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U.S. Construction Spending, Labor & Materials Outlook

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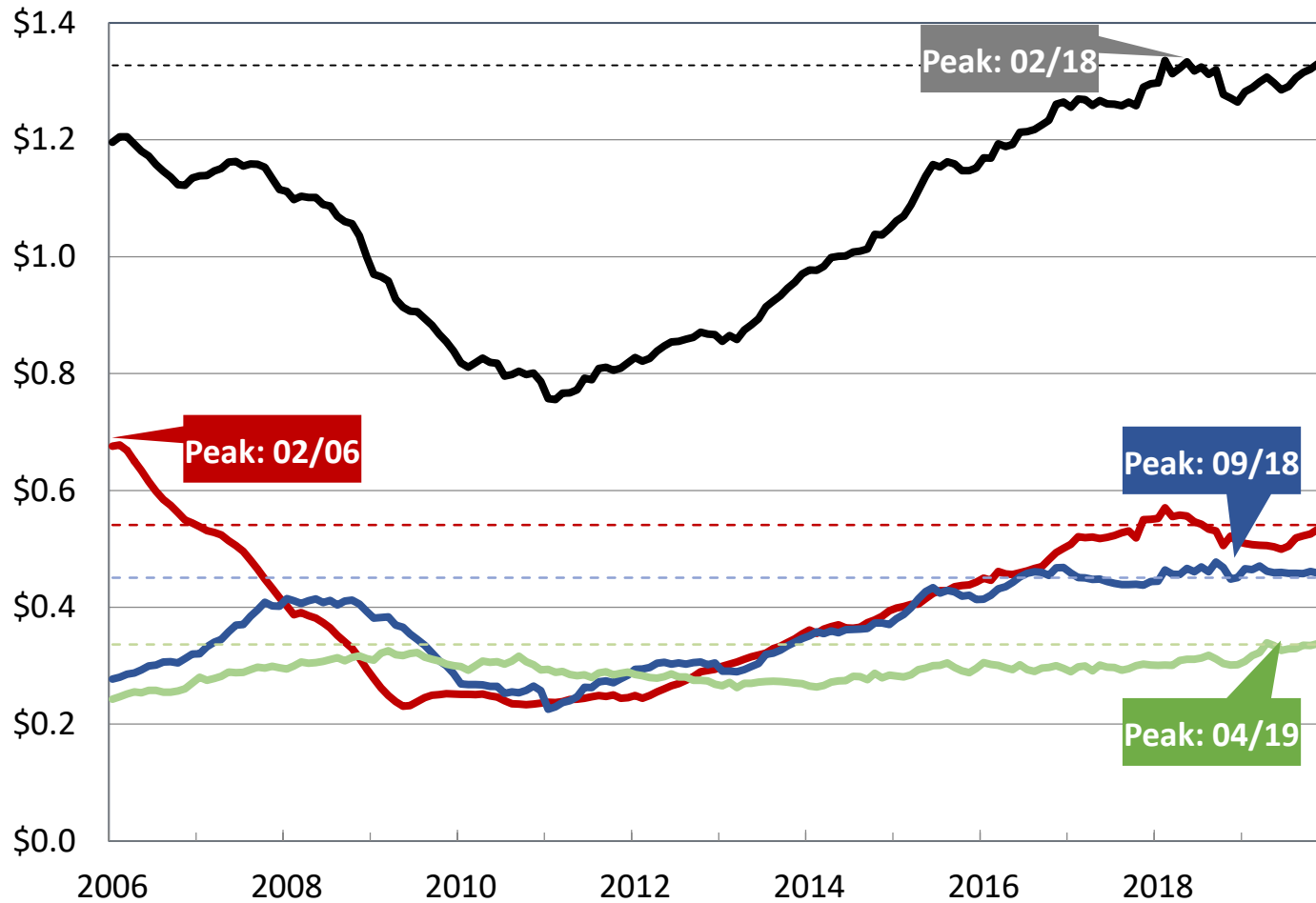
AGC members' expectations for 2020 compared to 2019 survey



US Net % who expect dollar value of projects to be higher (2020 survey/2019 survey)			
25%/14%	Water/Sewer	16%/11%	Higher Education
20%/16%	Bridge/Highway	11%/5%	Multifamily Residential
20%/16%	K-12 school	11%/12%	Manufacturing
20%/16%	Hospital	10%/17%	Public Building
20%/14%	Transportation (e.g., transit, rail, airport)	10%/15%	Retail, Warehouse, Lodging
17%/10%	Power	8%/13%	Private Office
17%/15%	Federal (e.g., VA, GSA, USACE, NAVFAC)		<i>Note: Net = % who expect dollar value to increase - % who expect decrease</i>

Construction spending, 1/06-12/19

trillion \$, seasonally adjusted annual rate; not inflation-adjusted



	12/19 Change from	
	12/18	Peak
Total	5.0%	-0.6%

Private Residential	5.5%	-20%
Private Nonresidential	-0.1%	-0.1%
Public	11.5%	-0.9%

Nonresidential spending by segment

2018 & 2019 year-to-date change; 2020 forecast



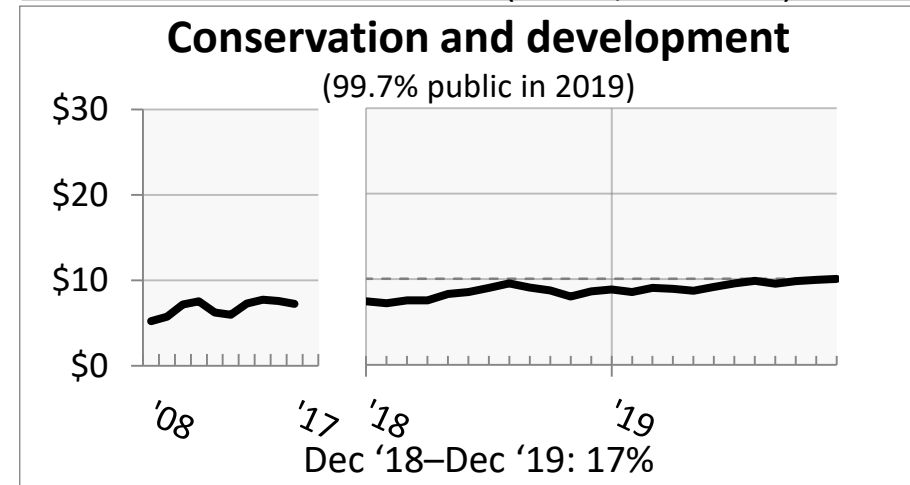
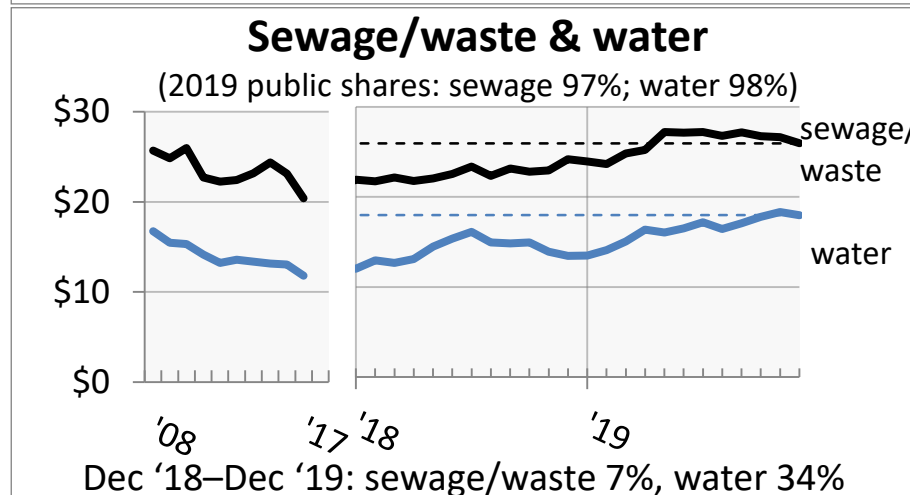
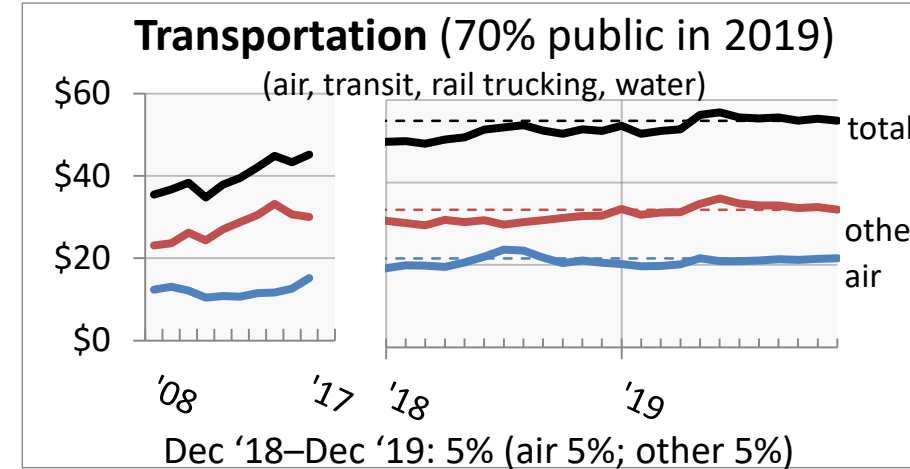
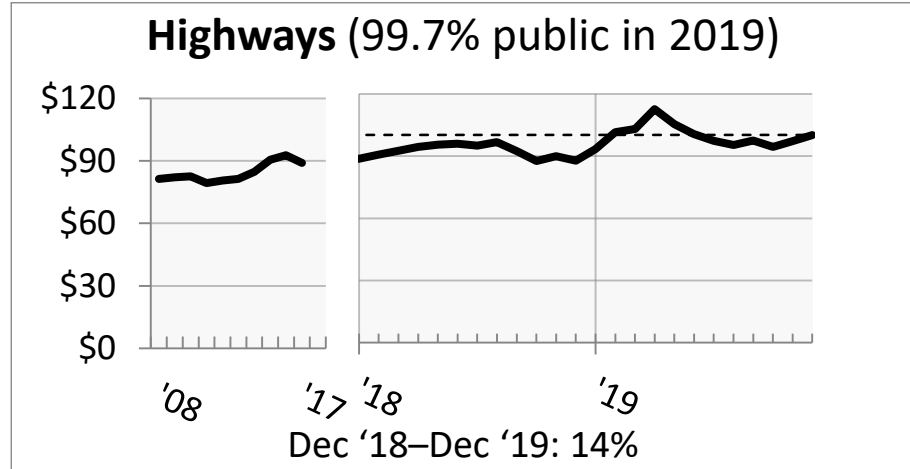
	2018 vs. 2017	2019 vs. 2018	2020 forecast
Nonresidential total (public+private)	<u>3.7%</u>	<u>2.8%</u>	<u>0-4%</u>
Power (incl. oil & gas field structures, pipelines)	-3	7	5-10%
Highway and street	2	9	5-10%
Educational	1	0.2	0-5%
Office	8	6	near 0
Manufacturing	0.1	4	near 0
Transportation (air, land, water)	12	6	5-10%
Health care	-1	3	0-5%
Retail	5	-24	-15 to -20%
Warehouse	16	-0.2	near 0
Lodging	10	6	near 0
Sewage & waste disposal	4	9	0-5
Other* (13% of 2019 total)	6	1	0-5

