



2015

FMI's Construction Outlook

Second Quarter Report



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Second Quarter 2015 Construction Outlook

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SECOND QUARTER 2015 CONSTRUCTION OUTLOOK

Face it, “The construction industry is just not that sexy.” Construction is not about the latest smartphone or tablet; it isn’t about electric cars, haute couture or high-tech robotics — correct that, robotics is even finding its way into construction these days. The idea that construction isn’t sexy is a comment recently heard in conversation. It is not the first time we have heard it, and probably many in the construction industry have heard it too. Often it is meant in the sense that the industry is not that attractive to young people looking for careers similar to the following quote from Andy Patron, principal, FMI:

The reason considering a career in construction seems unconventional, especially to Generation Y, also known as millennials, is that construction has a reputation for being a dirty, dangerous, cyclical, low-tech, dead-end, low-paying job. The reputation is not entirely undeserved, but it is also outdated. The construction industry has changed and continues to change. (“Recovering the Lost Generation for the Construction Industry’s Future,” FMI)

COMMERCIAL CONSTRUCTION WILL GROW 13% IN 2015 TO \$64,999 BILLION THEN SLOW TO 7% GROWTH IN 2016.

either. Certainly, we can’t compete with the announcement of the next iPhone tricks or the upcoming release of Windows 10. Look at all the publicity and money spent to hype these “events.” Where does the construction industry even come close? Yes, there is a program on PBS called “Super Skyscrapers,” but who watches PBS anymore? For those who do, it is a great show and does give an idea of what it really takes to build iconic, tall buildings. The skill, the risk, the knowledge and the challenge are all there. The program can even get quite tense when workers are installing a large piece of glass curtain wall 40 stories high in a windstorm. These are the real ironmen and-women.

The statistics in our quarterly “Outlook” may not help bolster a more appealing or sexy view of the construction industry

Like the center on a football team or a rusted bolt holding up a bridge, the importance of these positions is not really appreciated until they fail. Moreover, this is a problem for favorable

LIKE THE CENTER ON A FOOTBALL TEAM OR A RUSTED BOLT HOLDING UP A BRIDGE, THE IMPORTANCE OF THESE POSITIONS IS NOT REALLY APPRECIATED UNTIL THEY FAIL.

publicity in the construction industry. Not sexy? Not hot or interesting? Consider this: Our forecast calls for a return to over a trillion dollars for construction put in place in 2015, and that number doesn’t consider all the other related suppliers and advisors to the industry. Construction put in place represents nearly 7% of GDP at this time.

The cold statistics presented below are just representations of larger stories, many jobs and talented people with skills and degrees who design and build structures that are represented in how much is being spent on construction for education, health care, water systems, department stores, roads and bridges. This may not be sexy to some, but it sure is important to many people making a living and finding careers in construction. You may have heard that everything is going to the “cloud” these days. Construction even builds the foundation and data centers that house the “clouds.” If the construction industry is not seen as sexy or attractive, it is the construction industry’s fault for not promoting itself enough or in the right way as well as the onlooker’s lack of ability to see it. We have been trained by the flashy media to chase the next shiny thing; we need it and we want it “now.” Construction may not be sexy, but it can be fascinating. There are still some people that spend time watching buildings rise through portholes in safety barriers. Then, there are those millions of people who get the experience firsthand and build it, over a trillion dollars of construction each year in the United States.

Construction Forecast

We have moderated our forecast from the first quarter somewhat from an expected 8% growth rate in 2015 to a more modest 5% for a total of \$1.012 billion. That is significantly lower than last quarter but the highest total for construction put in place since 2008. The reduction in growth expectations affects nearly every category reported with the exception of residential improvements, office building, amusement and recreation, communication and manufacturing. Manufacturing continues to show gains in construction activity despite several factors that point to slower growth for 2016 through the forecast horizon of 2019. That is partly due to the cyclical nature of industry as well as the sudden change in the value of the dollar affecting exports, among other factors. The largest drop was in the nonbuilding structures sectors, with power leading the slowdown, losing 12% in our growth forecast. As the U.S. per capita use of energy falls, the power industry is undergoing many changes due to changing fuel sources, new regulations and added capacity from renewable sources like solar and wind energy. The focus currently is on updating an aging fleet of power plants and adding peaking capacity.

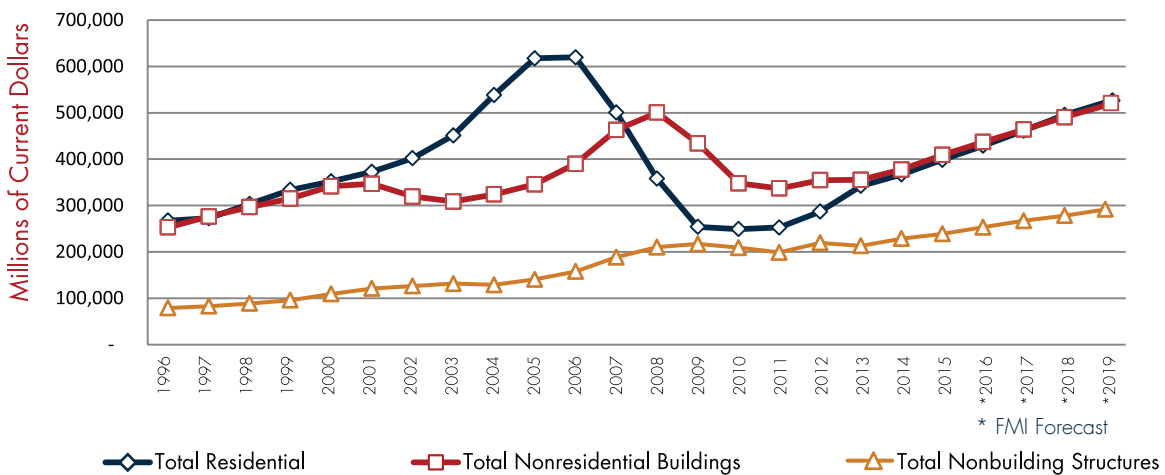
If there is one thing in common for most of the sectors with slower growth, it is the characteristic of being a public or quasi-public market. Most of these categories involve badly needed work in the areas of infrastructure. Few would disagree with the need for bridge repairs

FEW WOULD DISAGREE WITH THE NEED FOR BRIDGE REPAIRS AND REPLACEMENTS OR THAT OUR WATER SUPPLY IS FACING A CRITICAL SITUATION IN MORE REGIONS THAN JUST CALIFORNIA.

and replacements or that our water supply is facing a critical situation in more regions than just California. However, these areas are too easy for politicians and the public to ignore, since

they all require increasingly high investments backed up by taxes. That is, until the wells and aquifers run dry, bridges fail and trains go off the track. Then there are big headlines for a week or so, and the crisis is over until the next time. However, what if the majority of those who ignore the headlines and the need for improved infrastructure suddenly had a change of heart and opened up the purse strings for better sources of drinking water, safer roads and new schools? That would be a big problem too, as we are seeing increasing shortages of skilled labor entering the construction industry. The nation is actually approaching that point of "full employment," at least as measured by the unemployment rate. (The larger dispute about the unemployment rate is the concern for those who have dropped out of the job market due to frustration.) Despite deep cuts in the oil fields, we are beginning to see signs of slower growth due to labor shortages. Nonetheless, a slower growth trend translates into sustainable growth, especially for nonresidential construction, and sustainable growth in construction will be good for the economy.

