

A construction site at dusk or dawn, featuring a large concrete pillar in the foreground, workers in safety gear in the background, and a crane with a yellow hook. The sky is a mix of green and orange.

Construction Delivery Outlook

Q2 2022

LGE | DESIGNBUILD

LGE | DESIGNGROUP

A Look to the **FUTURE**

“As we continue to operate in what we hope is transitioning to a post-pandemic world, LGE Design Build is very optimistic about what lies ahead. With more and more restrictions being lifted nationwide, the path to recovery as a country is being placed in front of us. Fortunately, the construction industry has already returned to some semblance of its pre-pandemic state, and we look forward to more great things as 2022 progresses.

This positive outlook, however, does not come without its fair share of challenges. We recognize that the immediate future will be filled with obstacles as we continue to navigate what is still a delicate situation. While 2021 saw demand for commercial construction and design continue to rise, unprecedented issues, like shortages of skilled labor, import bottlenecks, and material volatility, still lingered into Q2 of 2022. Those already existing issues were compounded by a number of natural disasters, creating conditions that were ripe for what could have been an ominous situation for the entire industry.

Despite these challenges, LGE continues to flourish by relying on the ability of our amazing team and our single-source method of providing architecture and construction under one roof. This process, that we’ve been honing for nearly three decades, not only allows us to persevere as a firm, but also offers our partners a quality alternative and cost-effective solution during these complicated times. We hope this report provides thoughtful insight into the status of our industry and showcases how LGE continues to define design build.”