Construction spending: public works



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Annual total, 2008-17; monthly, Jan. '18-Dec. '19
(seasonally adjusted annual rate); billion \$



Key points: roads, transportation, sewer/water



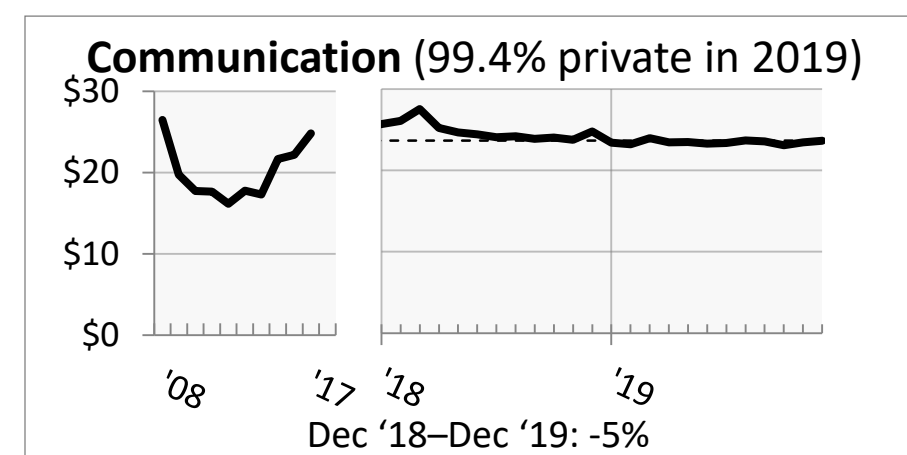
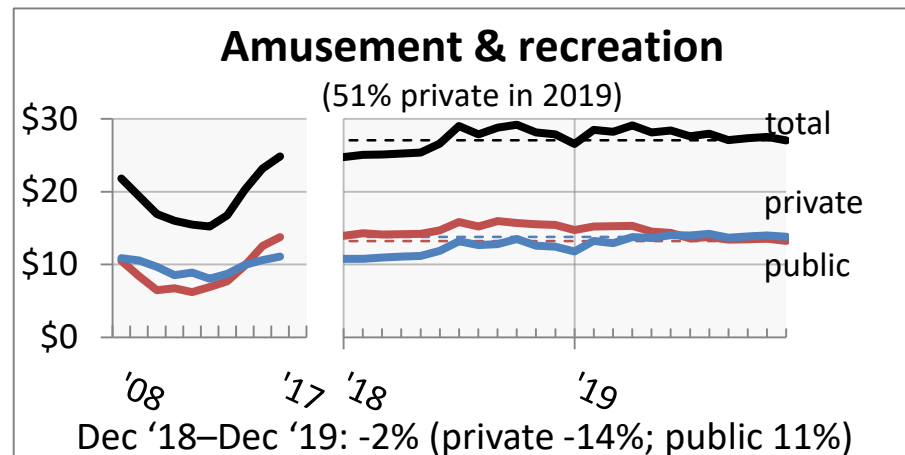
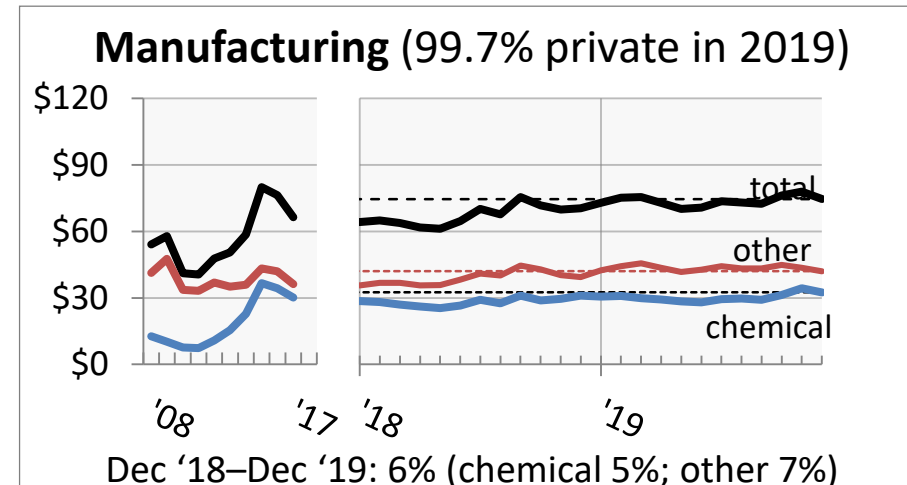
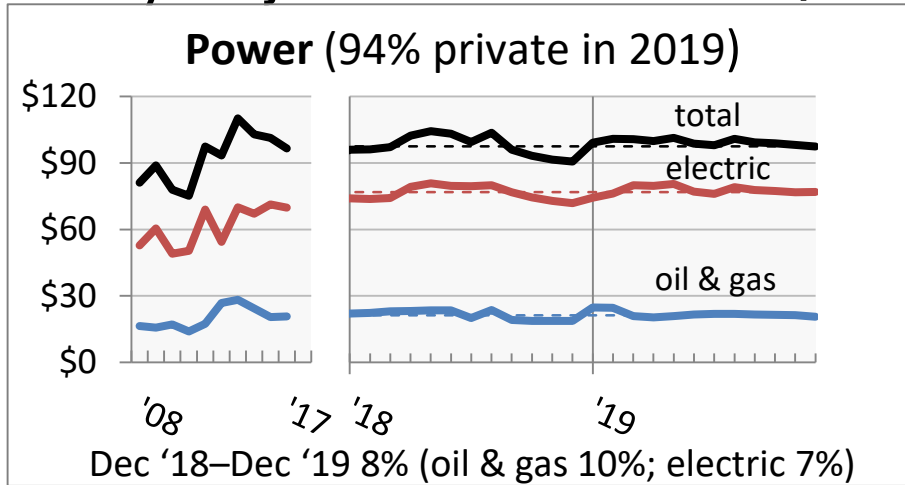
- Any federal infrastructure spending increase won't occur until 2021 or later, but state highway funding and toll projects are increasing
- Ongoing high level of airport projects; record level of transit construction/reconstruction
- Water & sewer/wastewater spending are at or near record levels after large drop in 2016-17; little long-term new funding likely
- Federal \$ for conservation have increased; Corps of Engineers is struggling to award and manage additional projects

Construction spending: industrial, heavy



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Annual total, 2008-17; monthly, Jan. '18-Dec. '19
(seasonally adjusted annual rate); billion \$



