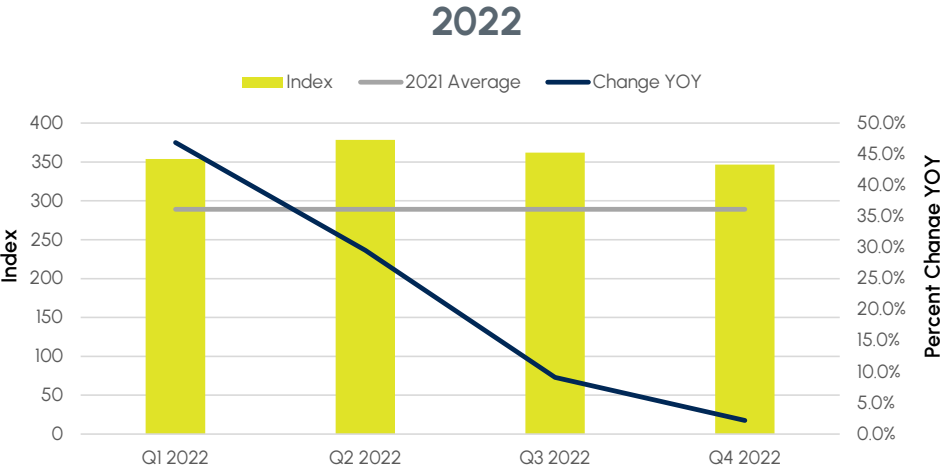
# Fabricated Structural Metal

- Fabricated structural metal index increased at 7.8 percent YOY to 360.5 as of December 2022, and 25.6 percent higher than the 2021 average.



# Metal Bar Joists and Concrete Bars

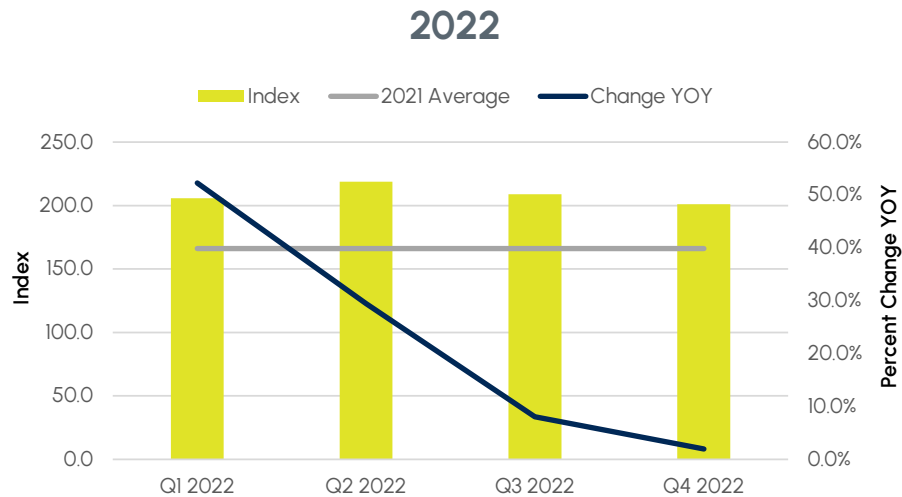
- Metal bar joists and concrete bars index increased at 2.2 percent YOY at 346.8 as of December 2022, and 20.0 percent higher than the 2021 average.



