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US Construction Spending, Labor and Materials Outlook

December 4, 2018

Ken Simonson

Chief Economist, AGC of America

simonsonk@agc.org

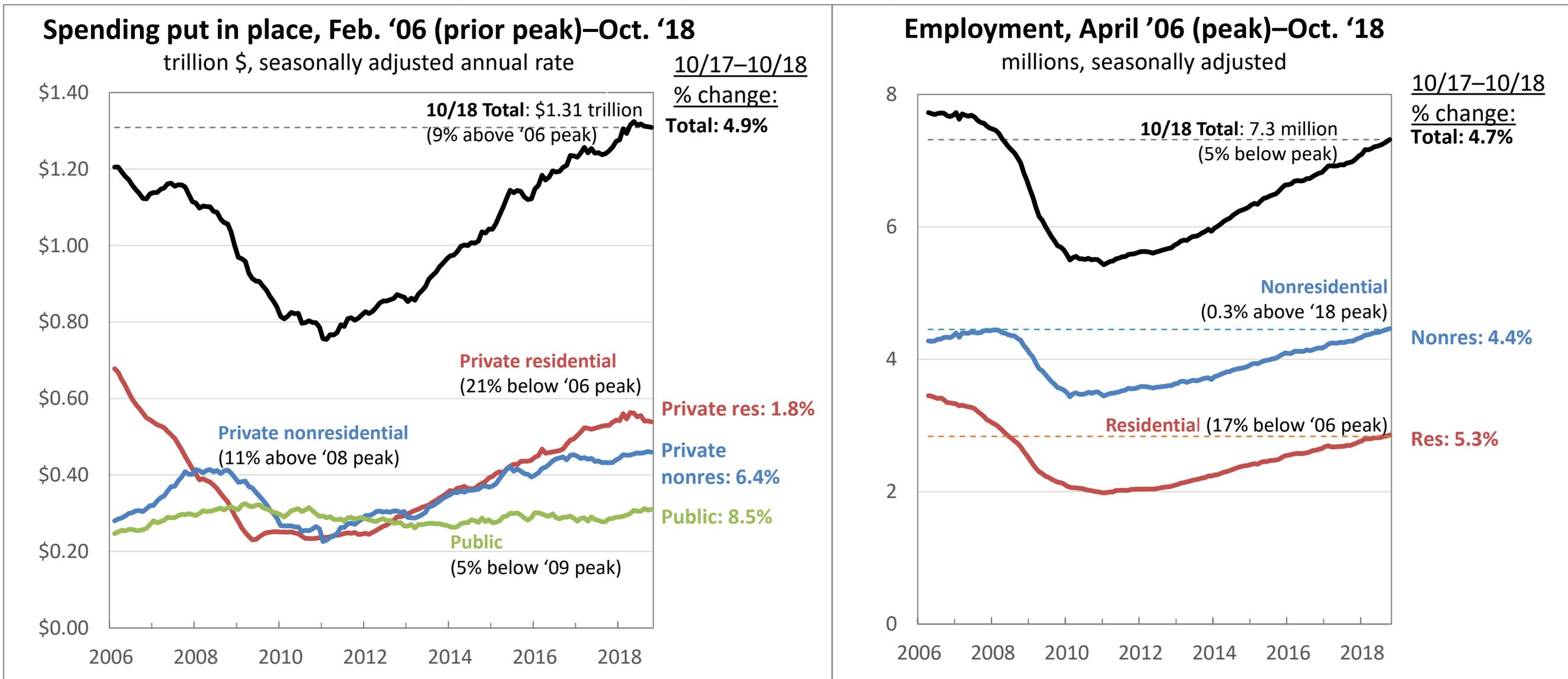
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Headline Forecast

- The US economy is strong and growing:
 - 3.5% third-quarter real GDP growth, rising employment and pay
 - consumer, business confidence are generally high; recession probability is low
 - but home & auto sales are slowing; trade & fiscal policy concerns remain
- Contractors remain busy and confident; construction employment at 10-year high but several spending categories have slipped or stalled in past few months
- Three concerns:
 - impact of trade policies on materials costs and demand for construction
 - widening labor shortage, worsened by hostile immigration policy
 - rising interest rates may cut demand for income-producing projects, new homes

Construction spending & employment, 2006–2018



Source: spending--U.S. Census Bureau; employment--Bureau of Labor Statistics

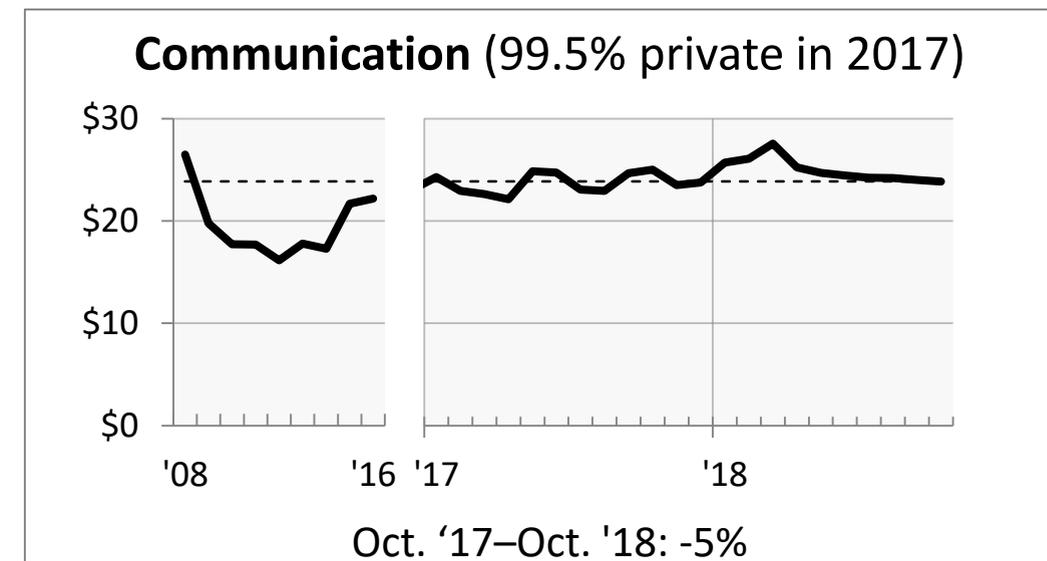
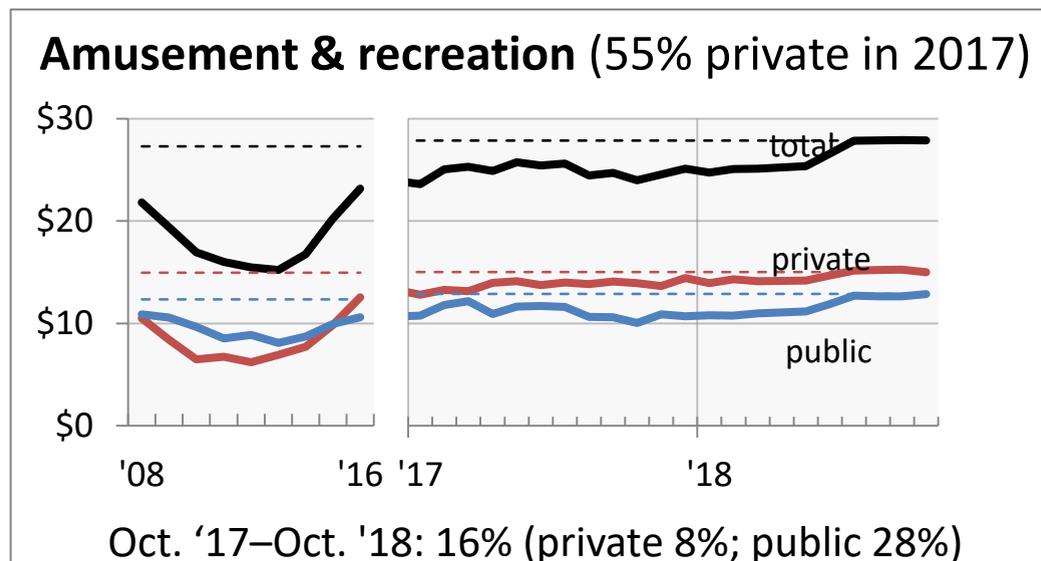
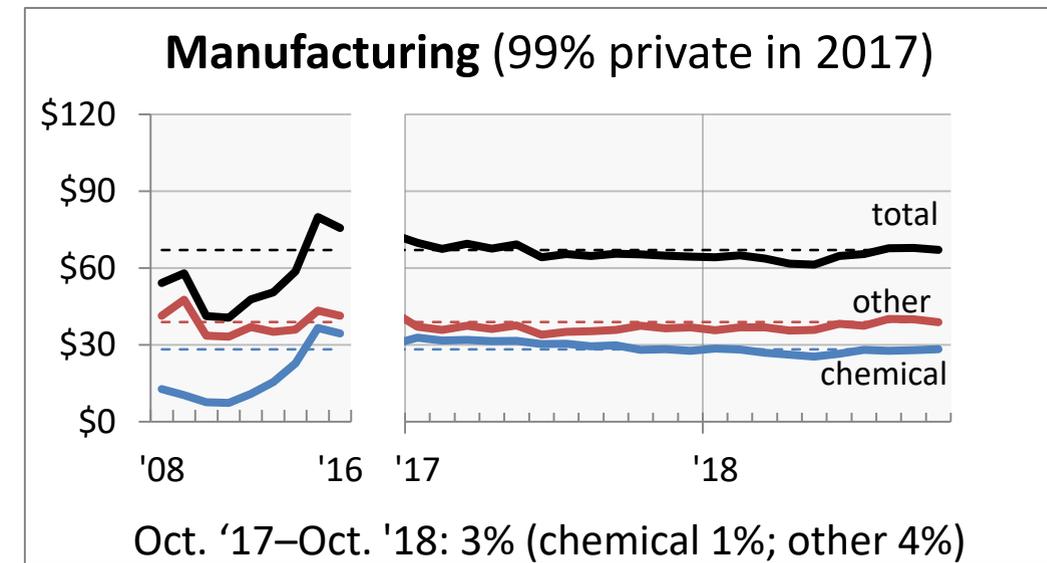
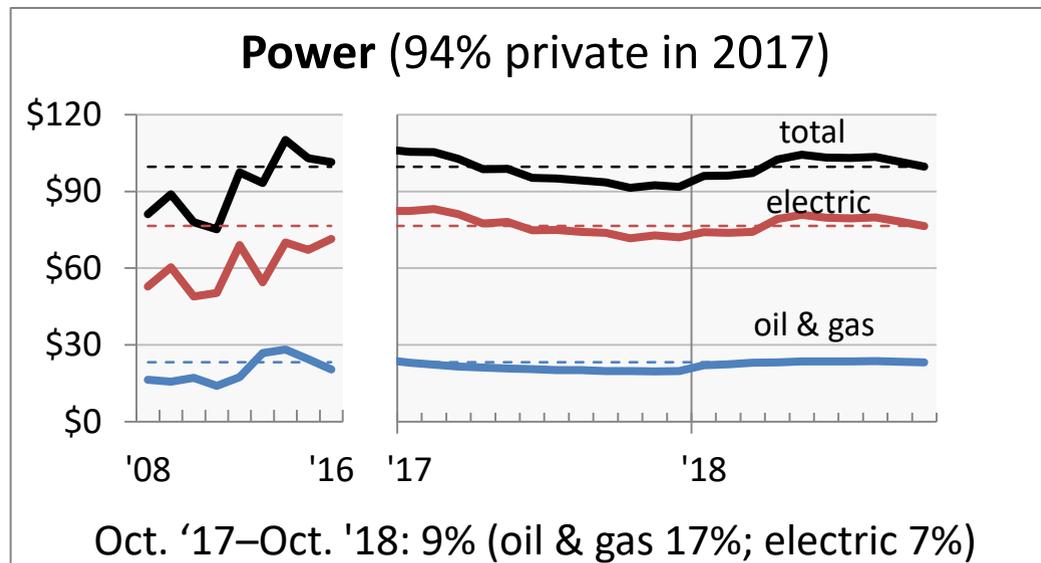
Nonresidential spending by segment: 2017-2018 change and 2019 forecast