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



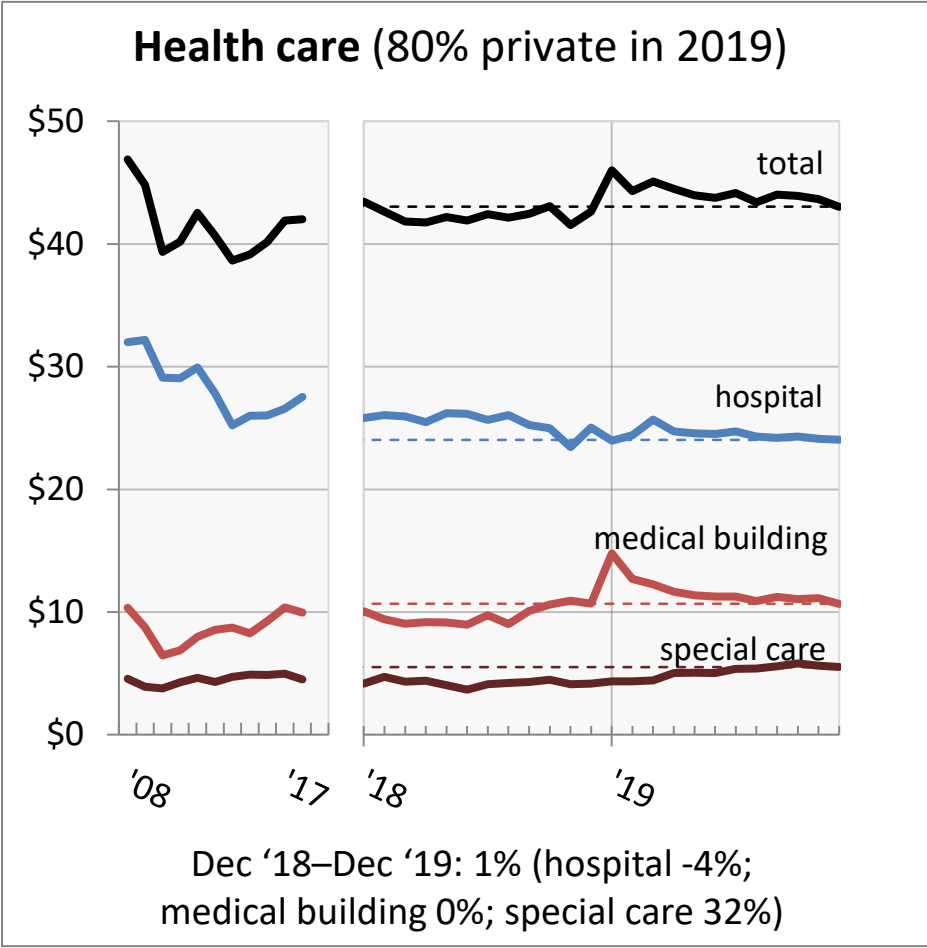
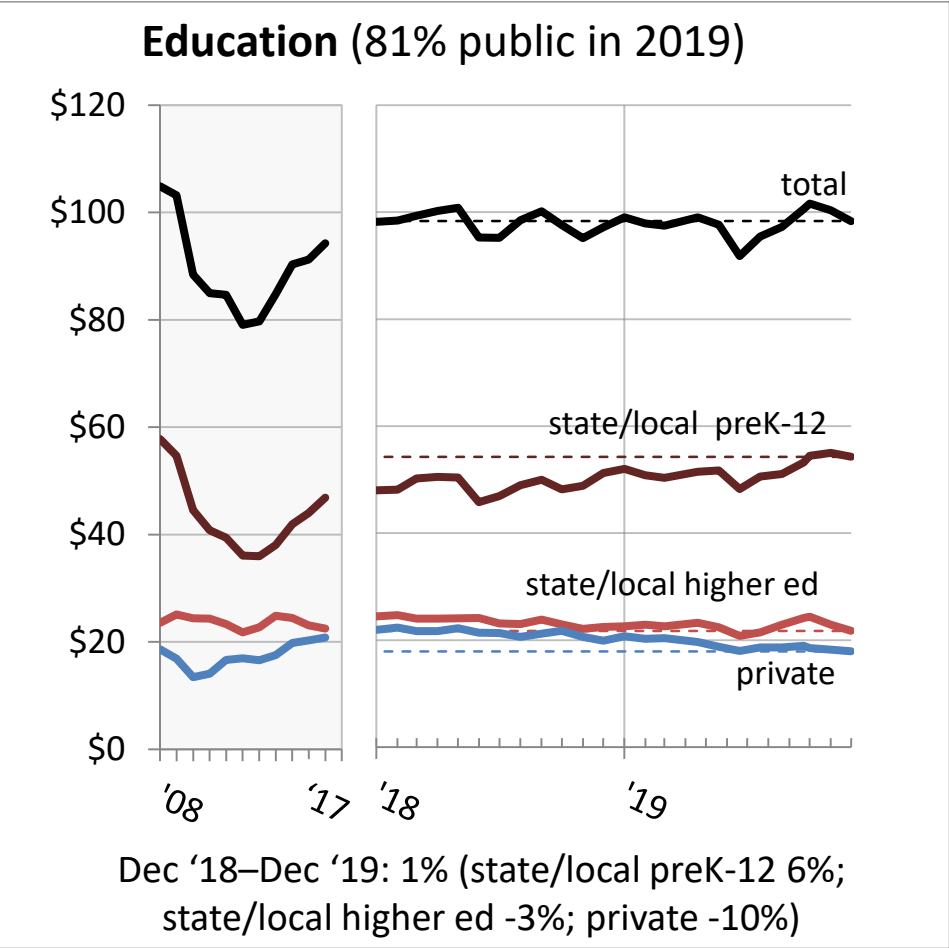
- Solar, wind power are growing; oil & natural gas pipelines have hit court & regulatory delays; new drilling is down as oil, gas prices fall
- Manufacturing construction recovery likely to stall as tariffs, foreign retaliation, sluggish global economy lead to project cancellations
- Amusement & recreation 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: education, health



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Annual total, 2008-17; monthly, 1/18-12/19 (seasonally adjusted annual rate); billion \$



Key points: education & health care



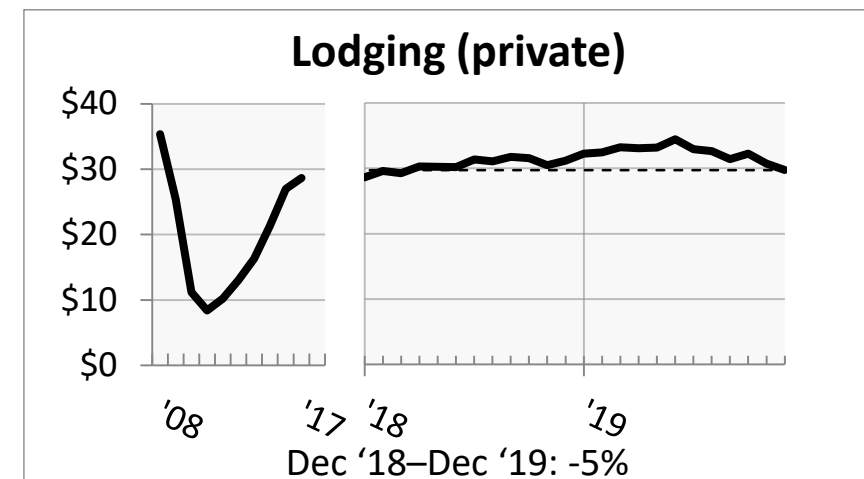
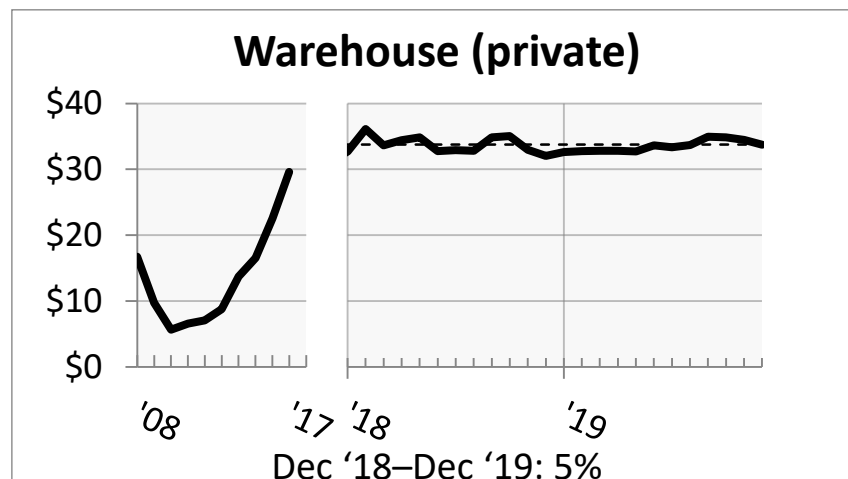
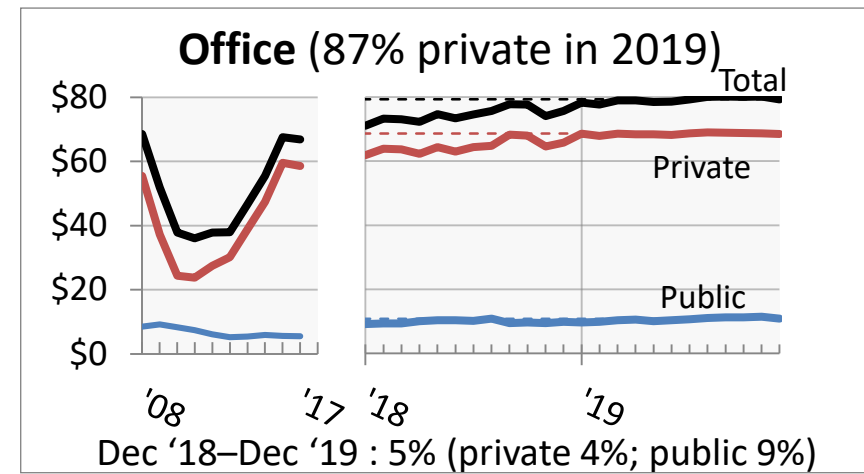
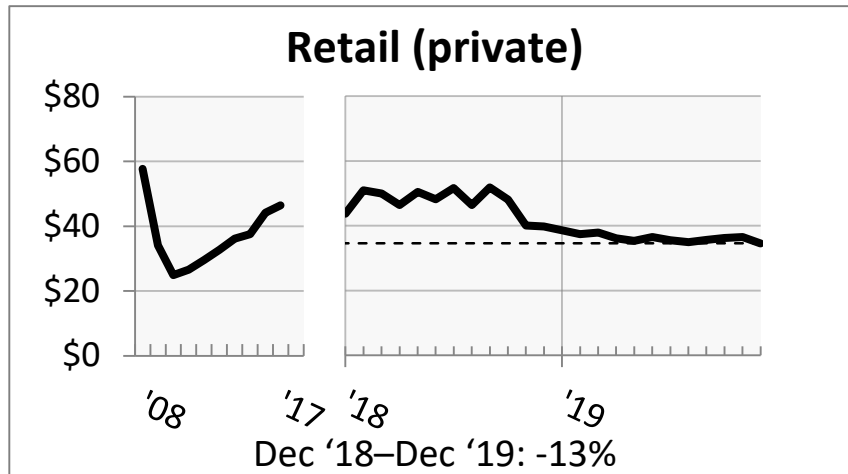
- Rising house & commercial property values are supporting school district tax receipts & bond issues for preK-12 projects
- More school spending is on urban/older suburban school reconstruction & expansion, less on new schools in new subdivisions
- Higher-ed enrollment is shrinking and some small colleges are closing; decrease in full-tuition foreign students will hurt budgets
- State of stock market affects college construction capital campaigns
- Health care spending is shifting from hospitals to special-care facilities (urgent care, surgery, rehab, hospices) and doctors' offices