– David Sellers
LGE President/CEO

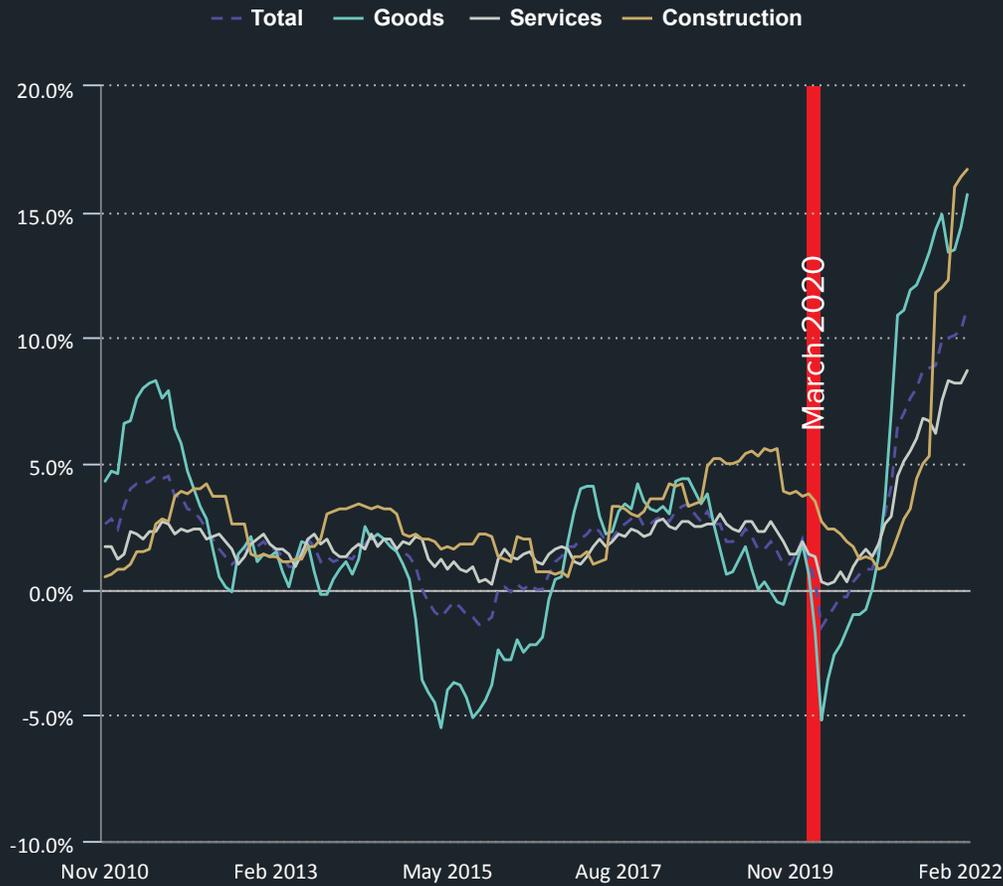


The 'Why' Behind Cost and Duration

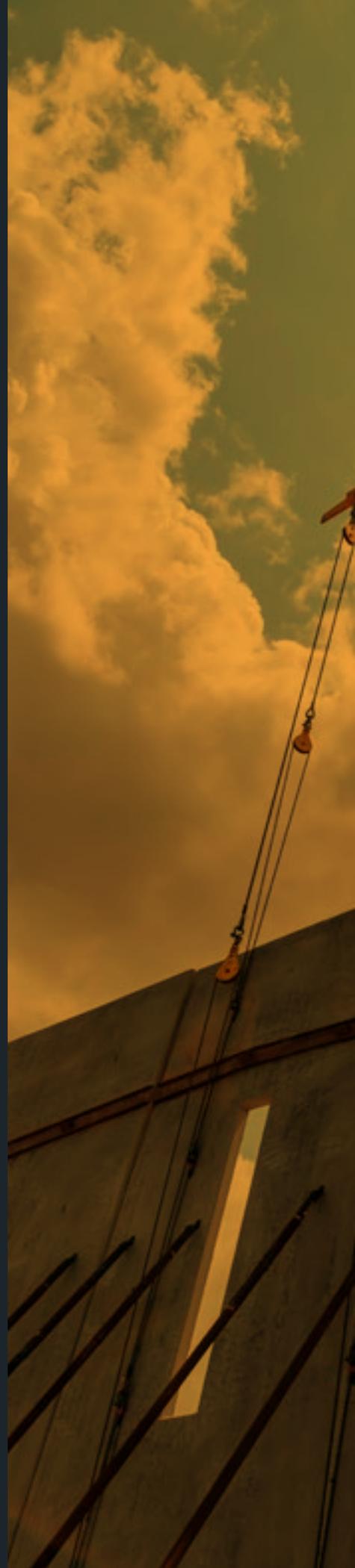
We're here to ensure that you have the most up-to-date information about market trends and conditions. Within this report, you will find data that clarifies the 'Why', including the most current market conditions, the observed impact of these conditions, and proactive measures we can take to be fully prepared for what's to come. This report focuses on the design and construction industries through the most recent data, so that together, we can enter the market better equipped and more confident.

PRODUCER PRICE INDEX

FINAL DEMAND CONSTRUCTION



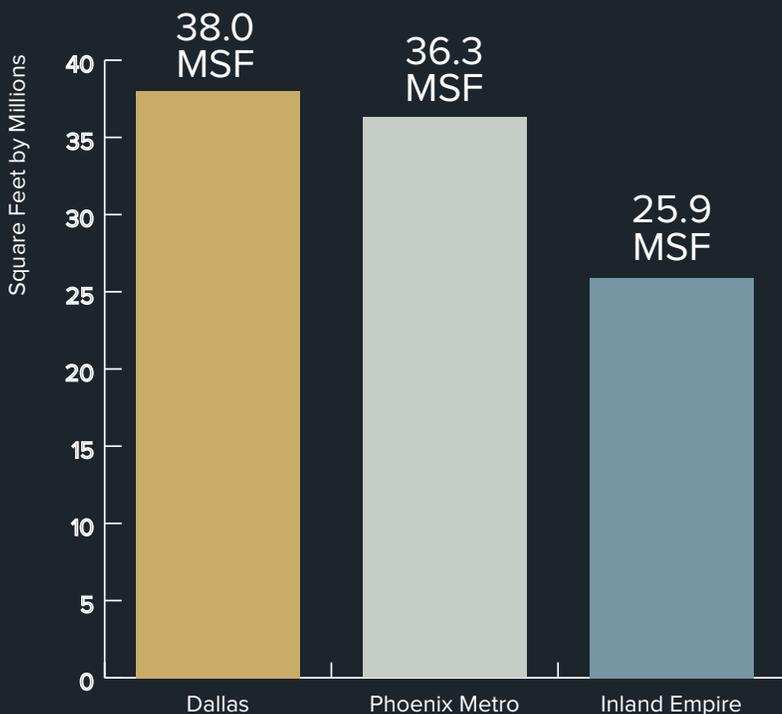
Percent change in Producer Price Indexes for final demand, November 2010–March 2022



Demand for our Markets

Currently, Phoenix has approximately 2 million square feet of office space under construction with retail construction registering at about half that, coming in at just under 1 million square feet. These figures, however, pale in comparison to the 36.3 million square feet of industrial construction taking place in the Phoenix metro area, which is a record mark for the Valley. This places Phoenix second only to Dallas, which is looking at 38 million square feet of industrial space currently under construction.

