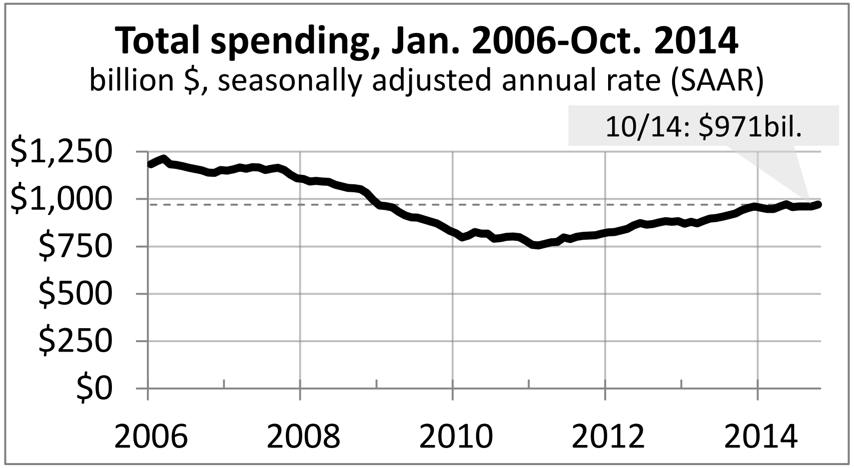
Construction Spending, Labor & Materials Outlook

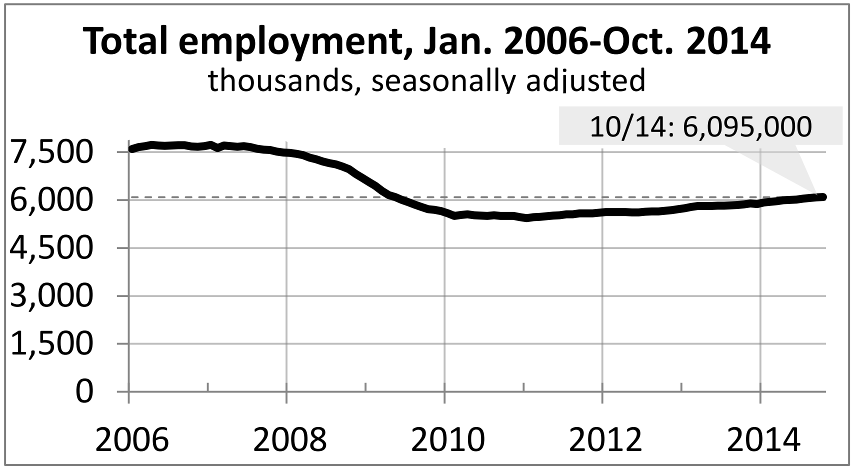
December 4, 2014

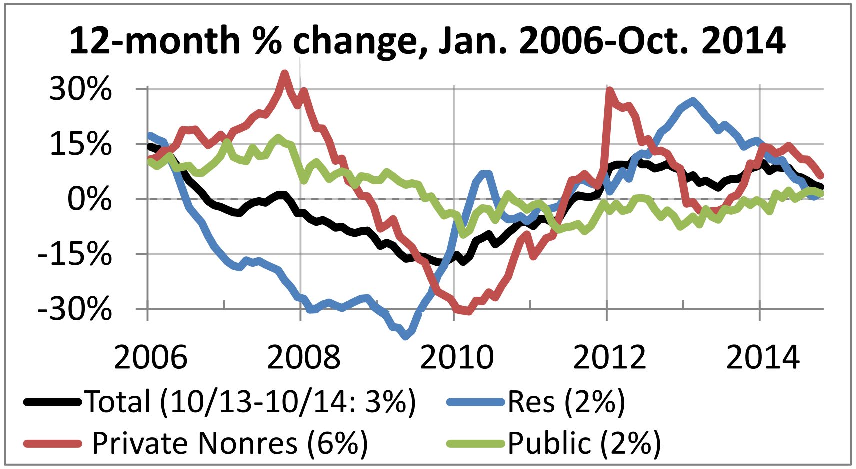
Ken Simonson
Chief Economist, AGC of America
simonsonk@agc.org

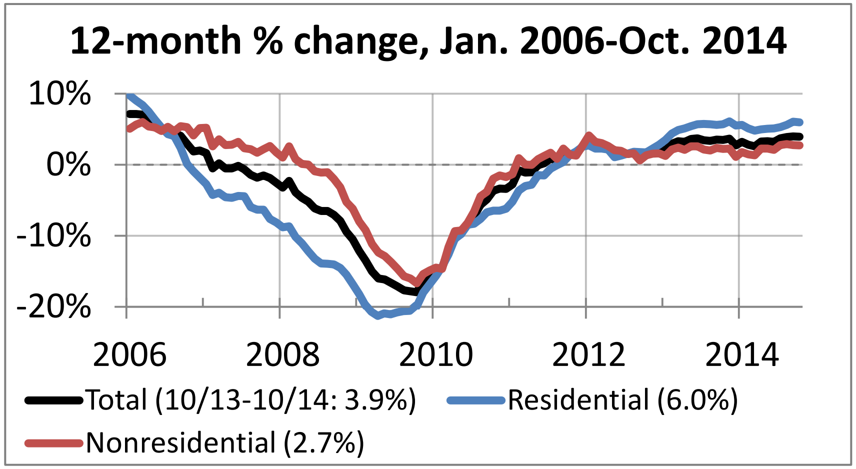
Quality People.
Quality Projects.

Construction spending & employment, 2006-14









Source: BLS, Census Bureau construction spending reports

Construction is growing, but unevenly

3 trends helping many sectors and regions:

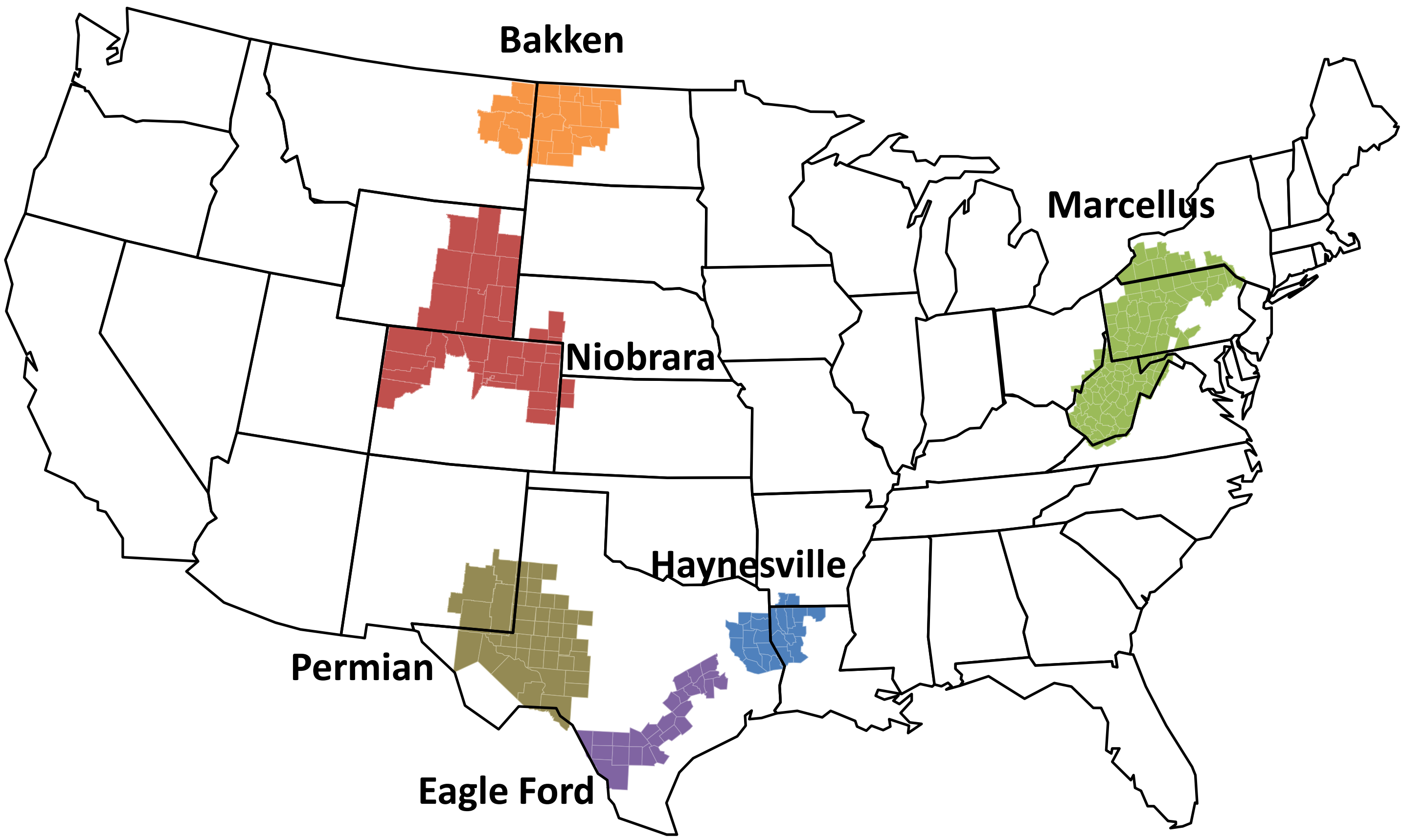
- 'Shale gale'
- Panama Canal expansion
- Residential revival, especially multifamily

3 trends holding down construction growth:

- Government spends less on schools, infrastructure
- Consumers switch from stores to online buying
- Employers shrink office space per employee

Source: Author

One (or many) bright spot(s): the shale 'gale'



