

Market Outlook Construction Forum Summary

as of May 20, 2022

Presenters

- → Blair Tennant, Principal, Vermeulens
- → Richard Vermeulen, Lead Economist, Vermeulens

Macro to Micro Update, Vermeulens

- → Turner Construction index has seen a 7.2% increase; FRED index showing an 11% growth in last quarter
- → Vermeulens is showing a 7-12% escalation since the beginning of the pandemic
- → As price levels crashed in the pandemic, the FED responded with quantitative easing and reduced interest rates
- Likely to see growth recessions, where asset prices and level off in tandem with quantitative easing, a slight rise in overall economy and sequential plateaus in the coming months and years
- → Monetary policy is stimulating economic activity, in terms of construction employment, we are seeing a peaking point
- → Currently, seeing above average growth, much more activity in markets again
- -> Construction market has grown 20% since the pandemic, 48% being in residential, non-residential is flat
- → Since mid-2021, contracts and backlogs have firmed up and concerns about labor shortages, material bottle neck and underlying inflation have risen
- → 3 year projections for consumer prices, 4.5% for this year,
- → Blended rates of bidding and estimation contingencies of 10-15%

Round Table Q&A Discussion on the State of the Market

- → To balance the deflationary sectors, the FED targets the 2% trendline by inflating other sectors more than the deflating sectors
- → with the prices being constrained 10% from the portion coming from Russia, the West is striving to replace that supply be on streaming the compensating supply from their own resources
- As the fed pulls the stimulus out, it will decrease the demand during the middle terms, likely in the three year window we will come back to a 2% projection in the long term as the FED is expansive to get inflation back into the market
- → Earthwork increases are unique to the project and currently seeing a high variation even within states
- → Design contingencies occur at each stage and zero out at term of design period
- → It is recommended to allocate 35-40% for preliminary concept design projects for one year out
- The difference between the PCE index and the Vermeulen's index is due to the fact that Vermeulens focuses on non-residential construction and the PCE index is consumer based
- → Still below pre-pandemic for labor supply
- → Mid 2021 a lot of selling prices were flat and a steep rise in the end of 2021 was experienced
- → Underlying on energy that will be a driver of prices as Russia phases out of global economy and will be a medium-term issue for western economies and takes pressure off of bid prices
- → when input prices go ahead of bid prices, it is always followed by bid prices rising ahead and balances out
- → Starting at the pandemic the pay levels did not increase above 17% range





Market Outlook Forum®

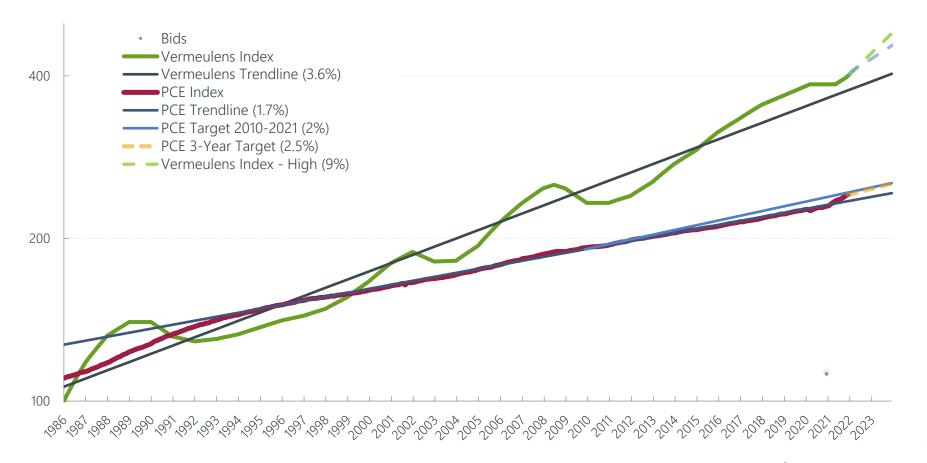
Blair Tennant, Principal, Vermeulens
Richard Vermeulen, Senior Principal, Vermeulens
Ken Simonson, Chief Economist, Associated General Contractors

vermeulens.com

- → interim questions and comments via chat
- → slide deck, recording, summary notes; available on website
- → 2022 forum dates will vary: minimum once per quarter

