



Industry Focus. Powerful Results.™

FMI's Construction Outlook

First Quarter Report



NIA's 63rd Annual Convention
April 18-20, 2018

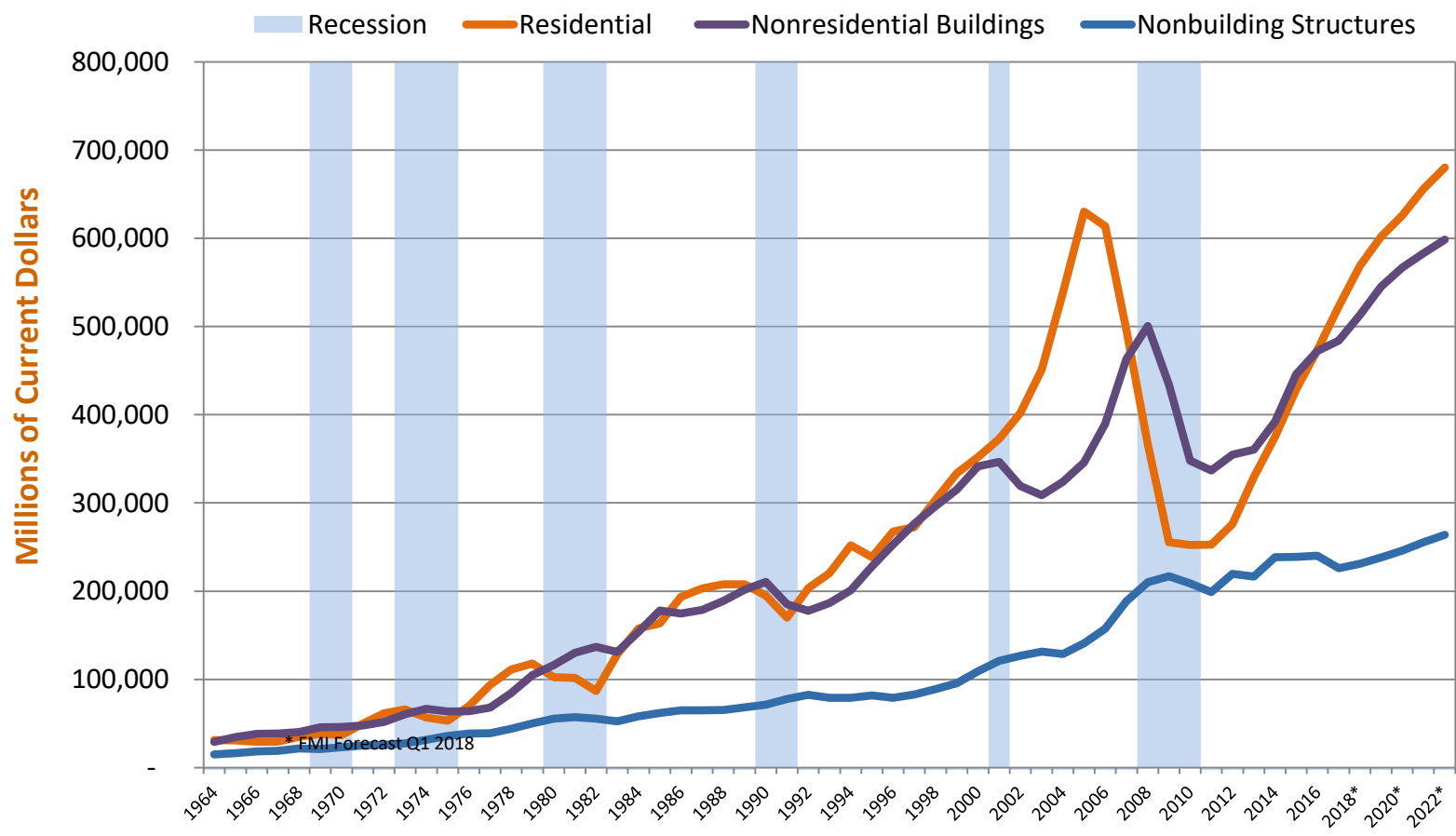
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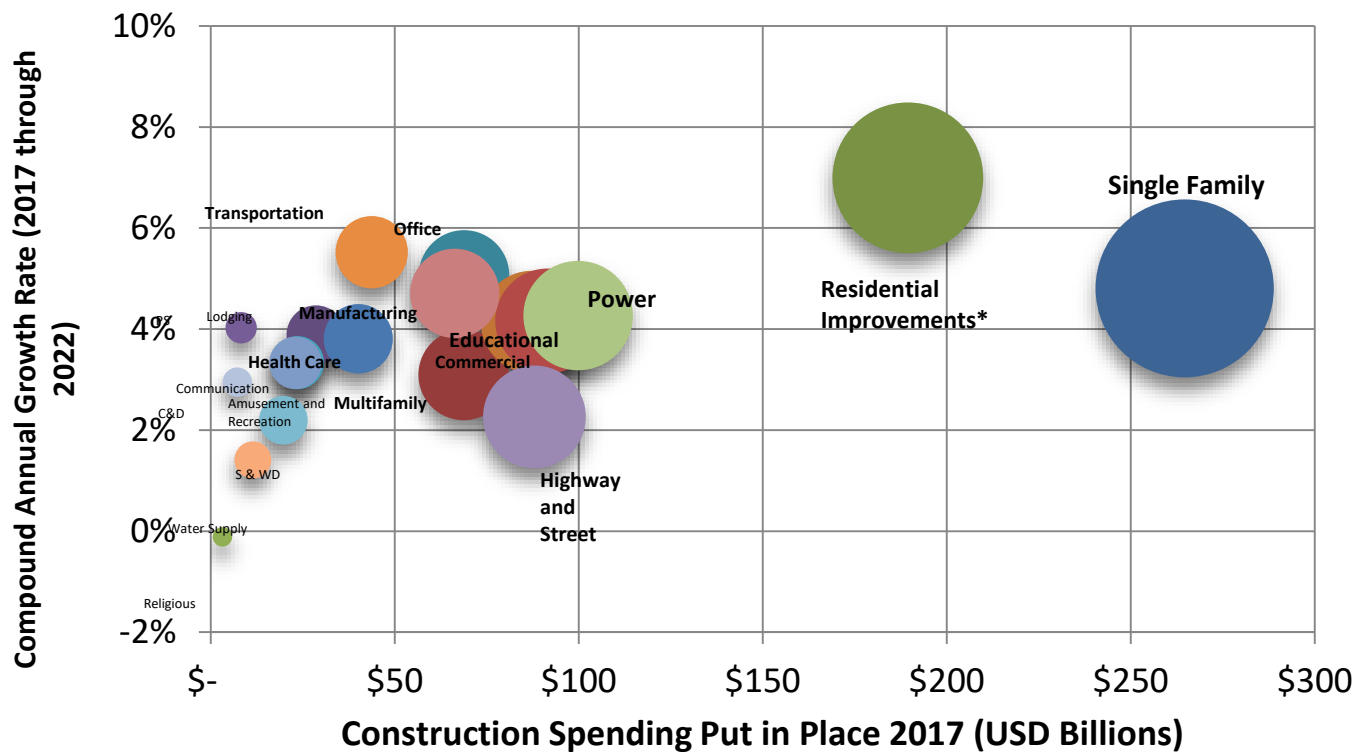
U.S. Construction Forecast