	2017 vs. 2016	Jan-Oct '18 vs. Jan-Oct '17	2019 forecast
Nonresidential total (public+private)	<u>-0.5%</u>	<u>5.2%</u>	<u>2-5%</u>
Power (incl. oil & gas field structures, pipelines)	-5	3	3-8%
Educational	1	3	0-5%
Highway and street	-4	6	3-8%
Commercial (retail, warehouse, farm)	12	4	0-5%
Office	-1	9	0-5%
Manufacturing	-13	-3	near 0
Transportation	4	17	5-10%
Health care	4	1	near 0
Lodging	6	12	near 0
Sewage & waste disposal	-12	9	
Other--amusement; communication; religious; public safety; conservation; water: 11% of '17 total	3	6	

Source: U.S. Census Bureau construction spending report; Author's forecast

Construction spending: industrial, heavy

annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–10/18; billion \$

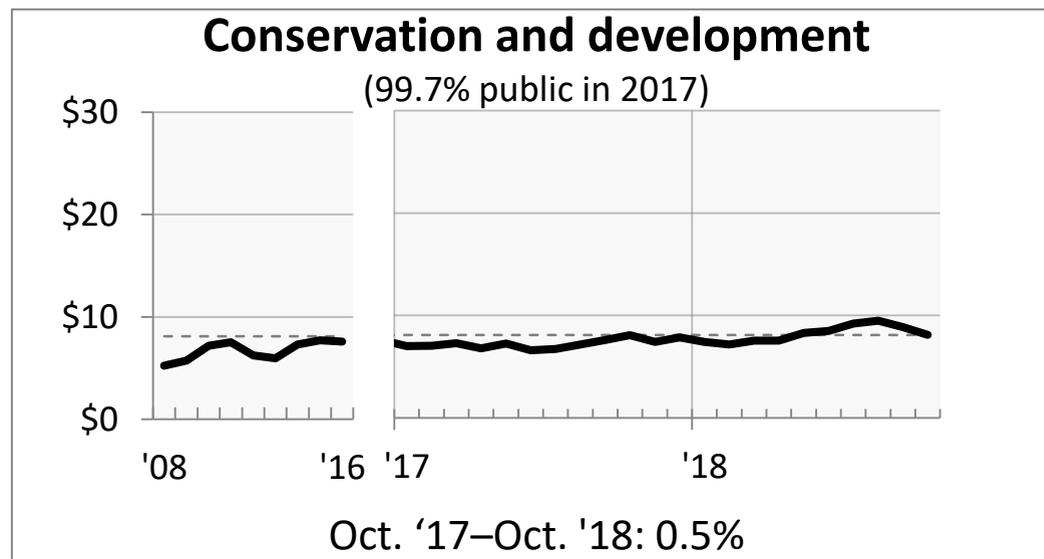
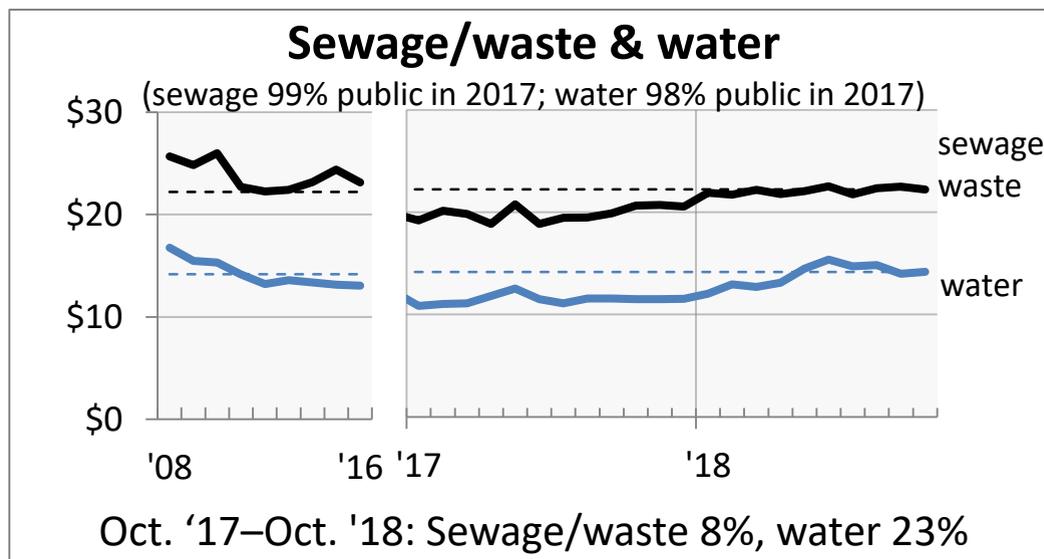
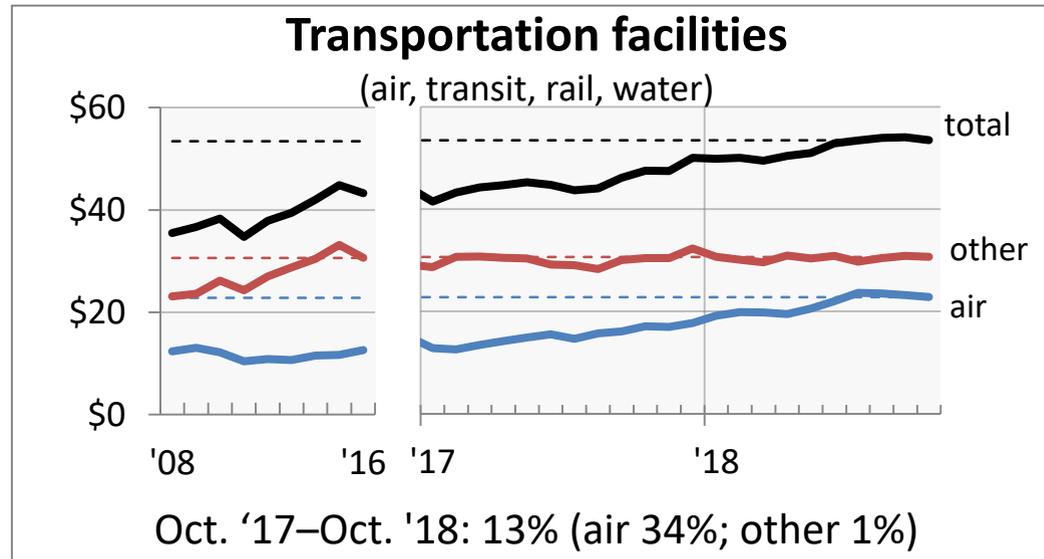
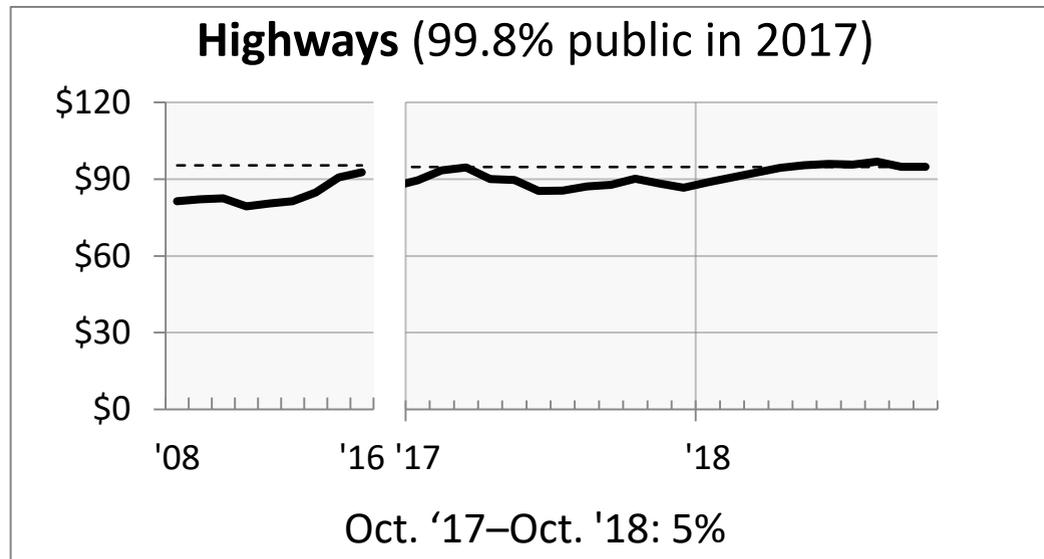


Key points: power & energy, mfg, amusement, communication

- Solar, wind power are growing again; expect more gas-fired plants, natural gas pipelines in '19
- Manufacturing construction should recover further in '19 based on energy projects, U.S. economic growth; but tariffs, foreign retaliation, rising construction costs are major concerns
- Amusement & recreation spending is very “lumpy”—a few big stadiums at irregular intervals; but funding for local, state, federal parks keeps eroding
- Communication may revive as wireless firms build out 5G networks