FMI CONSTRUCTION PUT IN PLACE ESTIMATED FOR THE UNITED STATES





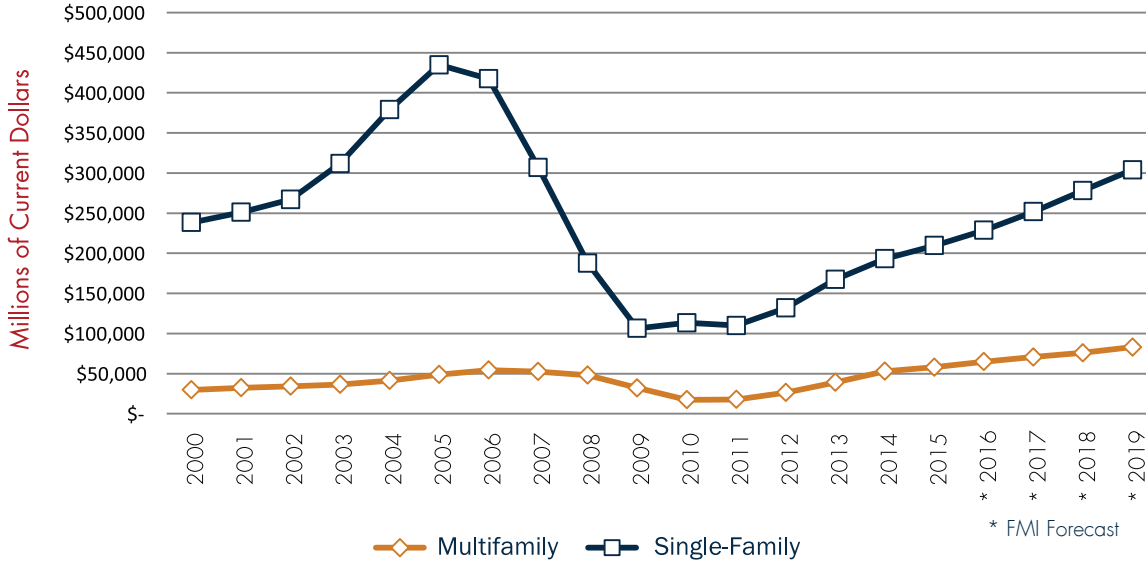
RESIDENTIAL CONSTRUCTION

We expect solid growth of 8% for 2015 and for that growth rate to remain steady through 2019. Multifamily construction continues in double-digit growth through 2016, according to our forecast. Even though sales of new single-family homes grew to 517,000 in April, which is 26.1% above April 2014, many would-be homebuyers are holding off until their wages go up and they can save enough money to meet new lending standards. Newer graduates also need to pay down huge college loans before taking on what is likely to be the largest amount of debt, as they become homeowners.

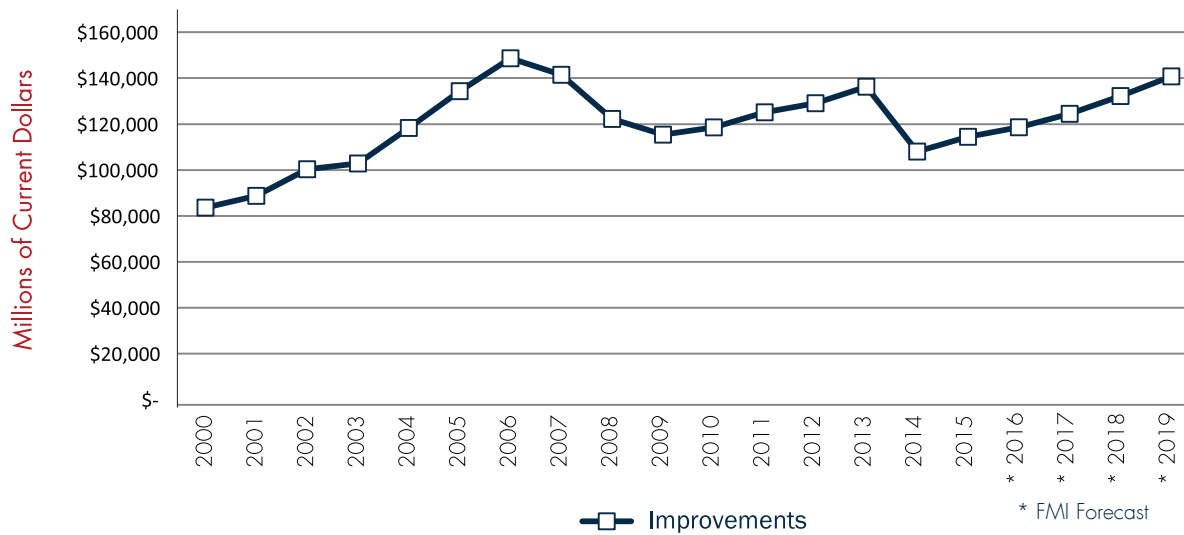
As home prices rise, there will likely be more homes on the market as those who have been holding off selling wait until the price is right.

The inventory continues to tighten, now running less than five months of supply. Housing starts rose April to 1.14 million from .94 million in March. Foreclosure rates are at their lowest since 2006, at the peak of the housing bubble. (RealtyTrac®, www.realtytrac.com). Mortgage rates have also remained historically low but show signs of rising. Nonetheless, home ownership is still less expensive than renting in most areas of the country. However, new multifamily construction is predominantly targeted for the upscale neighborhoods in and around major metropolitan areas. Rents have increased faster than the rate of inflation and are expected to increase around 4.5% in 2015 and more in desirable metro areas. Even though capacity has grown, most of that capacity has been quickly absorbed, with vacancy rates dropping only slightly, to around 4.5%.