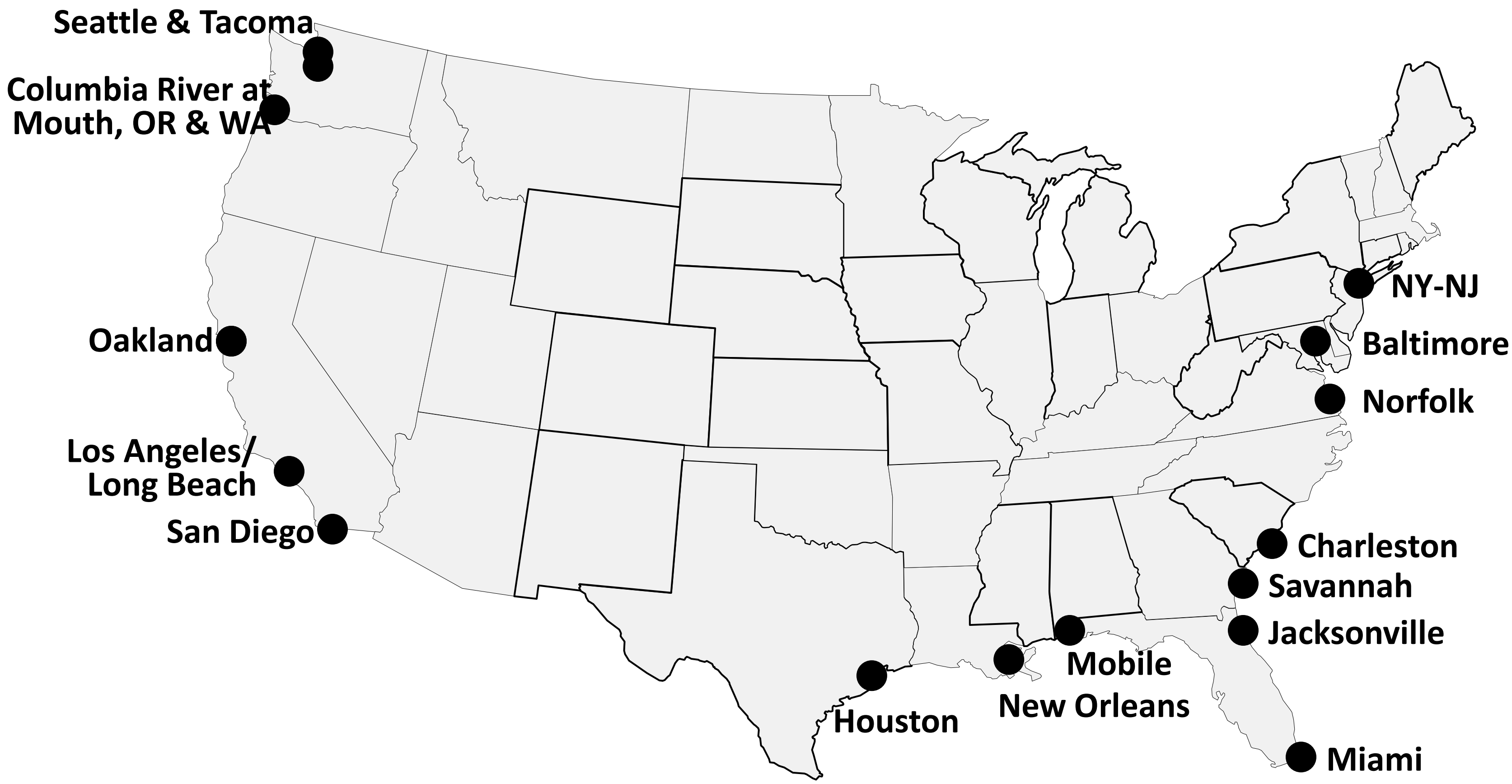
Source: U.S. Energy Information Administration

Shale's direct and indirect impacts on construction

- **Onsite:** Each well requires access road, site prep, pad, storage pond, support structures, pipes
- **Nearby:** Products, water require trucking, rail, pipeline, processing
- **Local spending** by drilling firms, workers, royalty holders
- **Upstream:** orders for fracking sand, rigs, compressors, pumps, pipe, tanks, trucks, railcars, processing facilities
- **Downstream:** Petrochemical, power, steel plants; LNG export terminals, fueling stations; NG-powered vehicles
- **Losers:** coal; maybe wind, solar, nuclear & their suppliers

Source: Author

U.S. ports affected by Panama Canal expansion



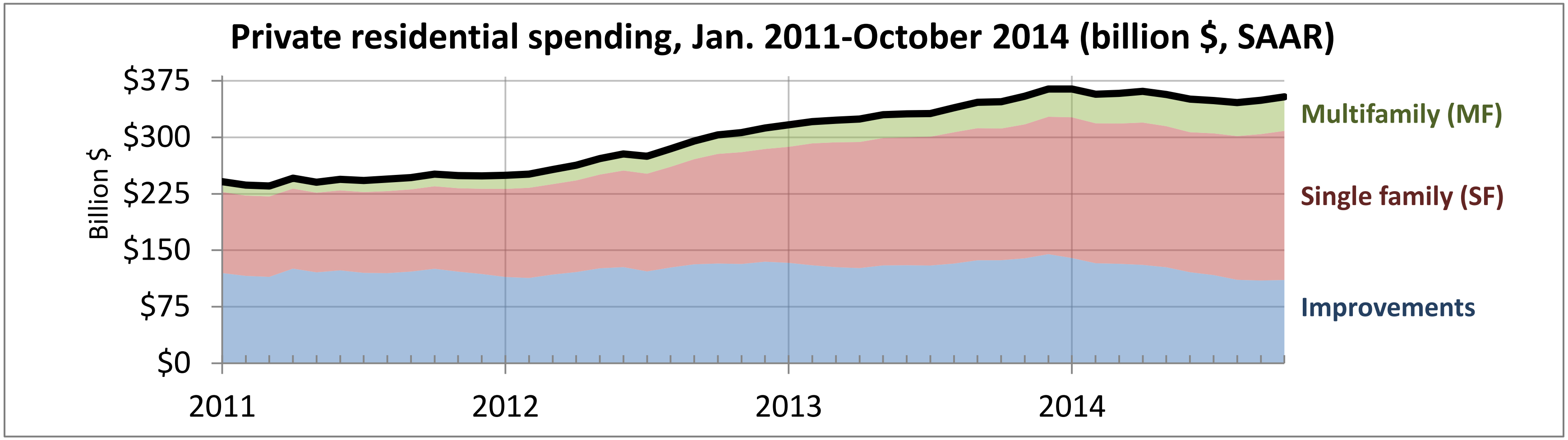
Source: U.S. Army Corps of Engineers

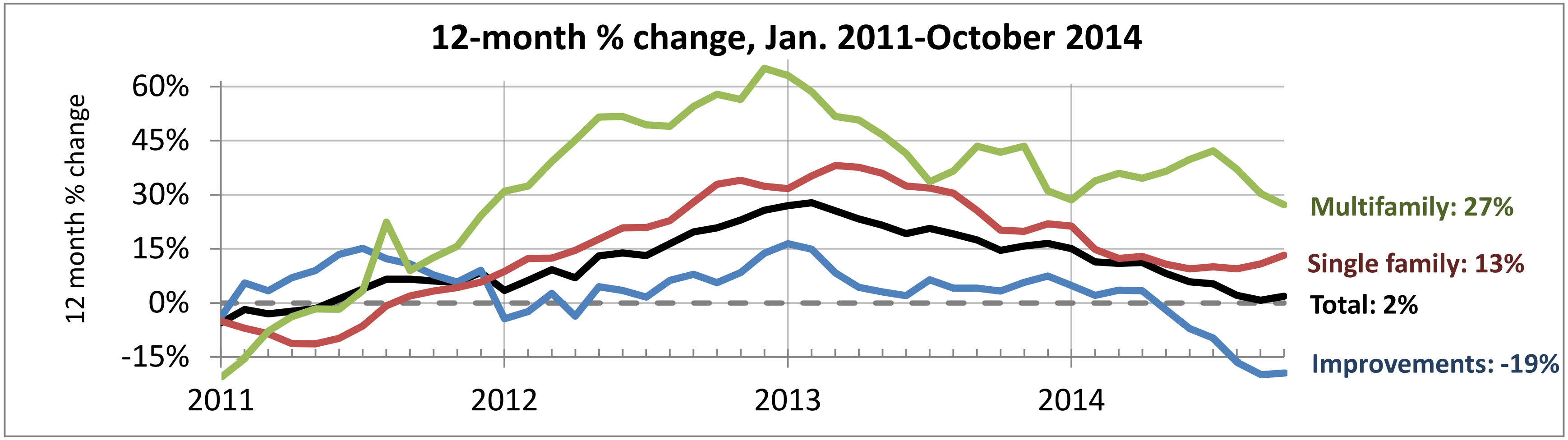
Panama Canal expansion's impacts on construction

- **Ports:** investing in dredging, piers, cranes, land access
- **Nearby:** Storage, warehouse, trucking, rail facilities
- **Bridge, tunnel, highway** improvements
- **Inland:** possible changes in distribution, manufacturing

Source: Author

Private residential spending: MF still soaring, SF slowing





Source: Census Bureau construction spending reports

Housing outlook

- SF: rising for now but tight credit, fear of lock-in, demographic shifts may limit increases
- MF: Upturn should last through 2015
  - Vacancy rates near multi-year lows in most cities
  - Preference for urban living adds to demand
  - Condos have been slower to revive than rentals
  - Government-subsidized market likely to worsen
- Improvements: down in ‘14 but should track SF sales

Source: Author

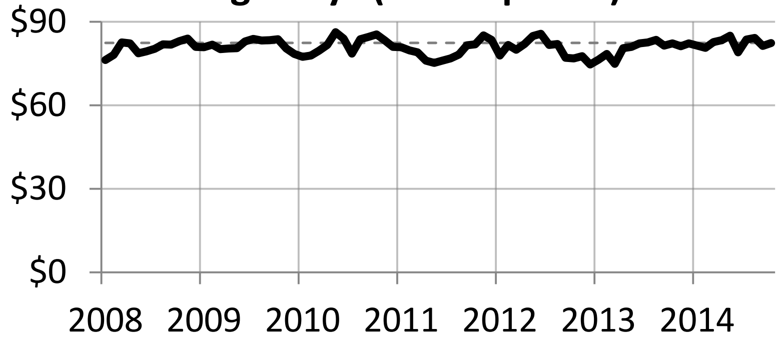
Nonres segments, 2013 & 2014 forecast (billion $, SAAR)

	10/14 Total	2014 vs. 2013 Jan-Oct YTD	2015 Forecast
Nonresidential	$612 billion	6 %	4-8 %
Power (incl. oil & gas structures, pipelines)	98	16	10+
Highway and street	82	2	0 to -5
Educational	81	0	5 to -5
Commercial (retail, warehouse, farm)	58	11	0 to 5
Manufacturing	58	13	10+
Office	47	18	0 to 5
Transportation	42	3	2 to 5
Health care	39	-7	0 to -5
Sewage and waste disposal	23	2	
Lodging	17	18	10+
Amusement & recreation	17	6	
Other (Communication; water; public safety; conservation; religious): 8% of total		-2	

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

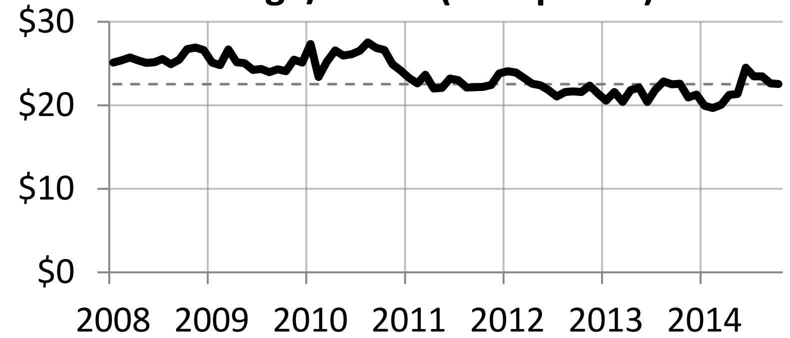
Construction spending: public works (billion $, SAAR)