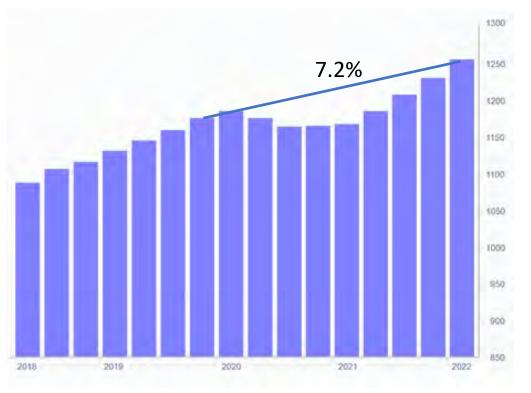
- → Vermeulens Macro to Micro Update
- → AGC Construction Industry Update
- → Round Table Discussion







Turner



Quarter	Index	% Change
1 st Quarter 2022	1255	2.03
4th Quarter 2021	1230	1.91
3rd Quarter 2021	1207	1.68
2 nd Quarter 2021	1187	1.28
1 st Quarter 2021	1172	0.09
4 th Quarter 2020	1171	0.00
3rd Quarter 2020	1171	-0.51
2 nd Quarter 2020	1177	-1.01

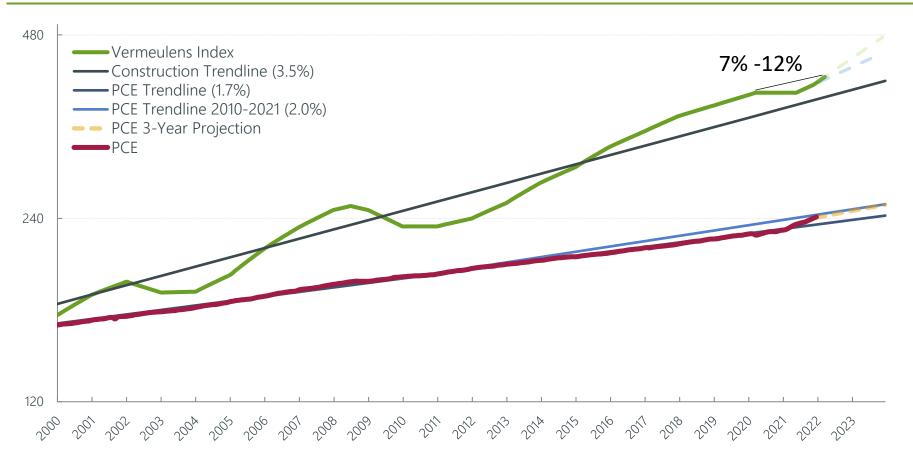