RESIDENTIAL CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015

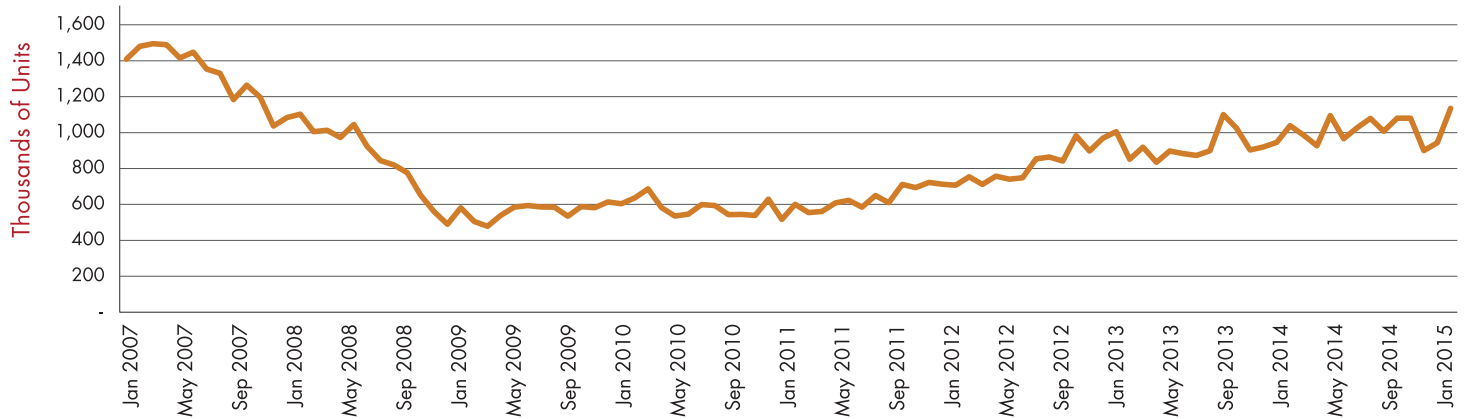


RESIDENTIAL CONSTRUCTION IMPROVEMENTS PUT IN PLACE Forecast as of Q2 2015



NEW PRIVATELY OWNED HOUSING UNITS STARTED

Seasonally Adjusted Annual Rate



Source: Federal Reserve Economic Data Link: <http://research.stlouisfed.org/fred2>

TRENDS:

- According to its March 2015 report, RealtyTrac said, “Foreclosure filings — default notices, scheduled auctions and bank repossessions — were reported on 101,938 U.S. properties in February, a decrease of 4% from revised January numbers and down 9% from a year ago to the lowest level since July 2006.” (RealtyTrac.com, March 19, 2015)
- The S&P Dow Jones Indices for its S&P/Case-Shiller Home Price Indices, reported, “Both the 10-City and 20-City Composites saw year-over-year increases in March. The 10-City Composite gained 4.7% year-over-year, while the 20-City Composite gained 5.0% year-over-year.” (May 2015)
- According to the U.S. Census Bureau, “Privately-owned housing units authorized by building permits in April were at a seasonally adjusted annual rate of 1,143,000. This is 10.1% ($\pm 2.2\%$) above the revised March rate of 1,038,000 and is 6.4% ($\pm 2.1\%$) above the April 2014 estimate. Single-family authorizations in April were at a rate of 666,000; this is 3.7% ($\pm 0.9\%$) above the revised March figure of 642,000. Authorizations of units in buildings with five units or more were at a rate of 444,000 in April.” (May 19, 2015)

DRIVERS:

- 📉 Unemployment
- 📉 Core CPI
- 📉 Income
- 📉 Mortgage rates
- 📉 Home prices
- 📉 Housing starts
- 📉 Housing permits

FMI NONRESIDENTIAL CONSTRUCTION FORECAST

Lodging

In 2014 lodging construction grew by 19%. Our latest forecast expects growth to slow to just 12%, or 4% less than our first quarter forecast. Solid growth will continue through 2016 and slow to around 7% through 2019. Lodging construction is one of the fastest-recovering construction sectors, with a healthy project pipeline that will take it through 2019.

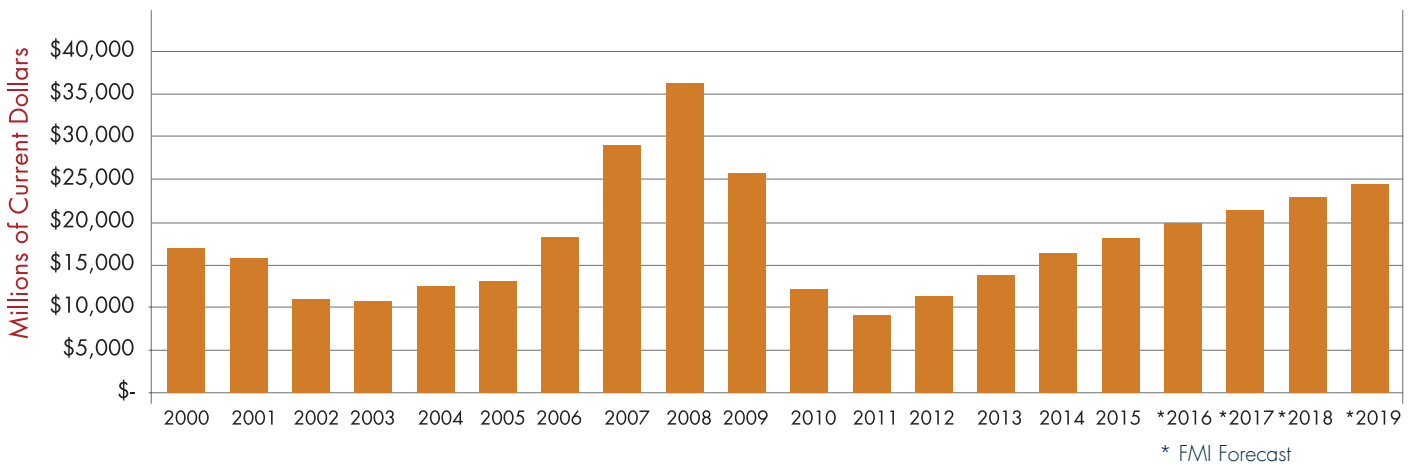
TRENDS:

- According to HospitalityNet, “PKF-HR is forecasting gains in excess of 10% for both 2015 and 2016 for unit-level net operating income, extending the streak of double-digit increases in hotel profits to six consecutive years.”
- Lodging Econometrics reports, “Now at 3,885 Projects/488,230 Rooms, the Total Construction Pipeline has shown seven consecutive quarters of growth, with the last three quarters posting Year-Over-Year (YOY) gains of 20% or greater.” (Lodging Econometrics, May 2015)
- The greatest amount of growth will continue to be upscale properties and event locations.
- Green building is more commonplace in remodels and retrofits.

DRIVERS:

- 📈 Occupancy rate
- 📈 RevPar
- 📈 Average daily rate
- 📈 Room starts

LODGING CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Office

Our office construction forecast for the second quarter calls for 11% growth in 2015. Although slower than the 19% growth seen in 2014, office construction is benefiting from the drop in unemployment levels. According to Jones Lang Lasalle, office vacancy rates were unchanged at 15.6% in the first quarter of 2015, “but are anticipated to fall below 15.0% by year-end.”

