Headline Forecast

• The US economy is still growing well:
  - 304,000 jobs added in January, 2.8 million in past 12 months—the most since ‘15
  - consumer, business confidence are generally high; recession probability is low
  - but home & auto sales are slowing; trade & fiscal policy concerns continue

• Contractors remain busy and confident; construction employment at 11-year high
  with growth in most states and project categories

• 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

Source: Author
## AGC members’ expectations for 2019—US & WA

### US/WA Net % who expect dollar volume of projects to be higher

<table>
<thead>
<tr>
<th>Category</th>
<th>US/WA Net % Expecting Higher</th>
<th>WA/WA Net % Expecting Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public building</td>
<td>17%/12%</td>
<td>14%/11%</td>
</tr>
<tr>
<td>Highway</td>
<td>16%/12%</td>
<td>13%/0%</td>
</tr>
<tr>
<td>K-12 school</td>
<td>16%/6%</td>
<td>12%/8%</td>
</tr>
<tr>
<td>Hospital</td>
<td>16%/13%</td>
<td>11%/9%</td>
</tr>
<tr>
<td>Retail, Warehouse, Lodging</td>
<td>15%/12%</td>
<td>10%/13%</td>
</tr>
<tr>
<td>Federal (e.g., VA, GSA, USACE, NAVFAC)</td>
<td>15%/5%</td>
<td>5%/-6%</td>
</tr>
<tr>
<td>Transportation (e.g., transit, rail, airport)</td>
<td>14%/38%</td>
<td></td>
</tr>
</tbody>
</table>

Source: AGC 2019 Outlook Survey, Jan. 2019
Construction spending & employment, 2006–2018

**Spending put in place, Feb. ‘06 (prior peak)—Nov. ‘18**

- **11/18 Total:** $1.30 trillion
  - (8% above ‘06 peak)

**11/17–11/18 % change:**

- **Total:** 3.4%
- **Private residential:** 0.8%
- **Private nonresidential:** 4.2%
- **Public:** 7.0%

**Employment, April ‘06 (peak)—Nov. ‘18**

- **11/18 Total:** 7.4 million
  - (4% below peak)

**11/17–11/18 % change:**

- **Nonresidential:** Nonres: 4.3%
- **Residential:** Res: 5.0%
  - (0.6% above ‘18 peak)
  - (16% below ‘06 peak)

Source: spending--U.S. Census Bureau; employment--Bureau of Labor Statistics
## Nonresidential spending by segment: 2017-2018 change and 2019 forecast

<table>
<thead>
<tr>
<th>Nonresidential total (public+private)</th>
<th>2017 vs. 2016</th>
<th>Jan–Nov ’18 vs. Jan–Nov ’17</th>
<th>2019 forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (incl. oil &amp; gas field structures, pipelines)</td>
<td>-0.5%</td>
<td>4.9%</td>
<td>2-5%</td>
</tr>
<tr>
<td>Educational</td>
<td>1</td>
<td>4</td>
<td>0-5%</td>
</tr>
<tr>
<td>Highway and street</td>
<td>-4</td>
<td>5</td>
<td>3-8%</td>
</tr>
<tr>
<td>Commercial (retail, warehouse, farm)</td>
<td>12</td>
<td>3</td>
<td>0-5%</td>
</tr>
<tr>
<td>Office</td>
<td>-1</td>
<td>9</td>
<td>0-5%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-13</td>
<td>-3</td>
<td>near 0</td>
</tr>
<tr>
<td>Transportation</td>
<td>4</td>
<td>16</td>
<td>5-10%</td>
</tr>
<tr>
<td>Health care</td>
<td>4</td>
<td>0</td>
<td>near 0</td>
</tr>
<tr>
<td>Lodging</td>
<td>6</td>
<td>12</td>
<td>near 0</td>
</tr>
<tr>
<td>Sewage &amp; waste disposal</td>
<td>-12</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Other--amusement; communication; religious; public safety; conservation; water: 11% of ‘17 total</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau construction spending report; Author’s forecast
Construction spending: industrial, heavy

annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–11/18; billion $

**Power** (94% private in 2017)

- Nov. ‘17–Nov. ’18: 6% (oil & gas 19%; electric 3%)

**Manufacturing** (99% private in 2017)

- Nov. ‘17–Nov. ’18: -0.5% (chemical -3%; other 1%)

**Amusement & recreation** (55% private in 2017)

- Nov. ‘17–Nov. ’18: 12% (private 9%; public 17%)

**Communication** (99.5% private in 2017)

- Nov. ‘17–Nov. ’18: -6%

Source: U.S. Census Bureau construction spending report
Key points: power & energy, mfg, amusement, communication

• Solar, wind power are growing again; expect more oil & natural gas pipelines in ’19 but timing is subject to court & regulatory delays

• 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

Source: Author
Construction spending: public works
annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–11/18; billion $