Highways (99.5% public)



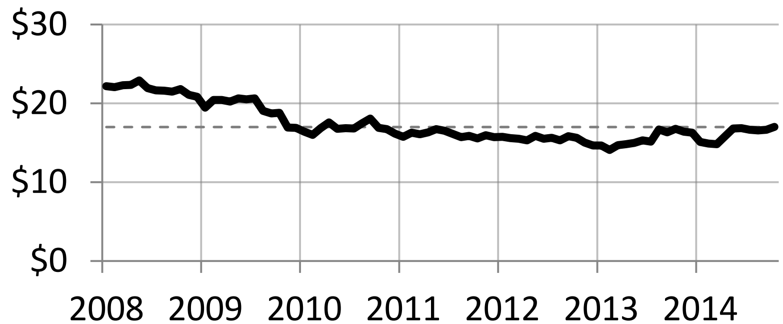
Latest 12-mo. change: 0.1%

Sewage/waste (99% public)



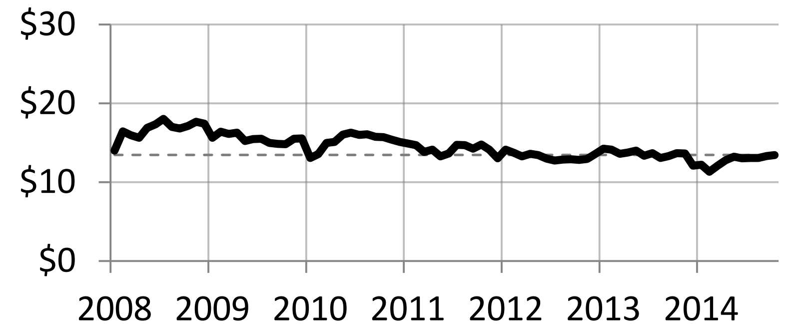
Latest 12-mo. change: -0.2%

Amusement & recreation (55% public)



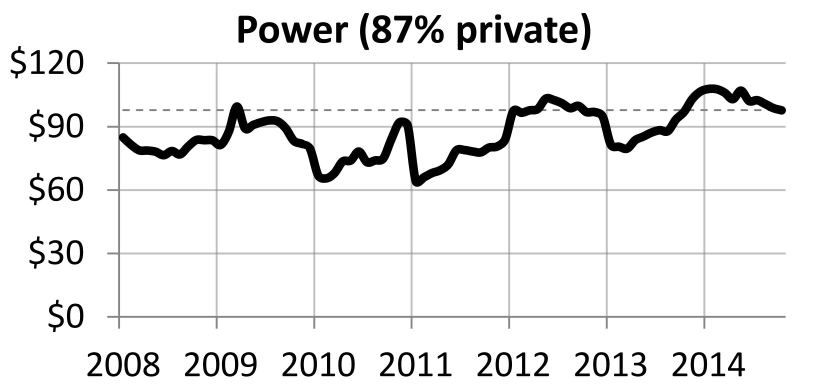
Latest 12-mo. change: 1%

Water supply (96% public)

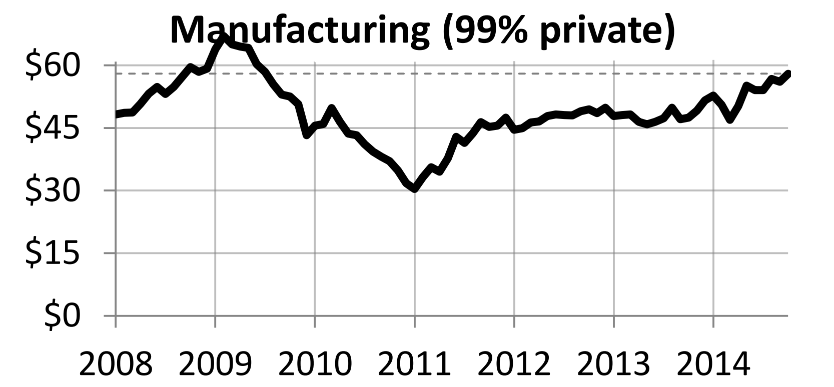


Latest 12-mo. change: -2%

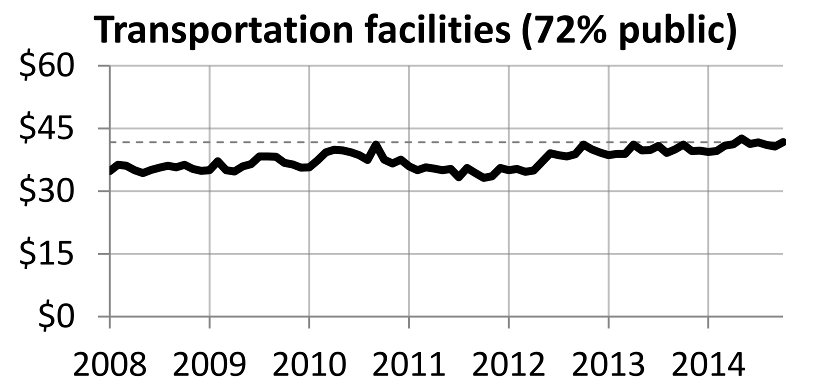
Construction spending: industrial, heavy (billion $, SAAR)



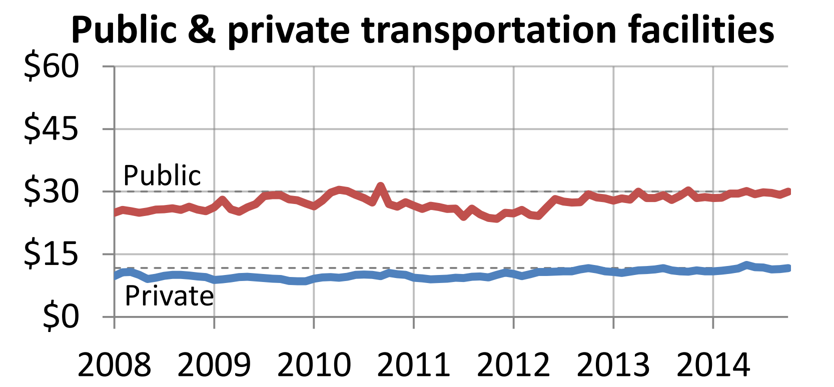
Latest 12-mo. change: 1% (private 0.3%; public 4%)



Latest 12-mo. change: 22%



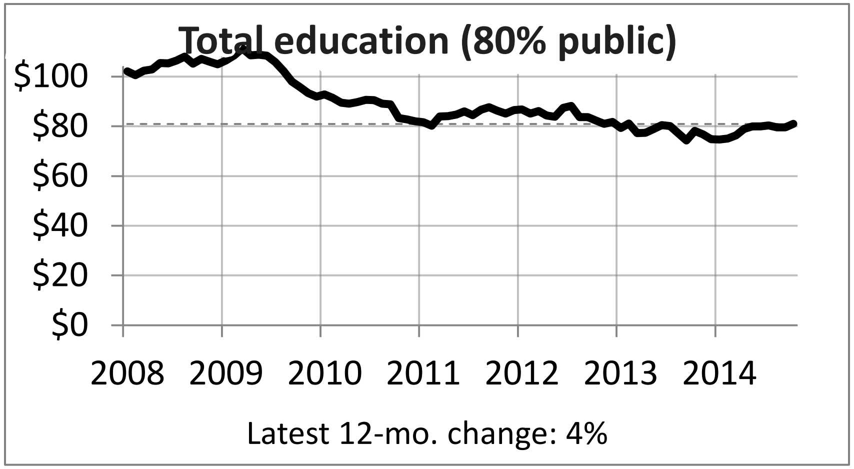
Latest 12-mo. change: 2%

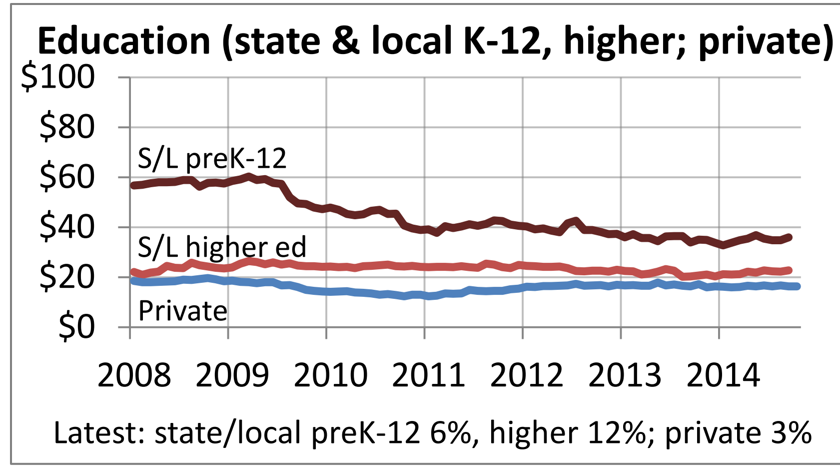


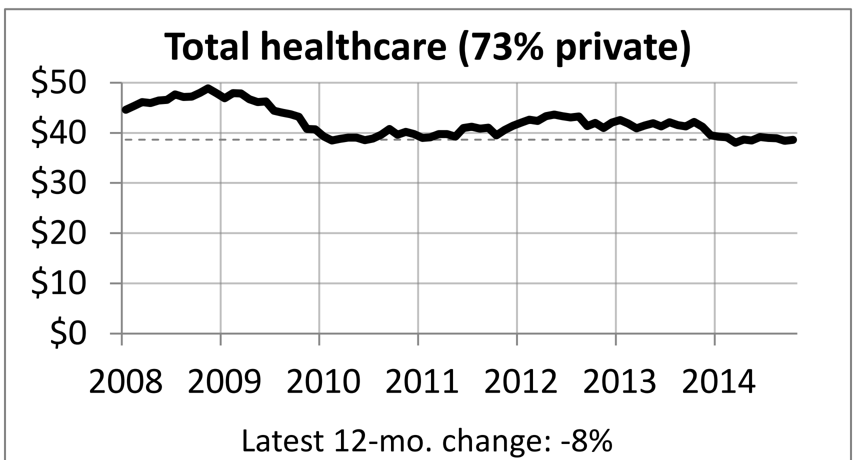
Latest 12-mo. change: private 8%; public -1%