TRENDS:

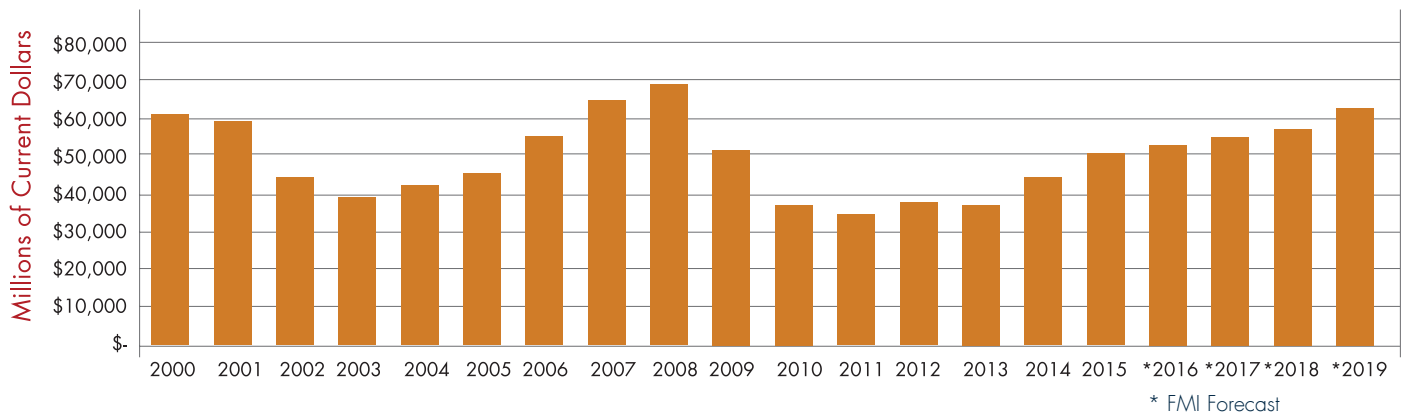
- According to the National Association of Realtors, Office rents increased 2.4% in 2014 and are expected to increase 3.3% in 2015. “Net absorption of office space in the U.S., which includes the leasing of new space coming on the market as well as space in existing properties, is likely to total 35.6 million square feet this year and 48.8 million in 2015.”
- CBRE reports, “The national gross asking lease rate for office space increased by 1.9% to \$28.65 in the first quarter of 2015. This puts the national average just 0.9% lower than the previous peak, which was recorded in 2008.” (Q1 2015 U.S. Office MarketView, CBRE, May 21, 2015)

DRIVERS:

- 📉 Office vacancy rate
- 📈 Unemployment rate

OFFICE CONSTRUCTION PUT IN PLACE

Forecast as of Q2 2015



Commercial

Commercial construction will grow 13% in 2015 to \$69.0 billion then slow to 7% growth in 2016. Consumers remain relatively confident about the economy, but they are also remaining conservative in their discretionary spending, at least until wage recovery improves.

TRENDS:

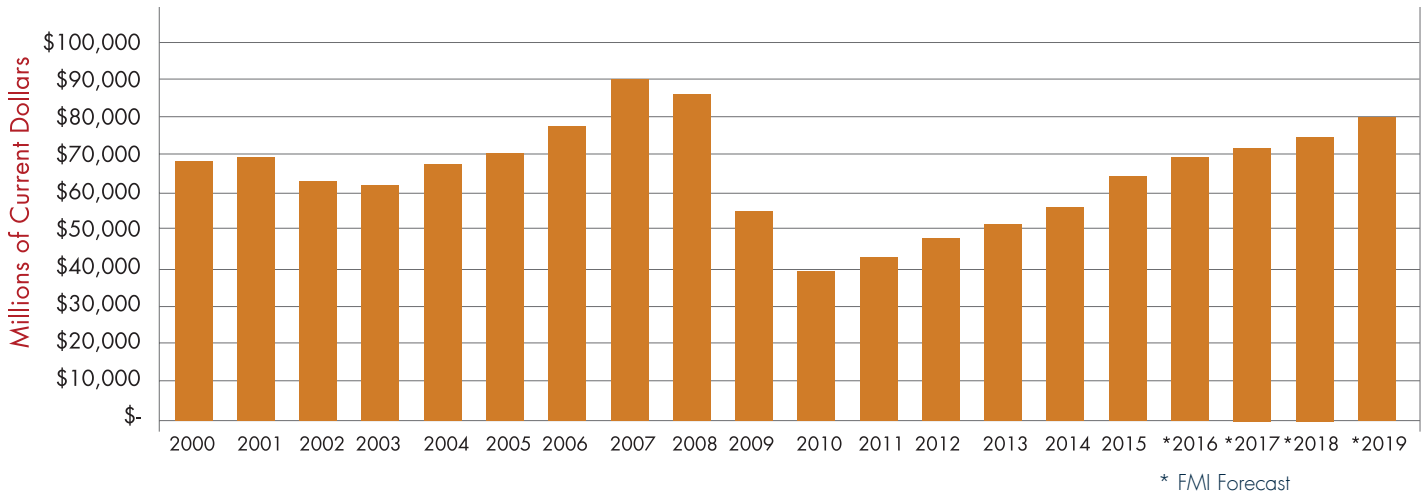
- Advance estimates of U.S. retail and food services sales for May, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes, were \$444.9 billion, an increase of 1.2 percent ($\pm 0.5\%$) from the previous month, and 2.7 percent ($\pm 0.9\%$) above May 2014. Total sales for the March 2015 through May 2015 period were up 2.1 percent ($\pm 0.7\%$) from the same period a year ago. The March 2015 to April 2015 percent change was revised from virtually unchanged ($\pm 0.5\%$) to +0.2 percent. (U.S. Department of Commerce, June 11, 2015)
- The Department of Commerce also reported, “[F]ood services and drinking places were up 8.2 percent ($\pm 3.3\%$) from last year.” Non-store retailers were up 5.3% over the same time in 2015.
- Consumer confidence slipped in April but recovered in May to 95.4%. (The Conference Board)
- Closings of well-known chain stores like Sears, JCPenney and RadioShack signal a change in consumer shopping habits as well as an example of traditional brands’ inability to move with the trends.

DRIVERS:

- Retail Sales
- 📈 CPI
- 📉 Unemployment rate
- 📈 Income
- 📈 Housing starts
- 📈 Housing permits

COMMERCIAL CONSTRUCTION PUT IN PLACE

Forecast as of Q2 2015



Health Care

Health care construction's recovery will be slow, but this ailing market will show 2% growth in 2015, and another 4% is expected in 2016 to \$41.0 billion. With continuing changes due to health care reforms, a difficult funding environment and changes to construction delivery methods, health care is facing many challenges. Ambulatory health care centers and renovations to existing facilities, in order to be competitive and keep up with changing technologies and patient needs, will continue to be the focus for construction. One of the major goals for health care is to continue to refine its processes to be leaner and more efficient.