Construction spending: developer-financed



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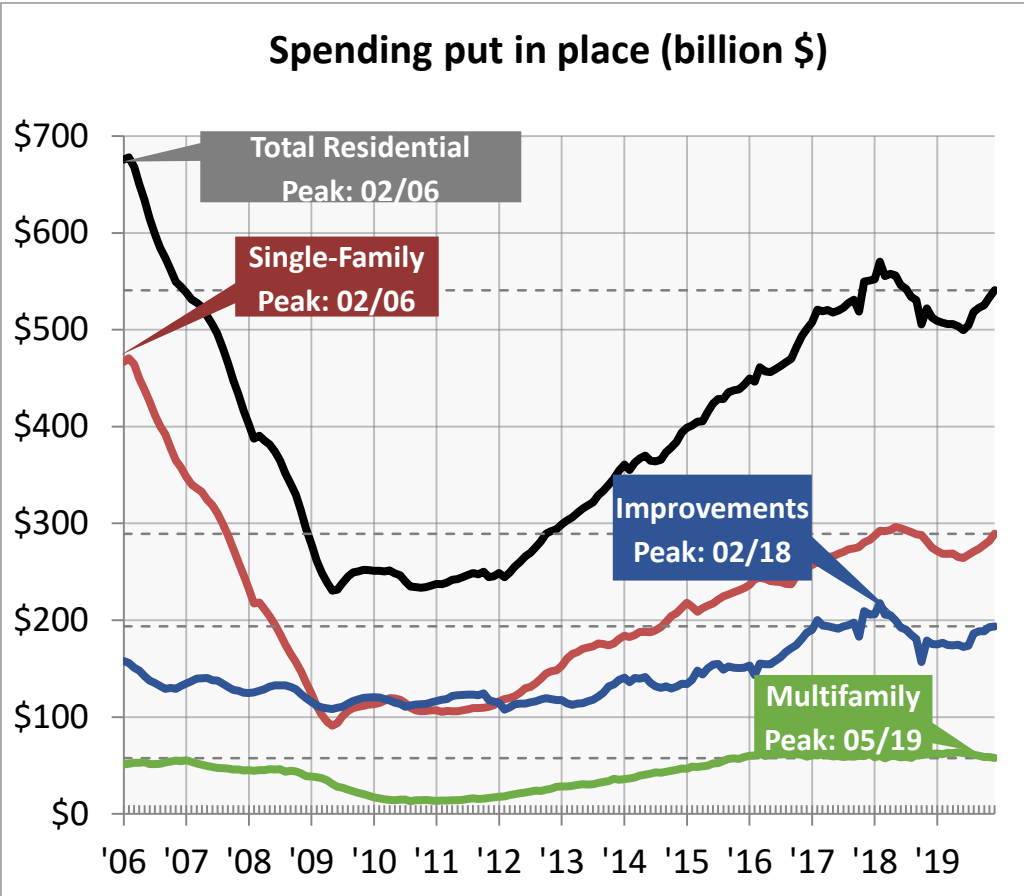


Key points: retail, warehouse, office, hotel, data centers

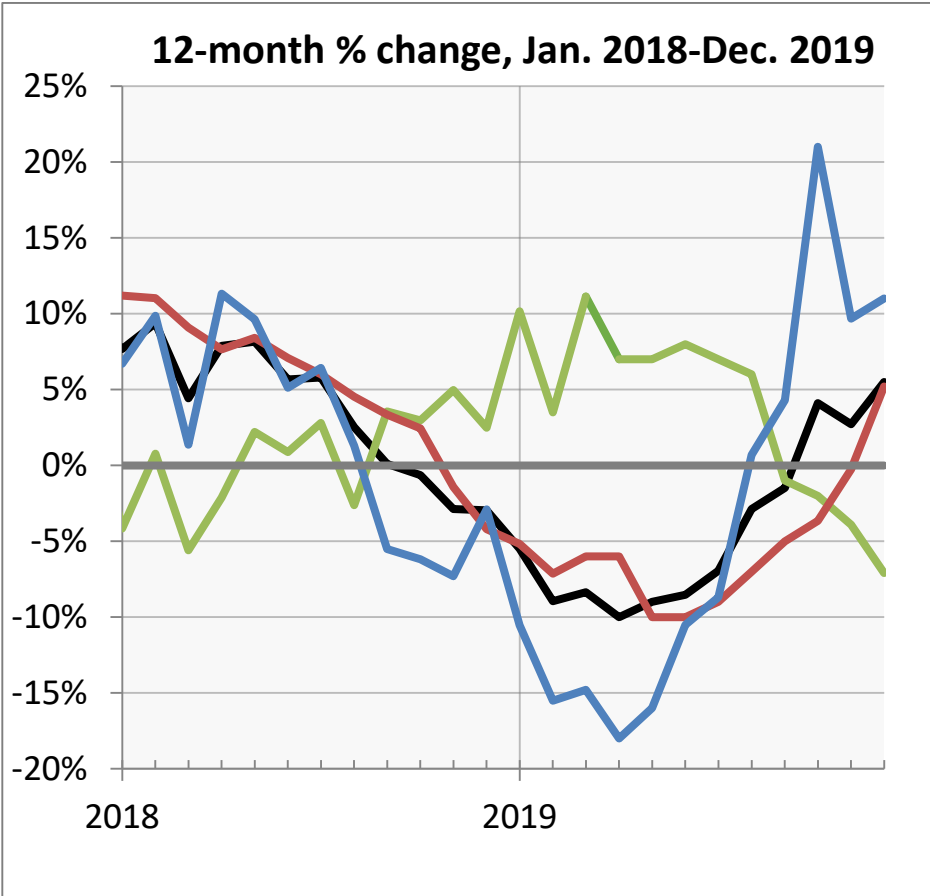


- Retail now tied to mixed-use buildings & renovations, not stand-alone structures; massive store closings imply ongoing downturn
- Warehouse growth is still benefiting from e-commerce but trade wars are reducing inbound and outbound shipments
- Office employment is still rising but space per worker is shrinking; more urban & renovation work than new suburban office parks
- Hotel “pipeline” is still large but sector is very sensitive to interest rates and travel disruptions (e.g., coronavirus)
- Data centers remain a strong niche but data is not reported separately (most are included in office total)

Private residential spending levels and change (seasonally adjusted annual rate)



	Dec vs. Peak	12/18-12/19
Private Residential Total	-20%	6%
Single-family	-39%	5%
Improvements	-11%	11%
Multifamily	-9%	-7%