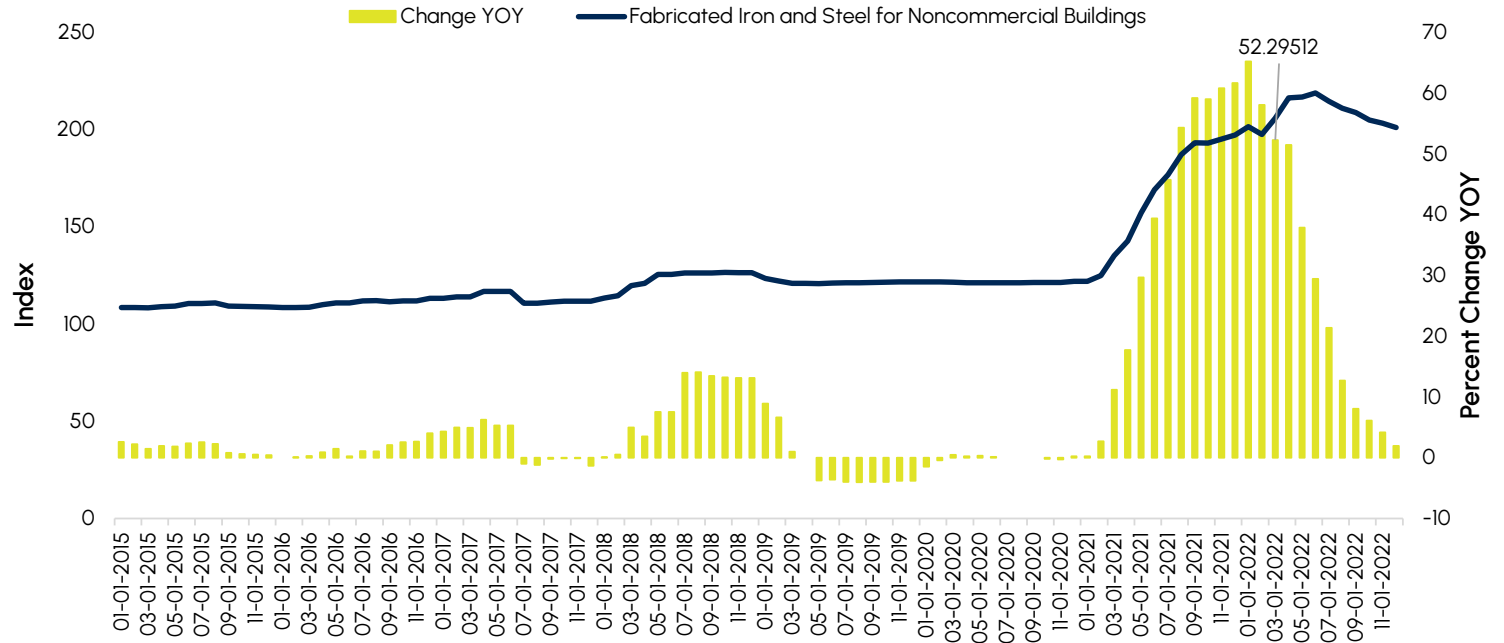


# Fabricated Iron and Steel

- Fabricated iron and steel for nonresidential buildings index increased at 2 percent YOY