TRENDS:

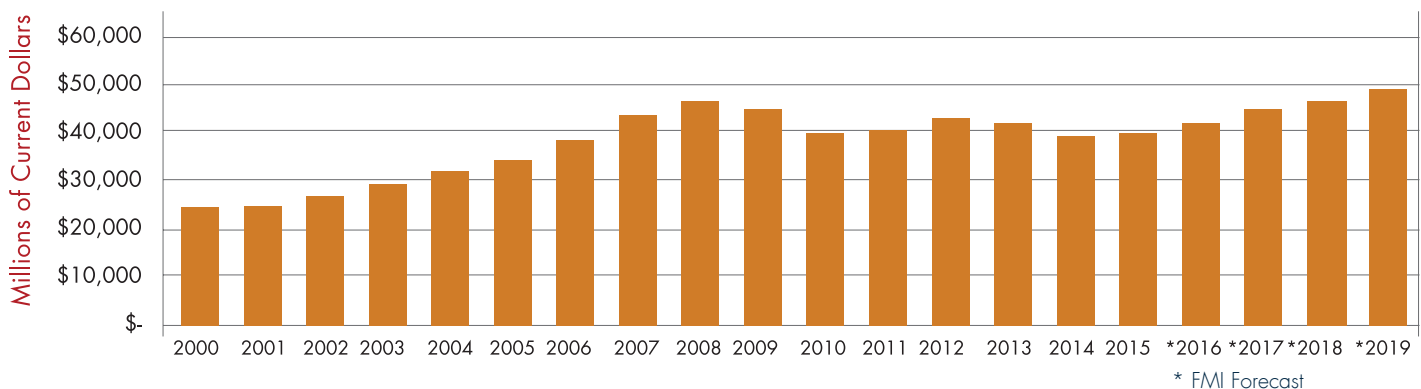
- Hospitals cautious with new investment due to changing nature of health care and insurance as well as the need for more qualified health care workers to staff any additions.
- Veterans Affairs hospitals rocked by poor management and patient care, old facilities and huge construction cost overruns.
- According to Health Facilities Management, "Ambulatory care accounts for approximately one-third of health care spending in the United States, slightly more than inpatient care, according to the U.S. Department of Health and Human Services' Agency for Healthcare Research and Quality."
- The new model for hospitals is the medical center with a cluster of offices including beds, which will deliver more of a patient's needs.
- Health care industry still not prepared for increased number of insured.
- Trend toward rebuilding existing facilities to use modern hospital design and allow for greater use of technology.
- Nontraditional funding sources for private nonprofit facilities.
 - Private development and equity
 - Government or government-backed
 - Pension and life insurance companies

DRIVERS:

- 📈 Population change younger than age 18
- 📈 Population change ages 18-24
- 📈 Stock market
- 📈 Government spending
- 📈 Nonresidential structure investment

HEALTH CARE CONSTRUCTION PUT IN PLACE

Forecast as of Q2 2015



Educational

Our forecast for education construction has been reduced from the first quarter outlook to no growth for 2015. One of the biggest hurdles to new construction continues to be state and local budgets. After taking large cuts during the recession, it has been a difficult battle to get back to previous levels of spending. For higher education, increasing tuition will add to already dangerously high levels of student debt. Some funding is expected to return as states improve income from tax receipts; but the various financing challenges will not easily go away, even as demand rises. This will likely lead to more online classes and other means of education differing from traditional schooling. Safety on campus will continue to be a major concern. Cities with unrest due to recent shootings and conflicts between the citizens and police policies will also give more attention to school systems and programs for improving education and safety on campus.

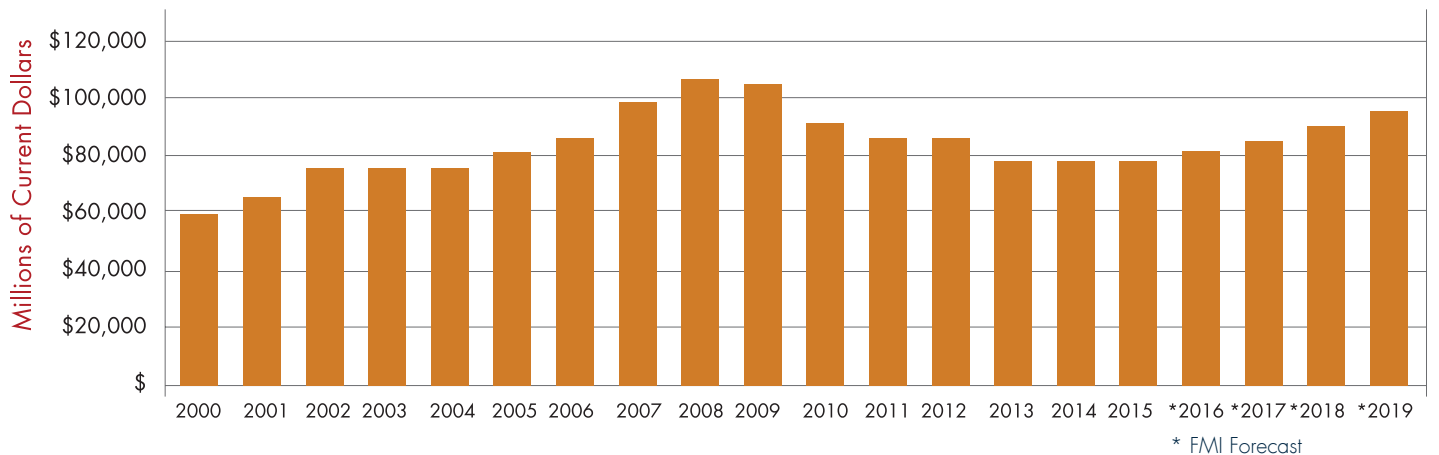
TRENDS:

- Significantly less funding from states for K-12 schools.
- Enrollment growth 2.5 million in the next four years.
- New school designs will be more flexible for changing classrooms and greater use of natural light.
- Greater attention to reducing energy use and employing green building technologies.
- Renovation and additions to current school buildings will continue to grow in comparison to new school projects.
- Greater focus on safe schools as the threat for shootings on campus continues to rise.

DRIVERS:

- 📉 Population change younger than age 18
- 📉 Population change ages 18-24
- 📉 Stock market
- 📉 Government spending
- 📉 Nonresidential structure investment

EDUCATIONAL CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Religious

Religious construction continues to slow and is expected to be 5% under last quarter's results. What growth there is will likely be renovation, as newly formed congregations move into vacated retail space or reoccupy church buildings abandoned by other faiths. As the housing market continues its growth trend and wages improve, we expect growth to improve somewhat through 2019. One trend that will continue to reduce the need for more houses of worship can be found in a recent report by the PEW Research Center ("America's Changing Religious Landscape," May 12, 2015). PEW reports, "The percentage of adults (ages 18 and older) who describe themselves as Christians has dropped by nearly eight percentage points in just seven years, from 78.4% in an equally massive Pew Research survey in 2007 to 70.6% in 2014. Over the same period, the percentage of Americans who are religiously unaffiliated — describing themselves as atheist, agnostic or 'nothing in particular' — has jumped more than six points, from 16.1% to 22.8%."