Highways (99.8% public in 2017)

Transportation facilities
(air, transit, rail, water)

Sewage/waste & water
(sewage 99% public in 2017; water 98% public in 2017)

Conservation and development
(99.7% public in 2017)

Source: U.S. Census Bureau construction spending report
Key points: roads, transportation, sewer/water

• Federal infrastructure bill is unlikely in 2019; spending wouldn’t occur until later, but state highway funding and P3s are increasing

• 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), 1/17–11/18; billion $

**Education**: (state/local K-12, S/L higher; private)

- Nov. ‘17–Nov. ‘18: 9% (state/local preK-12 16%; state/local higher ed -2%; private 11%)

**Health care**: (private hospital, S/L hospital, other)

- Nov. ‘17–Nov. ‘18: -4% [private hospital -5%; S/L hospital -1%; other (special care, medical office, federal) -4%]

Source: U.S. Census Bureau construction spending report
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
- Health care spending is shifting from hospitals to standalone special-care facilities (urgent care, surgery, rehab, hospices)

Source: Author
Construction spending: developer-financed
annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–11/18; billion $

- **Retail (private)**: Nov. ‘17–Nov. ’18: -11%
- **Office** (88% private in 2017): Nov. ‘17–Nov. ’18: 9% (private 10%; public 0.1%)
- **Warehouse (private)**: Nov. ‘17–Nov. ’18: 11%
- **Lodging (private)**: Nov. ‘17–Nov. ’18: 15%

Source: U.S. Census Bureau construction spending report
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 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), 1/17–11/18; billion $

<table>
<thead>
<tr>
<th>Spending put in place (billion $)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private residential total</strong></td>
</tr>
<tr>
<td>(20% below Feb '06 peak)</td>
</tr>
<tr>
<td><strong>Single-family</strong></td>
</tr>
<tr>
<td>(41% below Feb '06 peak)</td>
</tr>
<tr>
<td><strong>Improvements</strong></td>
</tr>
<tr>
<td>(8% below Apr '18 peak)</td>
</tr>
<tr>
<td><strong>Multifamily</strong></td>
</tr>
<tr>
<td>(3% above Oct '18 peak)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12-month % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
</tr>
<tr>
<td>2018</td>
</tr>
<tr>
<td>11/17–11/18:</td>
</tr>
<tr>
<td>Multifamily: 8%</td>
</tr>
<tr>
<td>Improvements: 1%</td>
</tr>
<tr>
<td>Private total: 1%</td>
</tr>
<tr>
<td>Single-family: -1%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau construction spending report
Residential spending forecast--2018: 3-4% 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: 0-1% growth; 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: 1-3% growth; 2019: 5-10% (19% in 2017); rising number of seniors prefer remodeling to moving but interest cost, labor scarcity are barriers

Source: Author
<table>
<thead>
<tr>
<th>State</th>
<th>Population Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK</td>
<td>-0.3%</td>
</tr>
<tr>
<td>HI</td>
<td>-0.3%</td>
</tr>
<tr>
<td>VT</td>
<td>0.3%</td>
</tr>
<tr>
<td>NH</td>
<td>0.5%</td>
</tr>
<tr>
<td>MA</td>
<td>0.6%</td>
</tr>
<tr>
<td>CT</td>
<td>-0.03%</td>
</tr>
<tr>
<td>RI</td>
<td>0.1%</td>
</tr>
<tr>
<td>DE</td>
<td>1.0%</td>
</tr>
<tr>
<td>NJ</td>
<td>0.2%</td>
</tr>
<tr>
<td>MD</td>
<td>0.3%</td>
</tr>
<tr>
<td>DC</td>
<td>1.0%</td>
</tr>
<tr>
<td>Source: U.S. Census Bureau</td>
<td></td>
</tr>
</tbody>
</table>
State construction employment change (U.S.: 4.0%)
12/17 to 12/18: 43 states and DC up, 6 down

**Top 5**
- **CT**: 16.9%
- **WY**: 14.9%
- **AR**: 12.5%
- **NV**: 12.3%
- **ND**: 11.6%

**Bottom 5**
- **MO**: -1.0%
- **ME**: -2.1%
- **AK**: -2.5%
- **HI**: -4.8%
- **SC**: -5.0%

Shading based on unrounded numbers

Source: BLS state and regional employment report
Washington Construction Employment
1/90–12/18 (seasonally adjusted; shading = recessions)

Peak: Dec ‘18
12/17–12/18
6.4%
216,700

Source: BLS
Construction Employment Change from Year Ago
1/08–12/18 (not seasonally adjusted)

12/17–12/18:
- Washington 5.5%
- Tacoma-Lakewood, WA Div. 4.6%
- U.S. 4.1%
- Seattle-Bellevue-Everett, WA Div. 3.2%

Source: BLS
## Change in construction employment, 12/17–12/18 (NSA)