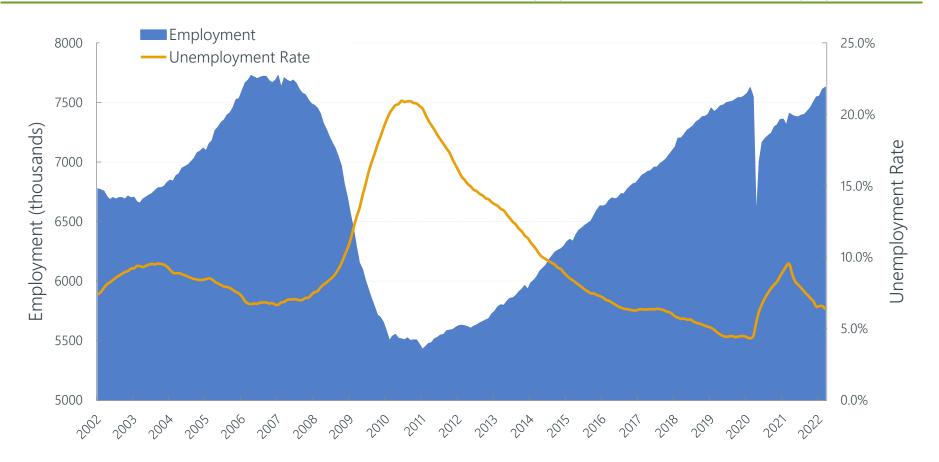




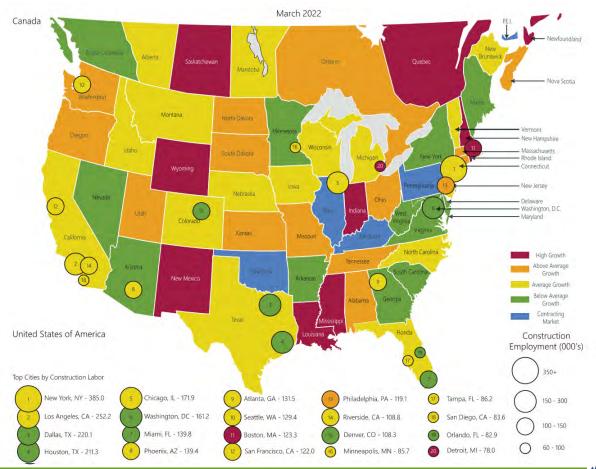




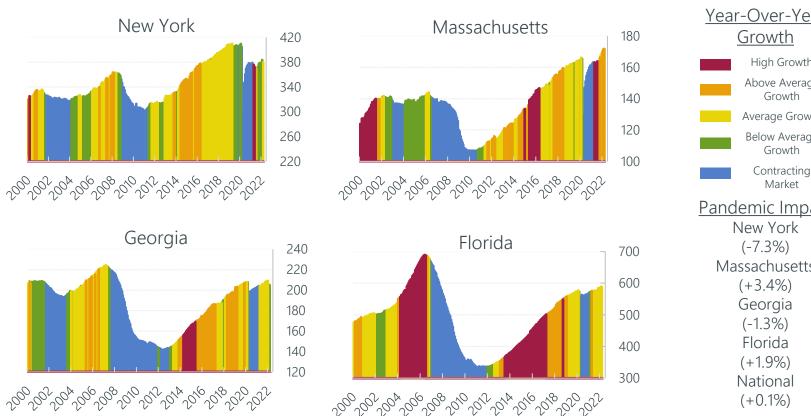










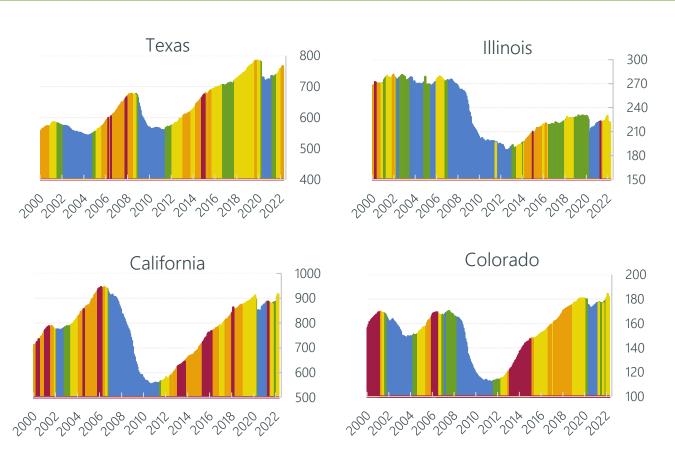




Pandemic Impact

New York (-7.3%)Massachusetts (+3.4%)Georgia (-1.3%)Florida (+1.9%)National (+0.1%)





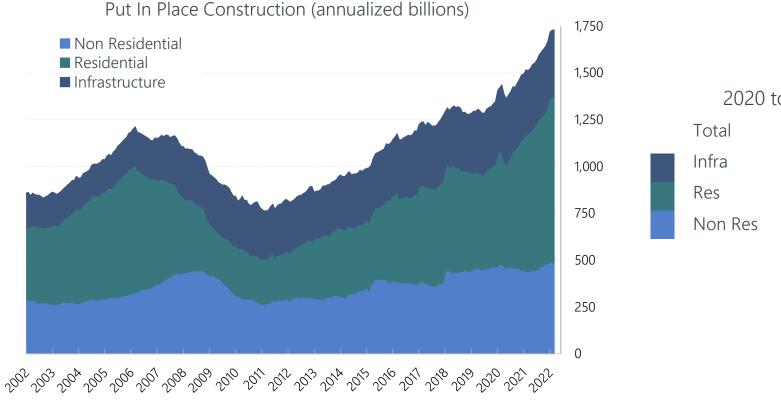
Year-Over-Year Growth High Growth Above Average Growth Average Growth Below Average Growth Contracting