Q1 INDUSTRIAL CONSTRUCTION ACTIVITY

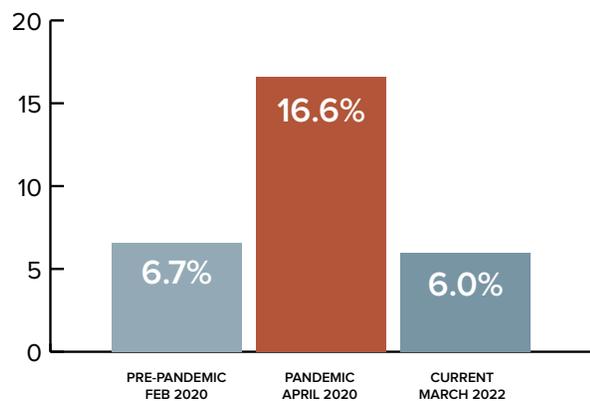




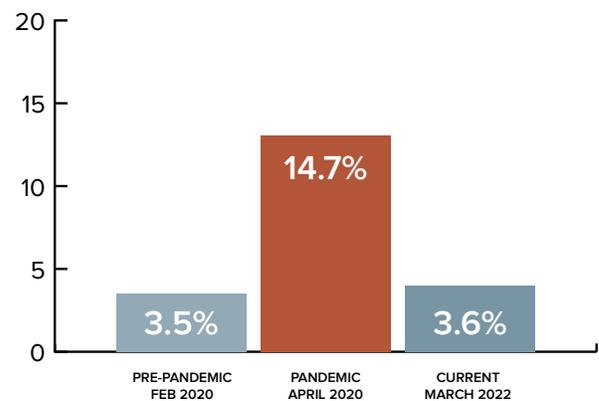
Construction Labor

Labor markets continue to present challenges, and the effects are being felt across many sectors of the economy. In the construction industry, the unemployment rate has been in steady decline since the height of the pandemic, and it is finally nearing pre-pandemic levels. More positive indicators show that demand for architectural work and construction has been growing.

Construction Unemployment Rate:

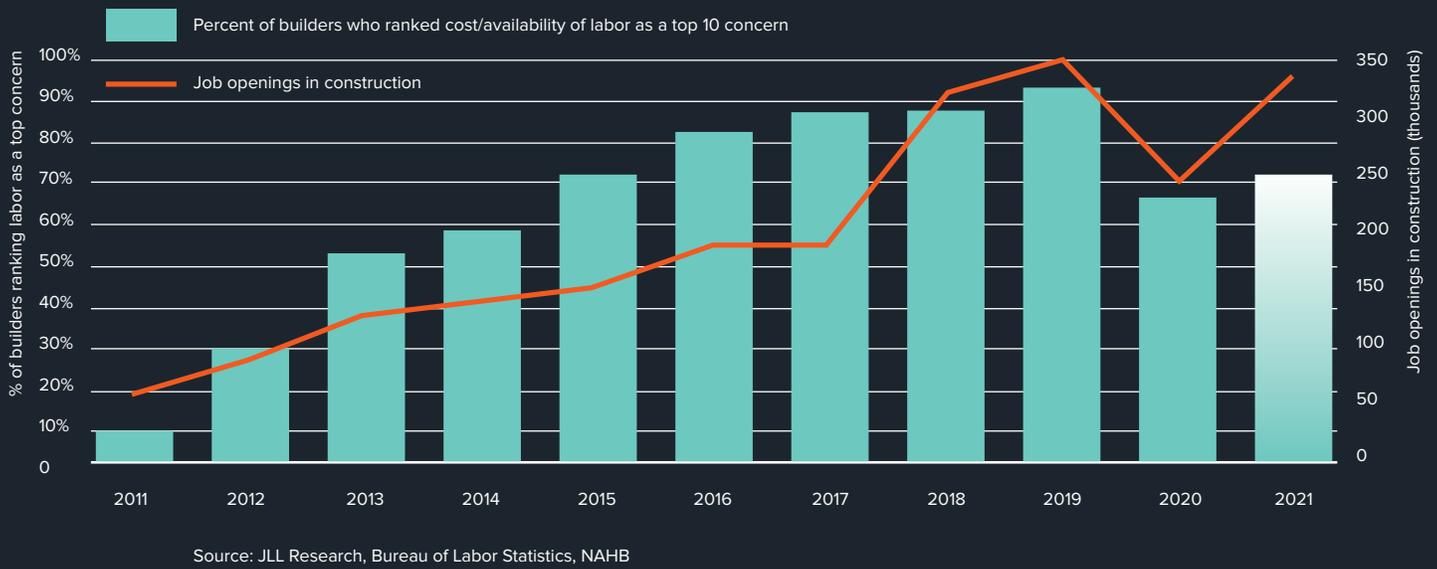


Total Unemployment Rate:



Between February and March of this year, construction employment rose by 19,000 jobs, and is beginning to exceed pre-pandemic numbers. Construction spending saw 12 straight months of growth.

CONSTRUCTION LABOR FEARS



A lack of skilled/qualified workers, along with the prevalence of unemployment insurance supplements, has caused great challenges for many construction firms trying to fill positions.