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Segment Analysis



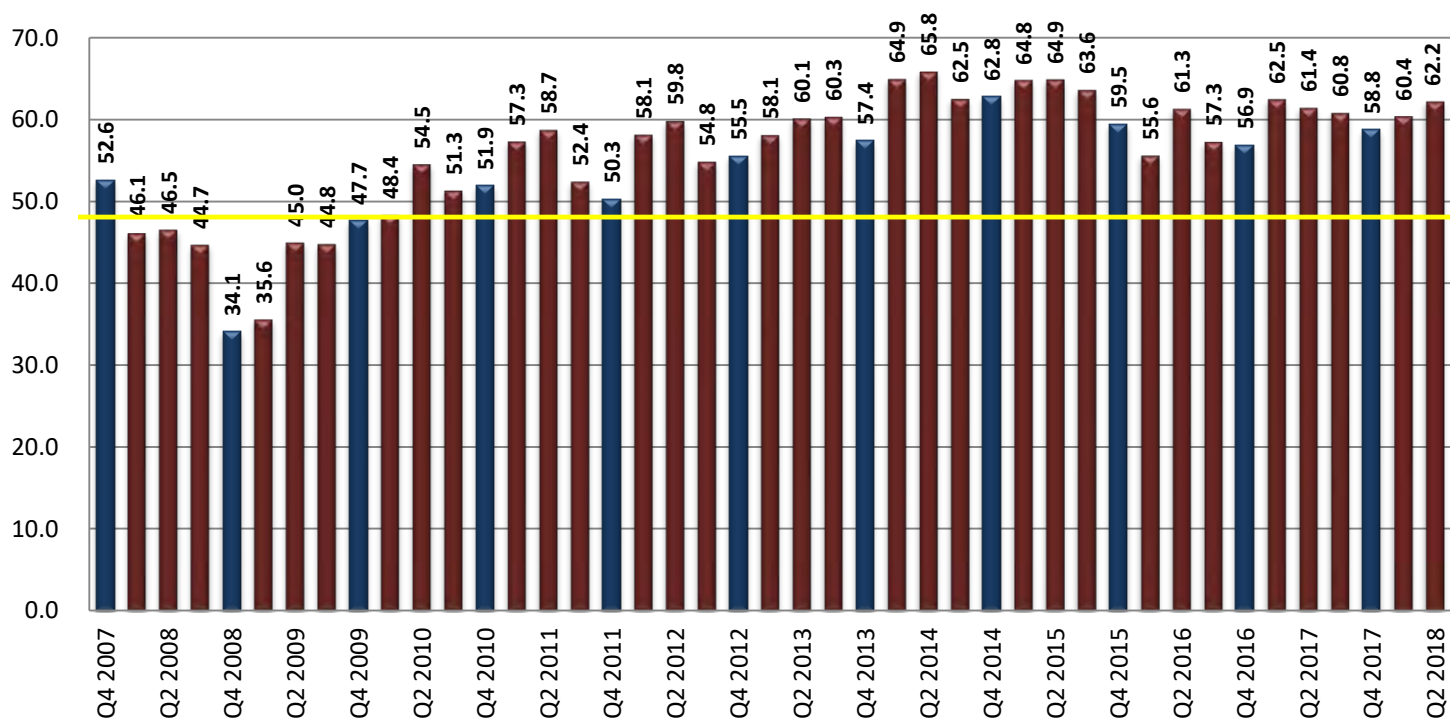
*Improvements include additions, alterations and major replacements. It does not include maintenance and repairs.



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FMI's Nonresidential Construction Index

NRCI Scores Since Inception—Q4 2010 to Q2 2018
(Scores above 50 indicate expansion, below 50 contraction.)