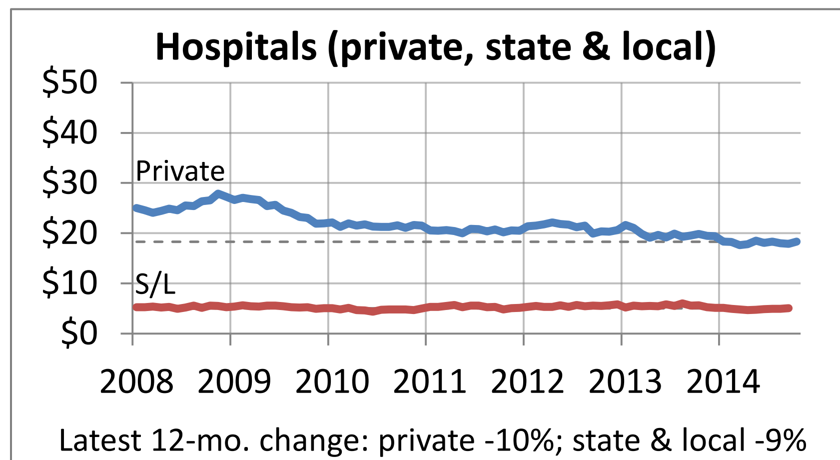
Source: Census Bureau construction spending reports

Construction spending: institutional (private + state/local)

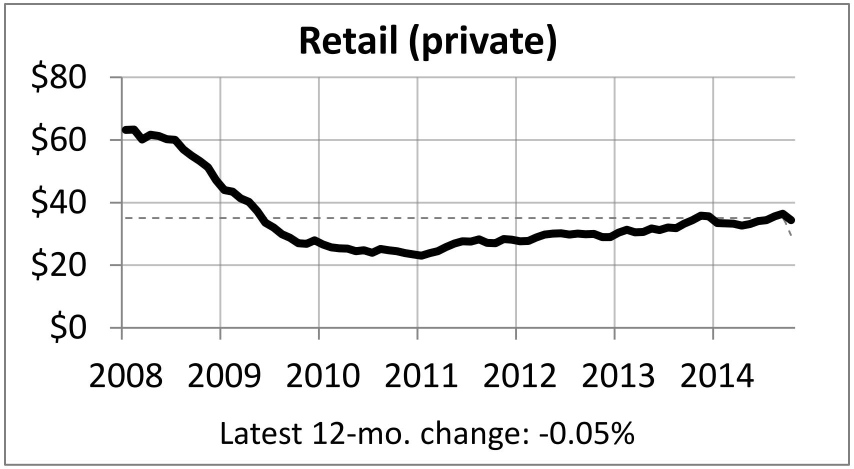


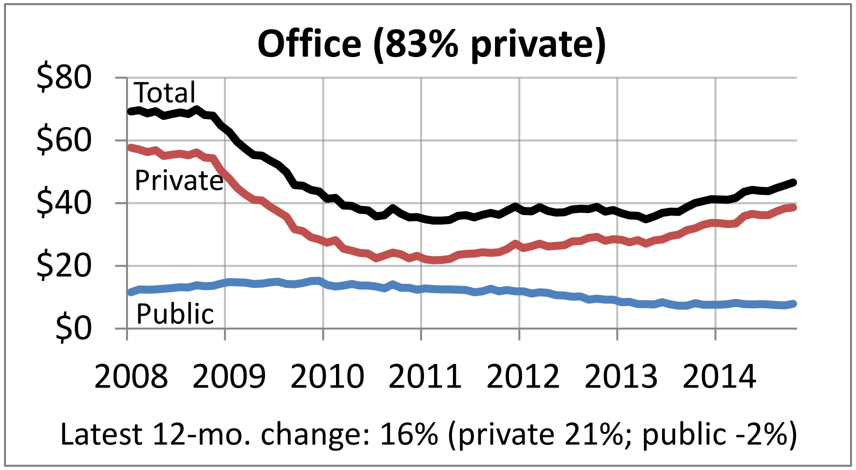


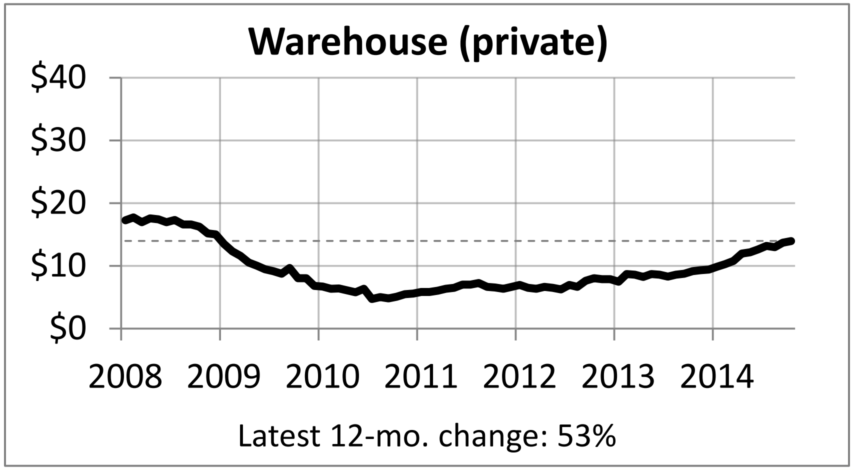


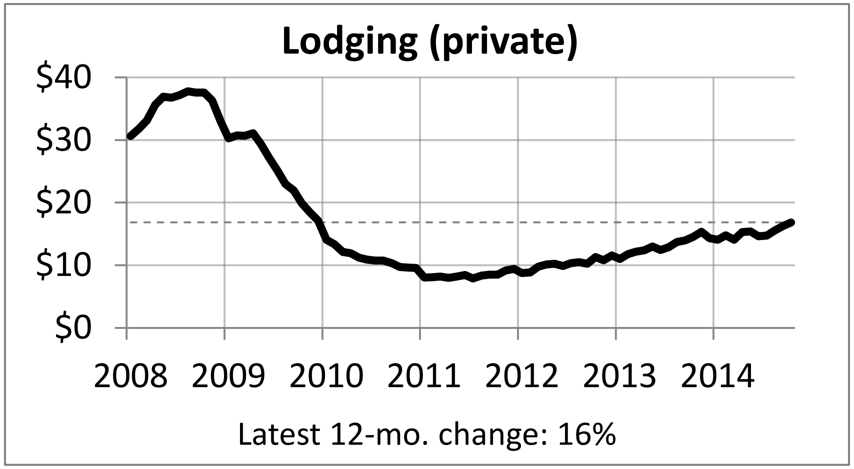


Construction spending: developer-financed (billion $, SAAR)









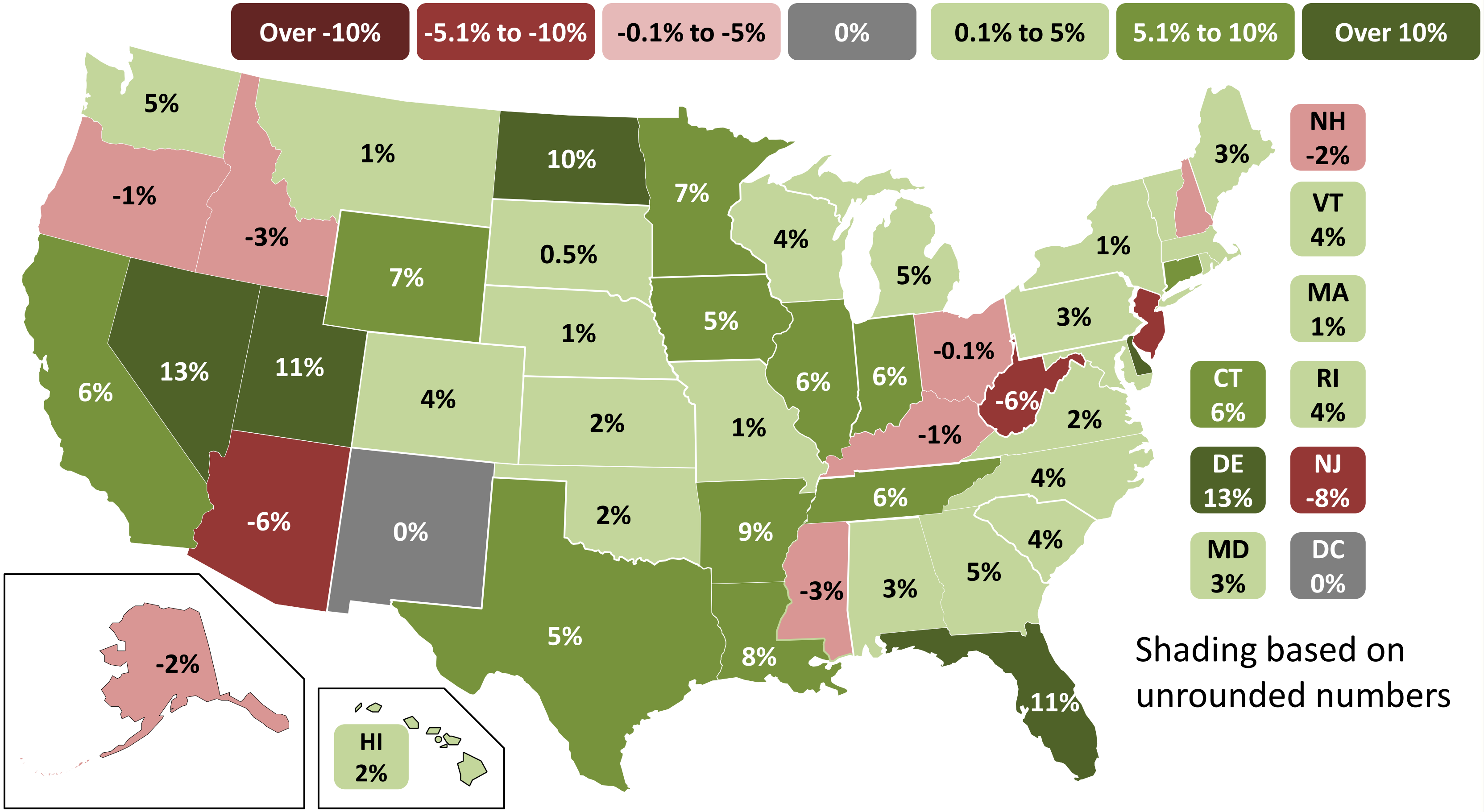
Source: Census Bureau construction spending reports

Major locations for data centers

Source: www.DataCenterKnowledge.com, from CBRE, ASHRAE

State construction employment change (U.S.: 3.9%)