to 201.2 as of December 2022, and increased 21.0 percent over 2021 average.

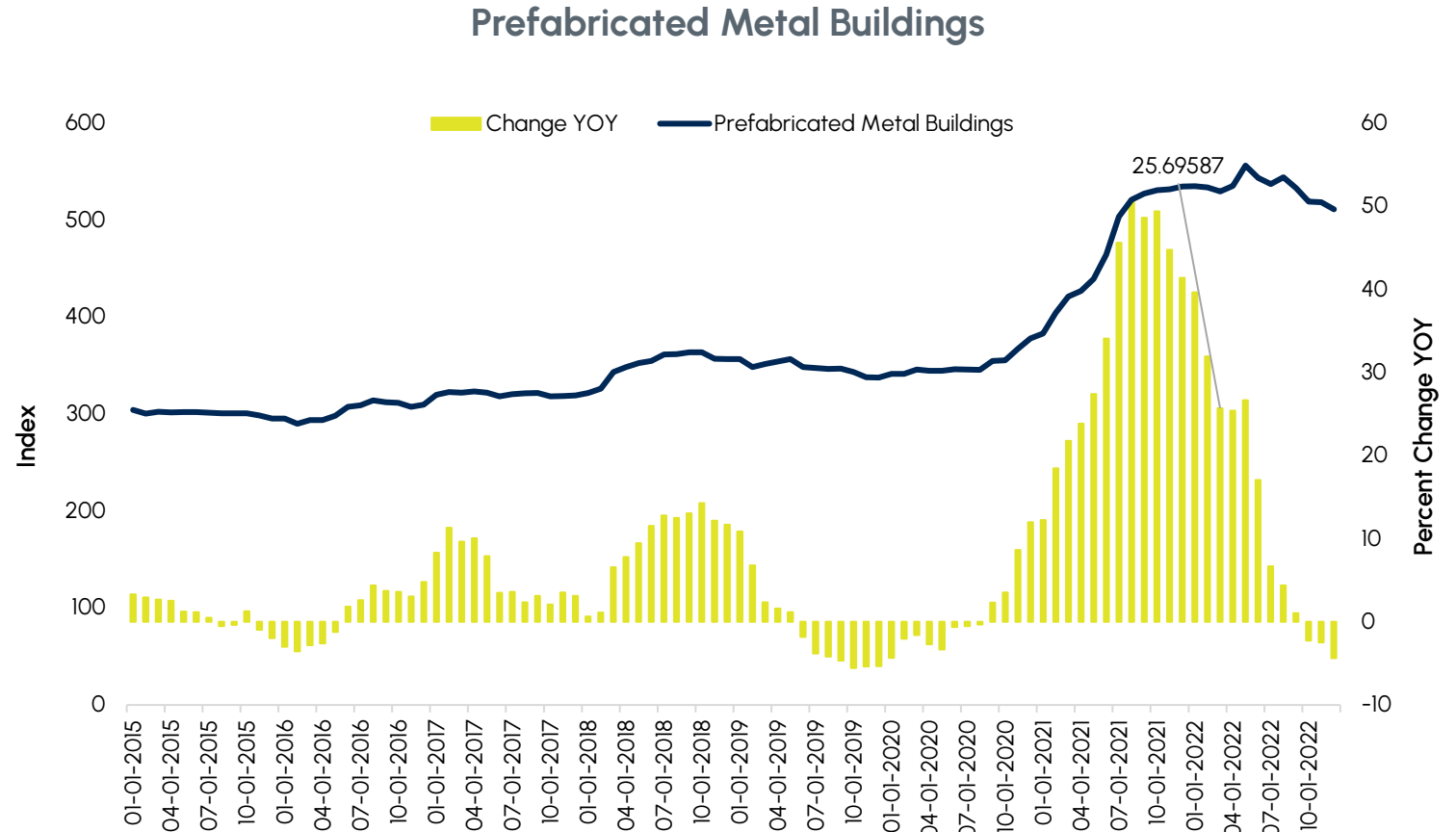
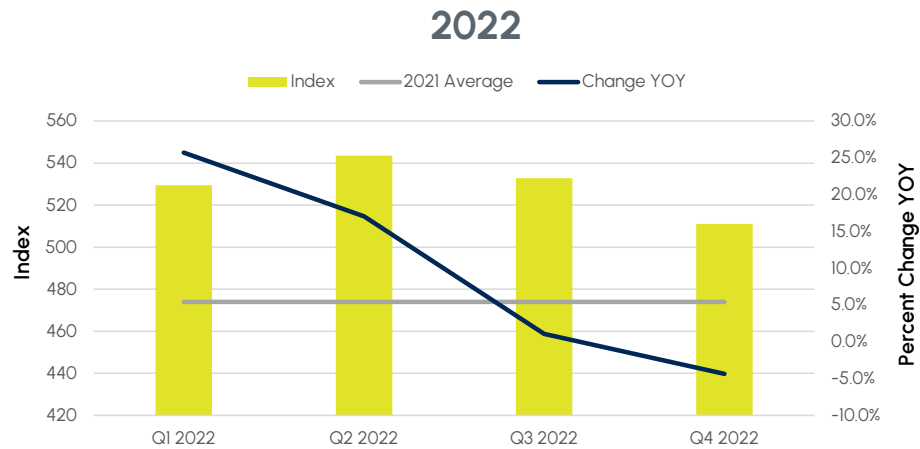