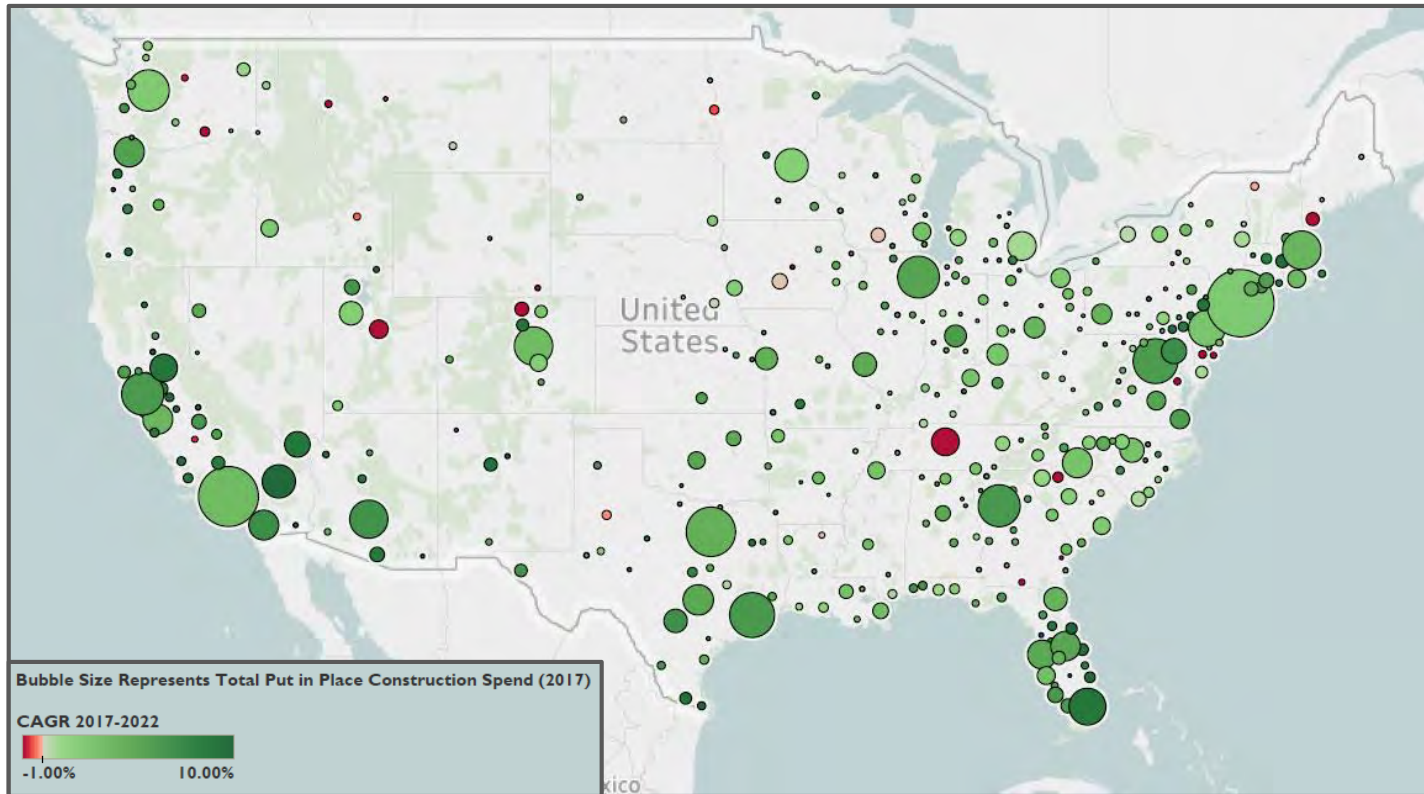


Source: FMI Nonresidential Construction Index Q2 2018



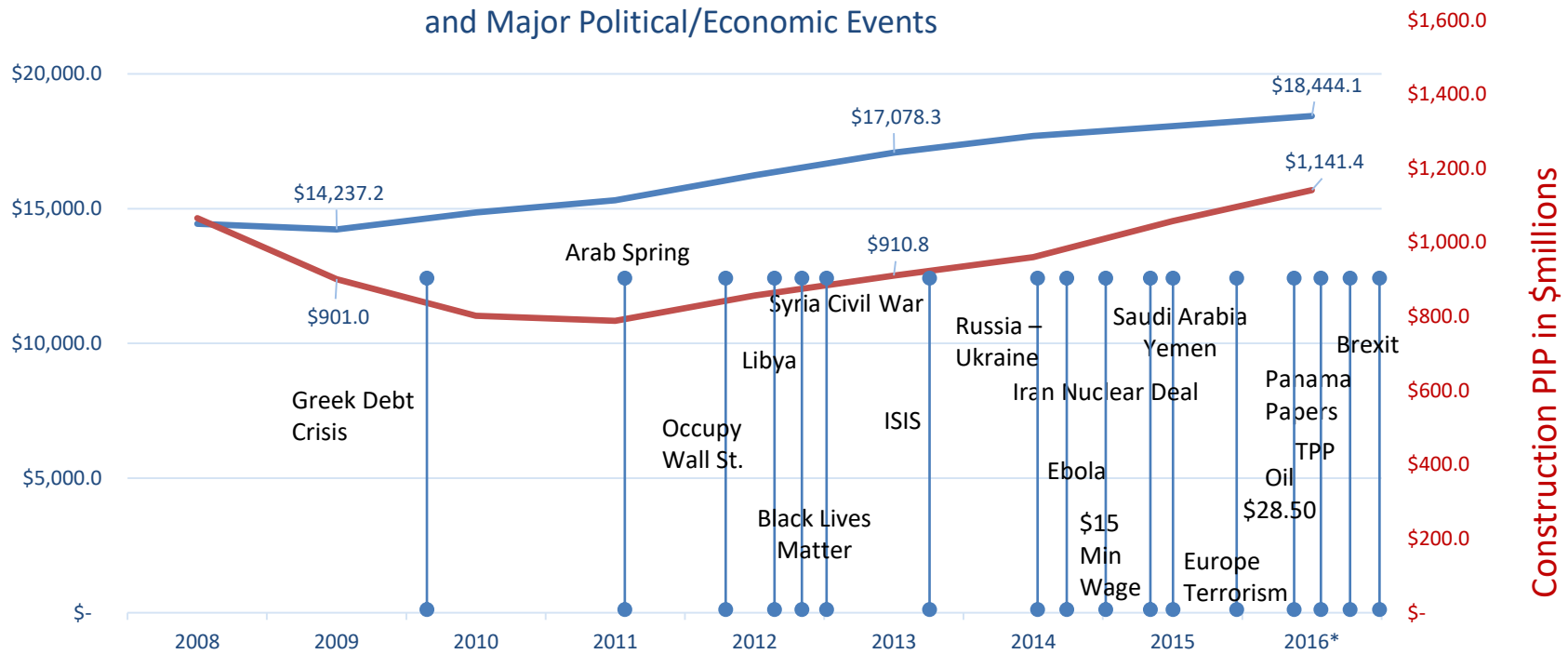
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Based on Q1 2018 CPIP Forecast



A Persistent Recovery Amidst Global Chaos

U.S. GDP and Construction Spending and Major Political/Economic Events

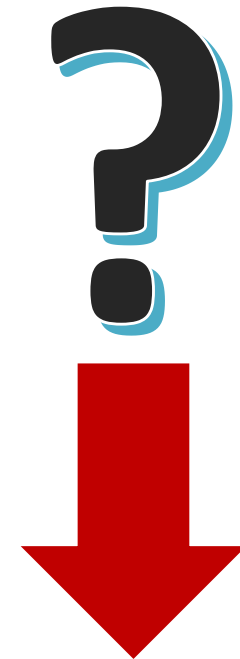




Anticipating the Next U.S. Recession and E&C Downturn

Perhaps some combination of the following

- Political dysfunction on the federal and state level
- Continuing major domestic or European terror events
- Rising energy prices and core inflation
- Premature/over action by the Fed on interest rates
- Commercial Real Estate Bubble/Debt
- Another European debt crisis



FMI's best "guess" is, barring an unpredictable event, a general recession followed by a relatively mild E&C industry downturn more than likely within next two years and most likely in second half of 2019 or first half of 2020.



What to do about it?

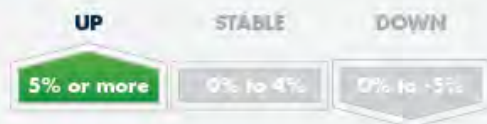
1. Attract, engage and develop talent
2. Adopt technology to gain advantage
3. Build business development capability to shift
4. Become operationally excellent
5. Collect and understand data



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Construction Segments Summary

2018 Forecast Growth Rates 2018/2017 Comparison



Up

- Single-family
- Improvements
- Office
- Commercial
- Health Care
- Education
- Public Safety
- Amusement and Recreation
- Transportation
- Communication



Stable

- Multifamily
- Lodging
- Manufacturing
- Power
- Highway and Street



Down

- Religious
- Sewage and Waste Disposal
- Water Supply
- Conservation and Development