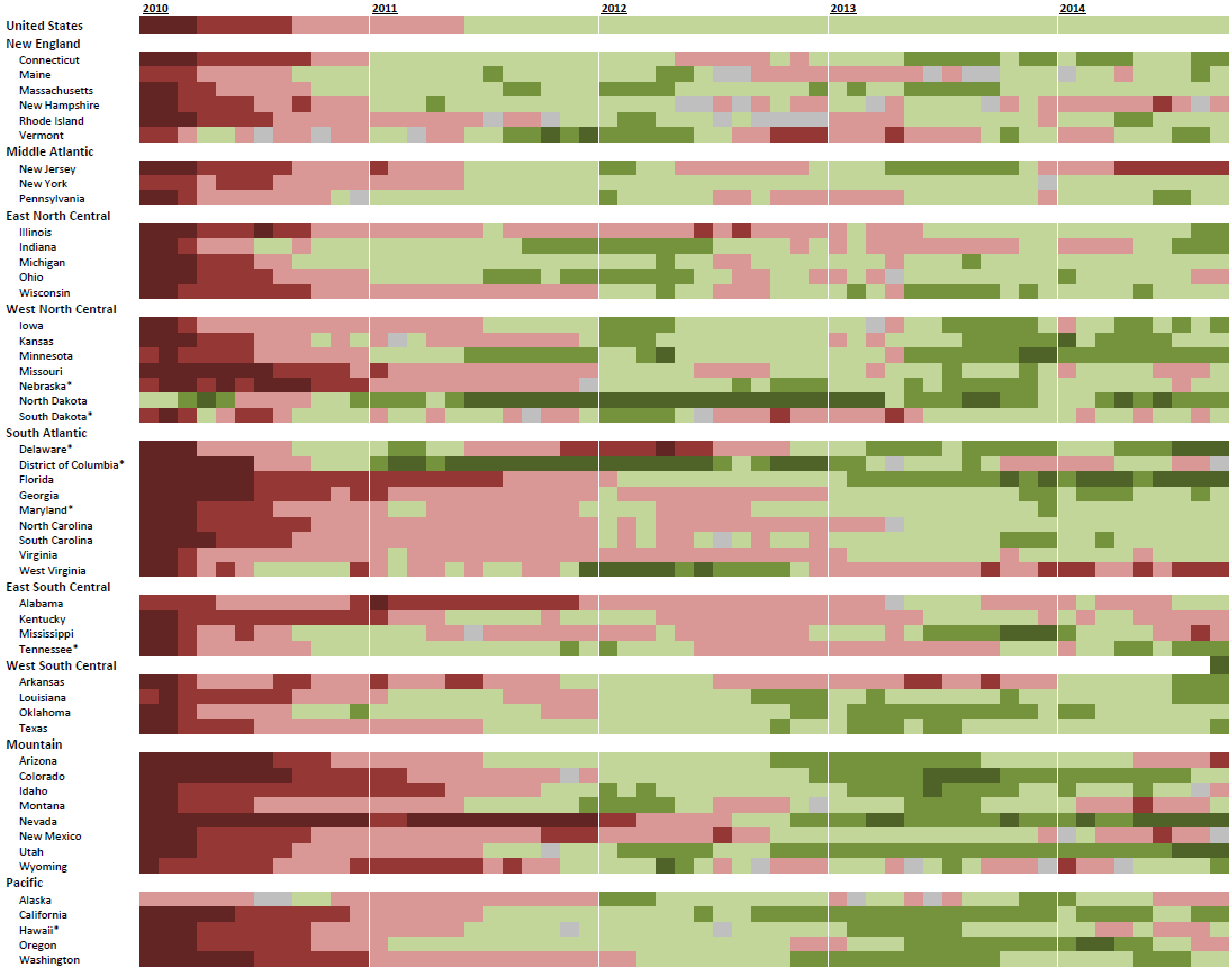
9/13 to 9/14: 39 states up, 10 down



Shading based on unrounded numbers

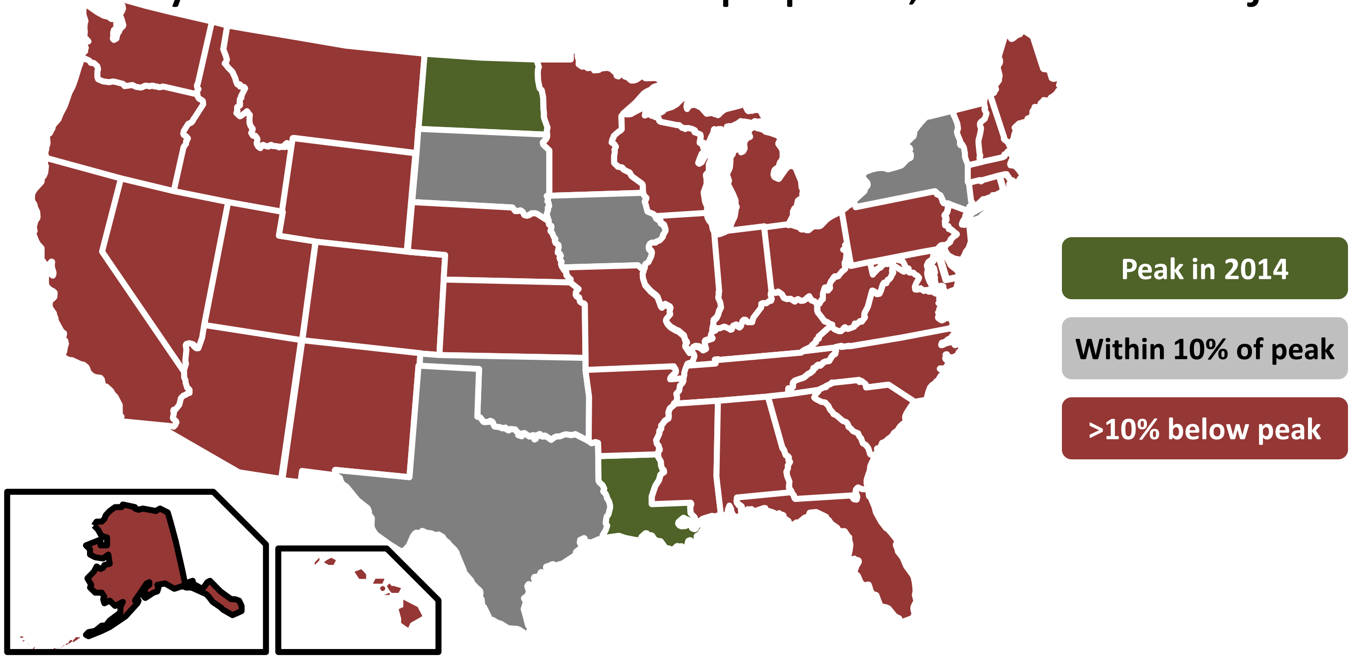
Source: BLS state and regional employment report

12-Month Percent Change in State Construction Employment (seasonally adjusted), 2010-September 2014



Construction employment, Sep. '14 vs. peak

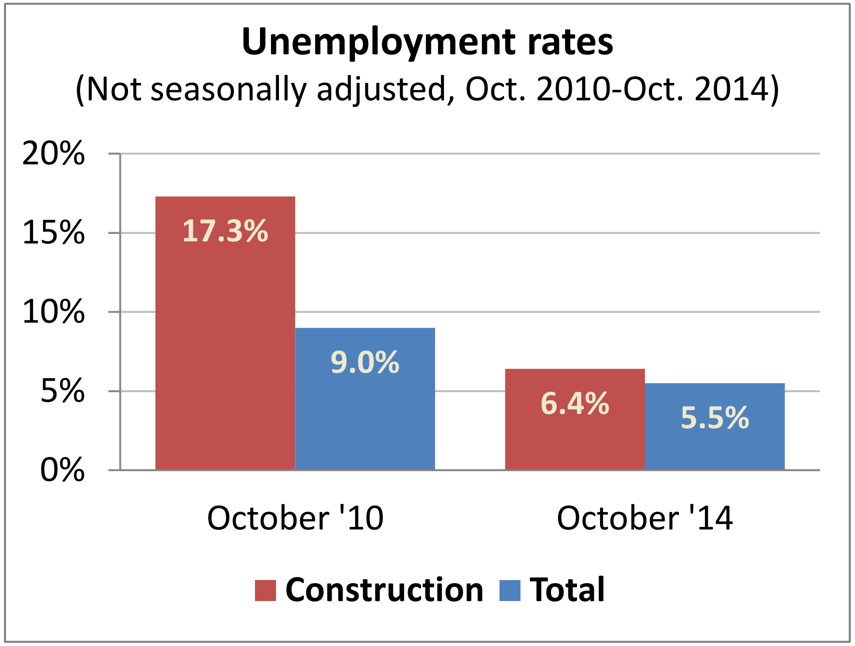
- US: construction -21% (-1.6 million) below Apr. '06 peak
- States: La., Okla. and N.D. at new peak in 2014, 43 states > 10% below
- Metros: only 33 of 339 at new Sep. peak, not seas. adjusted

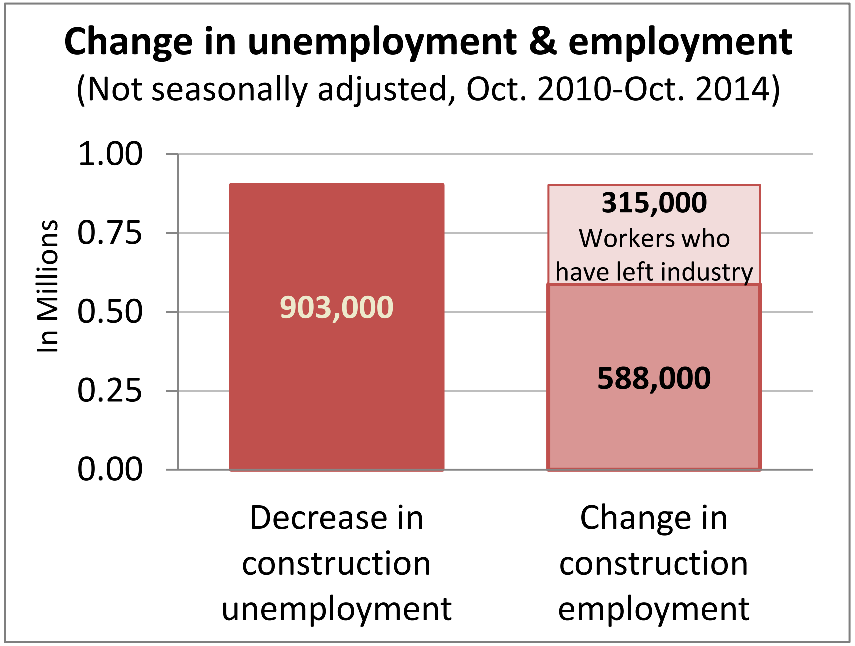


Source: Author, from BLS national and state & area employment data (www.bls.gov/ces, www.bls.gov/sae)