Nearly 90 percent of construction firms are encountering project delays, and more than 60 percent of those firms cite labor shortages as a reason for the delays. Typical lead times from subcontractors have tripled since 2019 and have become a major factor in project schedule delays.

SUBCONTRACTOR SCHEDULING LEAD TIMES:

	Pre-Pandemic Typical Lead Time	Current Lead Time as of May 2022
Grading/Paving	1-2 Weeks	4-6 Weeks
Concrete	1-2 Weeks	3-4 Months
Wood Structure	3-4 Months	12-18 Months
Roofing	1-2 Months	8-9 Months
Site Utilities	3-4 Weeks	3-4 Months
CMP	3-4 Weeks	10 Months



Photo by Tom Fisk: <https://www.pexels.com/photo/birds-eye-view-photo-of-freight-containers-2226458/>

Supply Chain

The global supply chain issues that we have been experiencing since 2020 do not seem to be letting up as we enter 2022. Construction materials are still in short supply due to a “perfect storm” of delays caused by natural disasters, logistical bottlenecks, labor shortages, political instability, as well as other manufacturing and production setbacks. Since the initial COVID lockdown, many supply-chain companies have resumed their services, but still deal with other lingering issues, like new tariffs. Some construction firms have been hoarding materials instead of relying on just-in-time delivery, further adding to the scarcity.

Material prices increased by nearly 20 percent in 2021. In the nonresidential construction industry, specifically, we saw material prices rise by 21 percent from February of 2021 to February of 2022.

Seventy-five percent of construction firms experiencing project delays cite shortages of materials and delivery delays as the main reason. The chart below reflects increasing lead times in construction materials

	Pre-Pandemic Typical Lead Time	Current Lead Time as of May 2022
STEEL JOISTS <ul style="list-style-type: none"> Longer lead times may exist for acoustical deck types The shortage of steel coil required to create metal deck has resulted in unprecedented lead times 	3-4 Months	10-12 Months
ROOFING (TPO) <ul style="list-style-type: none"> TPO stands for Thermoplastic Polyolefin; it's made primarily from recycled rubber, and sold in rolls Communication regarding any unanticipated delays with roofing materials remains essential 	1-2 Months	6-8 Months & TBD on Delivery
WOOD STRUCTURE MATERIAL <ul style="list-style-type: none"> Large increase in multi-family construction, home builders, home improvement and general construction The pandemic limited operation of some sawmills 	1-2 Months	4-5 Months
INSULATION <ul style="list-style-type: none"> Lead times are estimated to remain extended through Q2 Manufacturers are running 24/7 but still face raw material shortages 	3-4 Weeks	6-8 Months & TBD on Delivery
DOORS/FRAMES/HARDWARE <ul style="list-style-type: none"> Workforce challenges contributing to longer lead times 4-5 weeks for hollow metal doors and frames 	2-4 Weeks	6-8 Weeks
SWITCH GEAR <ul style="list-style-type: none"> Older transformers across the U.S. are reaching the end of their designated operational life The engineering required to produce transformers is complex and expansion of production capacity would take time and require a multi-million-dollar investment 	4 Months	11-12 Months
OVERHEAD DOORS <ul style="list-style-type: none"> Workforce challenges contributing to longer lead times Supply chain issues, market circumstances 	6-10 Weeks	4-7 Months
DOCK EQUIPMENT <ul style="list-style-type: none"> Workforce challenges contributing to longer lead times Supply chain issues, market circumstances 	6-10 Weeks	4-7 Months