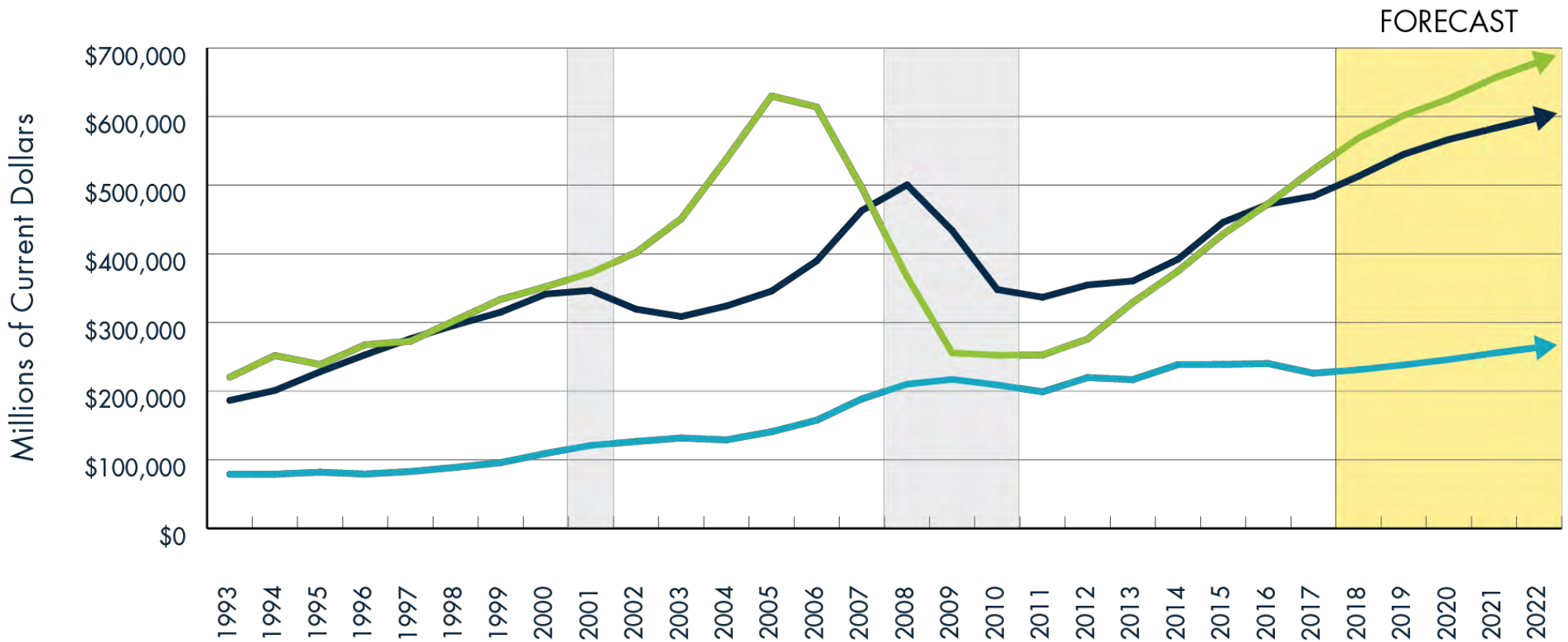


Total Construction Put in Place Estimated for the U.S.

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Q1 2018 Based on Q4 2017 Actuals

■ Residential ■ Nonresidential Buildings ■ Nonbuilding Structures

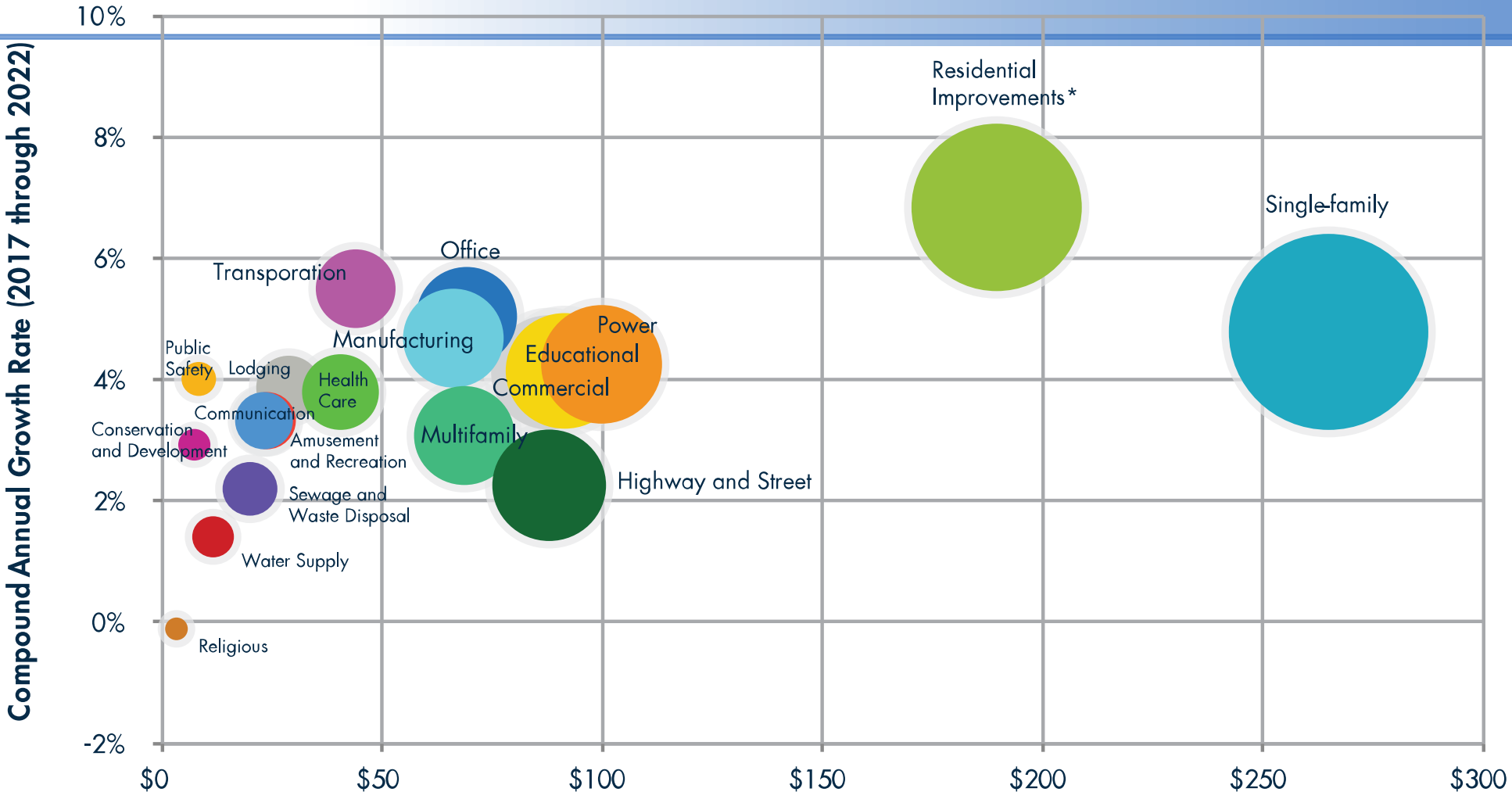




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Total Construction Spending Put in Place 2017 and Forecast Growth (2017-2022 CAGR) by Construction Segment