Construction spending: public works

annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–10/18; billion \$

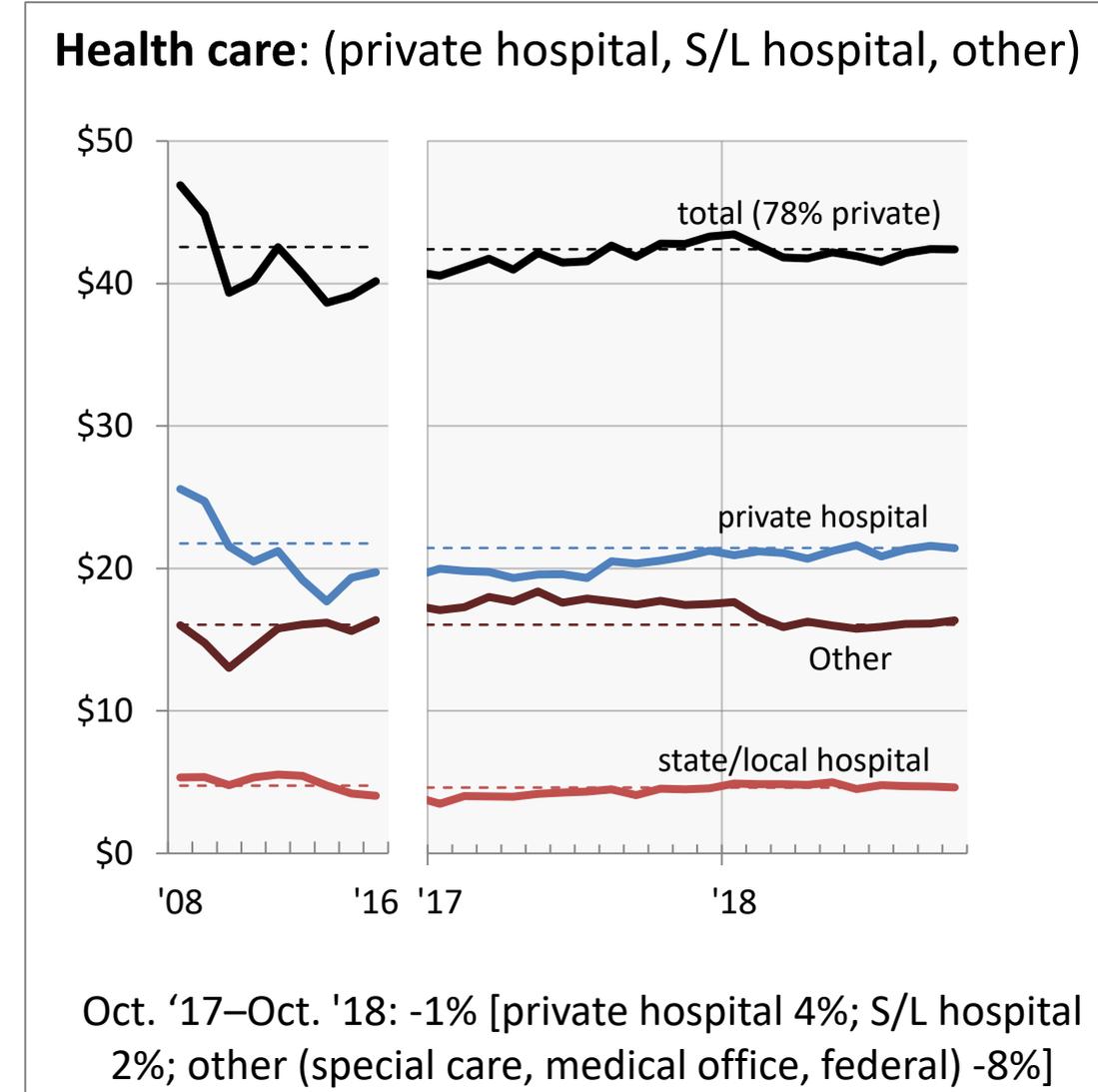
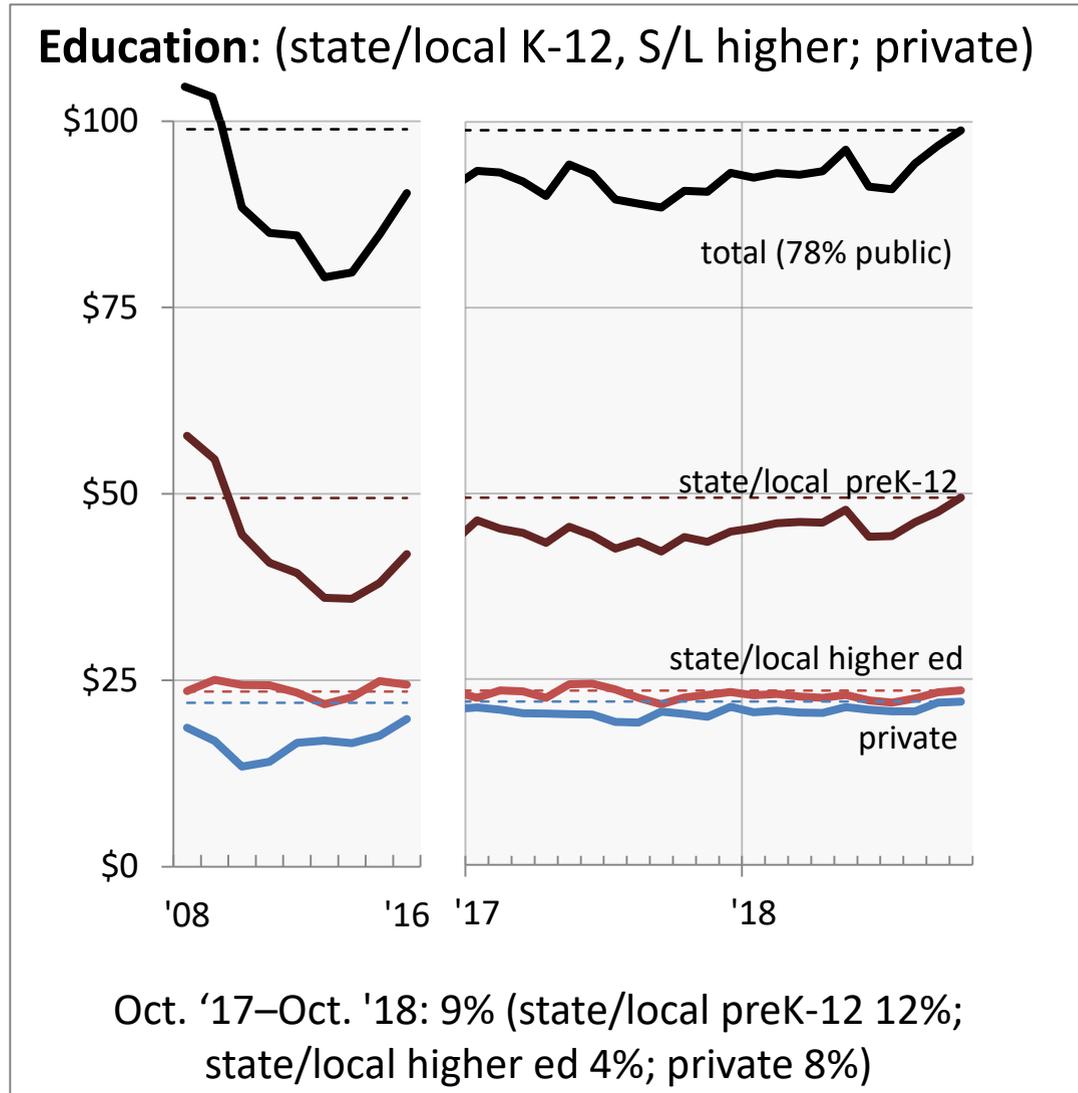


Key points: roads, transportation, sewer/water

- State highway funding and P3s gradually increasing; no federal infrastructure bill likely in 2019
- Many new and ongoing public & private airport projects; revival of freight rail construction; but no net increase likely in public funding for port, passenger rail or transit construction
- Water & sewer/wastewater spending returning to 2011-15 levels after large drop in 2016-17; little long-term new funding likely
- Conservation will grow if Corps of Engineers can award enough \$