## Fabricated Iron and Steel for Noncommercial Buildings



# Prefabricated Metal Buildings

- Prefabricated metal buildings index declined at -4.4 percent YOY to 511.0 as of December 2022, but hovered over 2021 average by 7.8 percent.




# Unprocessed Goods

- Unprocessed goods price index witness significant increases throughout the pandemic. At year-end 2022, the price index was still elevated at 11.7 percent YOY, but price pressures eased throughout the year.

Index	December 2022 YOY	December 2022	December 2022 vs. 2021 Average	2002-2022 Average
Asphalt	-24.5%	189.2	-17.9%	194.0
Sand, gravel, and crushed stone	11.8%	427.1	12.7%	277.7
Iron and steel scrap	-27.7%	534.2	-22.5%	438.0
Alloy steel scrap	-21.6%	497.2	-8.9%	477.8
Copper base scrap	-7.6%	600.1	-3.6%	435.1

SAND, GRAVEL, AND CRUSHED STONE



Biggest increase of  
**12.7%**  
over 2021 average

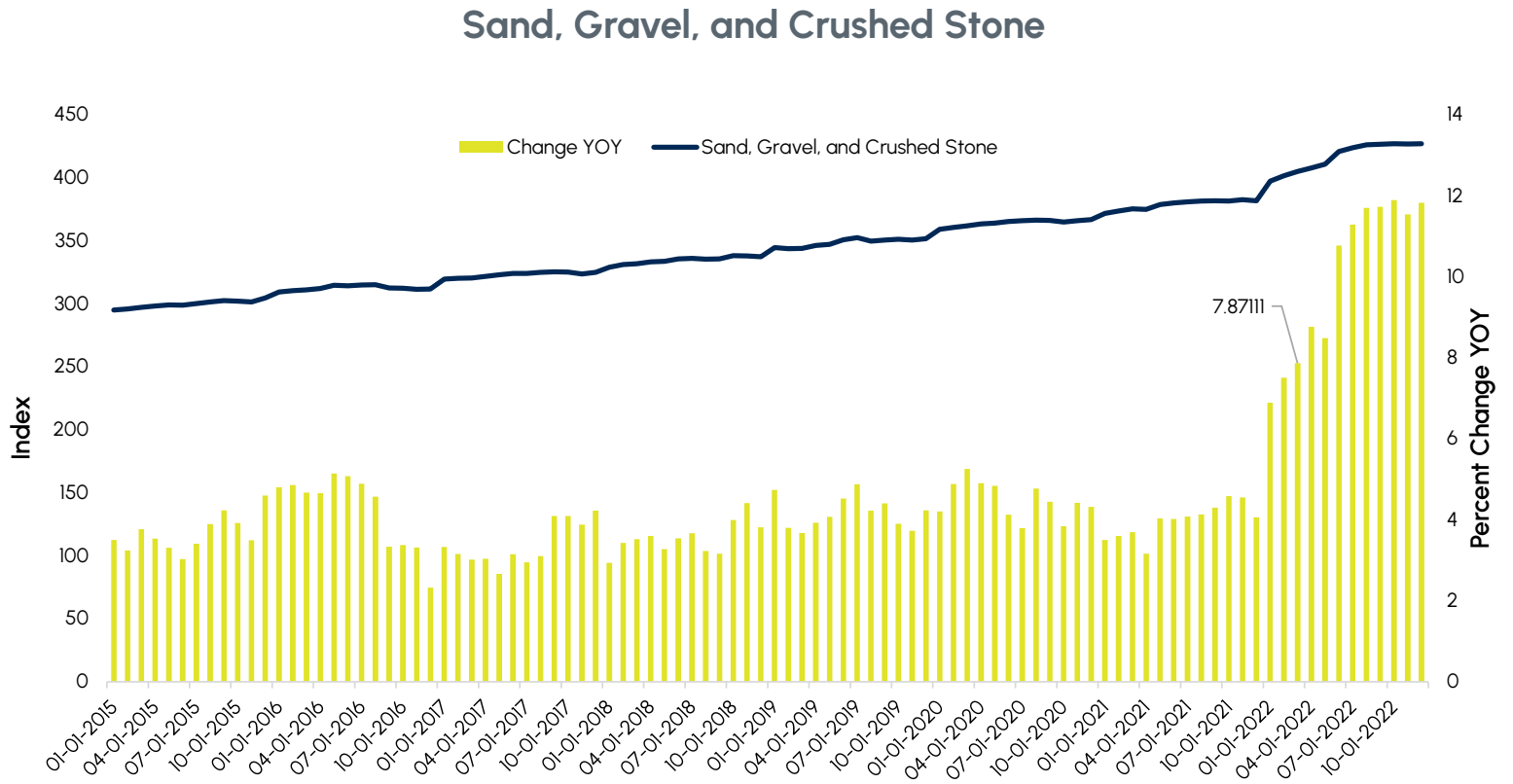
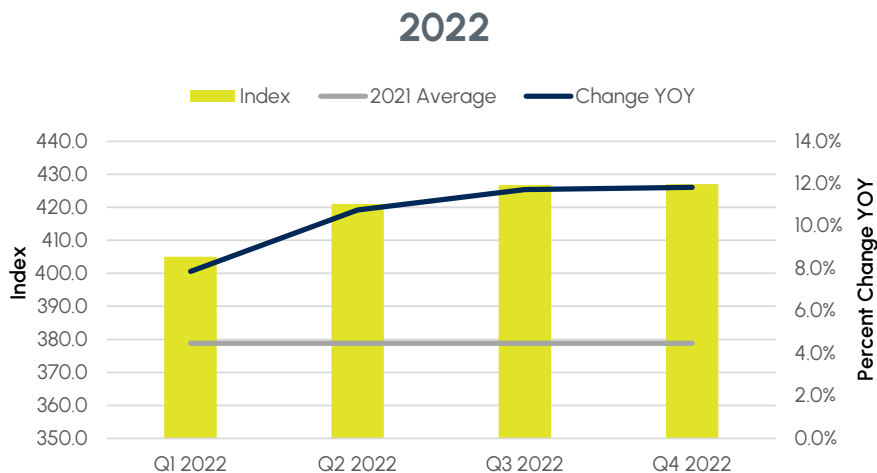
IRON AND STEEL SCRAP