Q1 2018 Based on Q4 2017 Actuals



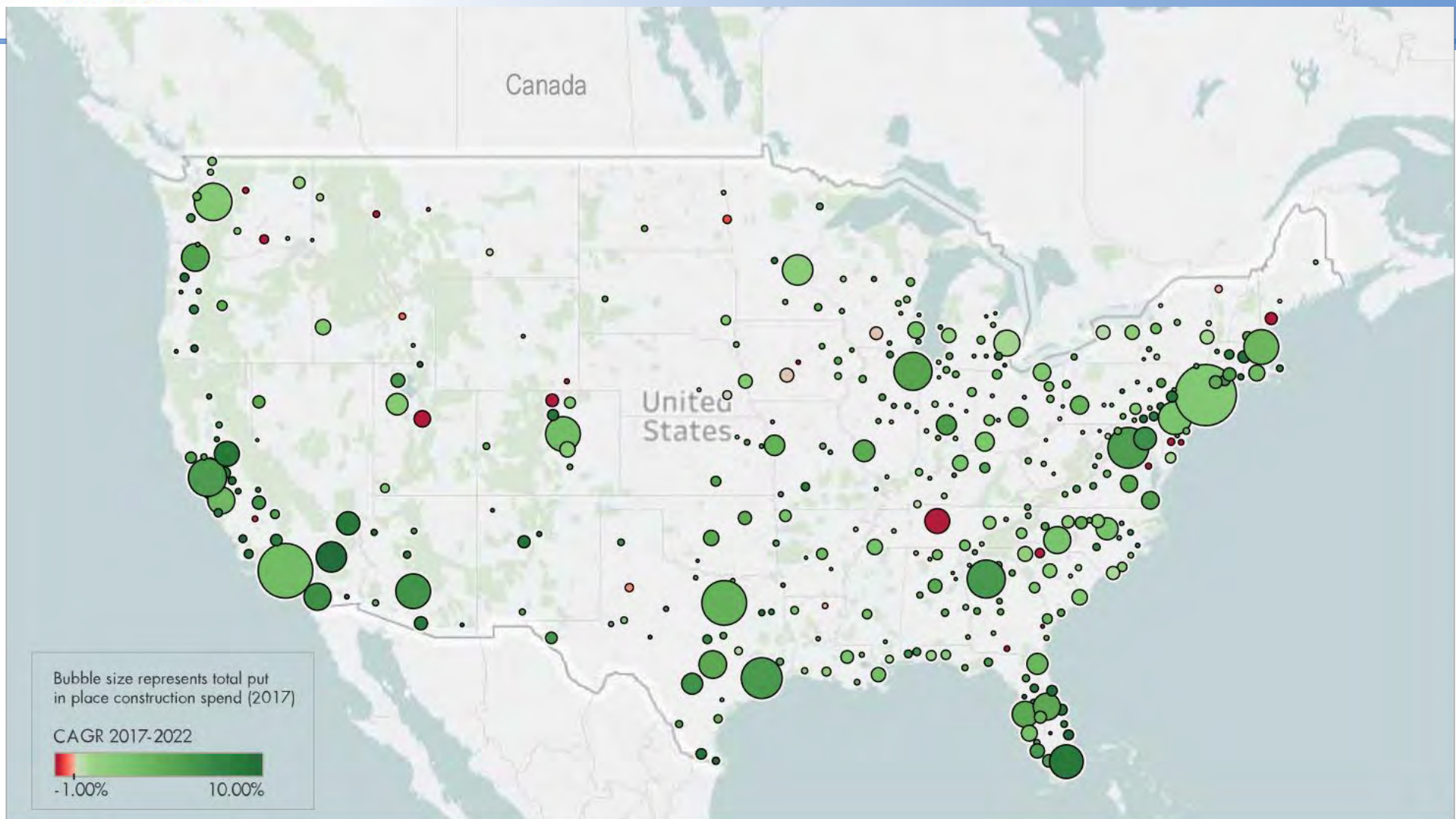
Construction Spending Put in Place 2017 (USD Billions)

* Residential improvements include additions, alterations and major replacements. It does not include maintenance and repairs.



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Total Construction Spending Put in Place 2017 and Forecast Growth (2017-2022 CAGR) by Metropolitan Statistical Area Q1 2018 Based on Q4 2017 Actuals



Residential Construction
Put in Place

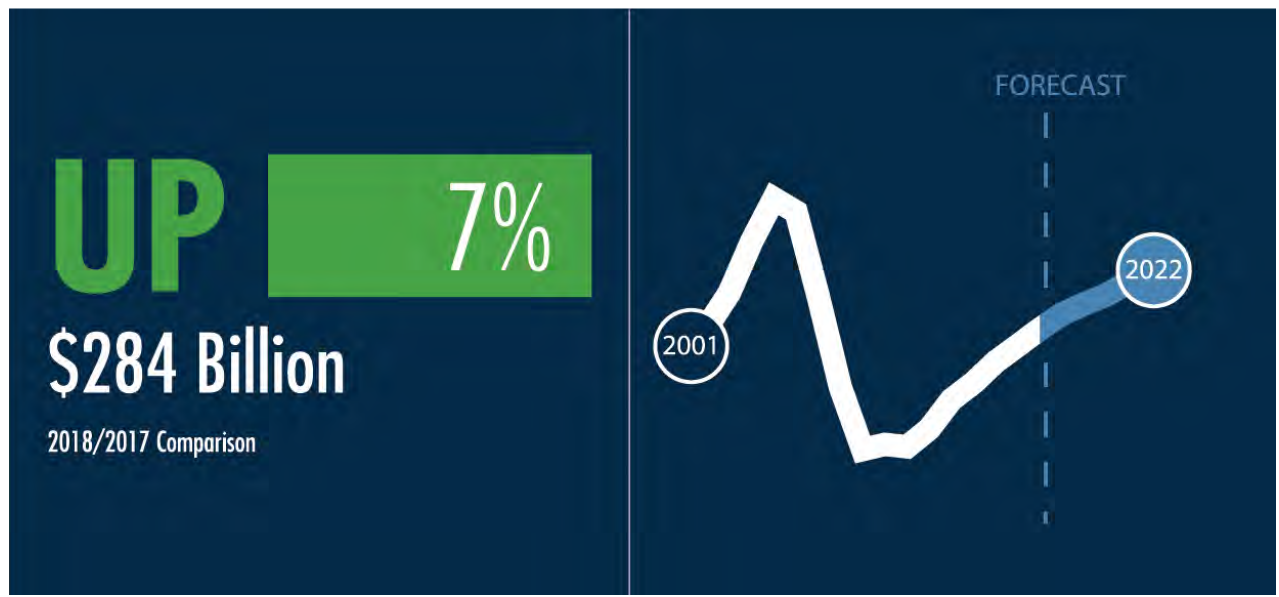


Single-Family Residential

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Q1 2018 Based on Q4 2017 Actuals

- Low unemployment rates, wage improvements, inventories, tax restructure and increasing interest rates are all driving demand
- Buyers expected to depart multifamily living for the benefits of single-family homes



Drivers: unemployment rate, core CPI, income, mortgage rate, home prices, housing starts, housing permits



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Multifamily Residential

Q1 2018 Based on Q4 2017 Actuals

- Single-family home supply, location and pricing encourage buyers to consider multifamily options
- Vacancy rates remain low, even with the considerable supply increases seen in 2016 and 2017



Drivers: unemployment rate, core CPI, income, mortgage rate, home prices, housing starts, housing permits