2020 Residential spending forecast: 3 to 7% (-5% in 2019; 3% in 2018)

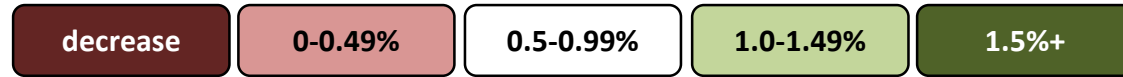


- Single-family: **5-10%** (-6% in 2019; 7% in 2018); low interest rates, rising income & wealth will boost home buying, but builders face challenges getting permits and finding workers
- Multifamily: **0-5%** (3% in 2019; -1% in 2018)
 - occupancy rates, rents have leveled off; some millennials moving to houses but some seniors moving to apartments
 - millennials are staying longer in apartments than previous generations
 - nearly all multifamily construction is rental, not condo; more high-rises
- Improvements: **5-10%** (3% in 2019; -2% in 2018); additions and renovations should track homebuying closely but data is unreliable

Population change by state, July 2018–July 2019 (U.S.: 0.48%)



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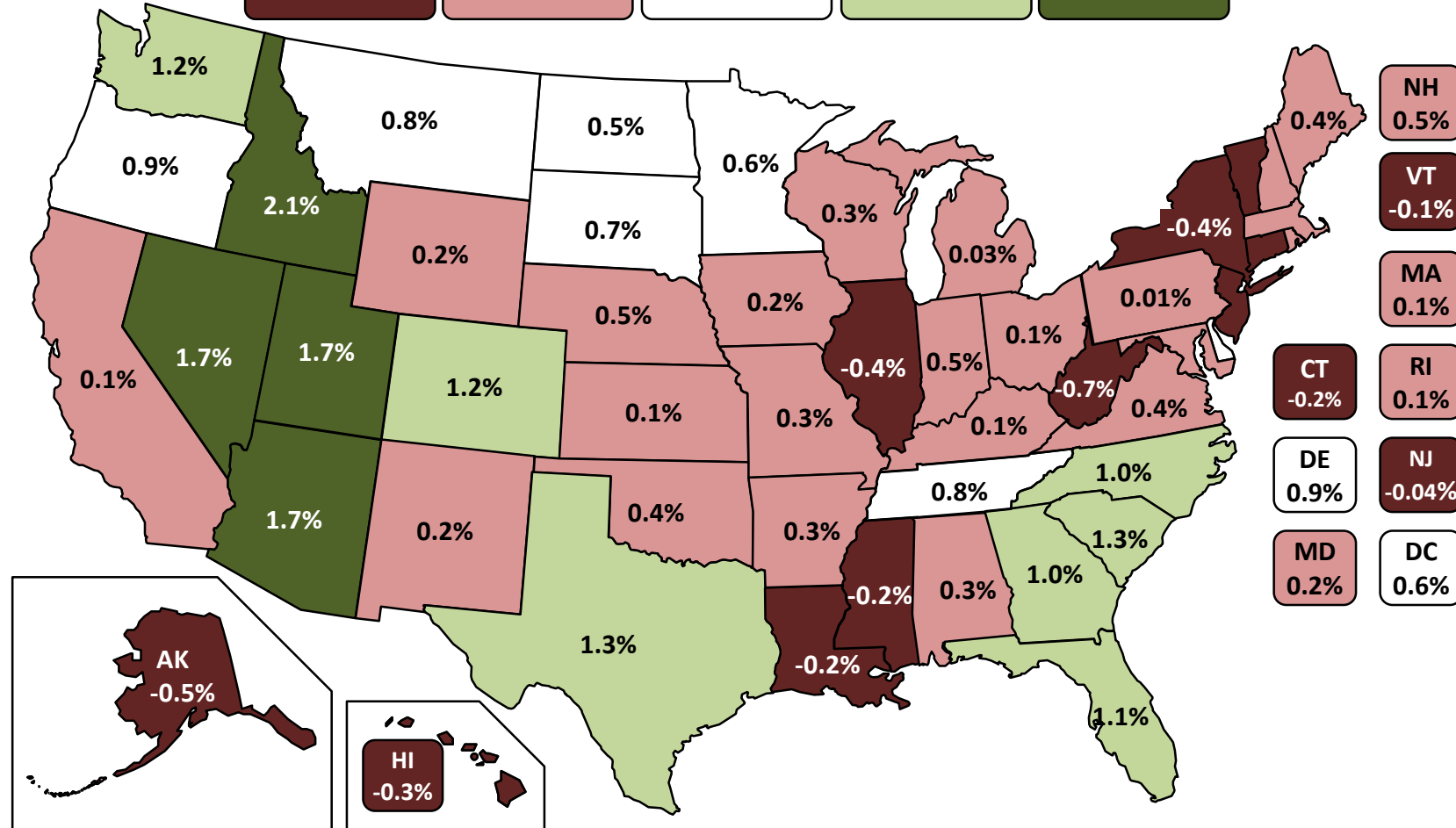


Top 5

ID	2.1%
NV	1.7%
AZ	1.7%
UT	1.7%
TX	1.3%

Bottom 5

WV	-0.7%
AK	-0.5%
IL	-0.4%
NY	-0.4%
HI	-0.3%



Population change: implications for construction



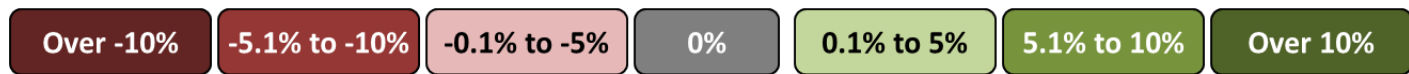
- Important determinant over time of: demand for housing, several types of nonresidential construction; public funding; labor supply
- 2019 U.S. growth of 0.48% was slowest in 101 years
- 10 states lost population; growth slowed in 32 states, DC
- Growth rate slowed the most from '18 in DC, FL, CO, MA
- CA growth was 300,000/year in '11-'15; 51,000 in '19

State construction employment change (U.S.: 2.0%)

12/18 to 12/19: 34 states and DC **up**, 16 states **down**



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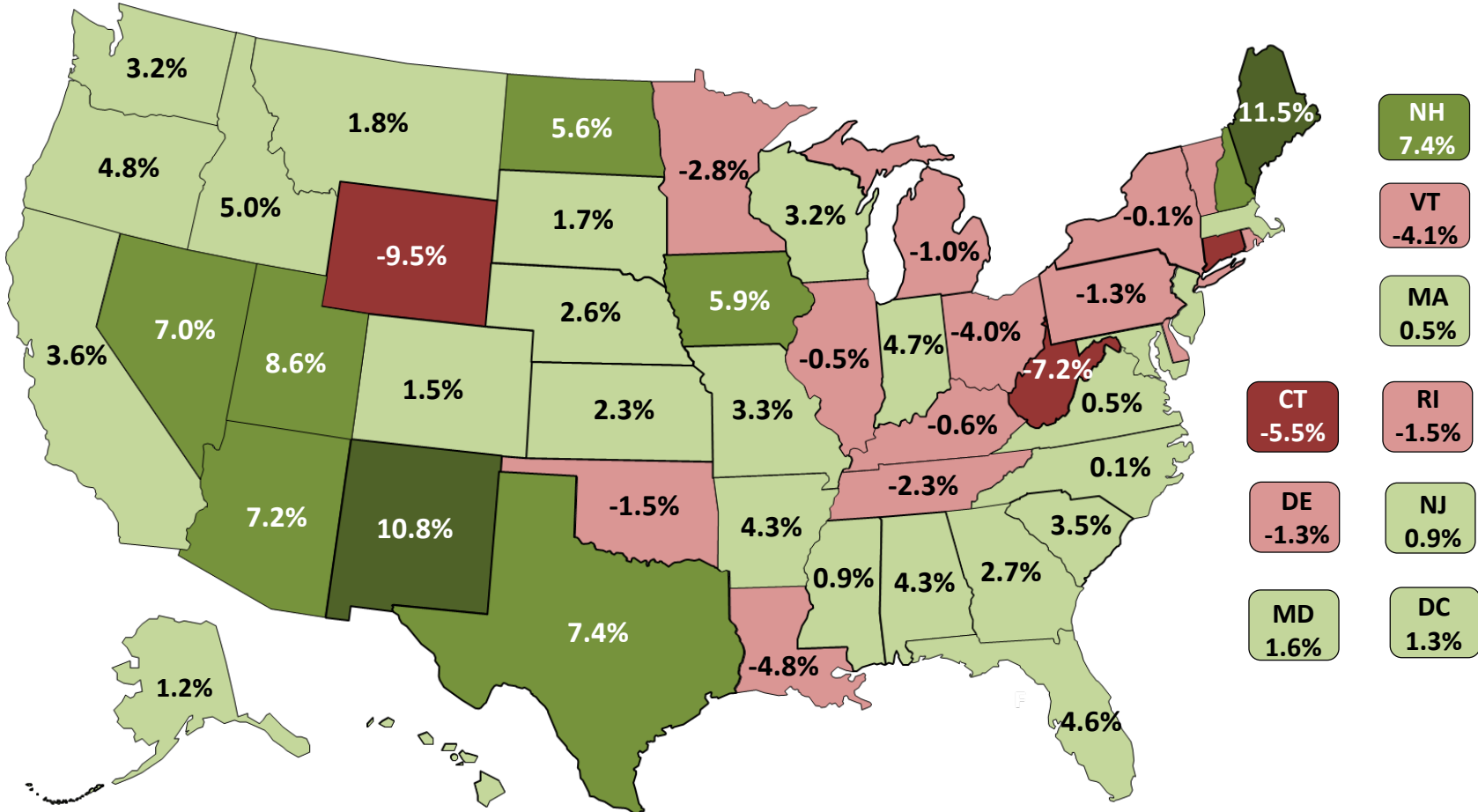