Biggest decline of  
**-22.5%**  
over 2021 average

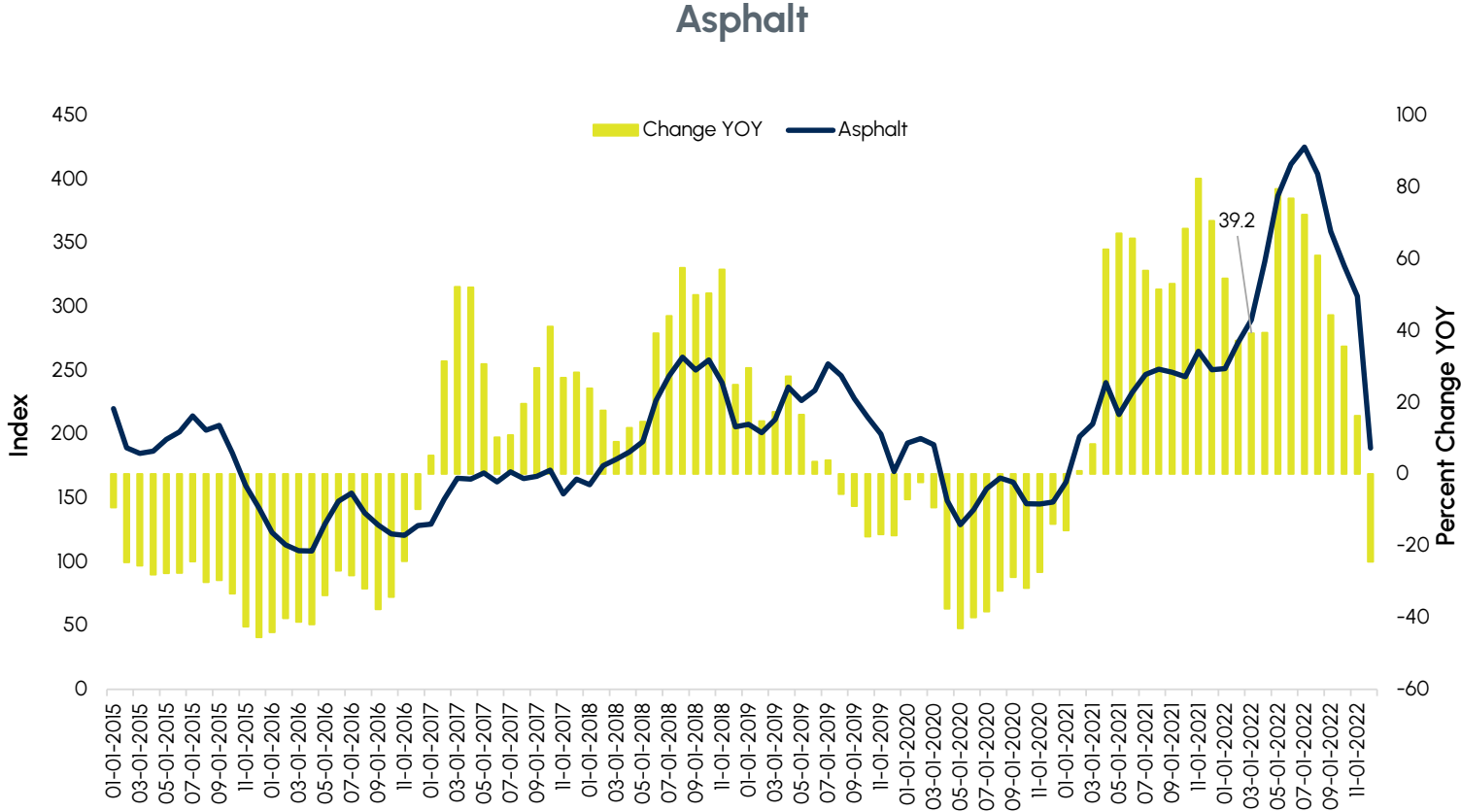
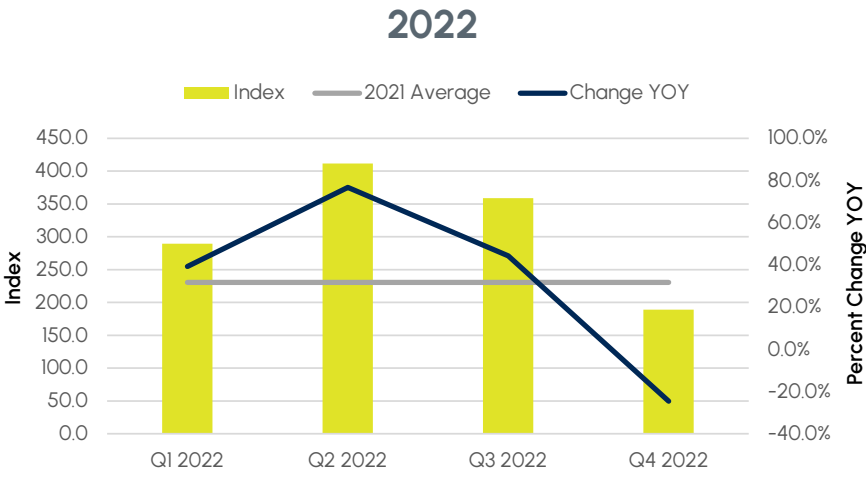
# Sand, Gravel, and Crushed Stone

- Sand, gravel, and crushed stone index increased at 11.8 percent YOY to 427.1 to December 2022, and outstripped the 2021 average by 12.7 percent. Regional shortages have caused actual prices to increase \$1.07/ton to \$11 as of 2022.