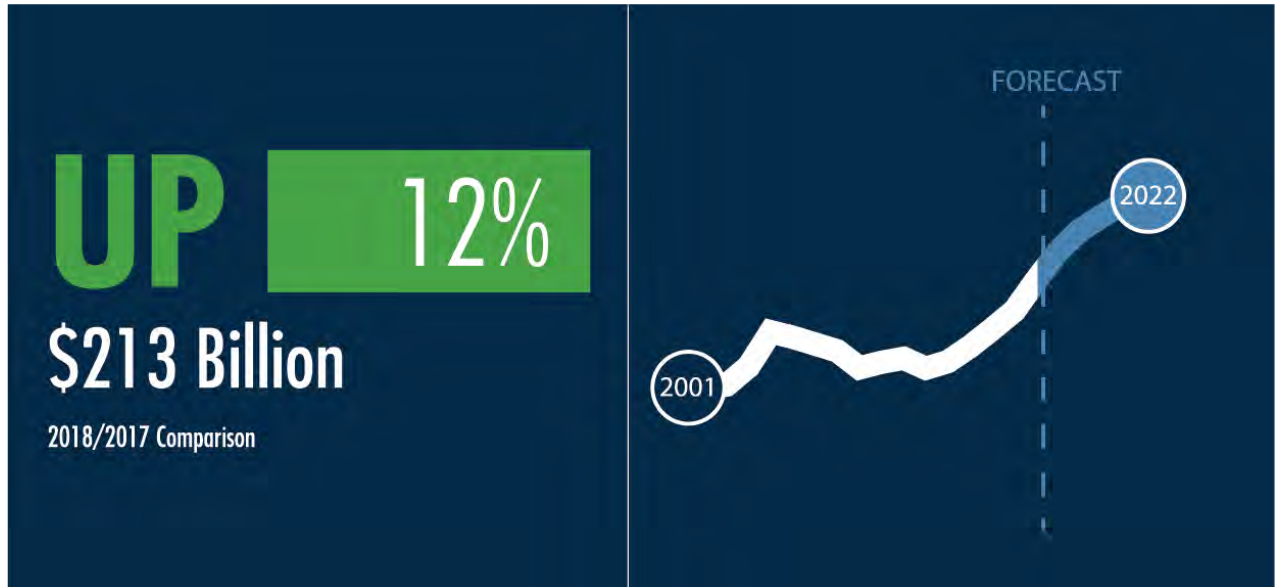


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Improvements

Q1 2018 Based on Q4 2017 Actuals

- Constrained (and rising) home sales are driving above-average improvements
- Low unemployment, increasing wages and higher home prices further strengthen demand



Drivers: unemployment rate, core CPI, income, mortgage rate, home prices, housing starts, housing permits

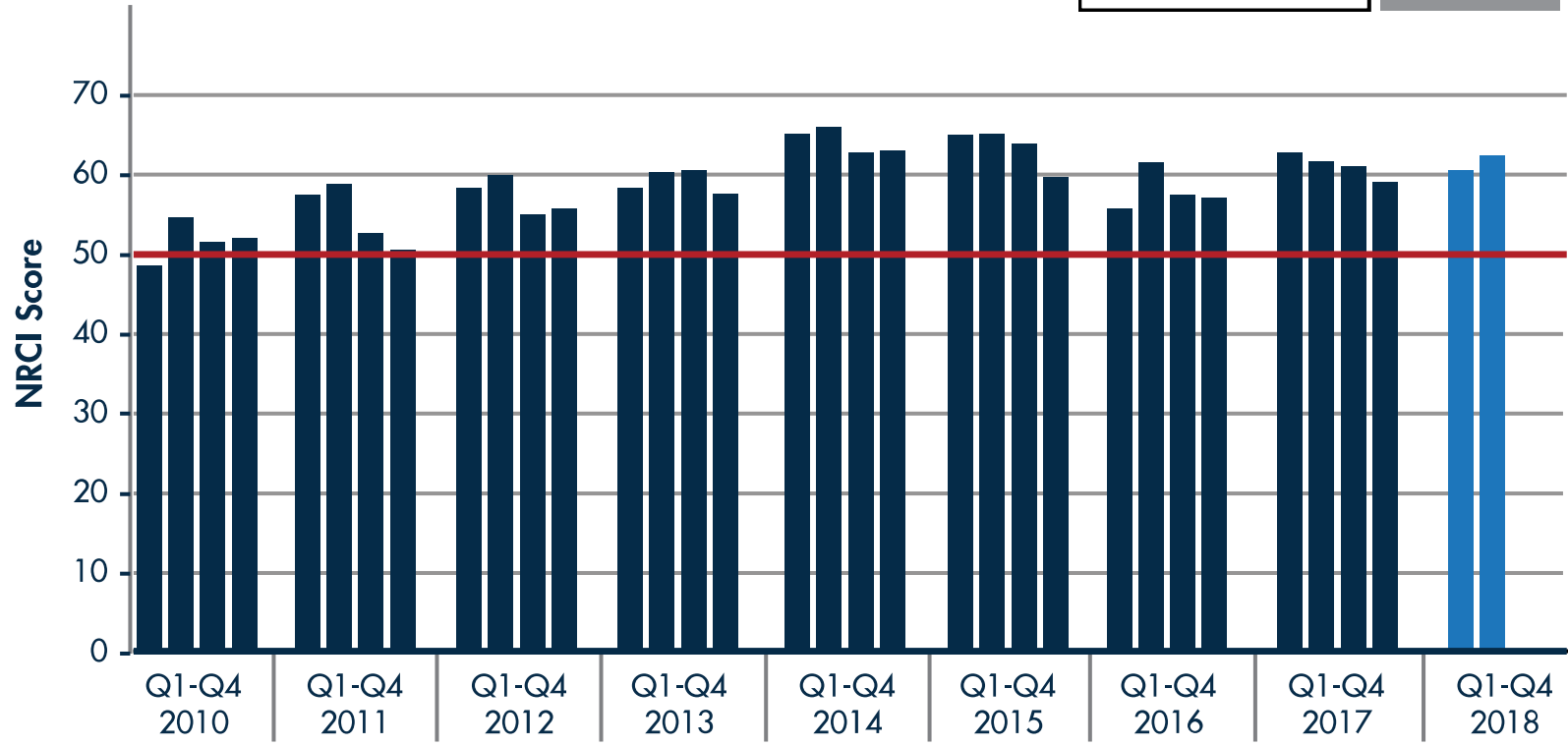


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Nonresidential Construction Index (NRCI) Score Since Inception Q1 2010 to Q2 2018

(Scores above 50 indicate expansion; scores below 50 indicate contraction)

Current NRCI Reading for Q2 2018	62.2
Previous Reading	60.4



Nonresidential Construction
Put in Place



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Lodging

Q1 2018 Based on Q4 2017 Actuals

- Supply outpacing demand, causing increasing vacancy rates
- Investment growth continues to moderate into 2018 and 2019