Pandemic Impact

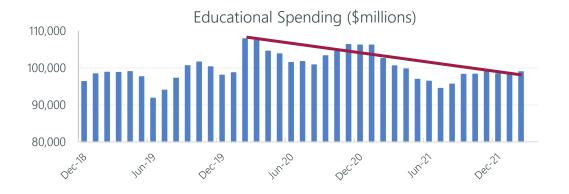
Market

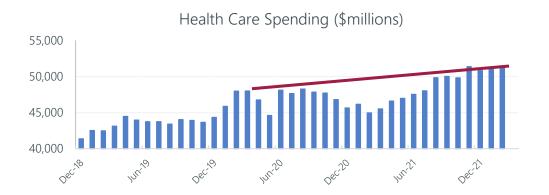
Texas
(-2.3%)
Illinois
(-3.8%)
California
(+0.6%)
Colorado
(+0.8%)
National
(+0.1%)













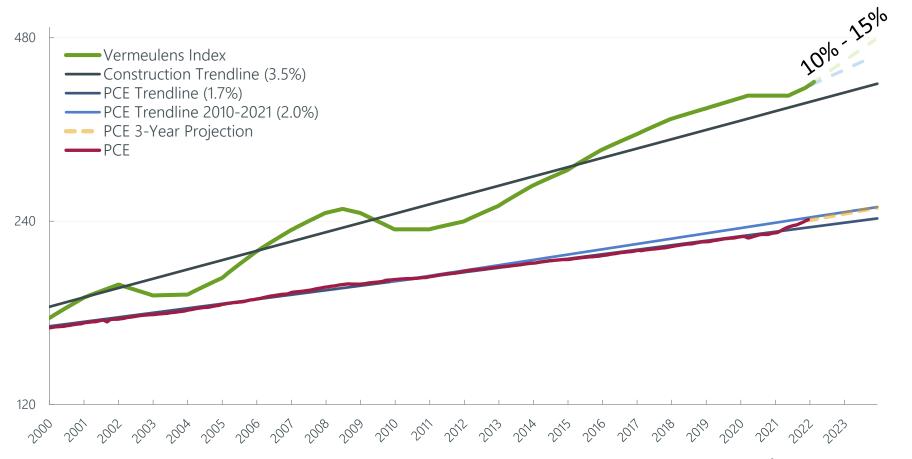
Indicator	Effect	Current	Forecast
Consumer Inflation – increasing	Stimulative	1	1
Construction Backlog – increasing	Stimulative	1	1
Nom Interest Rates – increasing	Moderating	1	1
Real Interest Rates – stable	Moderating	\Leftrightarrow	\Leftrightarrow
Government Deficits – decreasing	Moderating	•	\Leftrightarrow
Government Spending – decreasing	Moderating	1	\Leftrightarrow
Financial Assets – stable	Moderating	\rightleftharpoons	\Leftrightarrow
Real Estate Assets – increasing	Stimulative	1	\rightleftharpoons
Construction Volume - increasing	Stimulative	1	1
Construction Employment – increasing	Stimulative	1	1

"despite elevated costs and workforce challenges, construction backlog remains stable. Backlog would likely be rising rapidly if costs were more stable. Nonetheless, construction confidence indicators continue to improve. Collectively, contractors expect sales and employment to expand over the next six months. But what is far more remarkable is the expectation that profit margins will expand, indicating that demand for construction services remains elevated enough to countervail cost increases as we head into the heart of 2022." Associated Builders & Contractors











Project Contingency and Escalation Recommendations

design contingency

→ preliminary design	10% - 15%
→ schematic design	6% - 9%
→ design development documents	3% - 6%
→ contract documents	0% - 3%
→ design alternates	10% - 15%
construction contingency	3% - 5%
escalation, based on market outlook and local index	6% - 9%
bidding contingency	5% - 15%
project contingency (owner)	5% - 15%



May 2022

U.S. Construction Outlook: Workforce Worries, Cost Challenges, Project Prospects

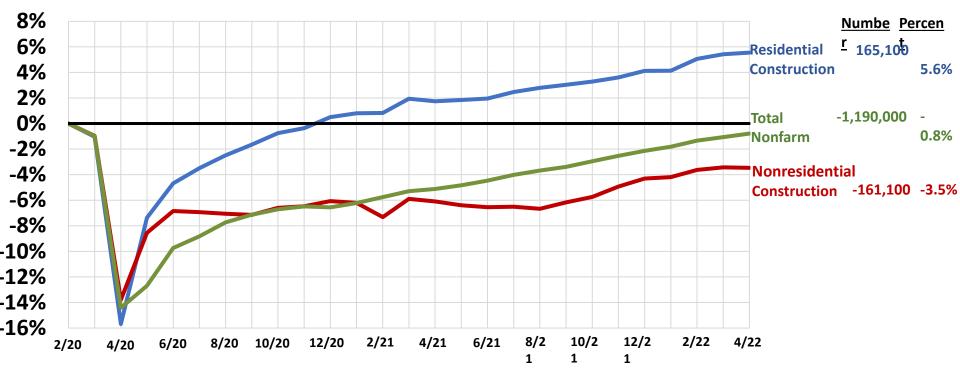
Ken Simonson
Chief Economist, AGC of America ken.simonson@agc.org