Change in construction (un)employment, 10/10-10/14

- Construction unemployment fell sharply in past 4 years
- But industry employment rose much less
- Thus, workers left for other sectors, school, retirement





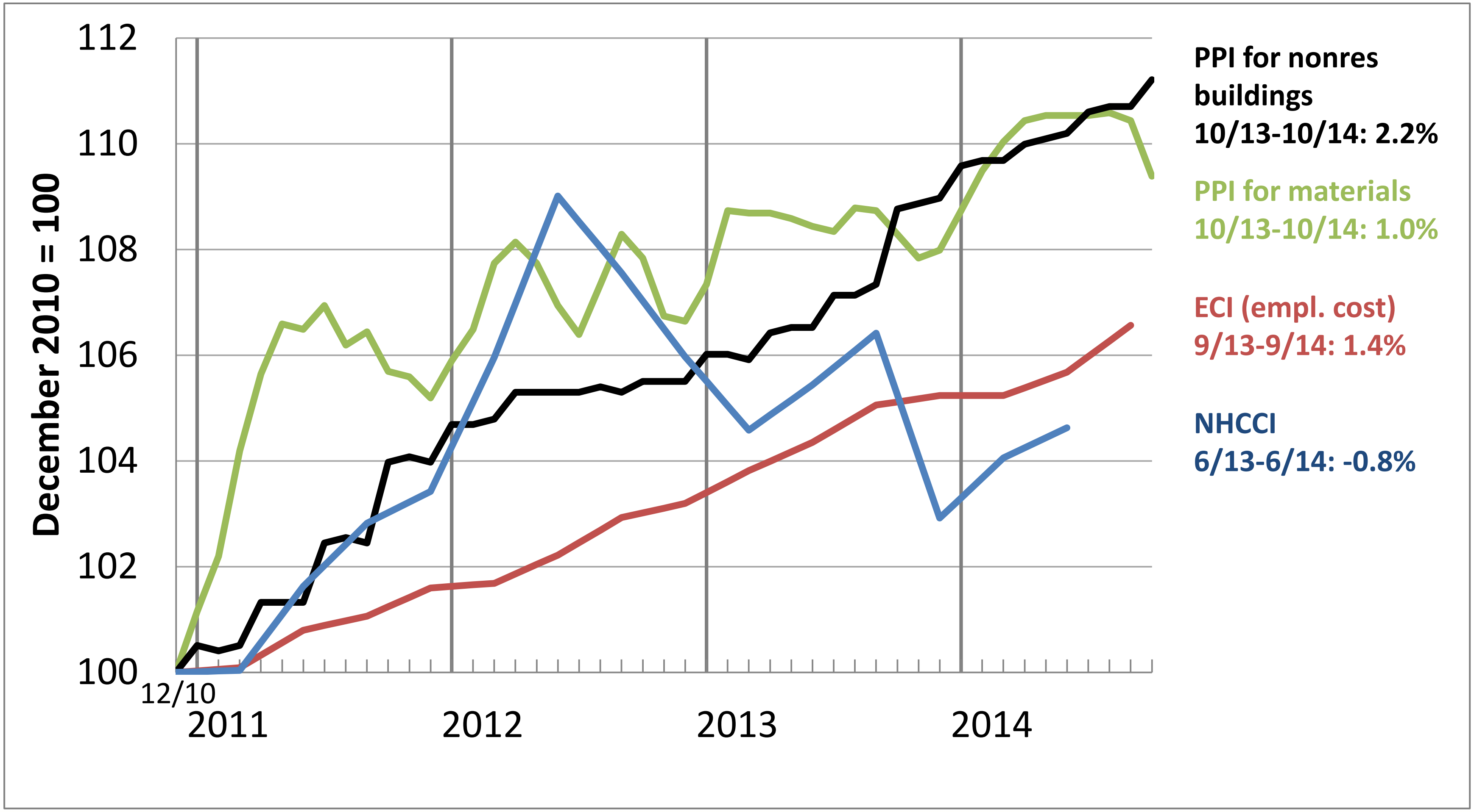
Hardest positions to fill

(% of respondents who are having trouble filling)

Craft	**83%**
Carpenters	66%
Roofers	64
Equipment operators	59
Plumbers	54
Electricians	52
Professional	**62%**
Project managers/supervisors	48%
Estimators	32

Source: AGC Member Survey, Sept. 2014

Material & labor costs vs. nonresidential building prices 12/10-10/14



Source: Author, based on Bureau of Labor Statistics for Producer Price Indexes (PPIs) and Employment Cost Index (ECI); Federal Highway Administration for NHCCI

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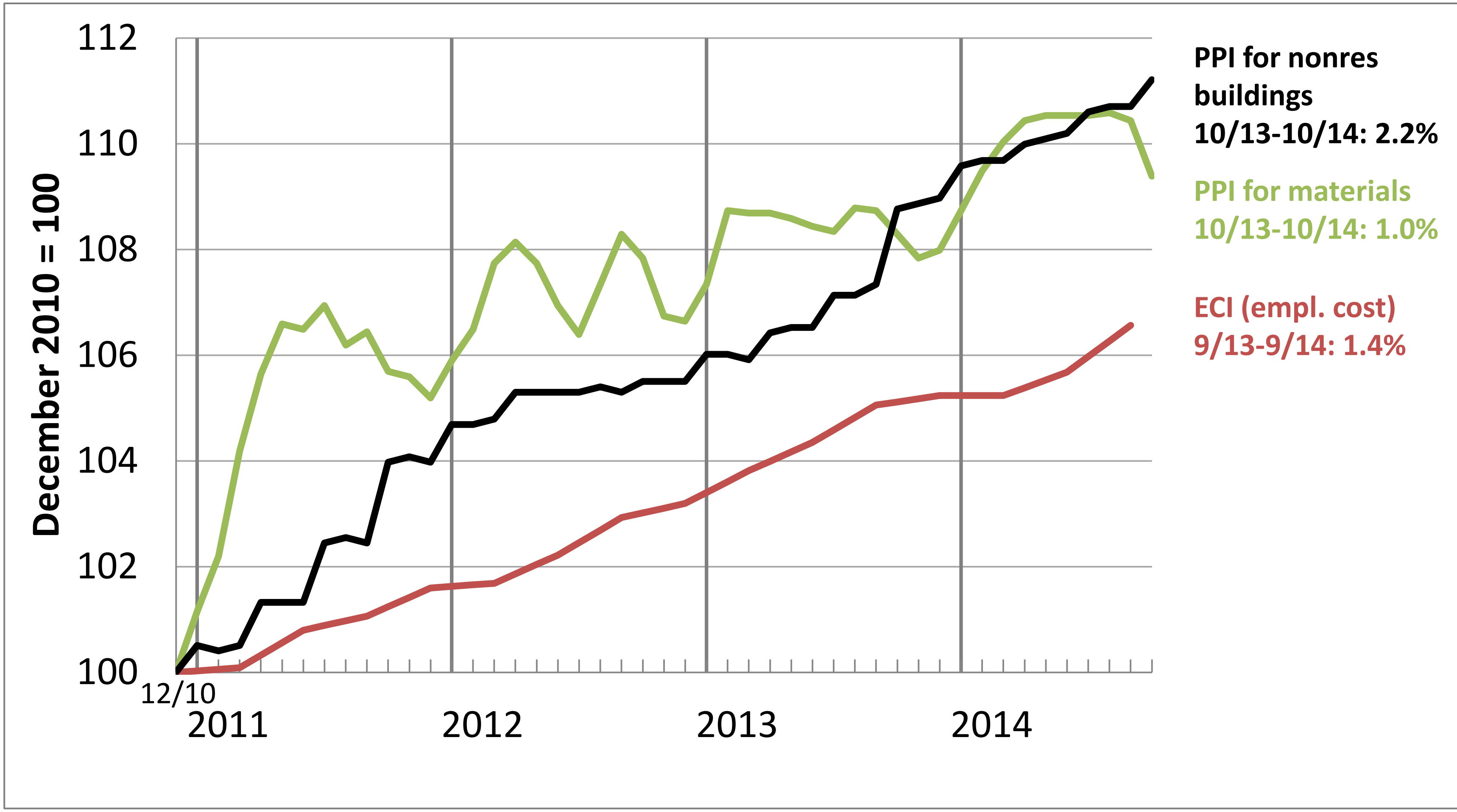

Source: Author, based on Bureau of Labor Statistics for Producer Price Indexes (PPIs) and Employment Cost Index (ECI); Federal Highway Administration for NHCCI