Construction spending: education, health care

annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–10/18; billion \$

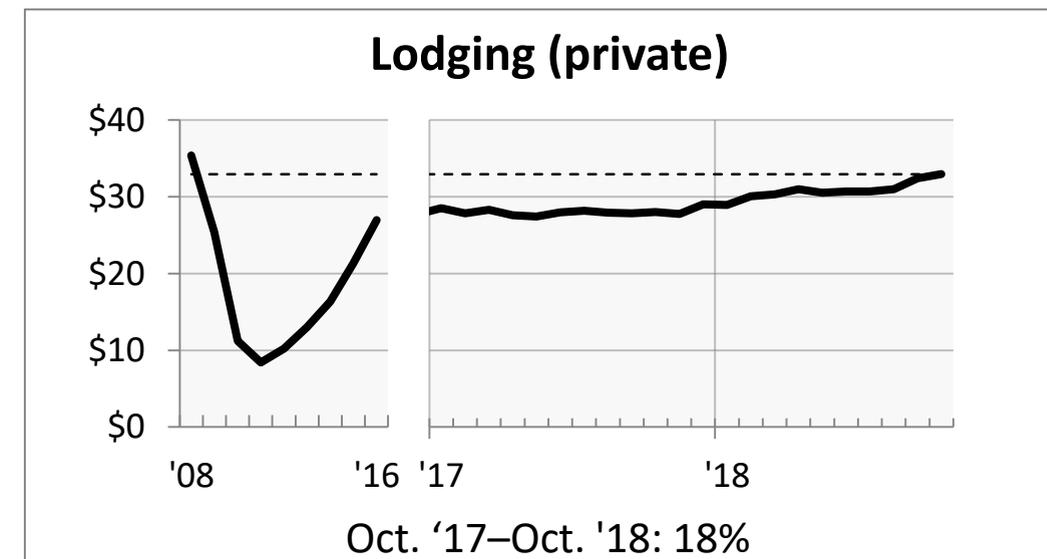
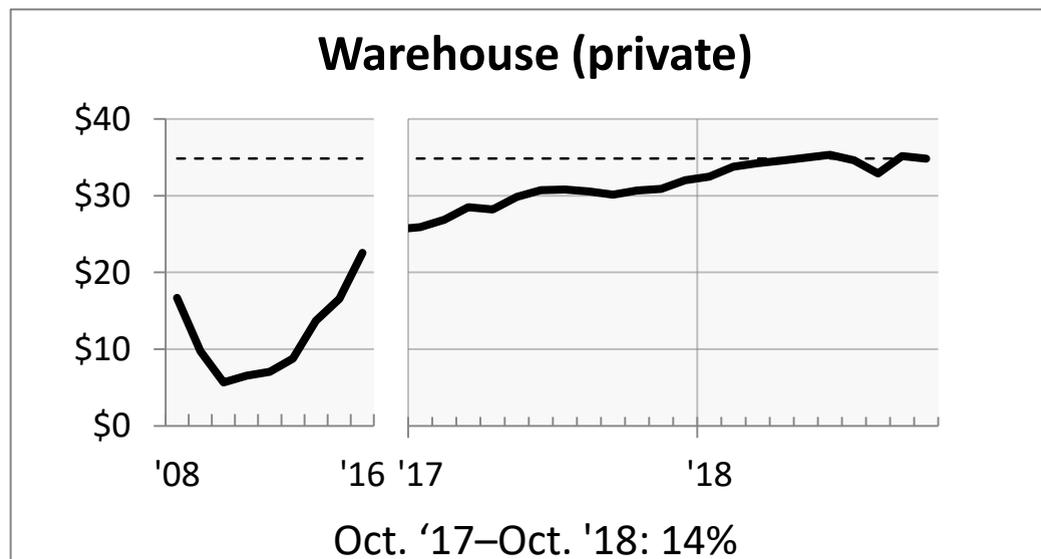
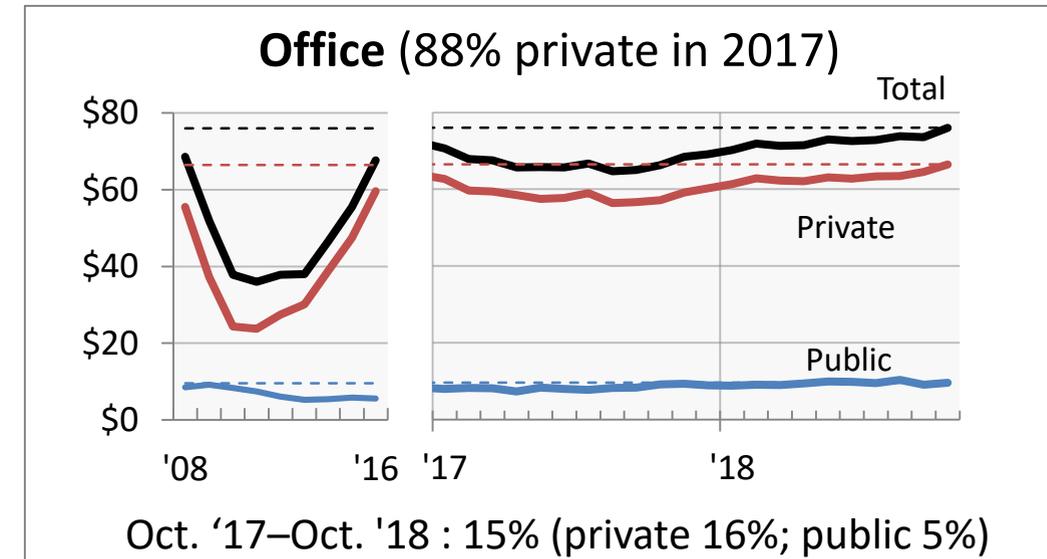
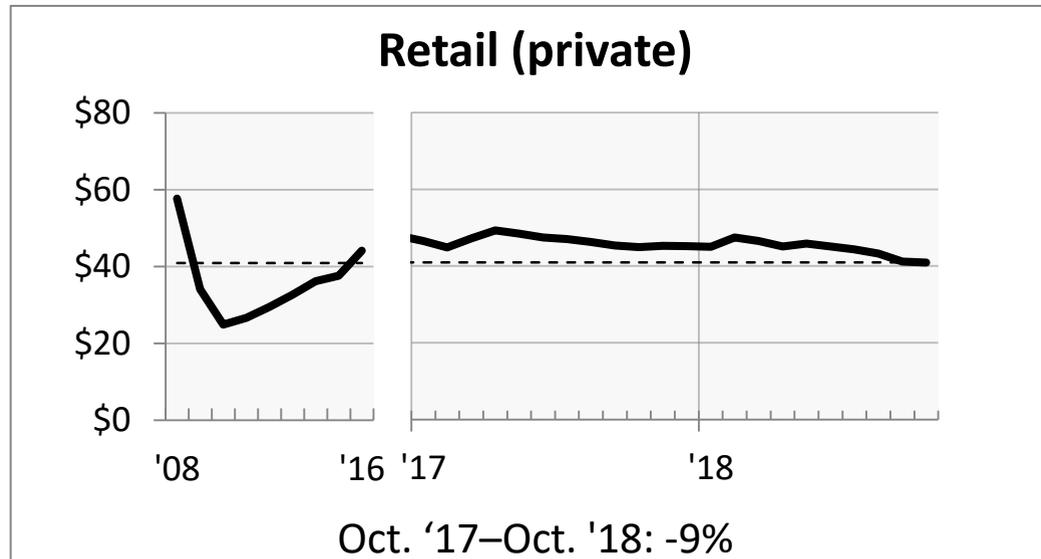


Key points: education & health care

- Rising house & commercial property values are supporting school district tax receipts & bond issues for preK-12 projects
- Higher-ed enrollment declined 21% from 2011 to 2016; likely decrease in full-tuition foreign students will hurt budgets; apts. (multifamily) replacing dorms (educational construction)
- Rising stock prices help private school & college capital campaigns
- Despite recent rebound in hospital spending, health care spending is shifting to special-care facilities (urgent care, surgery, rehab, hospices)

Construction spending: developer-financed

annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–10/18; billion \$

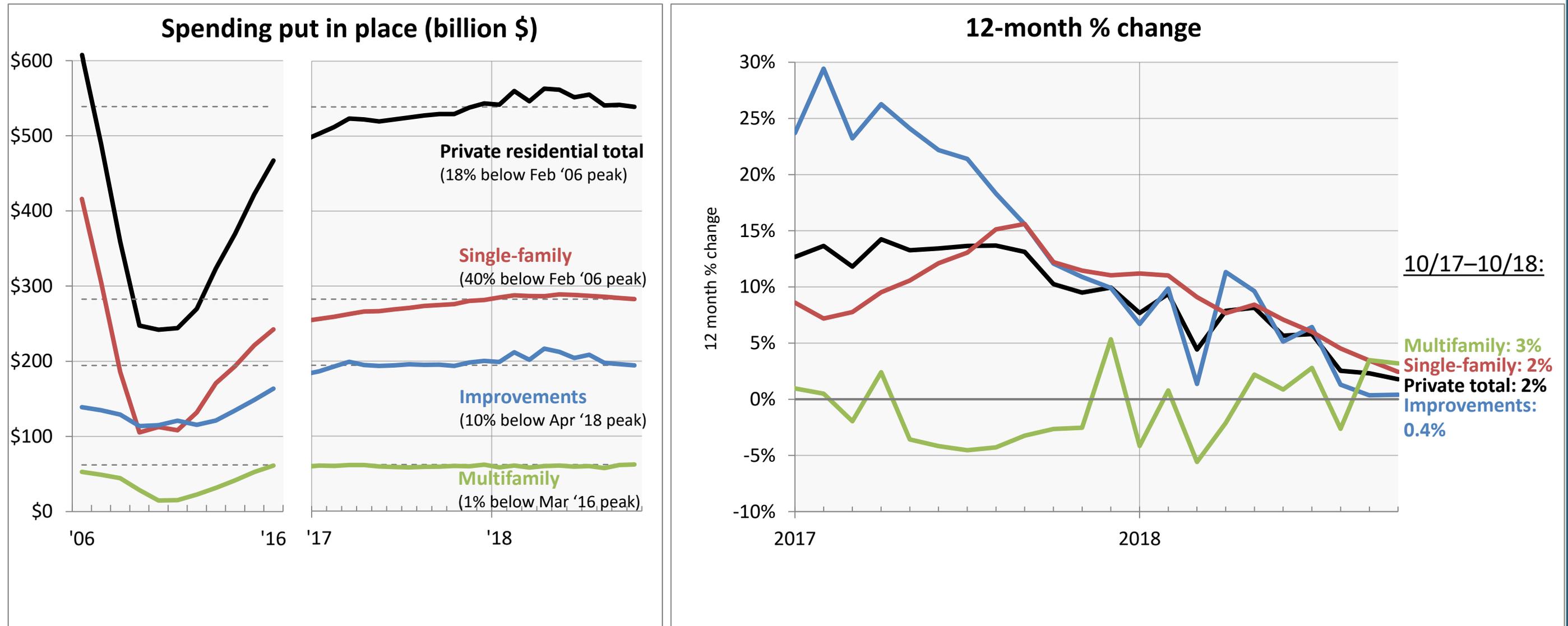


Key points: retail, warehouse, office, hotel, data centers

- Retail now tied to mixed-use buildings & renovations, not standalone structures; ongoing store closings imply downturn continuing in '19
- Warehouse growth is still benefiting from e-commerce; more local than huge regional distribution centers likely in future; self-storage is booming
- Office growth is slowing; employment still rising but space per worker is shrinking; more urban & renovation work than suburban office parks
- Hotel pipeline is still growing but sector is very interest-rate sensitive
- Data centers remain a strong niche but no data available on how strong

Private residential spending: slower single-family growth, pickup in multifamily

annual total, 2006–16; monthly (seasonally adjusted annual rate), 1/17–10/18; billion \$