Top 5

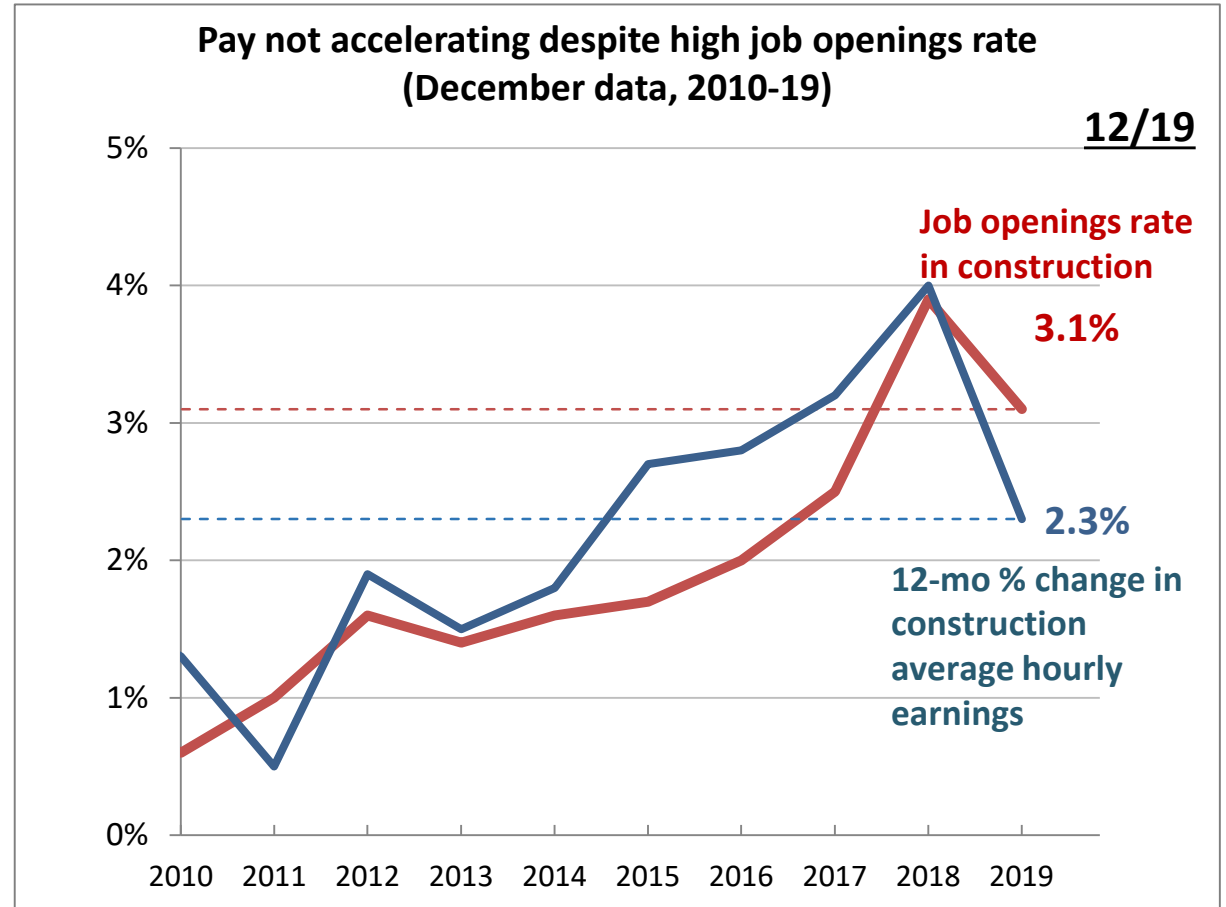
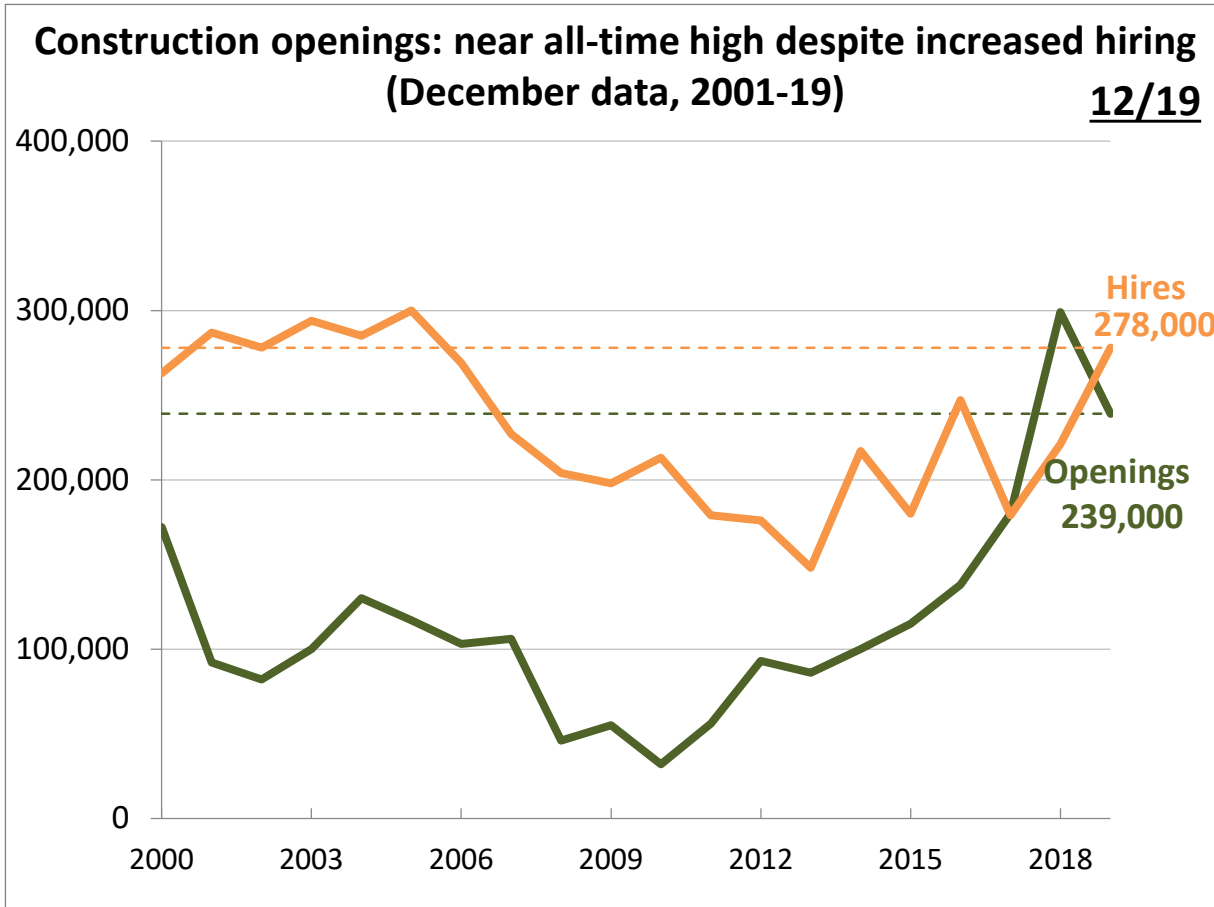
Maine	11.5%
New Mexico	10.8%
Utah	8.6%
Texas	7.4%
New Hampshire	7.4%