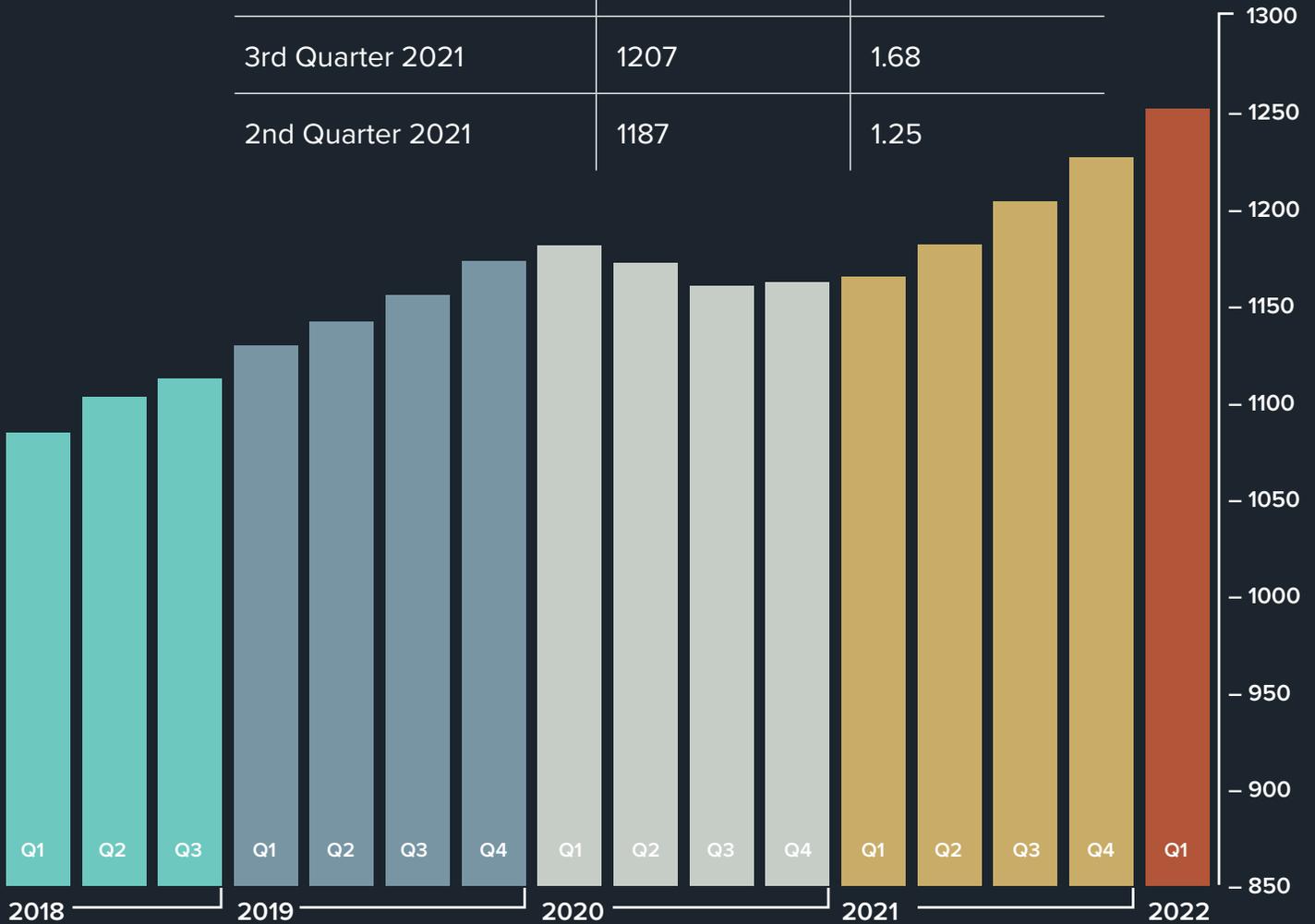
Material Costs

Commodity prices have been increasing across the board. Overall costs of materials rose 20 percent from January of 2021 to January of 2022, with a massive increase of 10.6 percent just from this past November through March. Many products, as well as trucking services, contributed to the extreme runup in construction costs, mainly due to the rise in gas prices. With the continuing war in the Ukraine, prices are not expected to fall any time soon.