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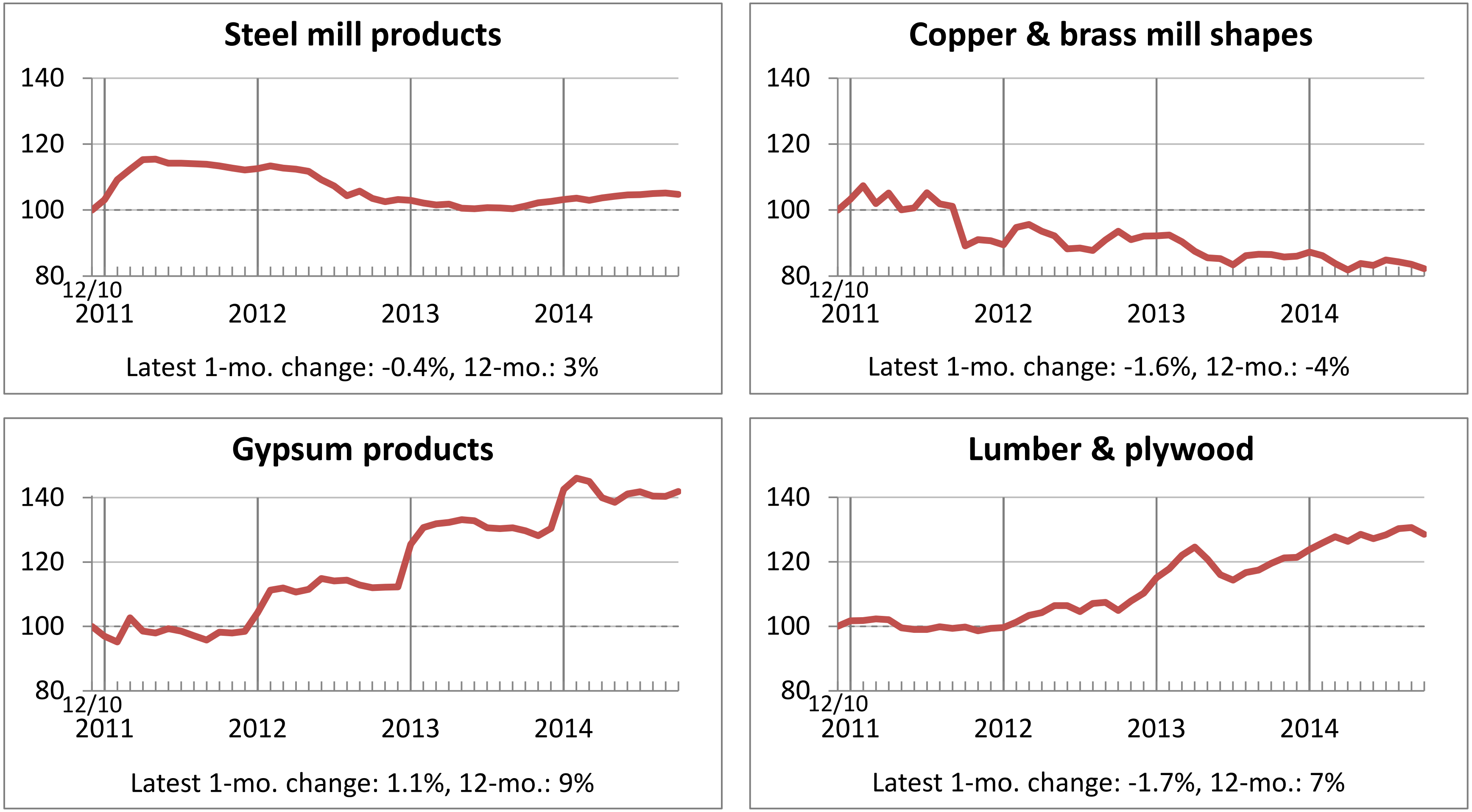
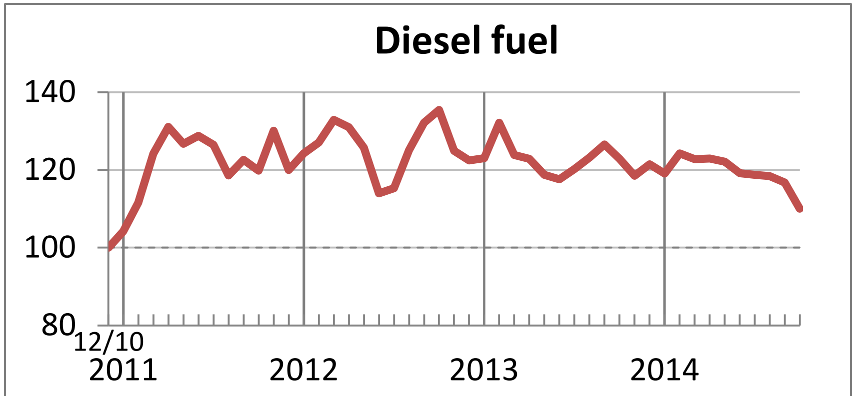
Producer price indexes for key inputs, 12/10-10/14 (Dec. 2010=100)

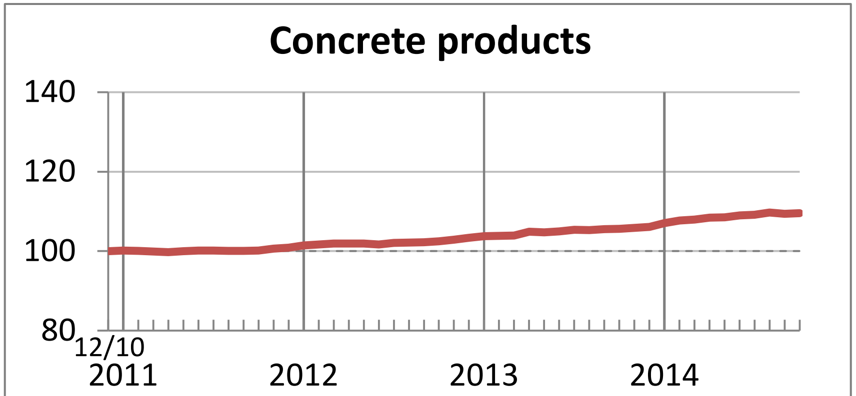


Source: Author, based on BLS producer price index reports

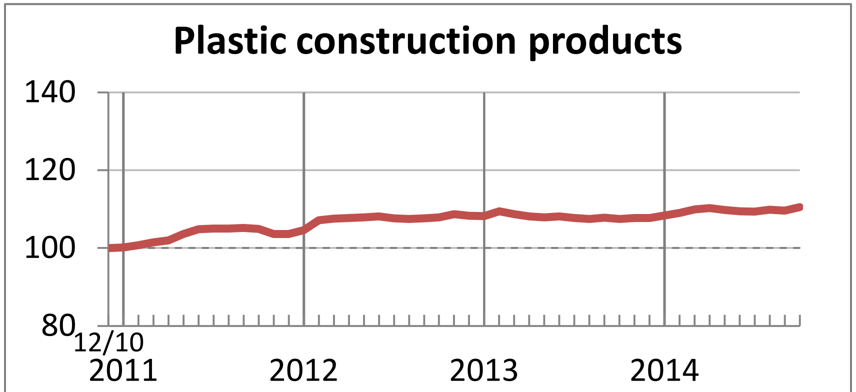
Producer price indexes for key inputs, 12/10-10/14 (Dec. 2010=100)



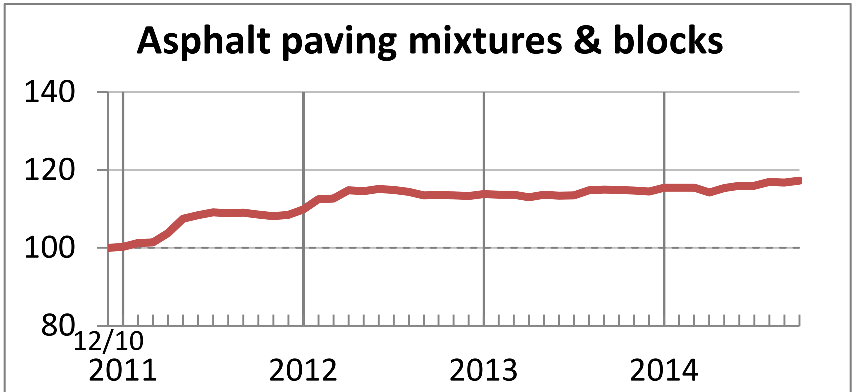
Latest 1-mo. change: -5.8%, 12-mo.: -10%



Latest 1-mo. change: 0.2%, 12-mo.: 4%



Latest 1-mo. change: 0.8%, 12-mo.: 3%



Latest 1-mo. change: 0.4%, 12-mo.: 2%

Source: Author, based on BLS producer price index reports

Best prospects for 2015

- Multifamily
- Manufacturing, esp. petrochemical, oil/gas supply
- Oil & gas fields
- Pipelines
- Warehouses
- Lodging (hotels & resorts)
- Rail
- Data centers

Source: Author

Trends: 2015-2017

- Total construction spending: +6% to +10% per year
  - less SF housing, retail; declining public spending
  - new drivers: shale-based gas & oil; Panama Canal widening; more elderly & kids, fewer young adults
- Materials costs: +1 to +3% (similar to CPI); rare spikes
- Labor costs: +2.5% to + 5%
- Labor supply: widespread shortages possible due to retirements, competition from other sectors, fewer vets

Source: Author

Summary for 2013, 2014-17

	2013 actual	2014 forecast	2015-17 ann. avg. forecast
Total spending	6%	5-7%	6-10%
Private – residential	20%	5-7%	1-10%
– nonresidential	1%	10-13%	1-10%
Public	-3%	-1 to +2%	near 0
Materials PPI	1.3%	-1 to 0.5%	1-3%; rare spikes
Employment cost index	2.0%	2-2.5%	2.5-5%

Source: 2012: Census, BLS; 2013-17: Author's ests.

AGC economic resources

(email simonsonk@agc.org)

- The Data DIGest: weekly 1-page email (subscribe at www.agc.org/datadigest)
- monthly press releases: spending; PPI; national, state, metro employment
- state and metro data, fact sheets
- website: http://www.agc.org/Economics
- webinars: 11/20, 12/4—get link via email

Data DIGest

AGC of America

THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA

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Sept. 24-Oct. 2, 2009
Vol. 9, No. 33

Construction job losses remain heavy, widespread; homebuilding rises, nonres sinks

Download the one-page Data DIGest

City-by-City Construction Employment, August 2009 and 2008

Seasonally adjusted nonfarm payroll **job losses** in September totaled 263,000, barely half the average of the last 12 months, the Bureau of Labor Statistics (BLS) reported on Friday. (Seasonal adjustment takes into account normal monthly variations in weather and numbers of work days.) *But **construction**, particularly nonresidential, continued to hemorrhage jobs. Construction lost 15% of its September 2008 jobs in the last 12 months, compared to 4% for the entire nonfarm economy. September losses totaled 51,000 in nonresidential building, specialty trade, and heavy and civil engineering construction combined, nearly the monthly average loss of 54,000 over the past 12 months. Residential building and specialty trade contractors shed a combined 13,000 jobs in September, barely a third as many as the monthly average over the 12-month span. One faintly positive sign was that **architectural and engineering services employment**, a harbinger of future demand for construction, rose for the first time in 15 months, albeit by only 500 jobs (0.04%). **Average hourly earnings** in construction tumbled 16 cents to $22.45 in September, bringing the 12-month change to 36 cents or 1.6%, compared to 2.5% for all private-sector production or nonsupervisory employees.* The overall **unemployment rate** climbed to 9.5% in September, not seasonally adjusted (9.8%, seasonally adjusted) from 6.0% a year earlier. *The **unemployment rate in construction**, 17.1%, not seasonally adjusted, again topped every other industry and was up from 9.9% a year earlier.*

For the eighth month in a row, all 372 **metro areas** had higher **unemployment rates** in August than a year earlier, BLS reported on Wednesday. (Seasonally adjusted industry and metro unemployment rates are not available.) Of the 369 areas reporting nonfarm payroll employment, 356 had year-to-year losses, 11 had gains and two were unchanged. The largest percentage gains were in Sandusky, Ohio, 2.7%; Hot Springs, Arkansas, 2.6%; Kennewick-Pasco-Richland, Washington, 2.5%; Jonesboro, Ark., 1.9%; and McAllen-Edinburg-Mission, Texas, 1.5%. *If sustained, these gains can lead to more demand for construction. AGC compiled a list of 337 areas, including divisions and subdivisions of the 34 largest metros, for which BLS provided construction employment figures (combined with mining and logging in metros where employment in these industries is small). **Construction employment** fell over the past 12 months in 324 of these locations, rose in eight and was unchanged in five. The largest 12-month percentage construction employment gains were in Columbus, Indiana, 14% (combined data); Anderson, Ind., 6% (combined); Tulsa (construction only); Longview, Wash. (combined) and Baton Rouge (construction only), 3% each. The worst construction job losses were in Reno-Sparks, Nevada, -35% (construction only); Duluth, Minnesota-Wisconsin, -33% (combined); Tucson, -31% (construction only); Wenatchee-East Wenatchee, Wash., -30% (combined); and Redding, California, -28% (combined).*

Construction in Chicago will not get a boost from the Olympics. The International Olympic Committee today awarded the 2016 Games to Rio.