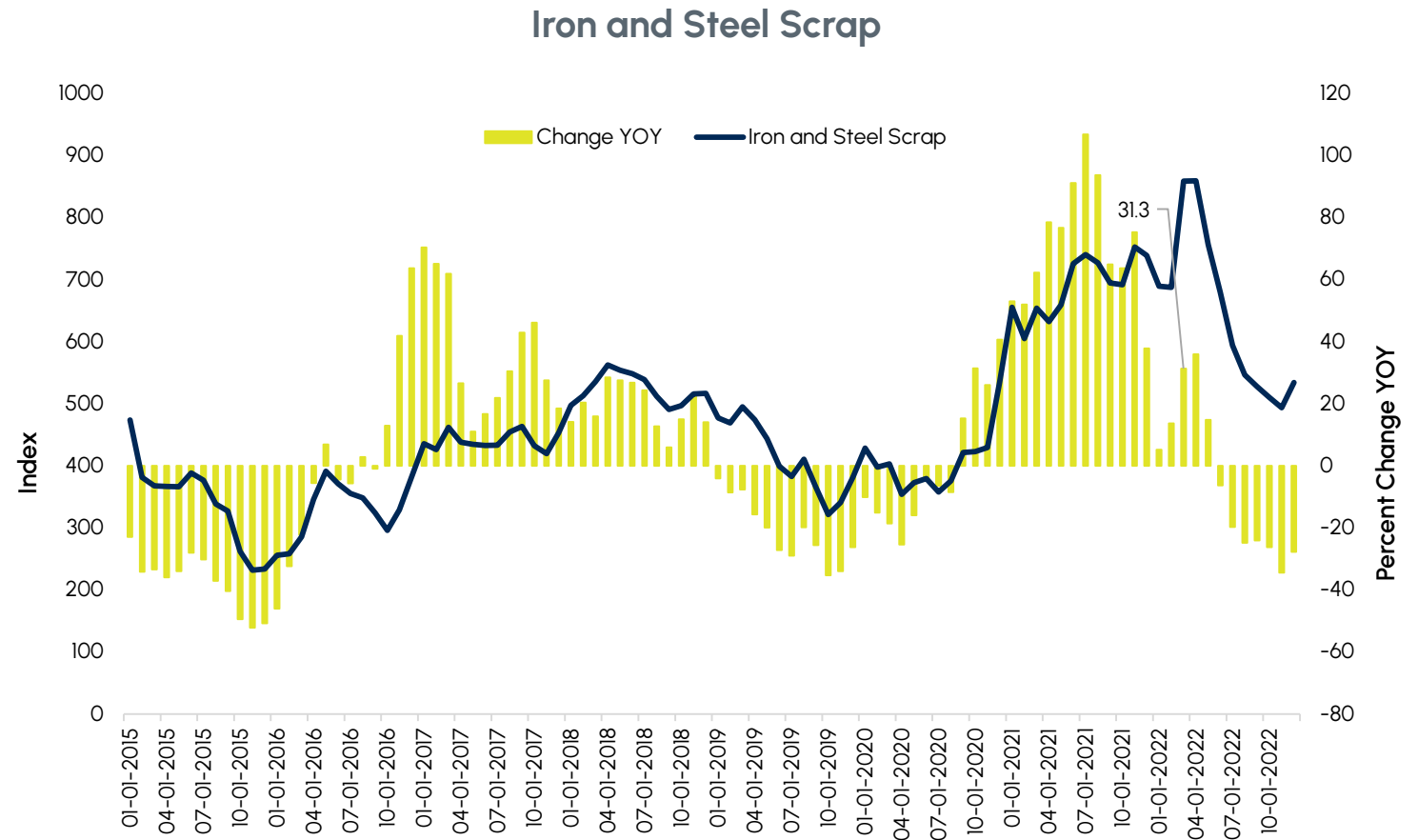
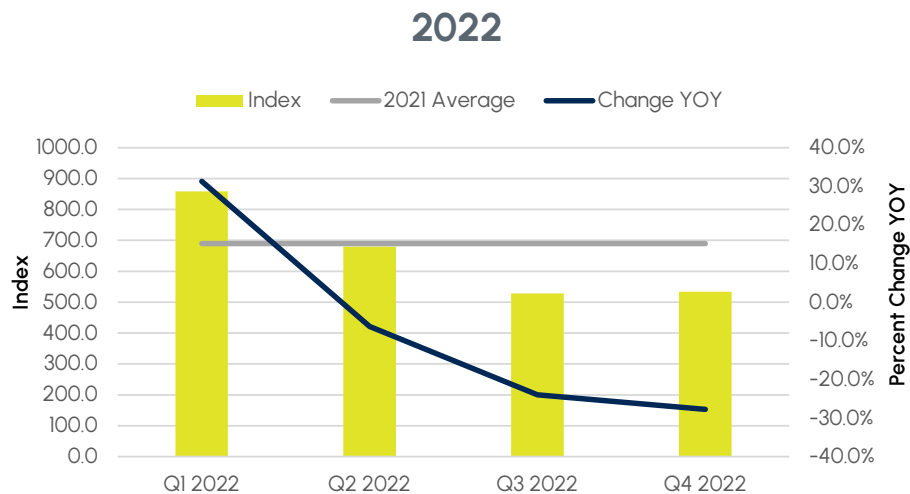
# Asphalt

- Asphalt index declined at -24.5 percent YOY to 189.2 as of December 2022, and down -17.9 percent from the 2021 average.