<table>
<thead>
<tr>
<th>Metro area or division</th>
<th>12-mo. empl. change</th>
<th>Rank (out of 358)</th>
<th>Metro area or division</th>
<th>12-mo. empl. change</th>
<th>Rank (out of 358)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide (Construction)</td>
<td>5%</td>
<td></td>
<td>Tacoma-Lakewood Div.</td>
<td>5%</td>
<td>150</td>
</tr>
<tr>
<td>Statewide (Mining, logging, and</td>
<td>5%</td>
<td></td>
<td>Walla Walla*</td>
<td>10%</td>
<td>45</td>
</tr>
<tr>
<td>construction)*</td>
<td></td>
<td></td>
<td>Wenatchee*</td>
<td>11%</td>
<td>32</td>
</tr>
<tr>
<td>Bellingham*</td>
<td>10%</td>
<td>45</td>
<td>Yakima*</td>
<td>8%</td>
<td>69</td>
</tr>
<tr>
<td>Bremerton-Silverdale*</td>
<td>2%</td>
<td>239</td>
<td>Lewiston, ID-WA</td>
<td>23%</td>
<td>2</td>
</tr>
<tr>
<td>Kennewick-Richland*</td>
<td>10%</td>
<td>45</td>
<td>Portland-Vancouver-Hillsboro, OR-WA</td>
<td>9%</td>
<td>58</td>
</tr>
<tr>
<td>Longview*</td>
<td>3%</td>
<td>205</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mount Vernon-Anacortes*</td>
<td>7%</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olympia-Tumwater*</td>
<td>3%</td>
<td>205</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seattle-Bellevue-Everett Div.</td>
<td>3%</td>
<td>205</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spokane-Spokane Valley*</td>
<td>-2%</td>
<td>330</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The Bureau of Labor Statistics reports employment for construction, mining and logging combined for metro areas in which mining and logging have few employers. To allow comparisons between states and their metros, the table shows combined employment change for these metros. Not seasonally adjusted statewide data is shown for both construction-only and combined employment change.

Source: AGC rankings, calculated from BLS state and area employment reports
Construction employment change by WA metro, 12/17–12/18

Shading based on unrounded numbers

Source: BLS state and regional employment report
Construction workforce indicators (not seasonally adjusted)

Construction openings: all-time high; unemployment: all-time low
(Nov. data, 2009-18)

- Unemployment
- Openings

Construction job openings rate has been growing as pay accelerates
(Nov. data, 2009-18)

- Job openings rate in construction
- 12-mo % change in construction average hourly earnings

Source: Bureau of Labor Statistics
Outlook 2019: Firms plan to add workers but expect continued difficulty finding them

- % of firms planning to add workers: 79%
- % reporting difficulty hiring: 78%
- % who expect as much or more difficulty in 2019: 68%

Source: AGC 2019 Outlook Survey, Jan. 2019
Outlook 2019: Firms with staffing challenges face higher costs and delays

- Costs have been higher than we anticipated: 33%
- Projects have taken longer than we anticipated: 34%
- We have put higher prices into our bids or contracts: 37%
- We have put longer completion times into our bids or contracts: 18%
- No impact/Stay the same: 24%

Source: AGC 2019 Outlook Survey, Jan. 2019
12-month change in producer price index for key inputs

Steel mill products: 19% (December 2017–December 2018)
Aluminum mill shapes: 10% (December 2017–December 2018)
Diesel fuel: 41% (December 2017–December 2018)
Copper & brass mill shapes: -6% (December 2017–December 2018)

Copper & brass mill shapes: 9% (December 2016–December 2017)

Source: Bureau of Labor Statistics
Materials & labor costs and bid prices accelerated in ‘18

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

Source: Bureau of Labor Statistics
## 2017-2018 summary and 2019 forecast

<table>
<thead>
<tr>
<th></th>
<th>2017 actual</th>
<th>2018 actual</th>
<th>2019 forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total spending</td>
<td>4%</td>
<td>4.5%*</td>
<td>5-8%</td>
</tr>
<tr>
<td>Private – residential</td>
<td>12%</td>
<td>4%*</td>
<td>5-9%</td>
</tr>
<tr>
<td>– nonresidential</td>
<td>1%</td>
<td>3%*</td>
<td>3-6%</td>
</tr>
<tr>
<td>Public</td>
<td>-3%</td>
<td>7%*</td>
<td>2-5%</td>
</tr>
<tr>
<td>Goods &amp; services inputs PPI</td>
<td>4.4%</td>
<td>3.8%</td>
<td>4-6%</td>
</tr>
<tr>
<td>Wages &amp; salaries (avg. hourly earnings)</td>
<td>3.1%</td>
<td>3.6%</td>
<td>3.5-4.5%</td>
</tr>
</tbody>
</table>

*Jan.-Nov. 2017 to Jan.-Nov. 2018
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