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Ken Simonson, Chief Economist, Associated General Contractors of America
Phone: 703-837-5313 • Fax: 703-837-5407 Email: simonsonk@agc.org

AGC's Data DIGest

www.agc.org/cs/industry_topics/construction_economics

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PPI falls in November as diesel price plunges; mixed moves foreseen for materials costs

The **producer price index** (PPI) **for final demand** decreased 0.4%, not seasonally adjusted (-0.2%, seasonally adjusted), in November and increased 1.4% over 12 months, BLS reported today. *AGC posted an explanation and tables focusing on construction prices and costs. Final demand includes goods, services and five types of nonresidential buildings that BLS says make up 34% of total construction. There are no indexes yet for other building types, or for residential or nonbuilding construction. The PPI for final demand construction, not seasonally adjusted, rose 0.1% in November and 2.2% over 12 months. The overall **PPI for new nonresidential building construction**—a measure of the price contractors say they would charge to build a fixed set of five categories of buildings—also climbed 0.1 % for the month and 2.2% since November 2013. The PPI for new healthcare construction increased 0.1% and 1.8%, respectively; industrial buildings, 0.2 % and 2.1%; offices, -0.2% and 2.1%; warehouses, -0.1% and 2.2%; and school buildings, 0.1% and 2.2%. **PPIs for new, repair and maintenance work** on nonresidential buildings by plumbing contractors rose 0.2% and 2.4%; concrete contractors, 0 and 1.5%; electrical contractors, -0.1% and 1.0%; and roofers, -0.2% and 4.8%. The **PPI for inputs to construction**—an average of the cost of all materials used in construction plus items consumed by contractors, such as diesel fuel—dropped 0.8% in November and increased 0.6% over 12 months. Materials with notable one- or 12-month price changes included diesel, -4.2% and -11%, respectively; copper and brass mill shapes, 0 and -3.0%; cement, 0 and 5.9%; aluminum mill shapes, 0.5% and 9.3%; and gypsum products, 0.3% and 11%.*

***Prices for construction inputs** have shown mixed patterns since the PPI data were collected in mid-November. The Energy Information Administration reported on Monday that the average retail price of on-highway diesel fuel fell 14 cents in the previous four weeks. The price of Brent crude futures, a major determinant of near-term diesel futures, has fallen an additional $6 per barrel (14 cents per gallon) in the past week. But contractors have forwarded to AGC copies of letters from suppliers announcing increases for ready-mix concrete (D.C. area, effective January 1, received November 26) and "12% on all clear tempered glass as well as a 5% increase in the cost of fabrication" (Denver area, received December 11). Readers are invited to send reports of price increases or decreases to AGC Chief Economist Ken Simonson at simonsonk@agc.org. On November 24, investment analyst Thompson Research Group wrote, "we see pricing momentum building [for aggregate] as we head into 2015, including in many markets that have yet to see any meaningful increase since the downturn….In addition, $10-$20/ton cement prices are being implemented in the cement industry in early 2015."*

*The **value of nonresidential construction starts** rose 4.9% from November 2013 to November 2014 and 7.4% year-to-date for the first 11 months of 2014 combined compared with the same period last year, CMD (formerly Reed Construction Data) reported on Thursday, based on data it collected. Nonresidential building starts increased 6.9% year-over-year and 5.9% year-to-date; institutional buildings increased 17% and 8.4%, respectively, while commercial building starts plunged 16% year-over-year but increased 2.8% year-to-date. Heavy engineering starts climbed 1.8% and 9.9%, led by increases of 9.0% and 17% for road/highway construction.*

Seasonally adjusted results from Manpower Group's latest survey of 18,000 U.S. employers, released on Tuesday, "suggest that employers expect **hiring intentions** to remain relatively stable during Quarter 1 2015 compared to Quarter 4 2014 and to slightly increase compared to one year ago at this time….employers have a positive outlook in all 13 industry sectors included in the survey…*When the industry sector data is compared quarter-over-quarter, employers in the [construction sector] expect the hiring pace to slightly increase….Among Midwest employers, [a] considerable increase is anticipated among employers in the construction [sector. In the West,] construction employers plan to moderately decrease hiring," whereas construction employers in the Northeast and South expect to moderately increase hiring.* Combining responses from all sectors, "all 100 of the largest Metropolitan Statistical Areas (MSA) in the United States report positive Net Employment Outlooks," led by Cape Coral, Fla.; McAllen, Texas; Deltona, Fla. and Grand Rapids, Mich.

The Census Bureau released **projections of population** by age group for 2015-2060 on Wednesday. *Population growth and its age distribution have major implications for numerous types of construction. Census projects that the population growth will slow continuously from 2.6 million (0.8%) per year in 2015 through 2023 to 1.9 million (0.46%) in 2057-2060, implying a diminishing demand for new housing. The primary-school age (5 to13 years old) population is projected to be flat from 2015 to 2020, and the high-school age (14 to 17 years old) population is projected to vary by less than 1% through 2030, suggesting much less demand for school construction than in the past several decades. The number of college-age and new workforce entrants (18 to 24 years old) is projected to remain below its 2015 level until 2040, which suggests less higher-education construction and also challenges for contractors trying to replace retiring workers.*

*Census released today the first detailed industry results from the 2012 **Census of Construction**, with additional releases planned through February. The 12 sets of tables released today provide data on framing, glass and glazing, siding, tile and terrazzo, and finish carpentry contractors, by state, project type, expense categories and other characteristics.*

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THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA
Quality People. Quality Projects.

The Economic Impact of Construction in the United States and Nevada

Economic Impact of Investment in Nonresidential Construction:

- An additional $1 billion invested in nonresidential construction would add $3.4 billion to Gross Domestic Product (GDP), $1.1 billion to personal earnings and create or sustain 28,500 jobs.
  - About one-third (9,700) of these jobs would be on-site construction jobs.
  - About one-sixth (4,600) of the jobs would be indirect jobs from supplying construction materials and services. Most jobs would be in-state, depending on the project and the mix of in-state suppliers.
  - About half (14,300) of the jobs would be induced jobs created when the construction and supplier workers and owners spend their additional incomes. These jobs would be a mix of in-state and out-of-state jobs. Conversely, investments elsewhere would support some indirect and induced jobs in the state.

Nonresidential Construction Spending:

- Nonresidential spending in the U.S. in 2013 totaled $569 billion ($305 billion private, $264 billion public).
- Private nonresidential spending in Nevada totaled $1.1 billion in 2012 and $1.5 billion in 2013. (Public spending is not available by state.)
- Nonresidential starts in Nevada totaled $1.3 billion in 2013, according to Reed Construction Data.

Construction Employment (Seasonally Adjusted):

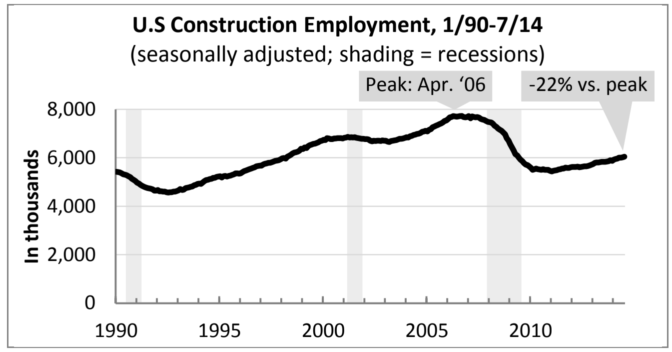
- Construction (residential + nonresidential) employed 6.0 million workers in July 2014, an increase of 218,000 (3.7%) from July 2013 and a decrease of 1.7 million (22%) from April 2006, when U.S. construction employment peaked.
- Construction employment in Nevada in July totaled 63,500, an increase of 13.4% from July 2013 and a decrease of 57% from the state's peak in June 2006.

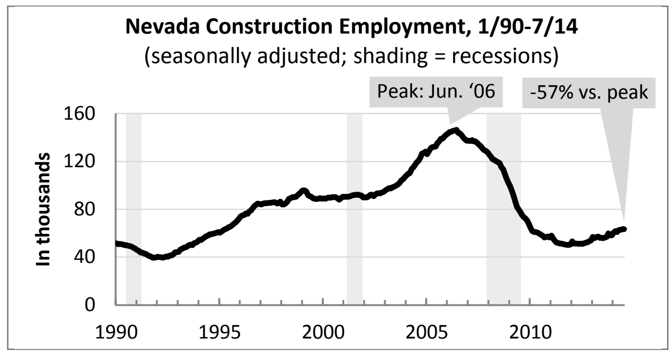
Construction Industry Pay:

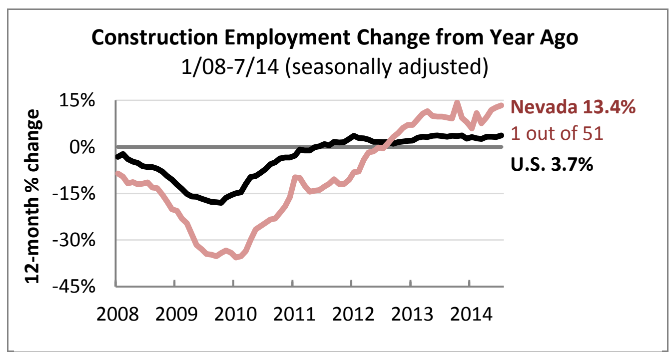
- In 2013, annual pay of all construction workers in the United States averaged $53,200, 7% more than the average for all private sector employees.
- Construction workers' pay in Nevada averaged $51,400, 20% more than all private sector employees in the state.

Small Business:

- The United States had 652,900 construction firms in 2012, of which 92% employed fewer than 20 workers.
- Nevada had 4,500 construction firms in 2012, of which 87% were small (<20 employees).







Empl. Change by Metro (not seasonally adjusted)		Rank
Metro area or division	7/13-7/14	(out of 339)
Statewide	11%	
Las Vegas-Paradise	5%	117
Reno-Sparks	4%	140

Source: Ken Simonson, Chief Economist, AGC of America, simonsonk@agc.org, from Prof. Stephen Fuller, George Mason University (investment); Census Bureau (spending); Reed Construction Data (starts); Bureau of Labor Statistics (jobs, pay); Small Business Administration (small business)

September 18, 2014