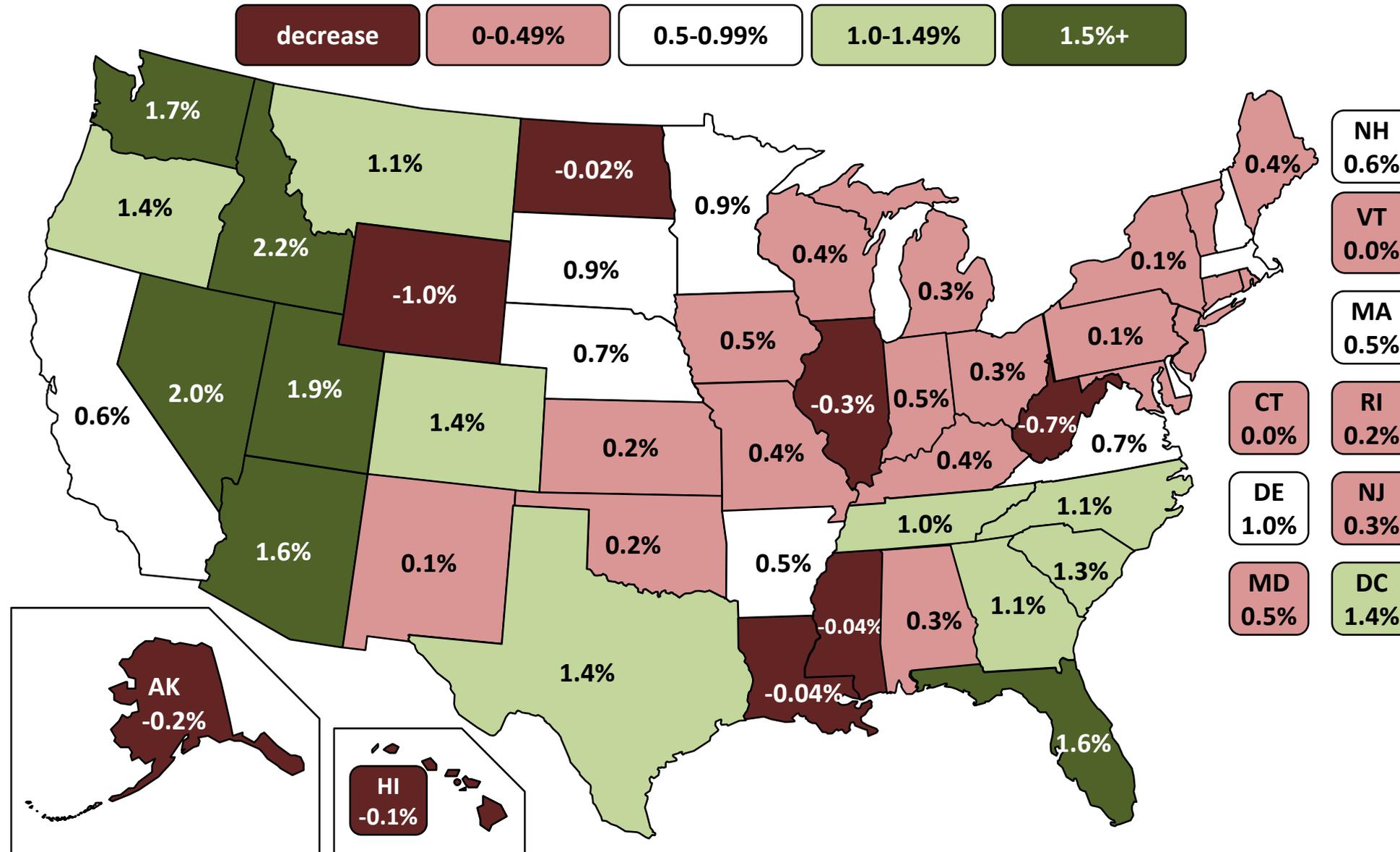


Source: U.S. Census Bureau construction spending report

Residential spending forecast--2018: 5-6% growth; 2019: 5-9% (12% in 2017)

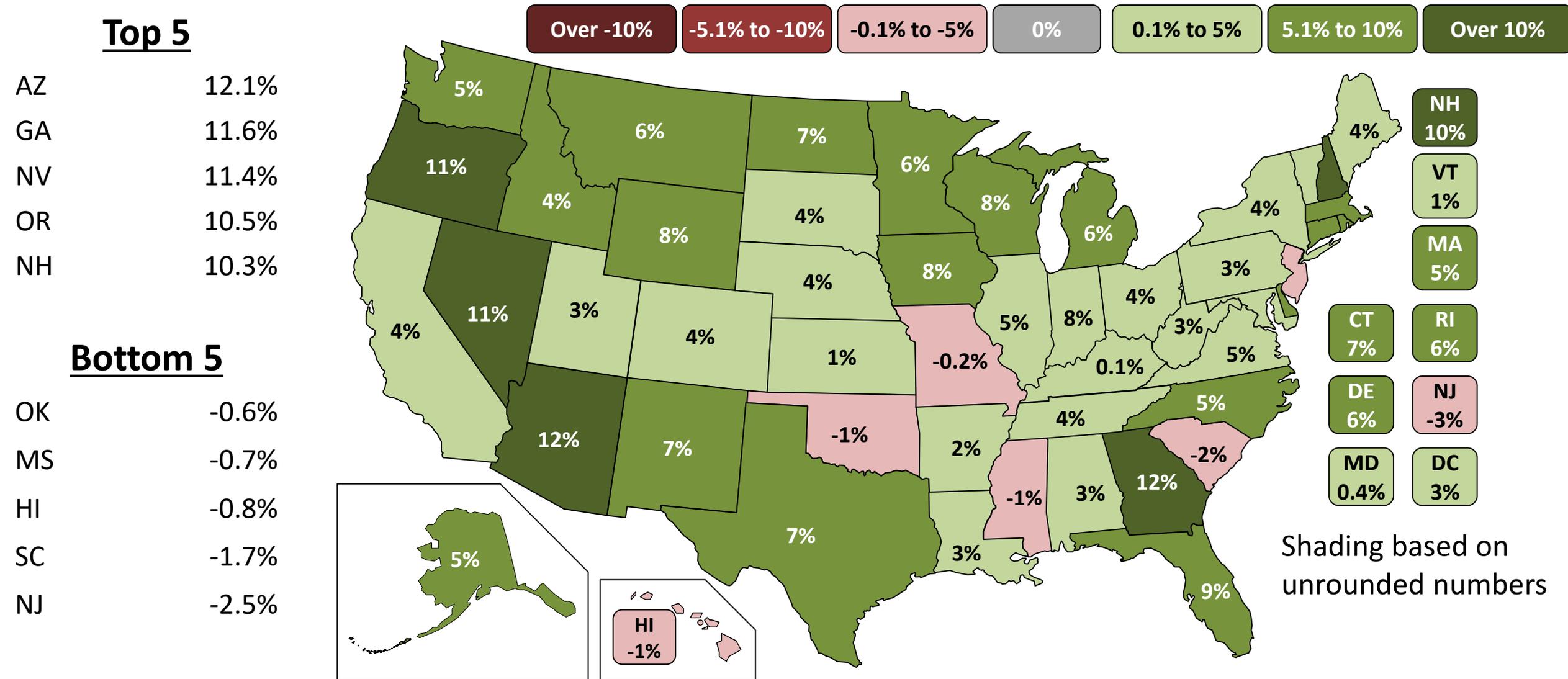
- **SF--2018: 6-7% growth; 2019: 6-10% (11% in 2017);** rising interest rates, building costs, student debt will limit number of potential buyers
- **MF--2018: near 0; 2019: 2-5% (-2% in 2017)**
 - occupancy rates, rents have leveled off; but permits are rising, implying rebound in 2019
 - millennials are staying longer in cities and denser suburbs where MF construction is bigger share of market than in outer suburbs
 - nearly all MF construction is rental, not condo; more high-rises
- **Improvements--2018: 6-8% growth; 2018: 5-10% (19% in 2017);** rising number of seniors prefer remodeling to moving but interest cost, labor scarcity are barriers

Population change by state, July 2016–July 2017 (U.S.: 0.72%)



Source: U.S. Census Bureau

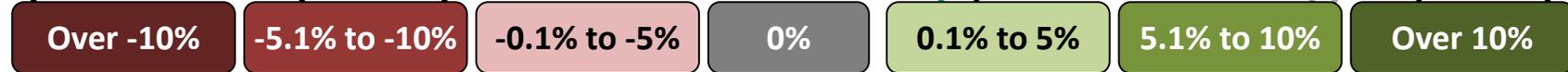
State construction employment change (U.S.: 4.7%) 10/17 to 10/18: 44 states and DC up, 6 down



Source: BLS state and regional employment report

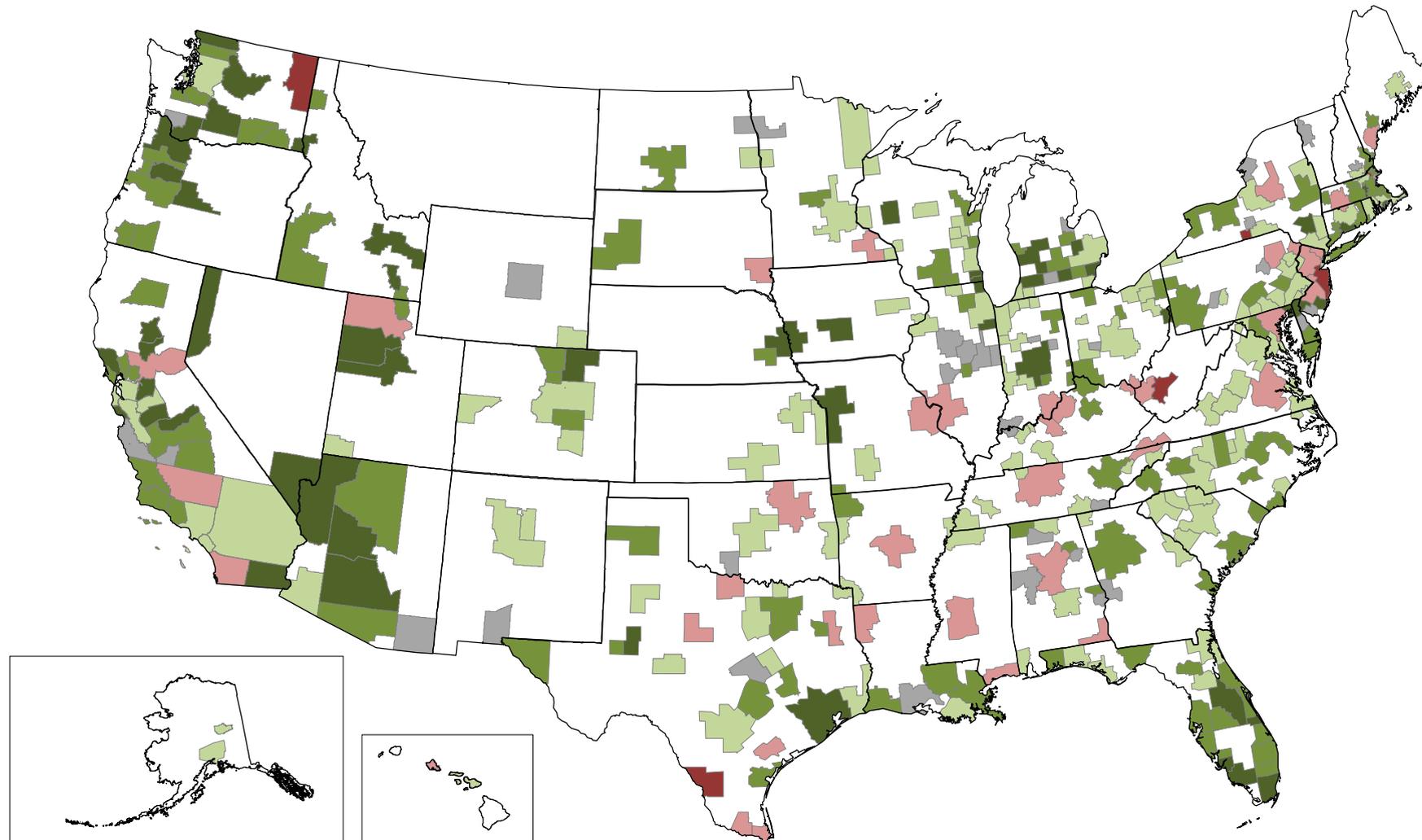
Metro construction employment change (U.S.: 4.7%)