Total Nonfarm & Construction Employment, Feb. 2020-April 2022

cumulative change (seasonally adjusted)



Change since Feb. 2020:

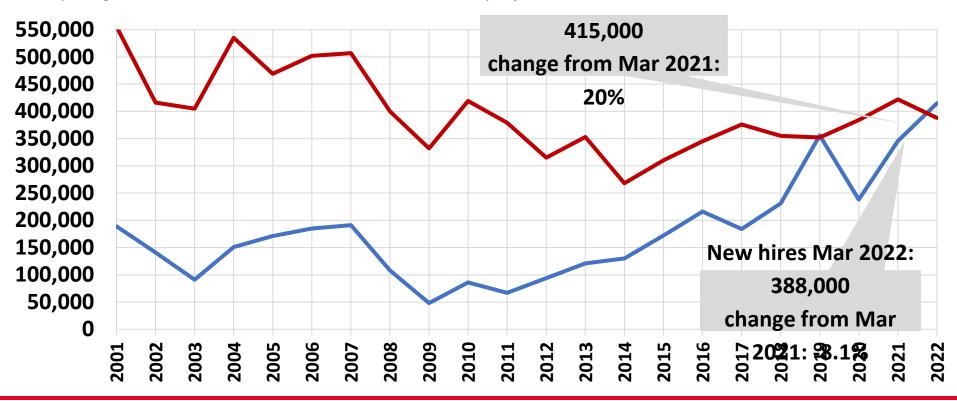


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Construction job openings exceed hires, set record high for Mar.



Job openings and hires, March 2001-March 2022, not seasonally adjusted



State construction employment change, Feb. 2020-Mar. 2022

32 states up, 2 flat, 16 states and DC down (U.S.: 0.1%)



Top 5

Utah	13.2%
South Dakota	12.1%
Idaho	12.0%
Montana	11.0%
Missouri	8.8%

Bottom 5

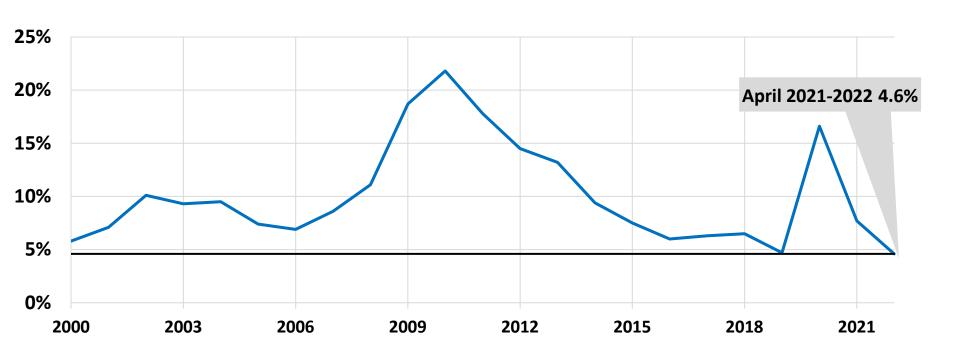
New York	-7.2%
Pennsylvania	-5.3%
North Dakota	-5.0%
Kentucky	-4.2%
Oklahoma	-4.1%



Rate of construction unemployment



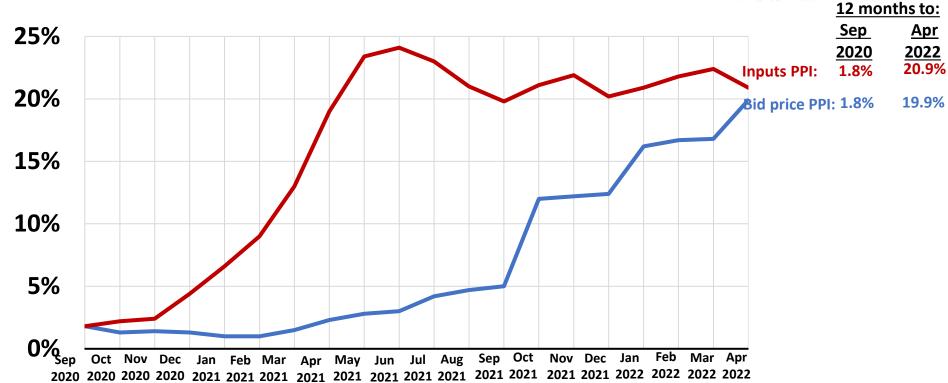
year-over-year, April 2000-April 2022, not seasonally adjusted