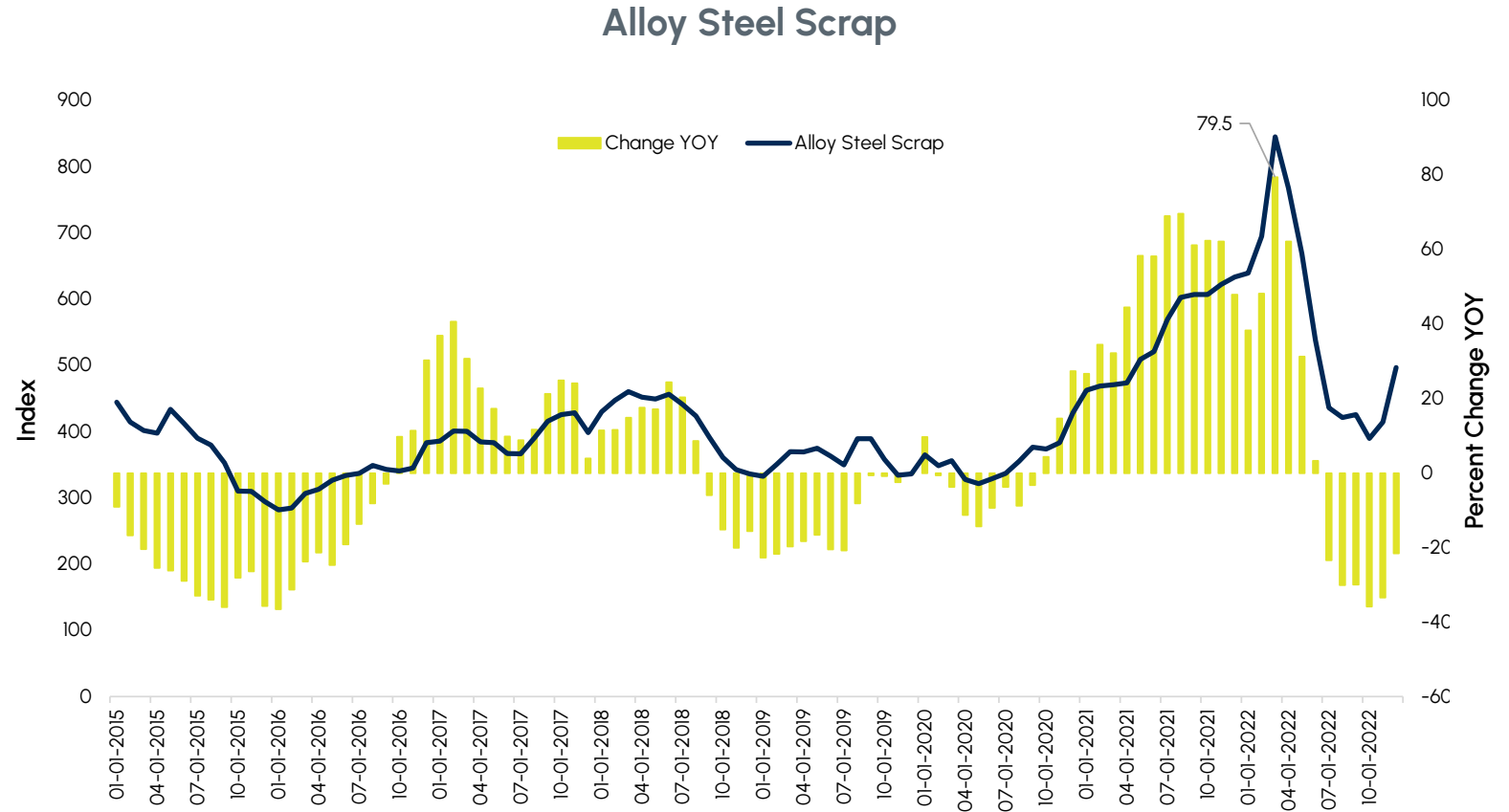
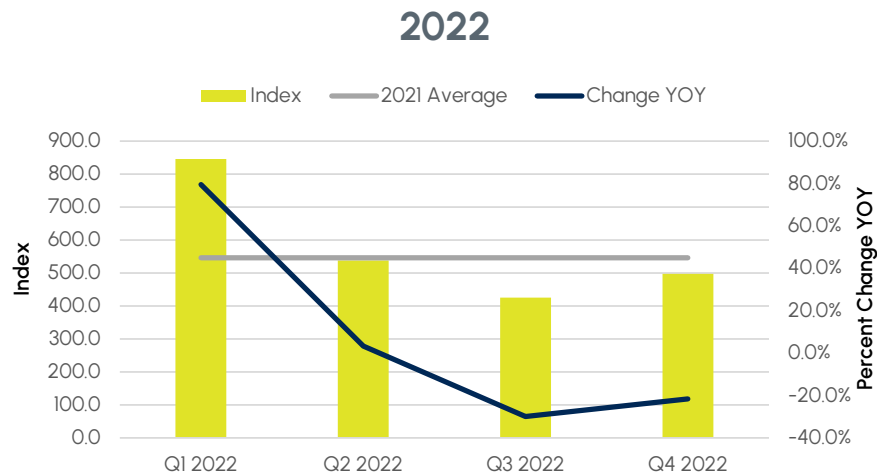
# Iron and Steel Scrap

- Iron and steel scrap index declined at -27.7 percent YOY to 534.2 as of December 2022 and -22.5 percent from the 2021 average. The Russo-Ukraine war caused a price rise because of uncertainty surrounding product availability. However, Russia's increase in production to the global market and the strengthened U.S. dollar resulted in a significant dip in prices during the last half of the year.