Bottom 5

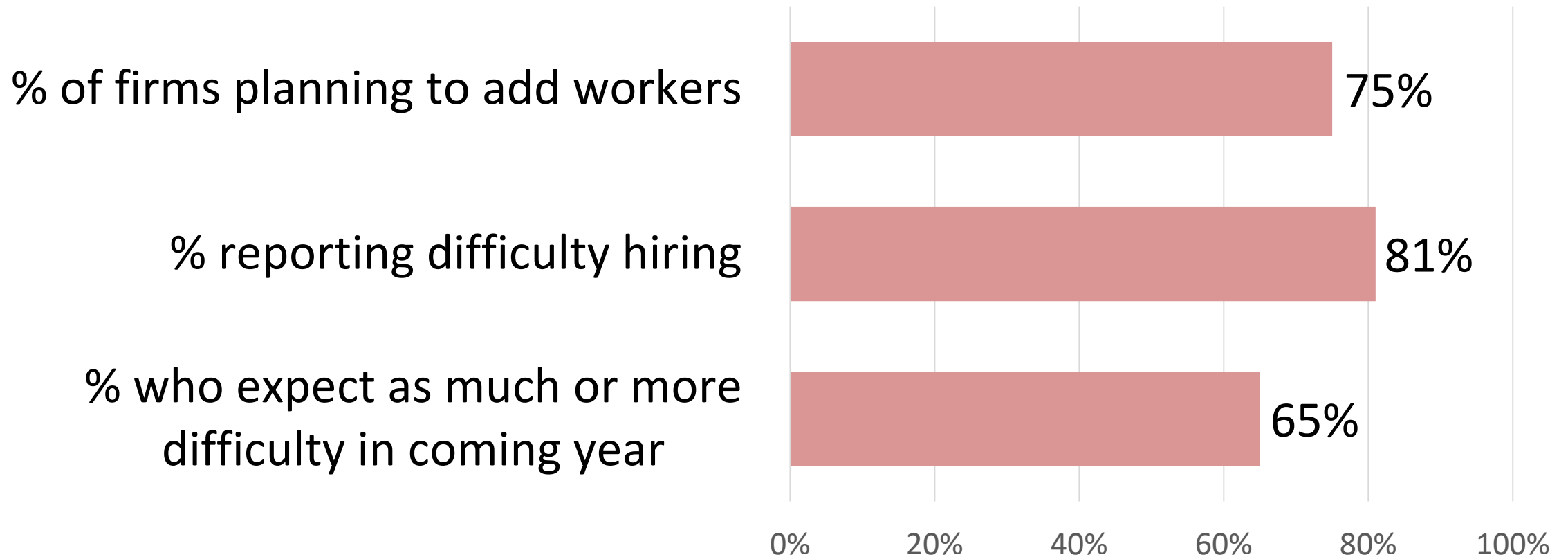
Wyoming	-9.5%
West Virginia	-7.2%
Connecticut	-5.5%
Louisiana	-4.8%
Vermont	-4.1%



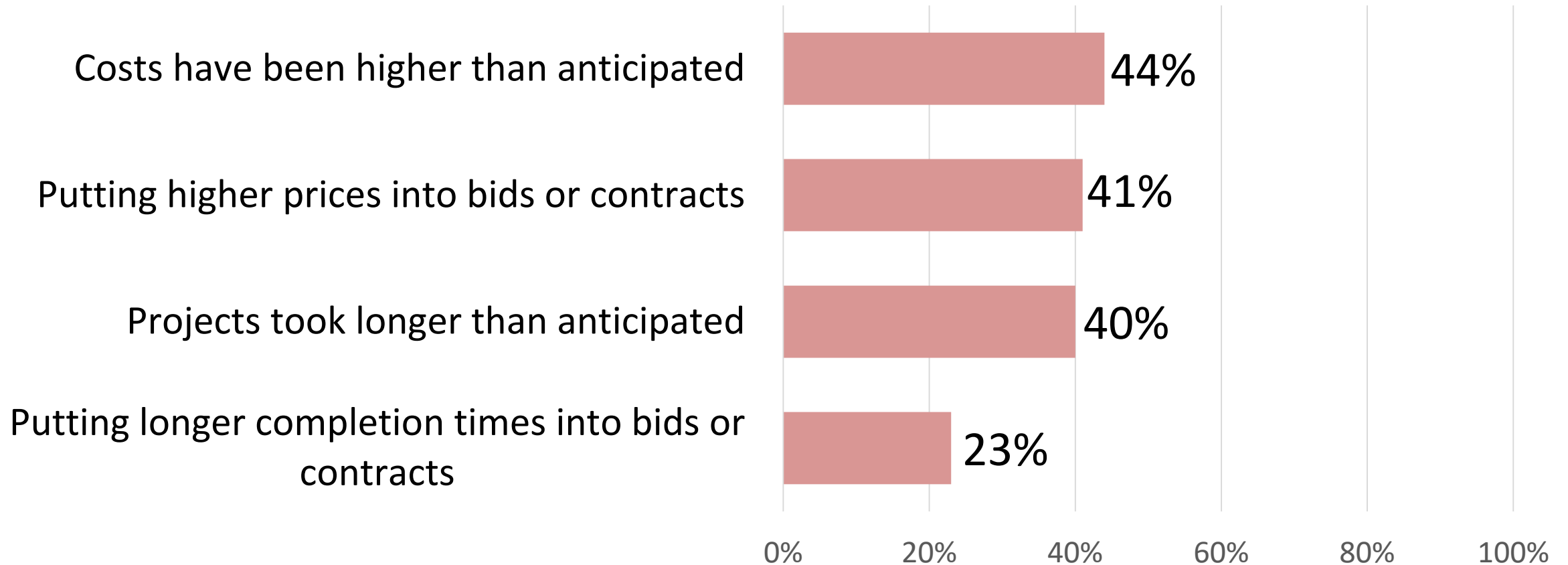
Construction workforce indicators (not seasonally adjusted)



Outlook 2020: Firms plan to add workers but expect continued difficulty finding them



Outlook 2020: Firms with staffing challenges face higher costs and delays



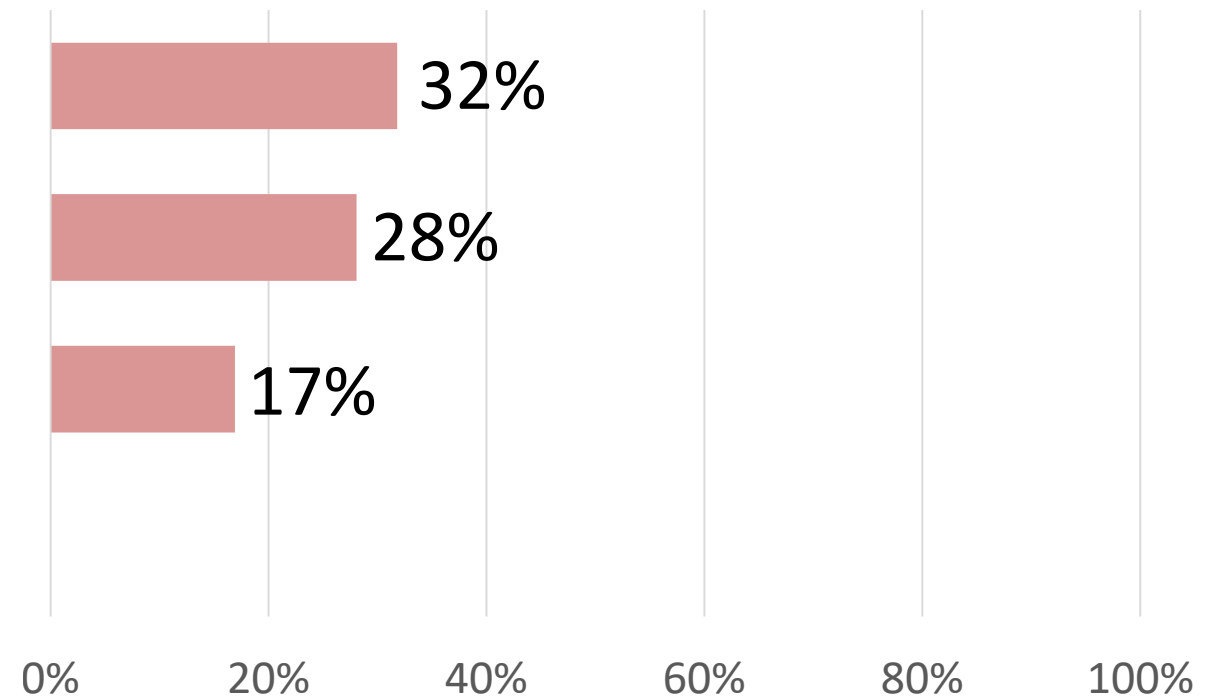
Outlook 2020: Firms adopt labor-saving methods to replace workers or skills



Labor-saving equipment (e.g., drones, robots, 3-D printers, laser-or GPS-guided equipment)

Methods to reduce onsite worktime (e.g., lean construction, virtual construction such as BIM, offsite fabrication)

Added specialists (e.g., architects, BIM or lean construction personnel, drone or other equipment operators, data or IT personnel)