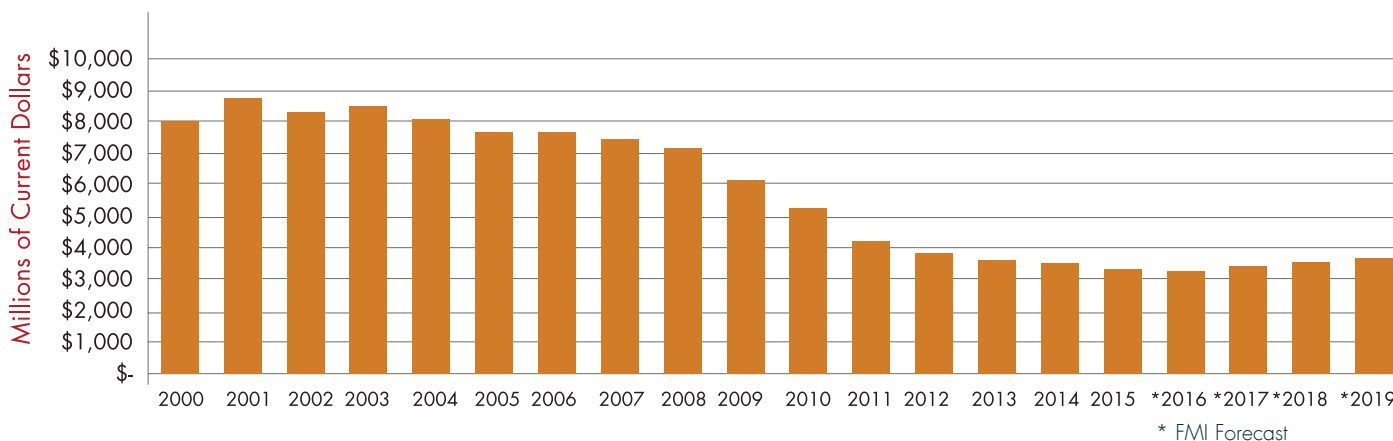
TRENDS:

- The lending environment continues to be a challenge for many congregations.
- Establishing a capital campaign is becoming increasingly common.
- Many churches are seeing tremendous declines in contributions and tithes.
- More parishioners are relying on their houses of worship to provide guidance and assistance, further stretching thin resources.
- New methods for charitable giving, including online giving and donation collections, are empowering religious organizations.

DRIVERS:

- 📉 GDP
- 📉 Population
- 📉 Income
- 📉 Personal savings rate

RELIGIOUS CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Public Safety

Public safety construction decreased 3% in 2014 and will continue to slow by 3% in 2015. Although federal prison populations have recently decreased, the overall prison system is still overcrowded. Reviews of mandatory sentencing and early release programs may help decrease some crowding.

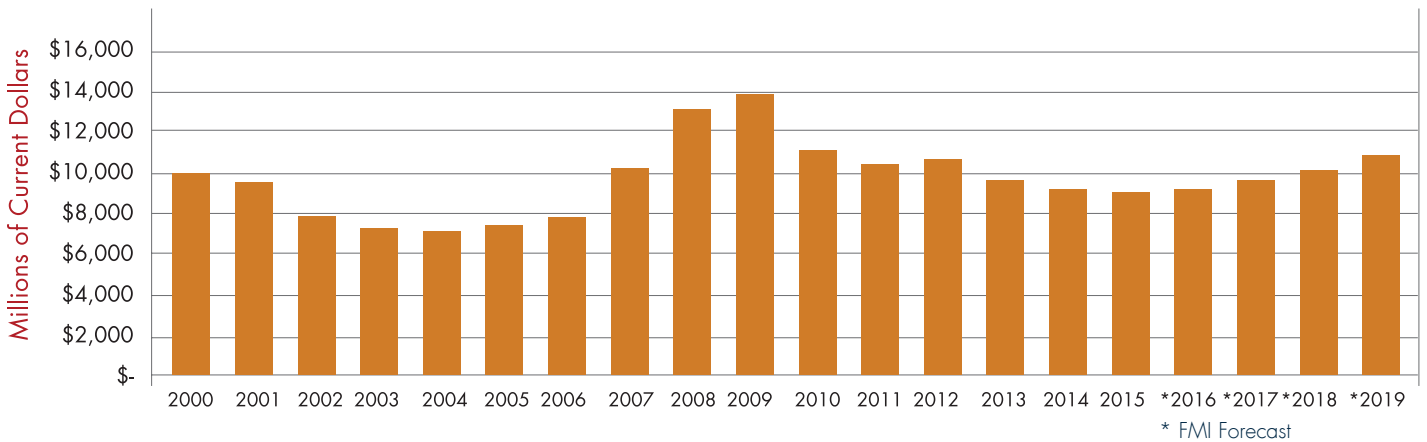
TRENDS:

- Recent reports show that the federal prison population dropped about 1% in 2014, but state prison population increased. Nonetheless, federal prisons are still overcrowded.
- “While our country is home to only 5% of the world's total population, we are home to 25% of the world's prison population.” (Sen. Cory A. Booker, CNN, April 23, 2015)
- “At year-end 2012, the combined U.S. adult correctional systems supervised about 6,937,600 offenders, down by about 51,000 offenders during the year.” (Ibid.)
- Private corporations now operate 5% of the 5,000 prisons and jails in the U.S. The private prison industry is growing at a rate of 30% per year.
- CM at-Risk or design-build arrangements will increase.
- P3s overcome shortfalls in public financing.

DRIVERS:

- 📈 Population
- 📈 Government spending
- 📈 Incarceration rate
- 📈 Nonresidential structure investment

PUBLIC SAFETY CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Amusement and Recreation

Construction for the amusement and recreation sector grew sharply to 7% in 2014 with another 9% growth expected in 2015. Although continued growth in major sports stadiums supports this sector, there are a number of smaller towns and colleges improving their sports facilities. In the gaming sector, there are trends to rethink facilities for broader market appeal. States will continue to be more welcoming to gaming in hopes of increasing their tax base. A new mixed-use development model includes the combination of multiple entertainment venues and shopping into one overall plan, as in the new facility for AEG and MGM Resorts International.

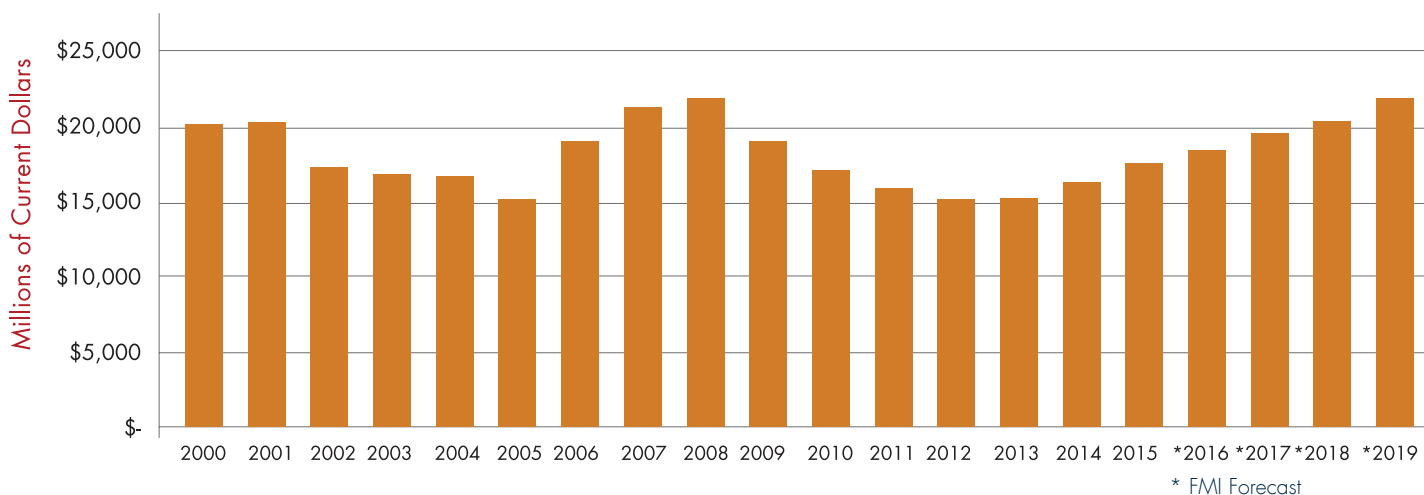
TRENDS:

- A new, privately funded indoor arena was recently announced by the partnership of AEG and MGM Resorts International. The Las Vegas arena will have 20,000 seats and is expected to cost \$375 million.
- The Atlanta Braves have announced they will build a new stadium using a public-private partnership.
- “A \$1 billion stadium is under construction for the Minnesota Vikings and another five have been proposed, including a \$1.4 billion facility for the Buffalo Bills, and new stadiums for the Atlanta Falcons and San Diego Chargers, each with a price tag of \$1 billion.” (<http://www.costar.com/News/Article/Developers-Seek-to-Catch-New-Wave-of-Stadium-Arena-Construction/167826>, 3/3/2015)
- Casino plans are underway in a number of states, including New York, Pennsylvania, Maryland, Florida and Ohio, with some investors coming from offshore.
- Public/private venture planned for the campus of UNLV includes a 50,000-seat, domed stadium, but still waiting approvals and taxpayer votes on plan to allow the project to be tax-free.
- Competition in the gaming sector will draw business away from some existing gambling centers, such as Atlantic City and Las Vegas, as well as from other public arenas.

DRIVERS:

- Income
- Personal savings
- Unemployment rate

AMUSEMENT AND RECREATION CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Transportation

Transportation construction continues at a solid pace, registering 5% growth in 2014, and is expected to add 7% for 2015 to \$44.7 billion. Congress will need to pass a new or renewed transportation bill in 2015 to add some stability as well as funds to the transportation sector. The last extension of Map-21 expired at the end of May but was once again “saved” by the bill with a two-month extension. The transportation sector will continue to face some ups and downs in early 2015 due to the dockworker slowdown and volatile oil and gas prices negatively affecting shipments by rail and ship road.

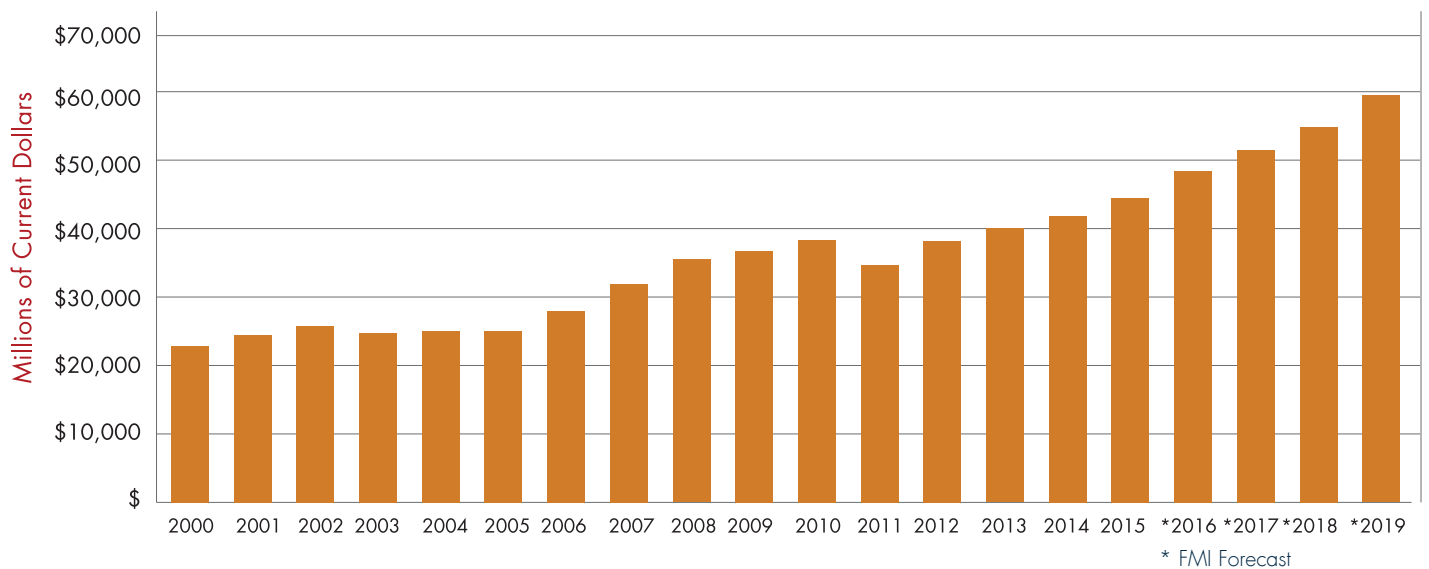
TRENDS:

- Slowdown in transportation due in part to long dockworkers slowdown in California rippling through the economy.
- According to the American Association of Railroads report for May 27, 2015, “Total carloads for the week ending May 23, 2015, were 273,387 carloads, down 9.1% compared with the same week in 2014, while U.S. weekly intermodal volume was 281,090 containers and trailers, up 4.3% compared to 2014.” (AAR, May 27, 2015)
- The FAA Modernization and Reform Act will provide \$63.6 billion for the agency’s programs between 2012 and 2015.
- “The 2014 FAA forecast calls for U.S. carrier passenger growth over the next 20 years to average 2.2% per year, unchanged from last year’s forecast. After another year of slow growth in 2014, growth over the next five years will be higher than the long run rate as we assume U.S. economic growth accelerates.”
- High-speed rail is slow to get projects off the ground due to state funding and political resistance.
- The recent disaster involving an Amtrak train derailment in Philadelphia points up the need for improving transportation infrastructure as well as safety procedures.

DRIVERS:

- 📈 Population
- 📈 Government spending
- 📈 Transportation funding

TRANSPORTATION CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Communication

Communication construction put in place slowed sharply in 2014 but is expected to bounce back to 2% growth for 2015. The trend for communications is likely to be more integration and mergers in order to capture market share. The current trend is for building more data centers and beefing up security and privacy against potential interlopers and severe weather events. The passing of new net neutrality regulations by the FCC is designed to protect the free flow of content on the Internet. This means that access providers cannot charge special rates for data flows or slow down the delivery of certain content to others. With mergers and proposed mergers, we will see a rise in multimedia giants.