10/17 to 10/18: 281 (78%) of 358 metros **up**, 34 unchanged, 43 (12%) **down**



Top 5

Midland, TX	25%
New Bedford, MA	
NECTA	22%
Weirton-Steubenville, WV-OH	21%
Lewiston, ID-WA	20%
Orlando-Kissimmee-Sandford, FL	16%

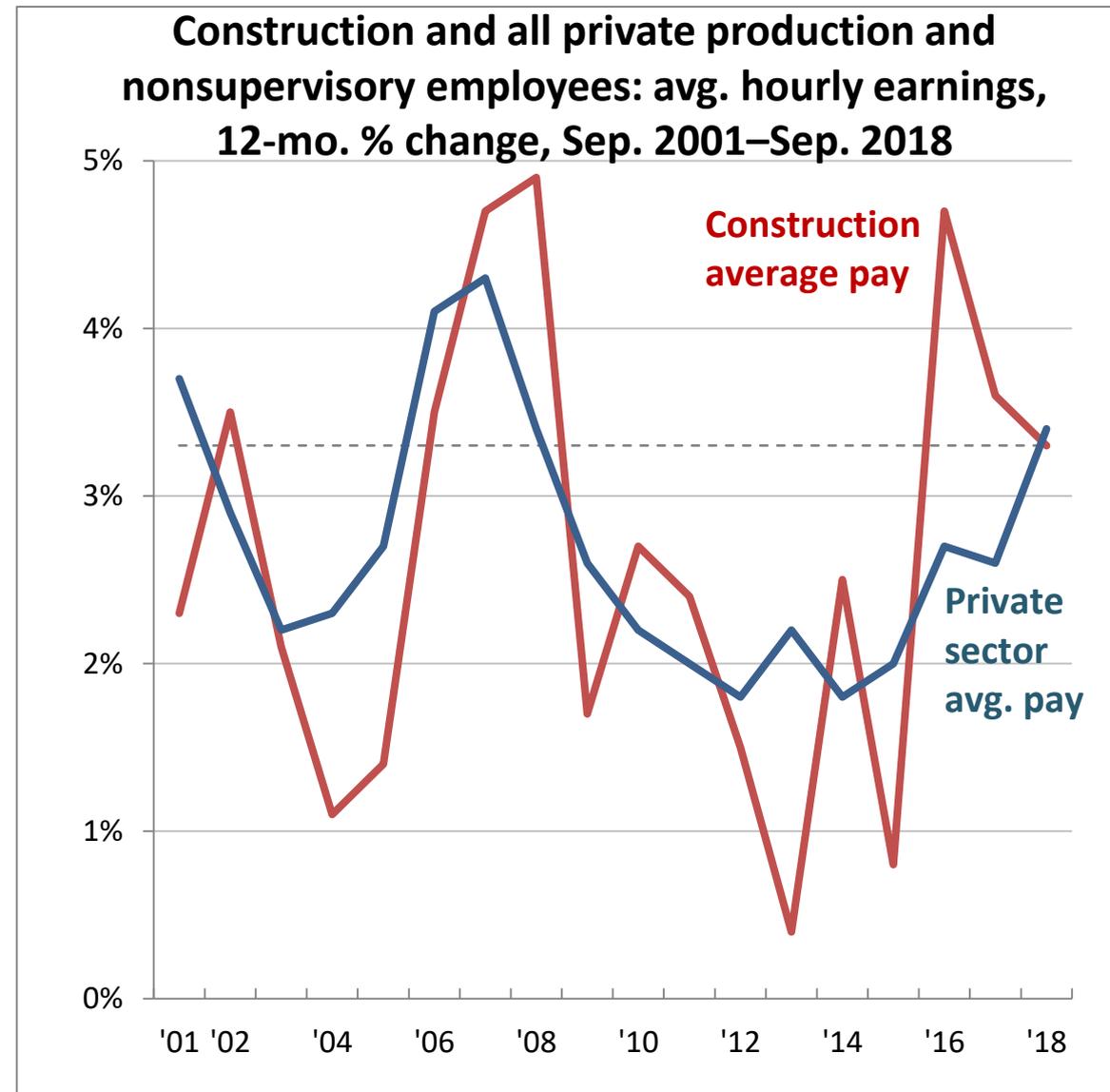
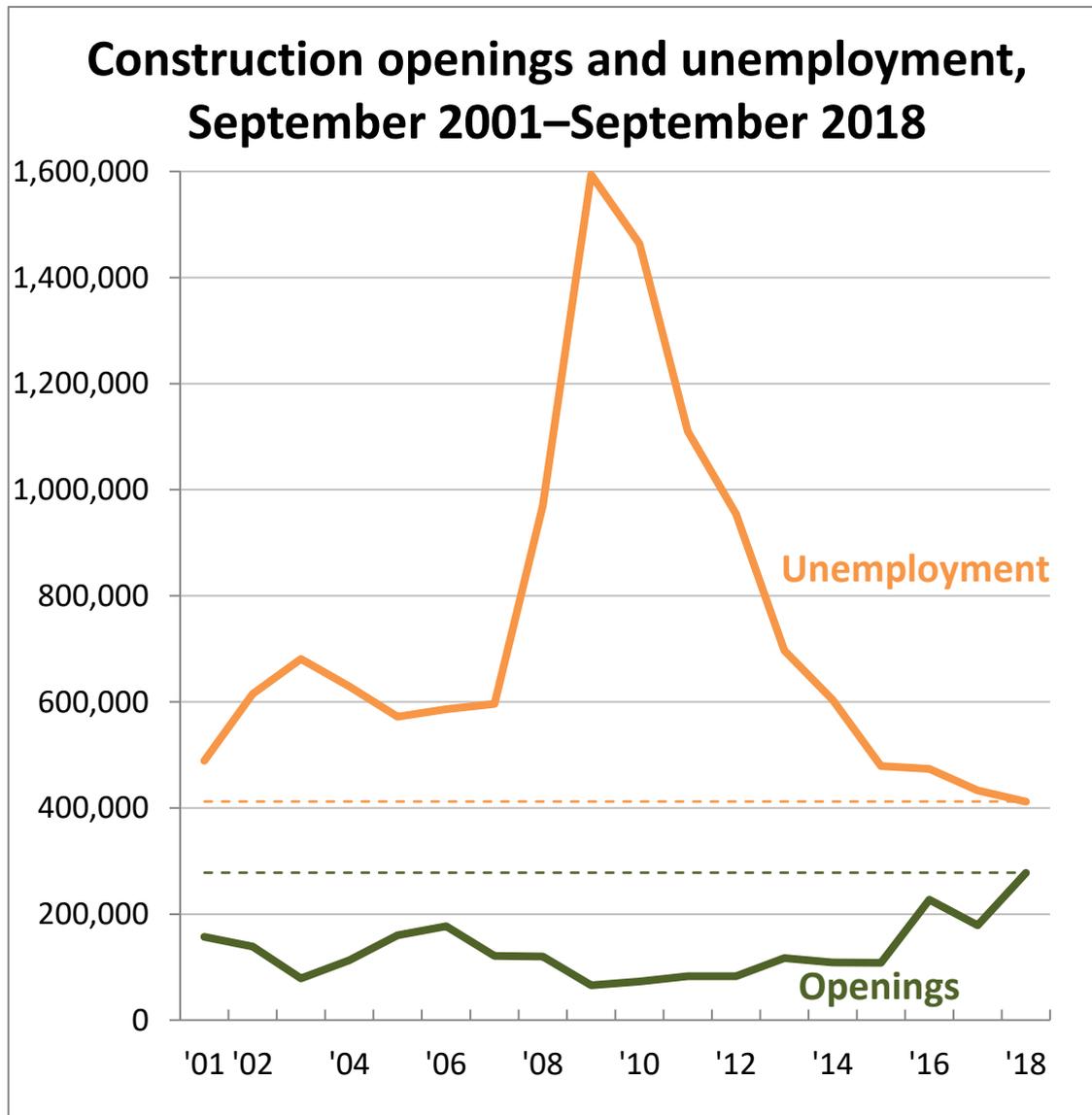


Bottom 5

Middlesex-Monmouth-Ocean, NJ	-10%
Laredo, TX	-10%
Spokane-Spokane-Valley, WA	-8%
Charleston, WV	-7%
Lawrence-Methuen Town-Salem, MA-NH	
NECTA, Div.	-6%
Elmira, NY	-6%

Source: BLS state and regional employment report

Construction workforce indicators (not seasonally adjusted)