TURNER BUILDING COST INDEX

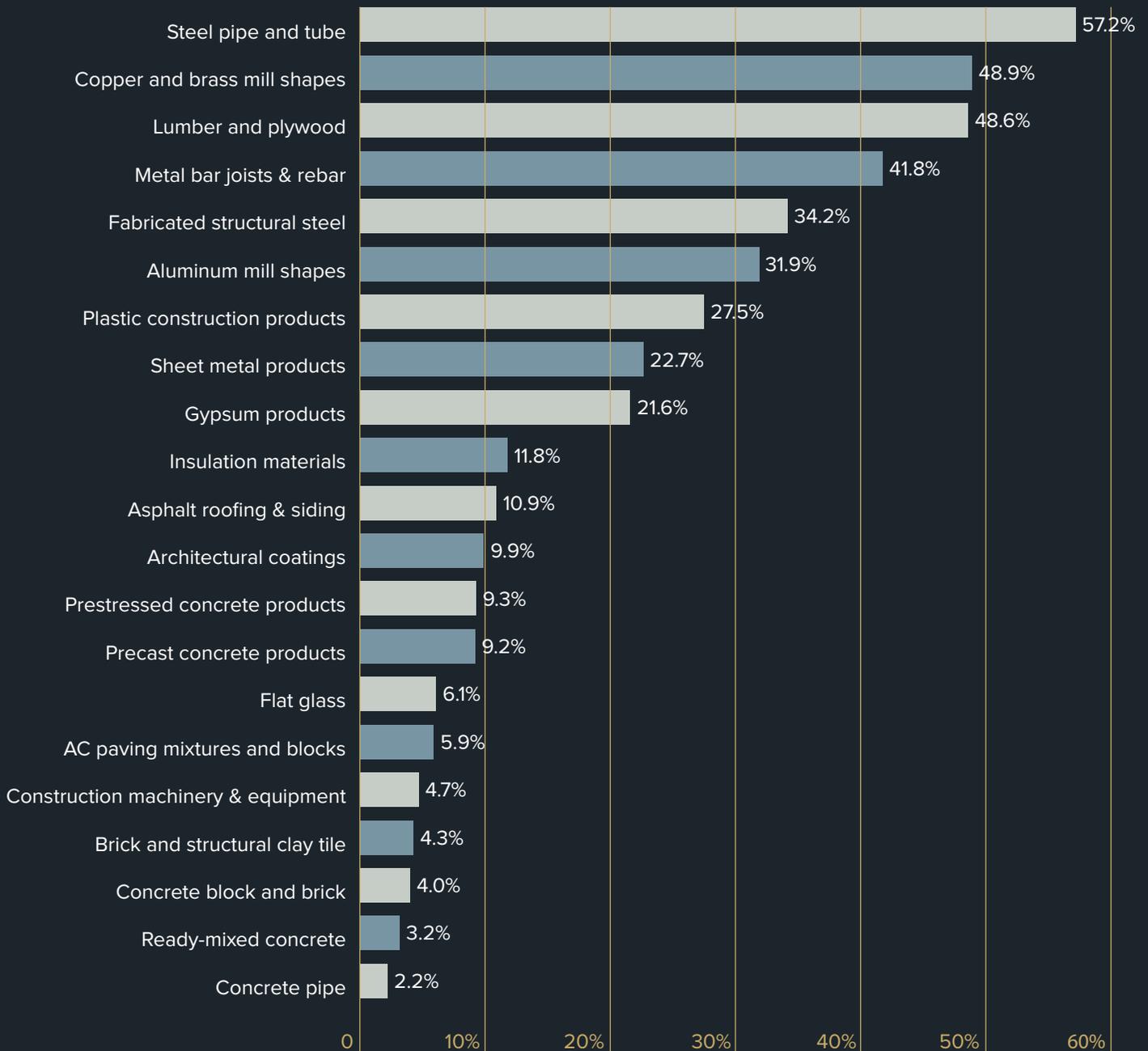
CONSTRUCTION COST ESCALATION BY QUARTER

Quarter	Index	% Change
1st Quarter 2022	1255	2.03
4th Quarter 2021	1230	1.91
3rd Quarter 2021	1207	1.68
2nd Quarter 2021	1187	1.25



The Cost Index is determined by several factors considered on a nationwide basis, including labor rates and productivity, material prices, as well as the competitive condition of the marketplace.

CONSTRUCTION MATERIALS PRICE MOVEMENT – LAST 12 MONTHS



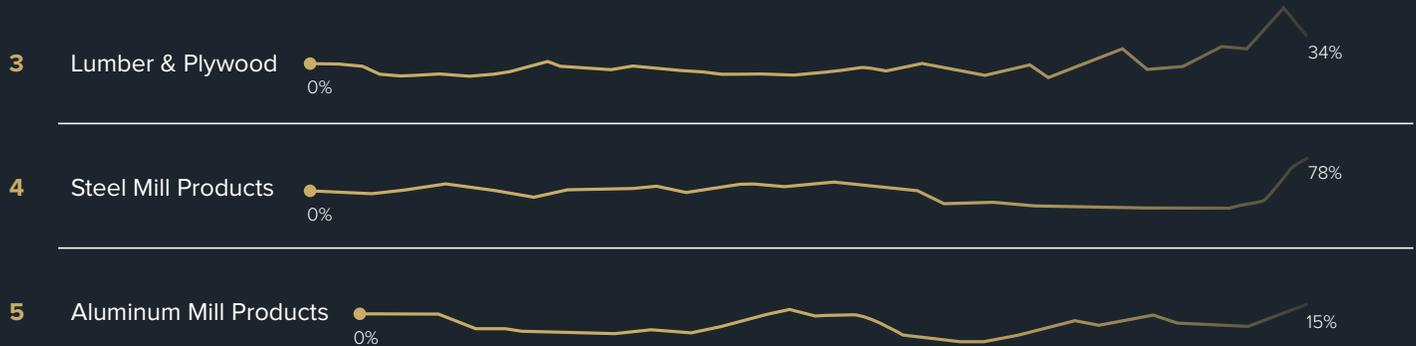
The table below analyzes the recent cost history of nine major types of construction materials over the past decade. The materials are ranked by historical cost volatility over the past 30 years, with the most volatile materials at the top and the least volatile materials at the bottom.