Costs vs. bid prices for new nonresidential construction

Year-over-year change in PPIs, Sep 2020-Apr 2022, not seasonally adjusted

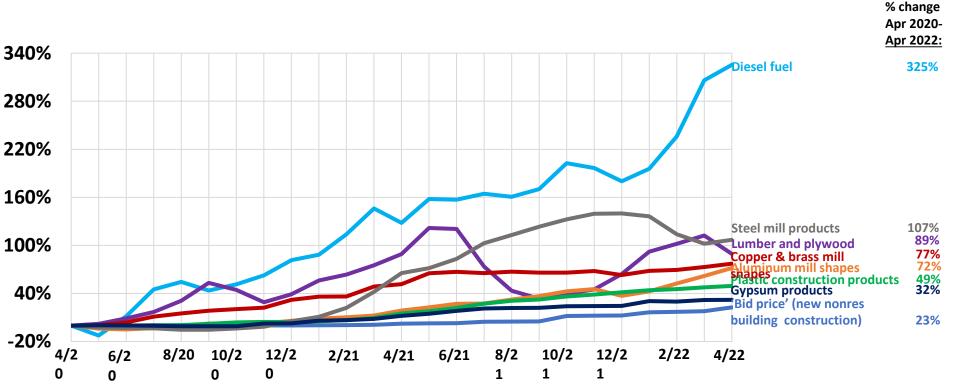




PPIs for construction bid prices and selected inputs

cumulative change in PPIs, April 2020-April 2022 (not seasonally adjusted)

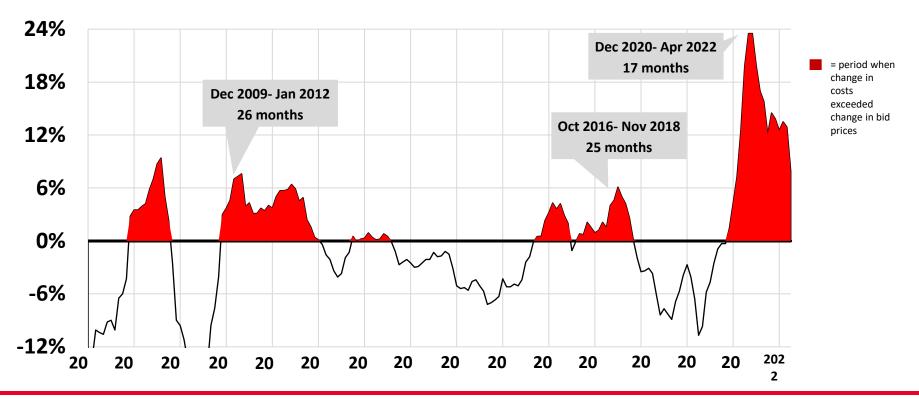




Cost squeeze on contractors can last two years or more

Difference between year-over-year change in materials costs vs. bid prices, Jan 2007-Apr 2022





Change in construction spending: Jan-March 2022 vs. 2021

current (not inflation-adjusted) dollars, not seasonally adjusted



- Total 12%; private residential 19% (single-family 20%; multi 5%); private nonres 9%; public 0.7%
- Largest segments (in descending order of 2021 spending)
- Power 0.9% (electric 4%; oil/gas fields & pipelines -0.3%)
- Commercial 18% (warehouse 22%; retail 19%)
- Education -3% (primary/secondary -7%; higher ed -0.3%)
- Mfg. 34% (chemical -0.8%; computer/electronic 238%; food/beverage/tobacco 23%; transp. equip. -6%)
- Office 5%
- Highway and street 9%
- Transportation 0.0% (air -5%; freight rail/trucking 6%; mass transit -5%)
- Health care 7% (hospital 5%; medical building 15%; special care -14%)
- Lodging -27%