Drivers: occupancy rate, RevPAR, average daily rate, room starts

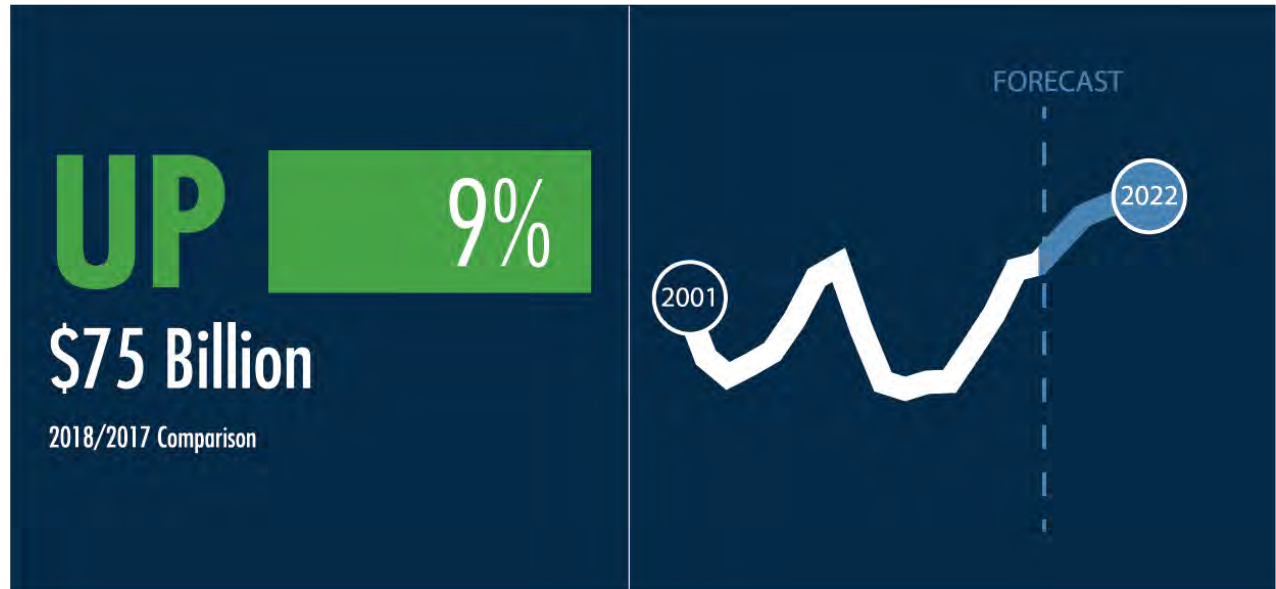


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Office

Q1 2018 Based on Q4 2017 Actuals

- Reduced corporate tax rates increase investment through 2018
- Increased remote workers and a slowdown in high-tech offices remain drawbacks



Drivers: office vacancy rate, unemployment rate



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Commercial

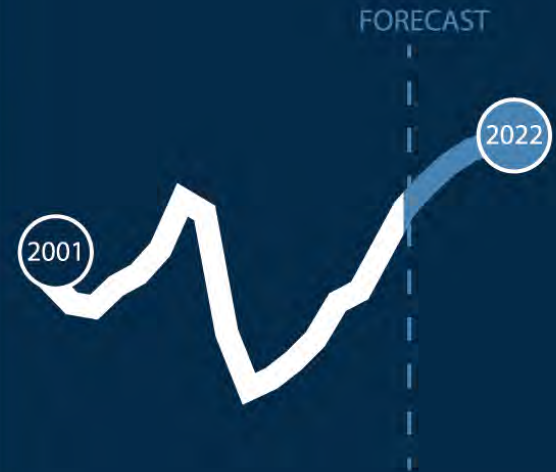
Q1 2018 Based on Q4 2017 Actuals

- The ongoing rise in e-commerce
- Increased warehouse and distribution center spending
- Increased profits due to tax reform

UP **7%**

\$94 Billion

2018/2017 Comparison



Drivers: retail sales, CPI, income, home prices, housing starts, housing permits



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Health Care

Q1 2018 Based on Q4 2017 Actuals

- Repeal of the Affordable Care Act increases number of uninsured, cutting into industry profitability
- Shift away from new, large-scale hospitals with emphasis on expansion and outpatient projects



Drivers: population change younger than age 18, population change ages 18-24, stock market, government spending, nonresidential structure investment

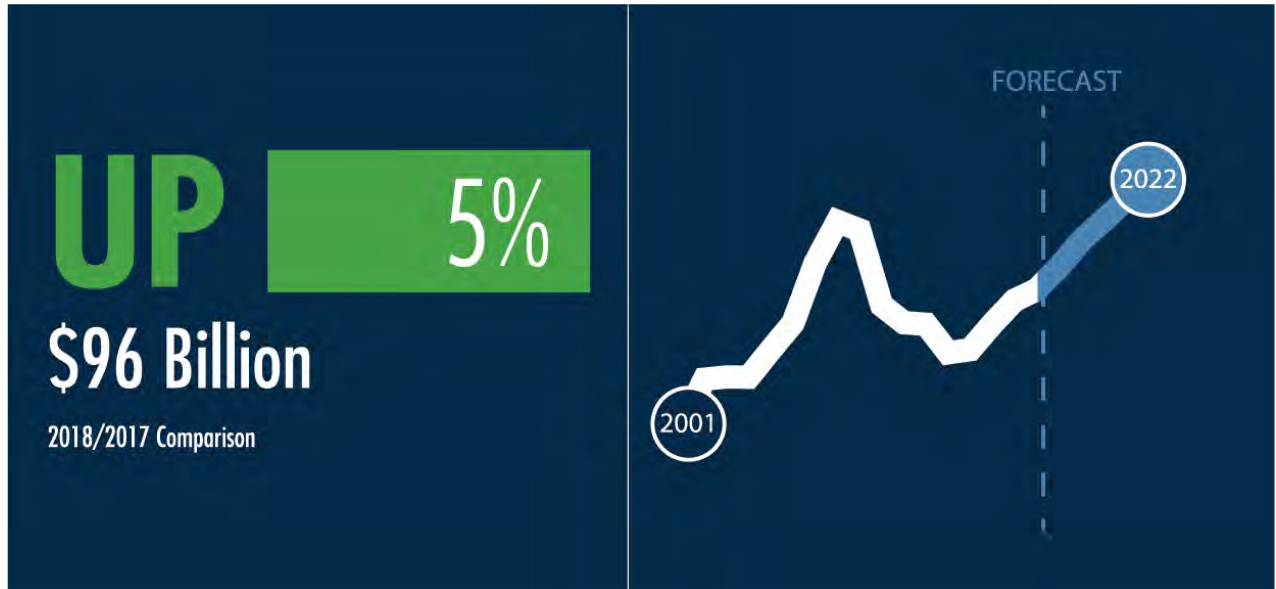


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Educational

Q1 2018 Based on Q4 2017 Actuals

- Short-term growth driven by public K-12 spending
- K-12 enrollments increasing in more than half of the states
- Increased use of flexible space to accommodate year-round schools



Drivers: population change younger than age 18, population change ages 18-24, stock market, government spending, nonresidential structure investment



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Religious

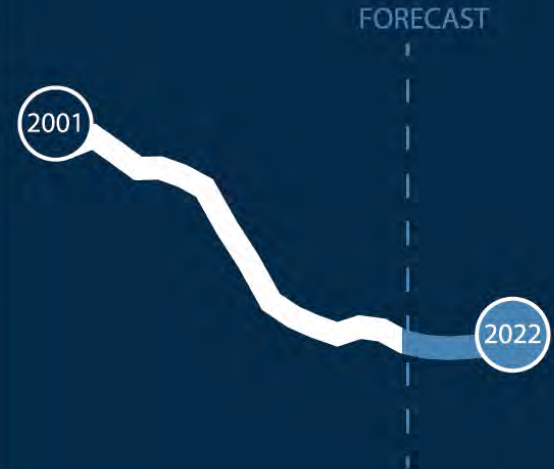
Q1 2018 Based on Q4 2017 Actuals

- Donations expected to decline due to new cap on state and local deductions
- Ongoing improved/creative space utilization at nontraditional facilities

DWN **-4%**

\$3 Billion

2018/2017 Comparison



Drivers: GDP, population, income, personal savings



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Public Safety

Q1 2018 Based on Q4 2017 Actuals

- State and local governments face significant fiscal constraints
- High-growth metropolitans need updated and/or new facilities
- Overcrowding in correctional facilities



Drivers: population, government spending, incarceration rate, nonresidential structure investment