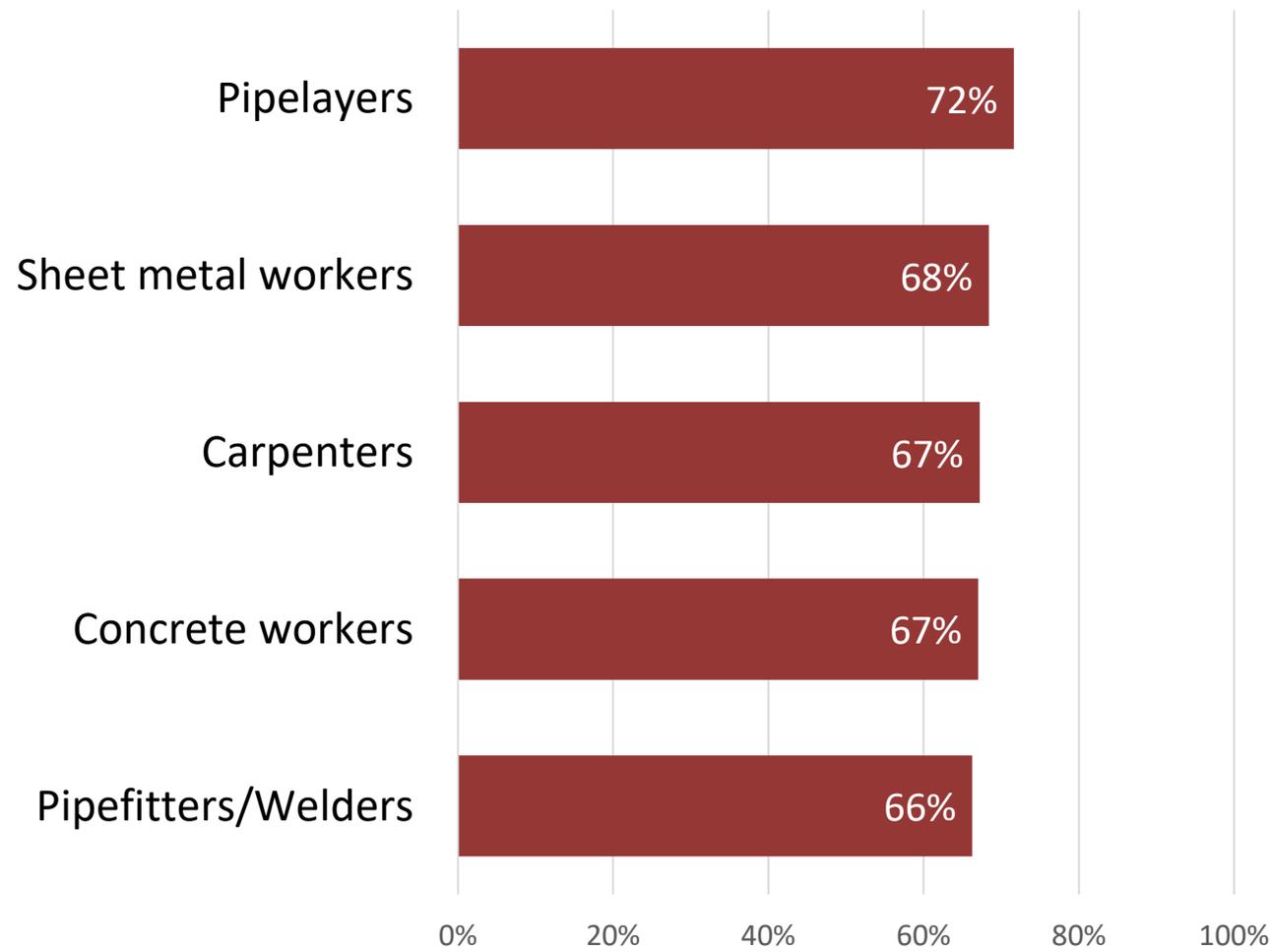


Source: Bureau of Labor Statistics

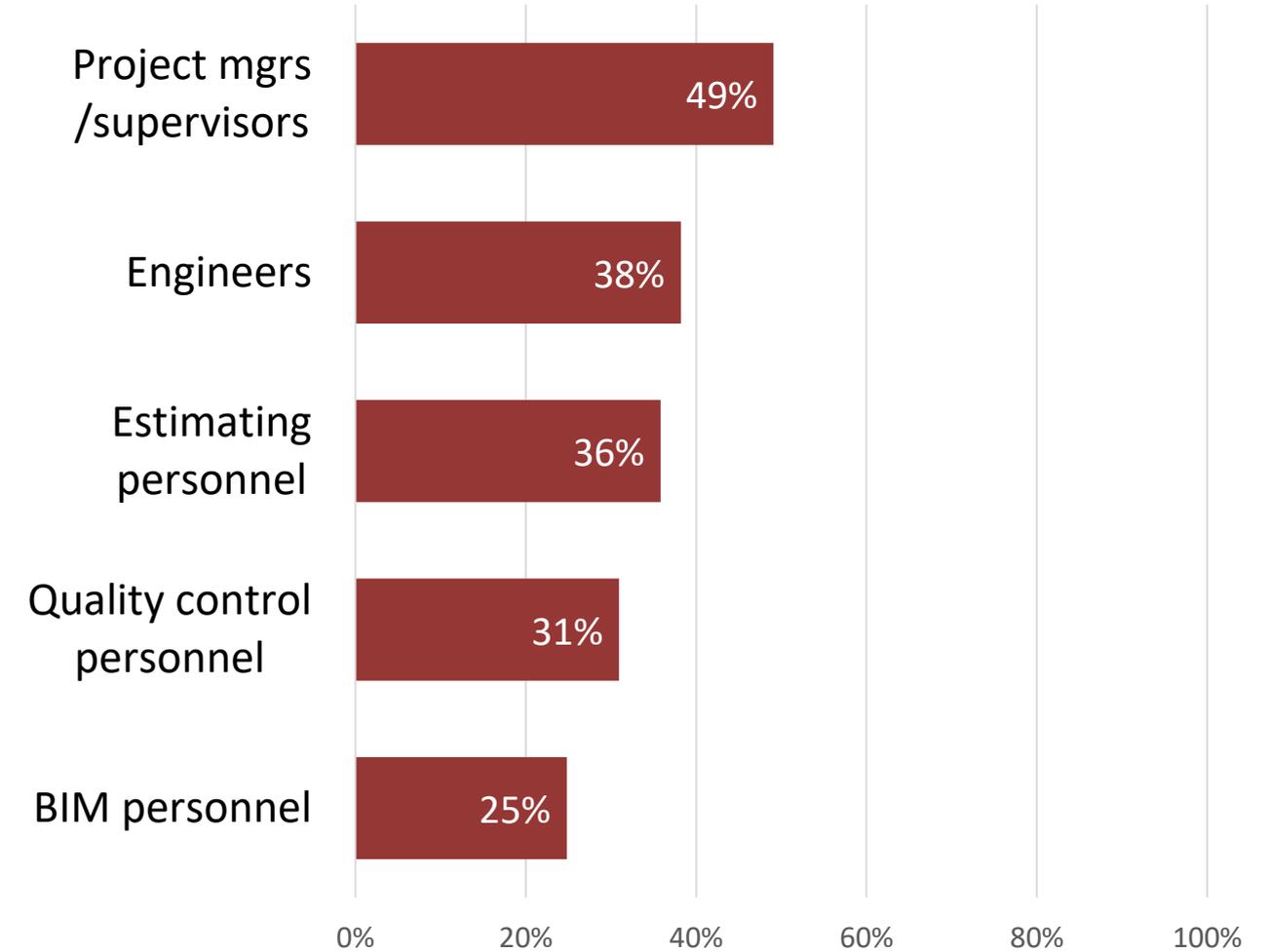
AGC Workforce Survey: hardest positions to fill

% of firms that employ a position and report difficulty filling:

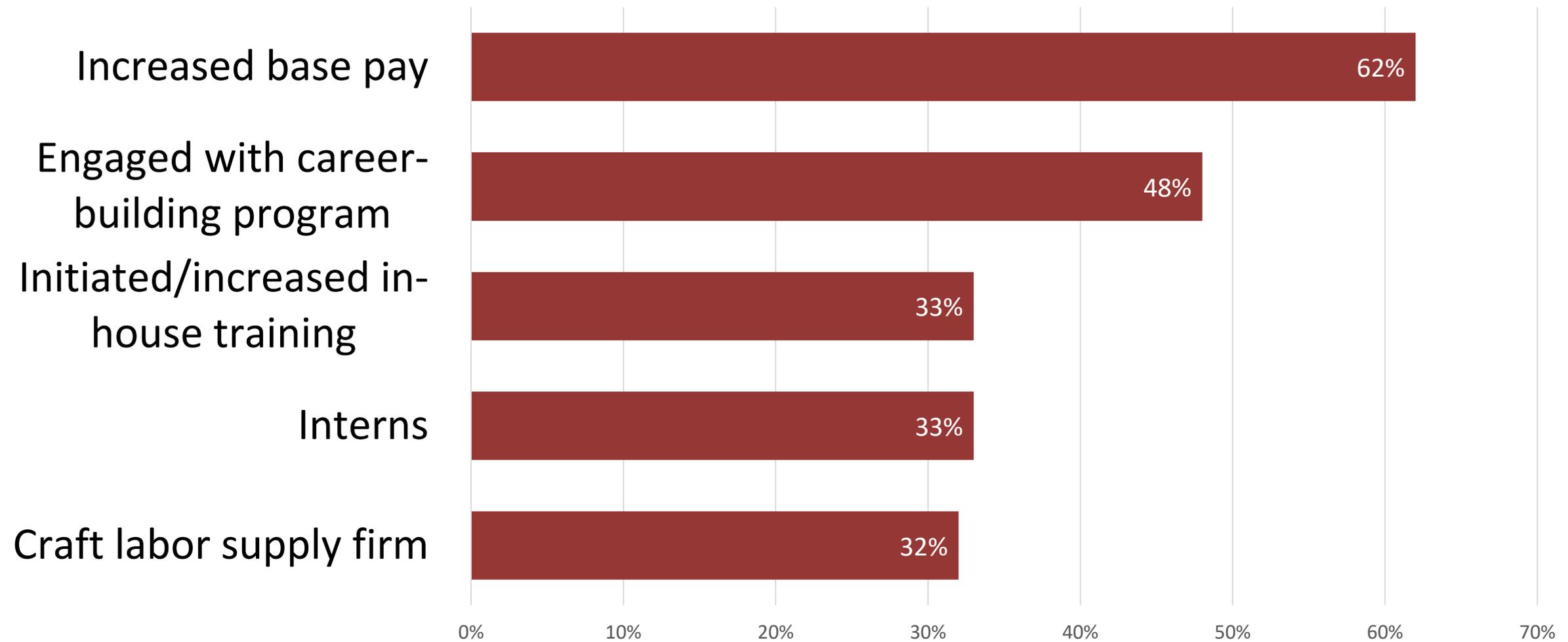
All hourly craft: 80% of firms report difficulty