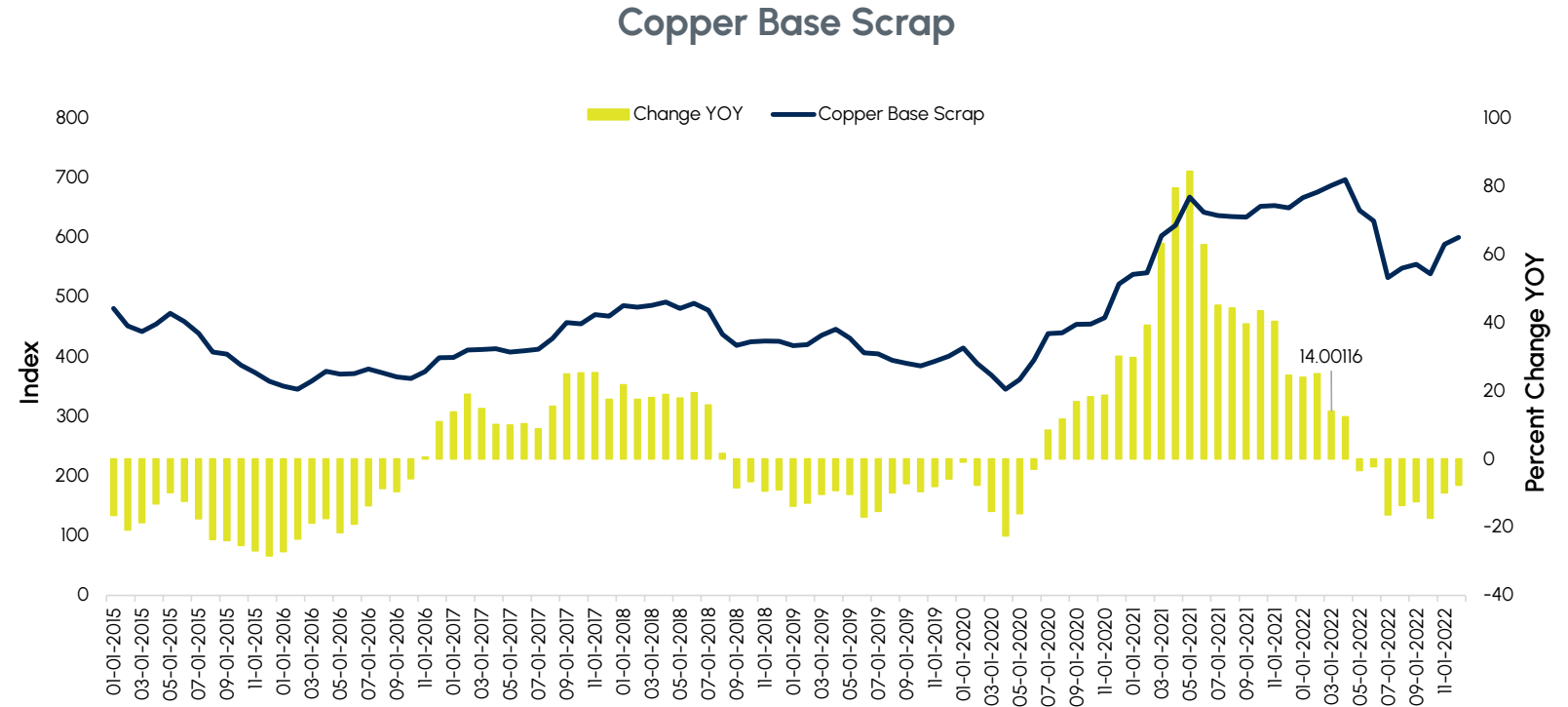
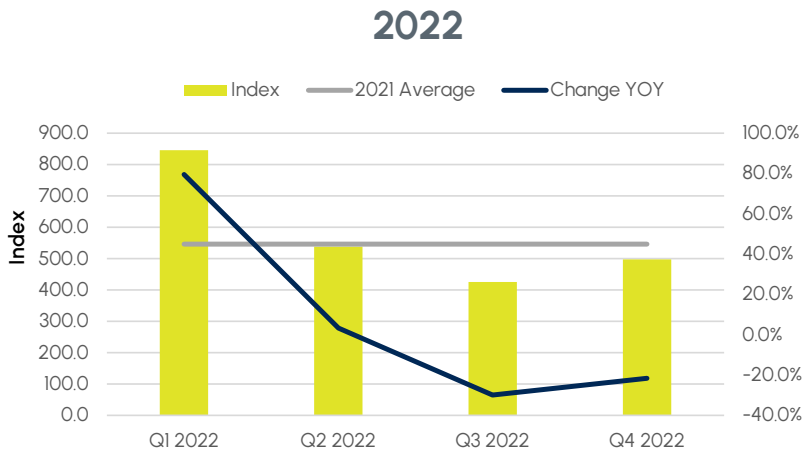
# Alloy Steel Scrap

- Alloy steel scrap index declined at -21.6 percent YOY to 497.2 as of December 2022, and -8.9 percent below the 2021 average.



# Copper Base Scrap

- Copper base scrap index dipped at -7.6 percent YOY to 600.1 as of December 2021, and -3.6 percent from the 2021 average.





# HITT



**MEGAN LANTZ**

Vice President, Research & Development

703.289.9253

[mlantz@hitt-gc.com](mailto:mlantz@hitt-gc.com)



**GAIL SUSON**

Vice President, Preconstruction

703.397.3293

[gsuson@hitt-gc.com](mailto:gsuson@hitt-gc.com)

thank you