Amusement and Recreation

Q1 2018 Based on Q4 2017 Actuals

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- Several big-budget and high-profile projects are underway (e.g., sports stadiums)
- Casino construction is increasing alongside efforts to boost state and local tax revenues



Drivers: income, personal savings rate, unemployment rate, employment



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Transportation

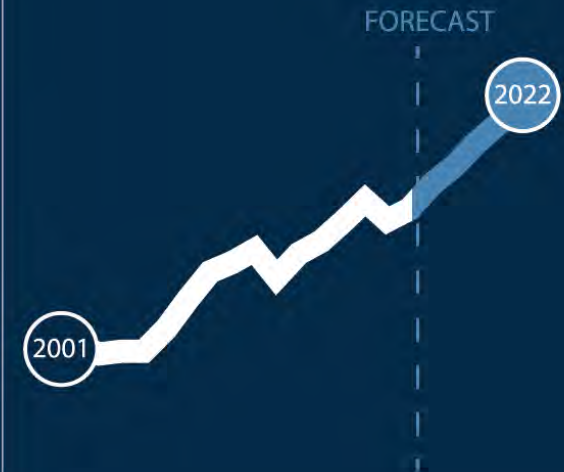
Q1 2018 Based on Q4 2017 Actuals

- Significant airport investment is underway and in planning
- Repair work underway at hurricane-damaged ports

UP **7%**

\$47 Billion

2018/2017 Comparison



Drivers: population, government spending, transportation funding



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Communication

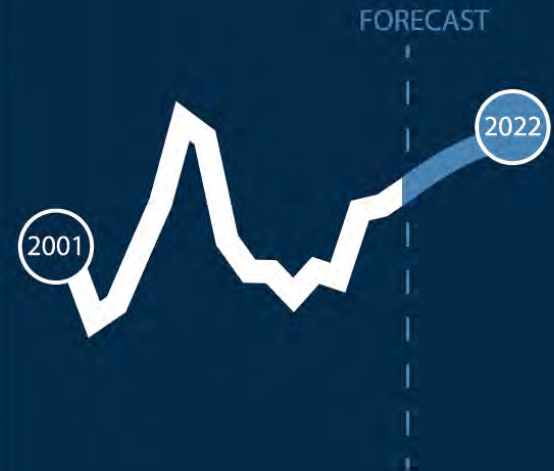
Q1 2018 Based on Q4 2017 Actuals

- Demand for bandwidth (alongside technology innovation) is increasing
- Connectivity is becoming a requirement for economic activity and growth (e.g., HQ relocations, data and distribution centers, etc.)

UP **5%**

\$24 Billion

2018/2017 Comparison



Drivers: population, security/regulation standards, private investment, innovation/technology investment



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Manufacturing

Q1 2018 Based on Q4 2017 Actuals

- Tax overhaul and new tariffs create several considerations for manufacturers; pros and cons vary by industry
- Manufacturing capacity utilization rates remain low



Drivers: PMI, industrial production, capacity utilization, durable goods orders, manufacturing inventories

Nonbuilding Structures
Construction Put in Place



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Power

Q1 2018 Based on Q4 2017 Actuals

- Spending continues in electric and gas transmission and distribution infrastructure
- Natural gas-fired power plants are the primary source of new utility-scale capacity
- New tariffs potentially handicap solar investments



Drivers: population, industrial production, government spending



Highway and Street

Q1 2018 Based on Q4 2017 Actuals

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- Federal funding is expected to remain flat
- States are successfully passing increased gas taxes and user fees
- Rising interest rates could stall public-private-partnership opportunities



Drivers: population, government spending, nonresidential structure investment

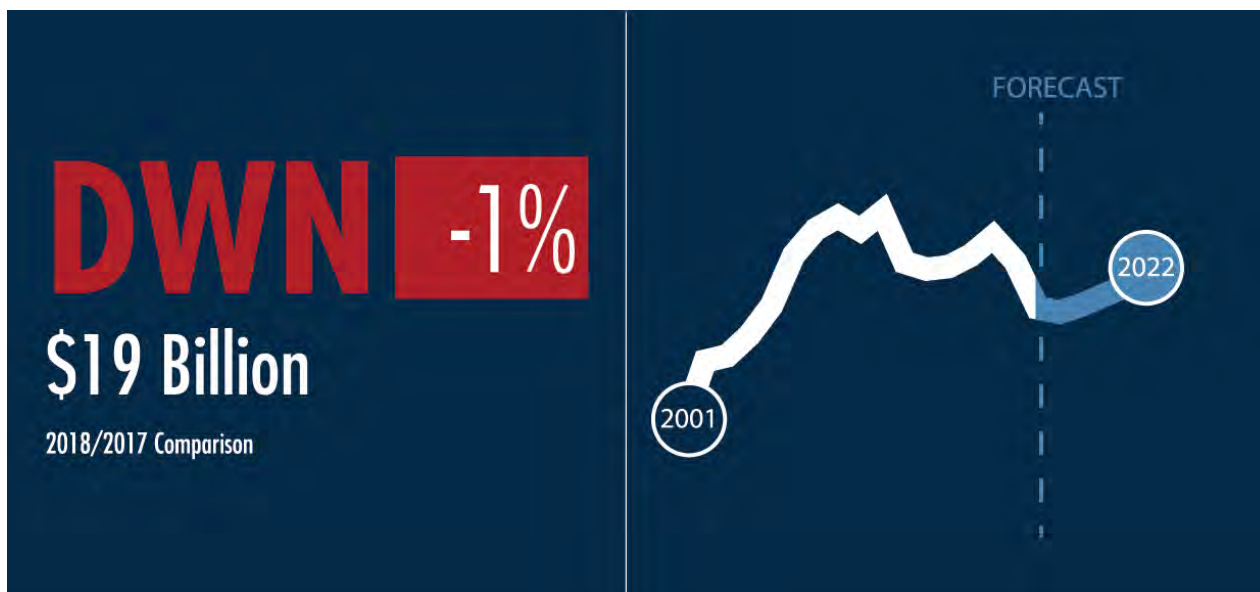


Sewage and Waste Disposal

Q1 2018 Based on Q4 2017 Actuals

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- Limited resources to plan, build, maintain or improve infrastructure
- Investments will be directed towards compliance-related needs
- Residential construction will drive and support demand/needs



Drivers: population, industrial production, government spending



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Water Supply

Q1 2018 Based on Q4 2017 Actuals

- Similar to sewage and waste disposal, funding and resources are severely limited
- Technology advancements help meet high-capacity industrial and residential needs



Drivers: population, industrial production, government spending



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Conservation and Development

Q1 2018 Based on Q4 2017 Actuals

- Federal budgets continue to drag on conservation and development spending
- Hurricane cleanup in Texas and Florida is expected to boost investment levels through 2019



Drivers: population, government spending



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About FMI

For over 60 years, FMI has been the leading **management consulting and investment banking** firm dedicated exclusively to **engineering and construction, infrastructure and the built environment**.

FMI serves all sectors of the industry as a trusted advisor. More than six decades of context, connections and insights lead to transformational outcomes for our clients and the industry.

Sector Expertise

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- General Contractors/CM
- Heavy Civil
- Industrial
- Specialty Trades
- Utility T&D
- Cleantech and Energy Services
- Construction Materials
- Building Products
- Oil and Gas
- Private Equity
- Owners