All salaried: 56% of firms report difficulty



How firms are coping with craftworker shortages



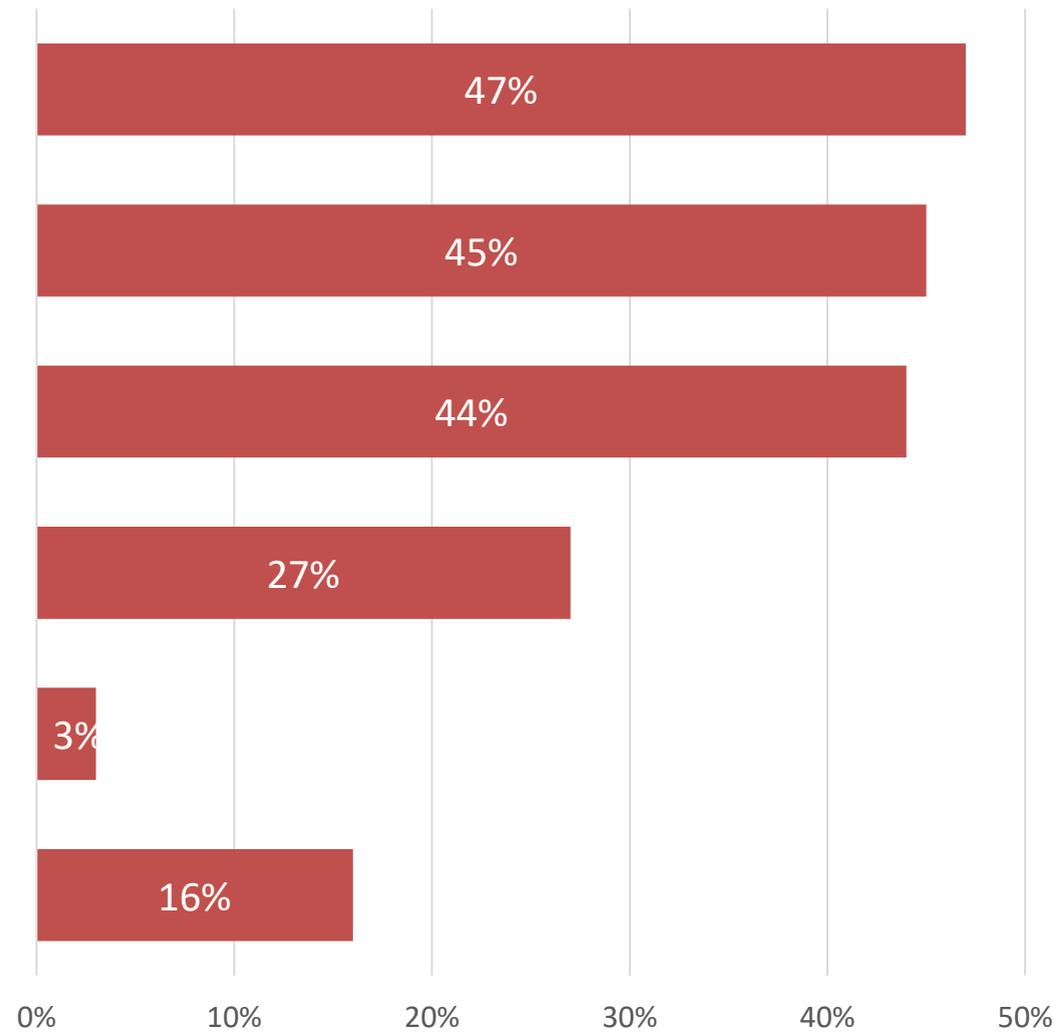
Impact on project costs and completion times

New bids have higher prices to perform construction
Longer completion times than contractor expected
Higher cost than contractor expected

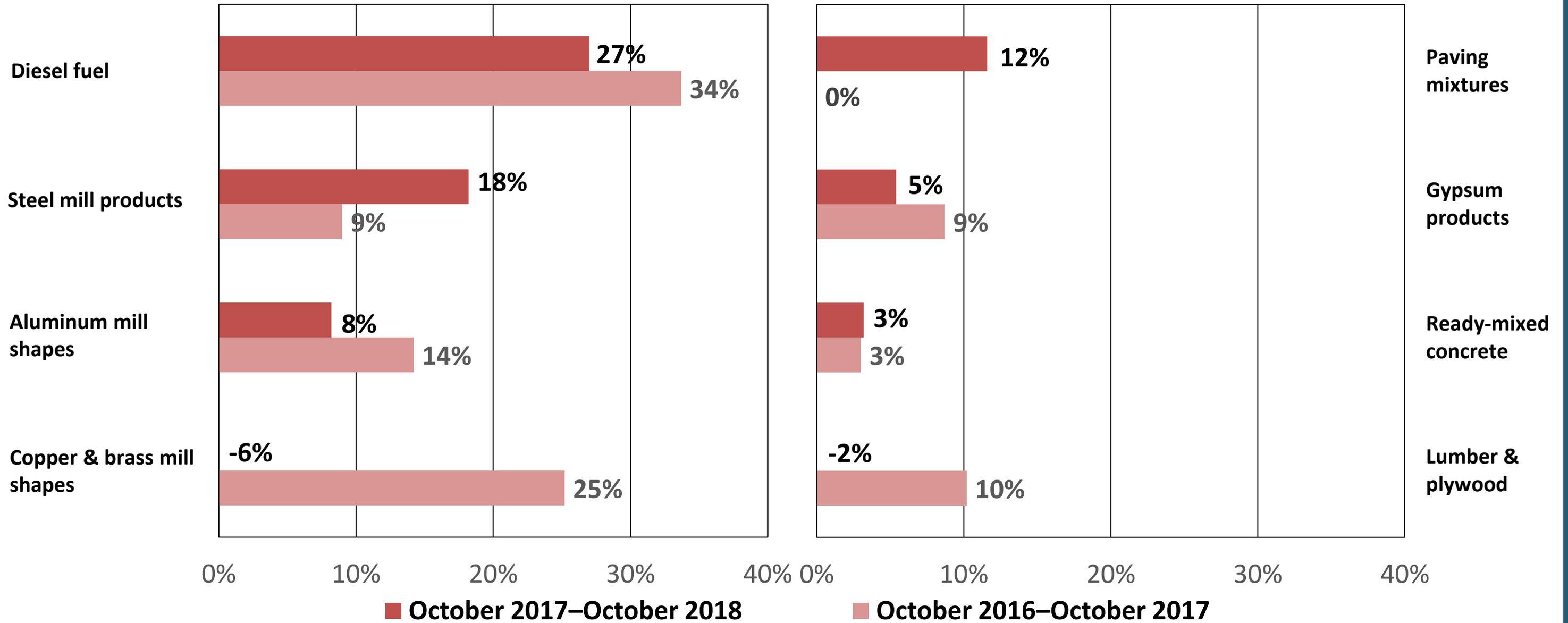
New bids contain longer completion times

Lower costs or completion times than expected

No impact



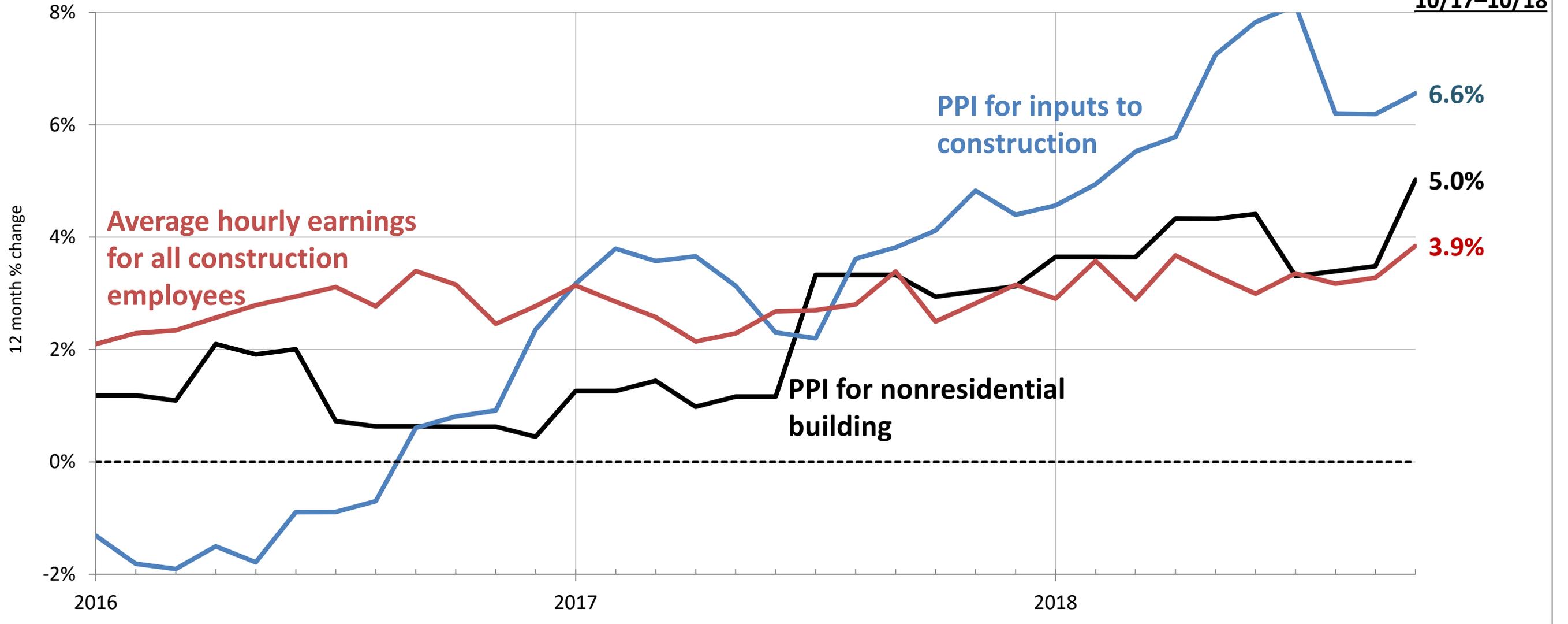
12-month change in producer price index for key inputs



Source: Bureau of Labor Statistics

Materials costs are rising faster than bid prices

12-month % change, not seasonally adjusted: Jan. 2016 – October 2018



Source: Bureau of Labor Statistics

2017-2018 summary and 2019 forecast

	2017 actual	Jan.–Oct. '18 vs. '17	2019 forecast
Total spending	4%	5.1%	5-8%
Private – residential	12%	5%	5-9%
– nonresidential	1%	4%	3-6%
Public	-3%	7%	2-5%
Goods & services inputs PPI	4.4%	6.6%*	4-6%
Wages & salaries (avg. hourly earnings)	3.1%	3.9%*	3.5-4.5%

*10/17 to 10/18

AGC economic resources

(email simonsonk@agc.org)

- *The Data DIGest*: weekly 1-page email (subscribe at <http://store.agc.org>)
- monthly press releases: spending; producer price indexes; national, state, metro employment with rankings
- yearly employment & outlook surveys, state and metro data, fact sheets: www.agc.org/learn/construction-data

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CONTACT: Brian Turmail
(703) 459-0238; turmailb@agc.org

CONSTRUCTION COSTS SURGE IN APRIL AS NEW TARIFFS AND OTHER TRADE MEASURES LEAD TO SIGNIFICANT INCREASES IN MATERIALS PRICES
Association Officials Warn That the New Tariffs and Resulting Price Spikes Have the Potential to Undermine Benefits of Tax and Regulatory Reform, Urge Administration to Reconsider

The cost of goods used in construction jumped in April at the fastest year-over-year rate since 2011, with ongoing increases for a wide range of building materials, including many that are subject to proposed tariffs that could drive prices still higher and cause scarcities, according to an analysis by the Associated General Contractors of America of Labor Department data released today. Association officials said that the new data indicates many firms are already being squeezed by higher materials prices that they are unable to pass along to their customers.

"Contractors have started to boost the prices they charge, but they are falling further behind on the cost of materials they buy," said the association's chief economist, Ken Simonson. "This imbalance poses two risks—either contractors will suffer decreased profit margins or project owners with fixed budgets will cut back on the projects they undertake."

The producer price index for inputs to construction industries, goods—a measure of all materials used in construction projects including items consumed by contractors, such as diesel fuel—rose 1.0 percent in April alone and 1.2 percent over 12 months. The year-over-year increase was the steepest since 2011, economist noted.