Volatility Rank / Materials / 3-Year Quick Chart

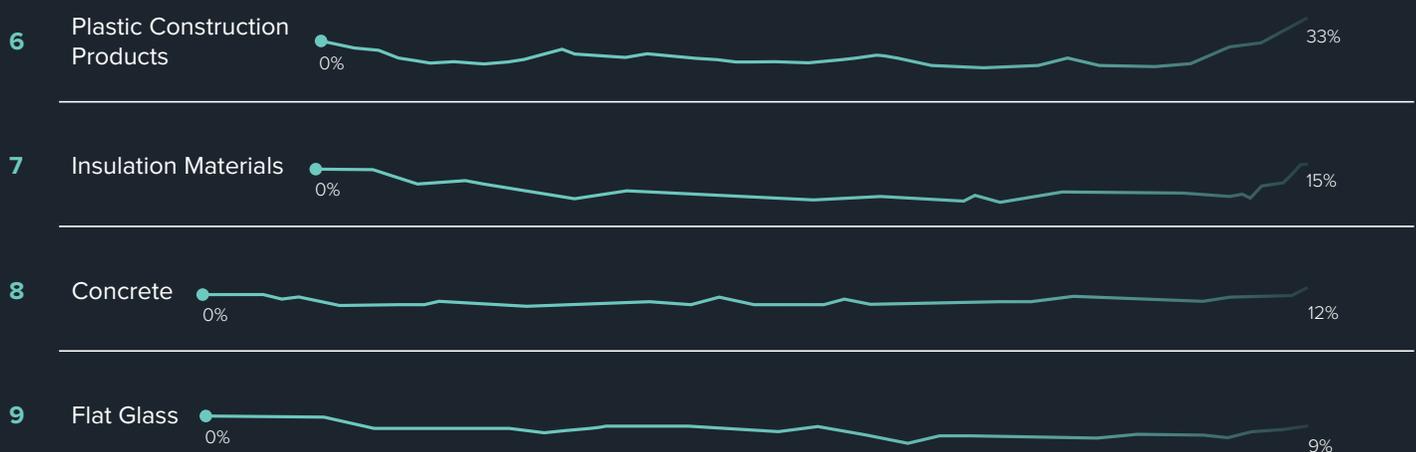
HIGH VOLATILITY



MEDIUM VOLATILITY



LOW VOLATILITY





Construction Forecast

The positive trajectory of the construction industry in the Southwest is continuing. We've been fortunate to see continued growth across the sectors in which we build. While the office sector was impacted heavily by the pandemic, people have returned to their workplaces, which have been re-imagined to attract talent in a changed, post-pandemic world.

Construction Labor

Training and mentorship is filling the skilled labor gap at LGE Design Build and increasing team member retention. Additionally, compensation is on the rise, making the construction trade a more attractive employment option. Total employment is expected to grow by 1 percent annually, with the fastest job gains occurring in the construction sector.

Supply Chain

Consumer demand will remain high. However, a nearly 5 percent production increase in the U.S., over the past year, slightly improved the supply chain. Supplier deliveries will be decreasing at a slower rate, but backlogs will continue to grow. The lack of raw materials will continue to affect every sector. The recently-passed Infrastructure Investment and Jobs Act may also cause delays for non-government projects that require the same materials, like concrete, for their buildings.

Material Costs

Overall construction volume is expected to grow by 5 percent over the course of 2022. Supply chain issues and material scarcity will continue to drive prices upwards. Final construction costs are expected to remain on the high end for at least the next two quarters.



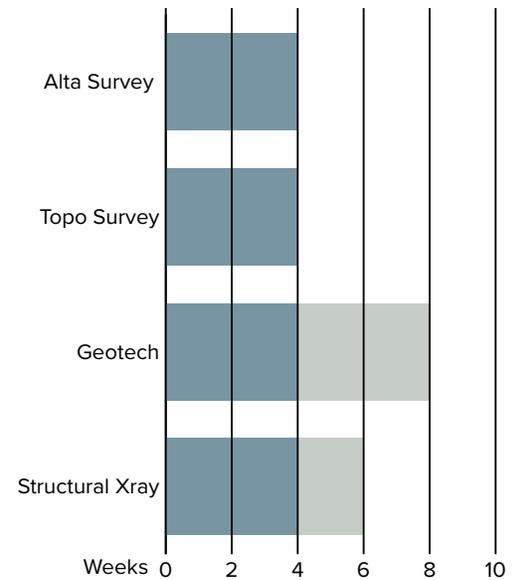
Design Expectations

The effects of labor issues, supply chain problems, and material volatility are being felt by more than just the construction team. Our architectural team is tasked with conceptual design, preliminary pricing, entitlements, construction documents, and construction administration through completion. Many of these steps are seeing long lead times because of heavily-booked due diligence consultants, ever-changing design expectations from municipalities, as well as increasing entitlement and permit review durations.