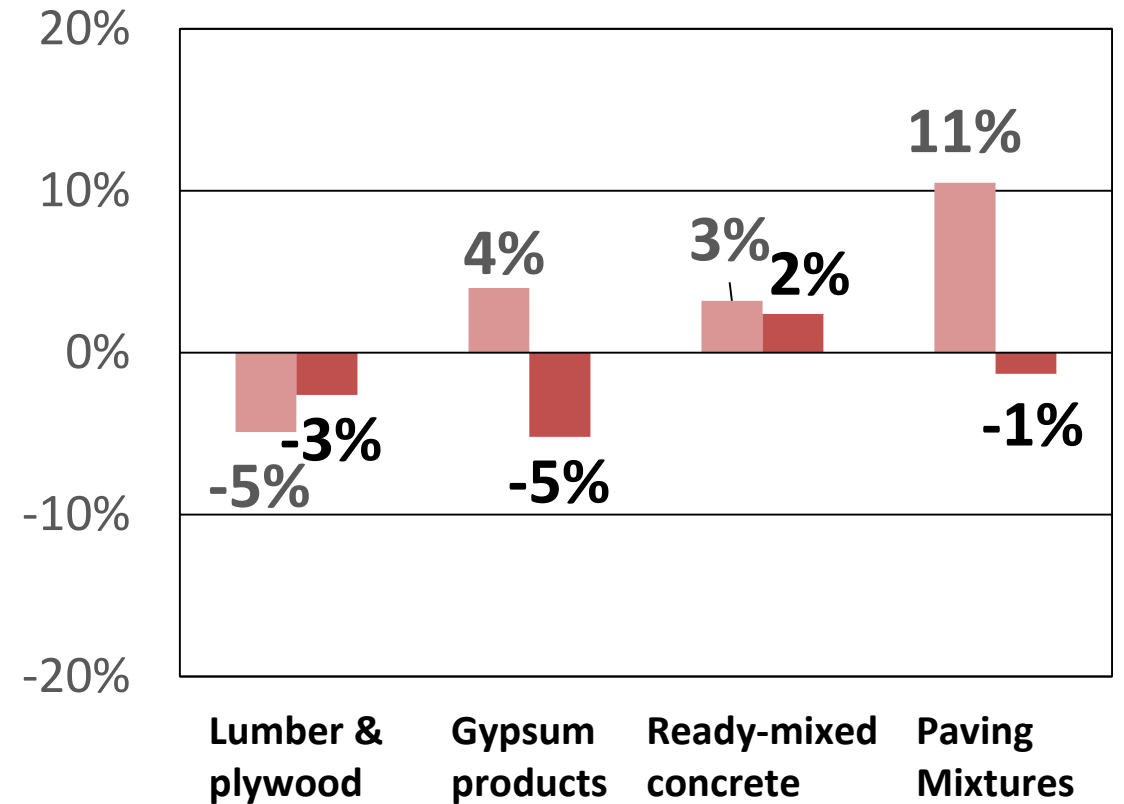
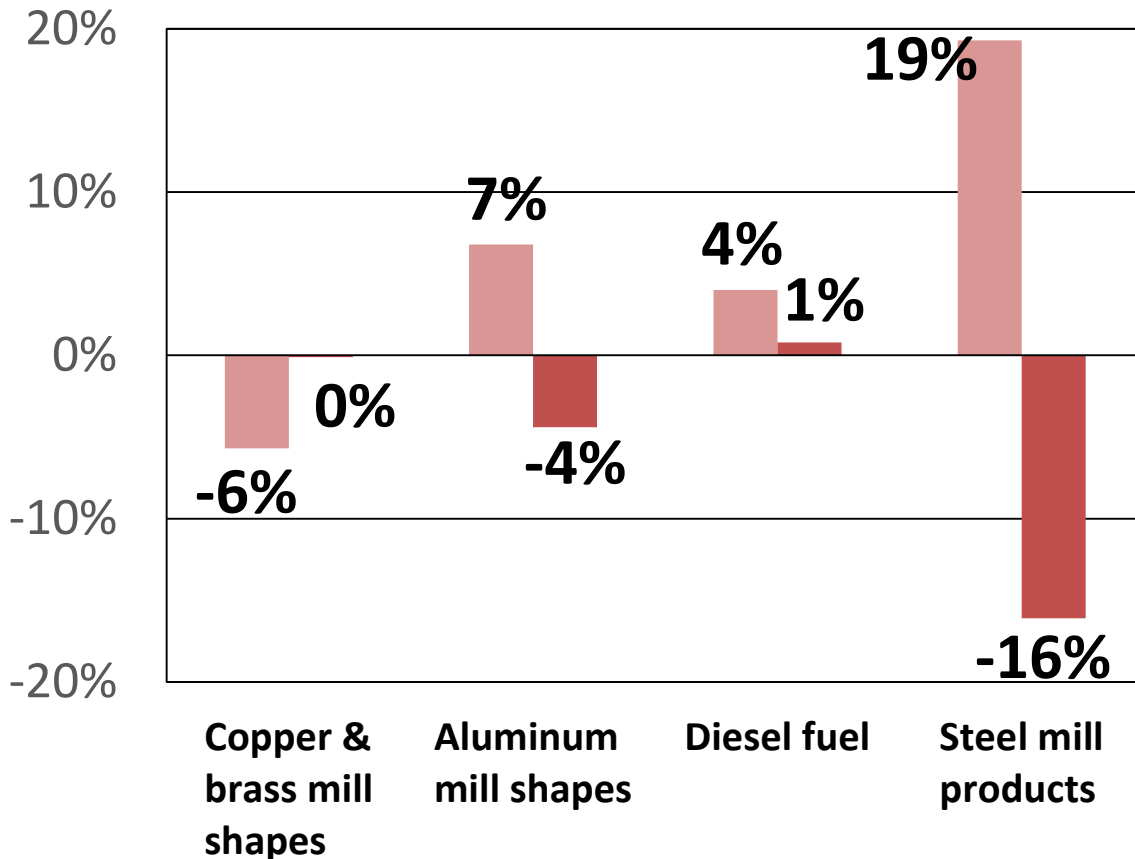
Producer price index for key inputs

12-month % change, not seasonally adjusted

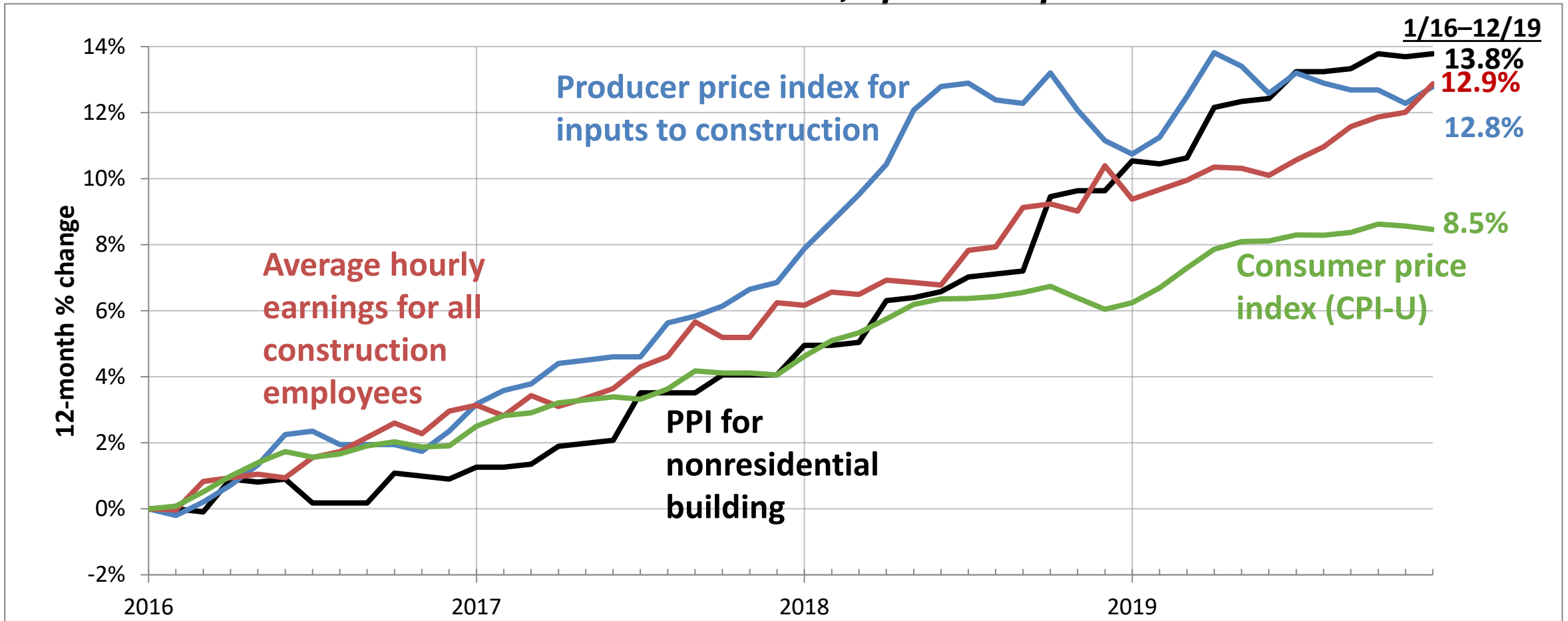


December 2017 – December 2018

December 2018 – December 2019



Cumulative changes in bid prices vs. materials & labor costs, 1/16-12/19



Summary: 2018 & 2019 actual; 2020 forecast



	2018 actual	2019 actual	2020 forecast
Total spending	3%	-0.3%	1-5%
Private – residential	3%	-4.7%	3-7%
– nonresidential	4%	-0.0%	0-4%
Public	4%	7.1%	0-4%
Goods & services inputs PPI	4.0%*	1.5%**	3-4%
Wages & salaries (avg. hourly earnings)	3.8%*	2.3%**	3.5-4.5%

AGC economic resources

(email ken.simonson@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 ranking
- Yearly employment & outlooks surveys, state and metro data, fact sheets: www.agc.org/learn/construction-data