Forward-looking indicators



Indicator	Latest date	Current value	Year-ago value
Architecture Billings Index (ABI)	April	56.5	57.6
Dodge Momentum Index (DMI)	April	165	140
Multifamily permits not yet started	April	130,000	101,000

Medium-term impacts as recovery begins

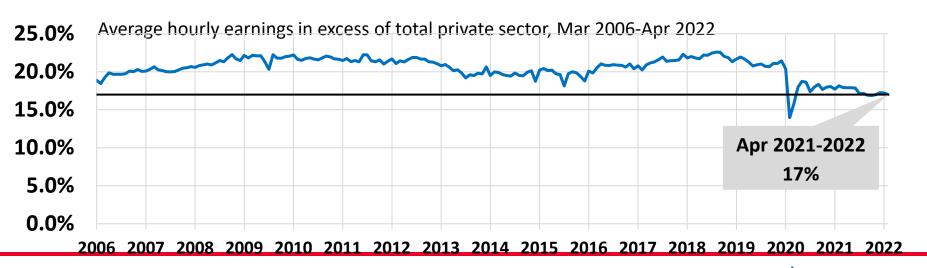


- Economic recovery should continue but invasion of Ukraine and Western countermeasures add to cost and supply-chain pressures
- Slower rebound than for other sectors as owners, investors/lenders, institutions, and public agencies face uncertainty about future demand, costs, and completion times
- Continuing cost and supply challenges may lead to more project deferrals
- Infrastructure funds will take time to distribute and award to individual projects, muting the medium-term impact on labor and materials "shortages"
- Best current prospects: manufacturing, data centers, renewable energy
- At risk of slowdown: warehouse, multifamily

Challenges regarding construction worker supply



- Low vaccination rate: 52% for construction workers, 82% for other occupations
- "Premium" for construction wages relative to total private sector has shrunk from 20-23% pre-pandemic to 17% for production & nonsupervisory employees as other sectors boost pay, benefits and offer flexible hours and locations
- Implications: Contractors will have raise pay still more, pay more overtime, invest more in labor-saving software and equipment



Long-run construction outlook (post-pandemic)

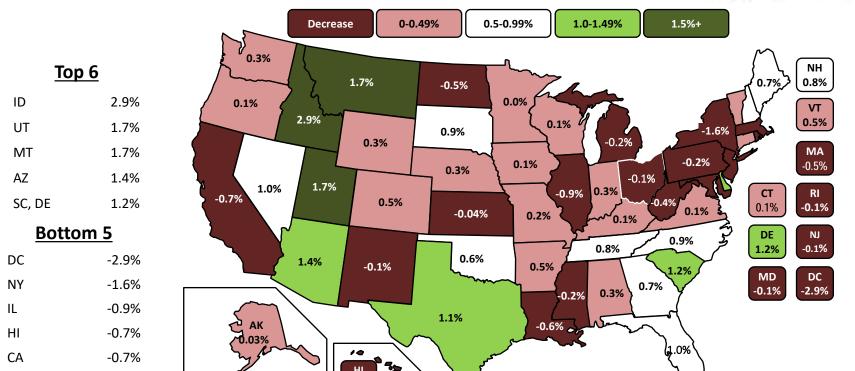


- Finding workers will be a challenge for much longer than materials costs or supply
- Slower population growth means slower demand growth for most construction
- Slowing demand for K-12, decline for higher ed construction
- Permanent shift from retail to e-commerce/distribution structures
- More specialized and online healthcare facilities; fewer hospitals, nursing homes
- More wind, solar, battery storage and charging facilities, and related manufacturing
- Not clear if offices will decentralize or remain in less demand
- Not clear if recent urban/rural or state-to-state migration will remain or reverse

Population change by state, July 2020-July 2021

(U.S.: 0.12%)





AGC economic resources

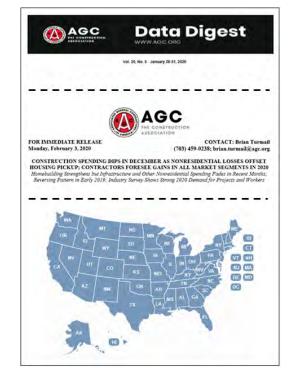
(email <u>ken.simonson@agc.org</u>)

- The Data DIGest: weekly 1-page email (subscribe at http://store.agc.org)
- Construction Inflation Alert:

https://www.agc.org/learn/construction-data/agc-construction-inflation-alert

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