Municipalities Design Expectations*

Design aesthetics are becoming more and more influenced by the desires of the municipalities' Design Review Boards (DRB). In many of our current markets, we have seen a greater desire to have new industrial projects look more like Class A office buildings. This is being accomplished through:

- Increased plane changes across facades
- Increased glazing amount and height
- Multiple materials and textures
- Increased landscape requirements
- Taller parapets, removing the ability to use screen walls

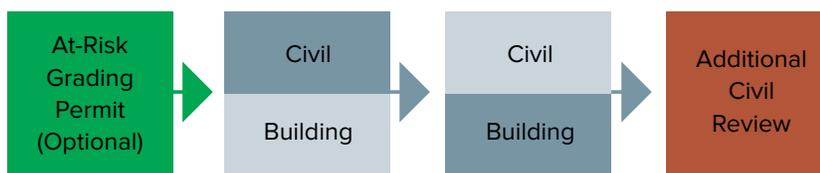


*Does not apply to all municipalities.

Entitlement and Permit Review Durations

Municipalities across the country are experiencing increased development demands, which is putting additional strain on their ability to meet the published review times. The expectation for timely reviews is no longer the reality.

Some municipalities are seeing a 50 percent increase in review durations and certain ones are beginning to require an additional civil review, bringing the total to three. This is compounded by the already-existing two building permits required, which can be sought simultaneously with the civil reviews.





Solutions and Strategies

Early collaboration of design and construction is the critical difference between design build and a traditional approach. Developers, engineers, architects, and subcontractors are interacting on a daily basis, using their insight to avoid future issues. We can avoid some of the pandemic pitfalls that have severely impacted other firms, like supply chain concerns. Joists and plywood, for example, have been hard to find, but we have been able to source these materials, thanks to early intervention by our architectural teams and clients.

DESIGN-BUILD PROCESS:

CONCEPTUAL DESIGN

Initial concepts take shape as LGE defines the project vision.

BUDGET & COST CONTROL

With conceptual designs and proposal approval, LGE ensures adherence to budgets.

PLAN & PERMIT APPROVAL

Coordinating required documents for permit approval prior to construction.

CONSTRUCTION ADMINISTRATION

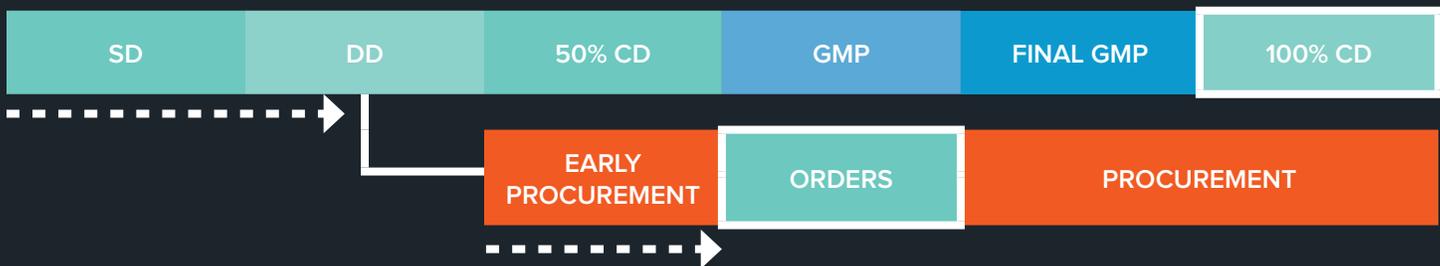
During construction, LGE manages tasks related to on-site activity.

Since 1994, our design-build process has been outperforming the traditional construction approach. Typically, our process saves clients 2-4 months and continues to deliver despite the many challenges found in the market.

TYPICAL TIMELINE:



LGE DESIGN BUILD'S PROCESS:



2-4 Months Saved with Early Procurement

Final Thought

“Despite the existing challenges laid out in this report, LGE Design Build has continued to thrive due to our single-source method. By combining architecture, engineering, permit coordination, and construction all under one roof, we are able to better control costs and deliver projects on time. From start to finish, our experienced team will rely on real-time data to secure long-lead products in order to avoid any delays. Obstacles are inherent in the construction industry, but if there was ever a time that highlighted the benefits of design build, this is most certainly it.”

– Grant Blunt, Vice President of Construction, LGE Design Build



LGE Design Build, AZ

1200 N 52ND STREET
PHOENIX, AZ 85008
www.lgedesignbuild.com
480.966.4001

LGE Design Build, TX

4925 GREENVILLE AVE, SUITE 350
DALLAS, TX 75206
www.lgedesignbuild.com
469.498.0998