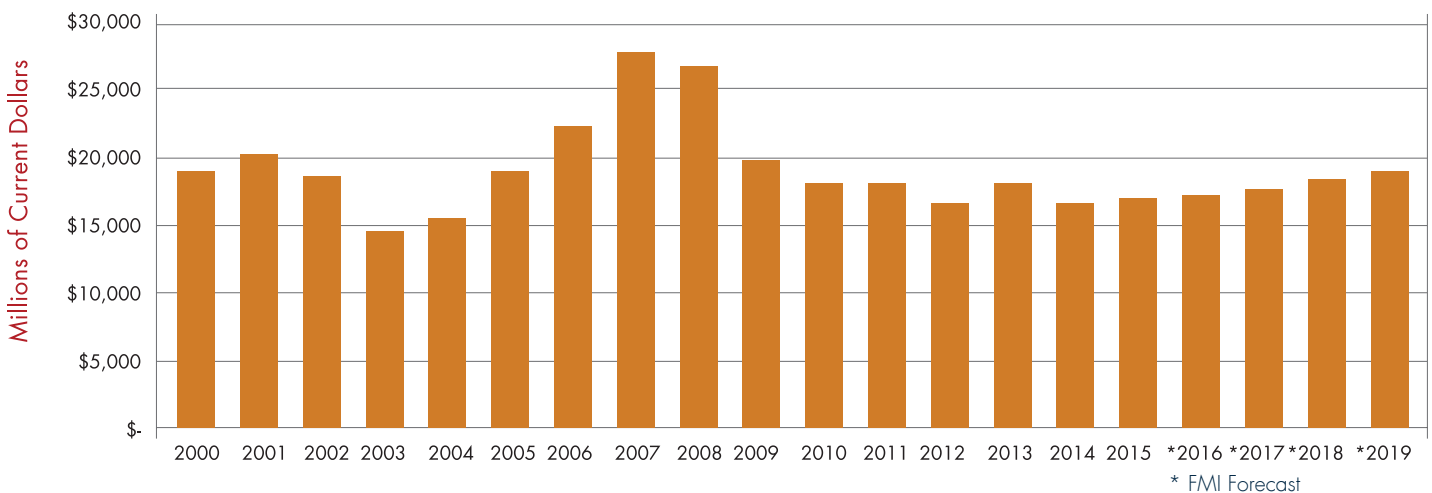
TRENDS:

- AT&T's plans to merge with Direct TV still under FCC investigation.
- "Mini towers" for increasing coverage and spectrum will proliferate rapidly in the next five years.
- Wireless technology is the fastest-growing area, as telecoms roll out more 4G technologies with smartphones and tablets.
- Data security is critical for large businesses and governments in the face of potential disasters and threats from hackers and foreign enemies.

DRIVERS:

- 📍 Innovation/technology
- 📍 Global mobility
- 📍 Population
- 📍 Security/regulatory standards
- 📍 Private investment

COMMUNICATION CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Manufacturing

Durable goods orders slipped 0.5% in April after rising 5.1% in March. Primary metals and slower defense orders led the downturn. Manufacturing may again take a hit as the oil and gas sector slows capital spending. Despite some ups and down in manufacturing activity, after seeing 15% growth in manufacturing construction in 2014, we expect another 17% for 2015. The manufacturing renaissance will continue to be susceptible to future energy prices and markets here and abroad, and we expect double-digit growth to slow to just 8% in 2016. Newer facilities are more efficient and often replace older plants. In addition, manufacturing capital construction is highly cyclical when markets reach a state of overcapacity, as some petrochemical products are expected to do in the next few years after a spate of building.

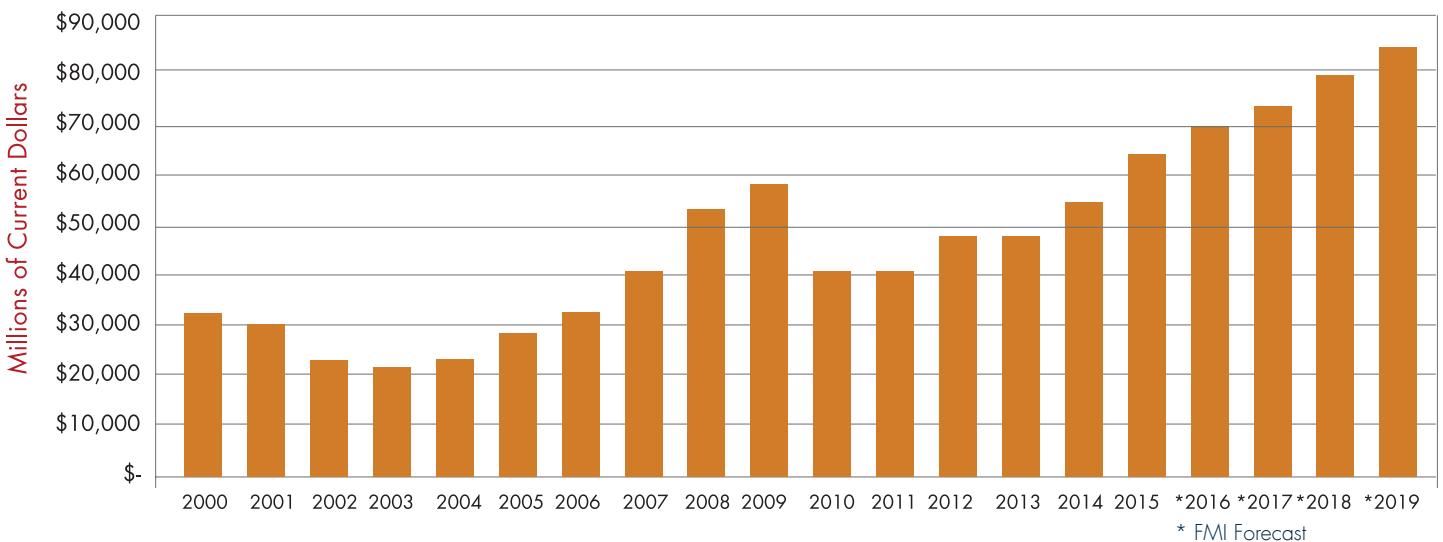
TRENDS:

- Manufacturing capacity utilization rates — 77.2% of capacity in April 2015 — remain near the historical average.
- The U.S. Department of Commerce reports, “Nondefense new orders for capital goods in April increased \$0.3 billion or 0.3% to \$81.2 billion. Shipments increased \$1.3 billion or 1.6% to \$80.2 billion. Unfilled orders increased \$1.1 billion or 0.1% to \$763.3 billion. Inventories increased \$0.3 billion or 0.2% to \$177.4 billion.”
- “Reshoring of manufacturing” may experience setbacks as long as dollar stays strong in international markets.
- “New orders for manufactured durable goods in December decreased \$8.1 billion or 3.4% to \$230.5 billion, the U.S. Census Bureau announced today. This decrease, down four of the last five months, followed a 2.1% November decrease. Excluding transportation, new orders decreased 0.8%. Excluding defense, new orders decreased 3.2%.” (January 27, 2015,)
- The Manufacturing ISM® Report On Business® reports the ISM index slipped to 52.8 in May after falling to 56.5 in March. Delays due to the slowdown on the docks in California and dropping oil prices are factors that the industry is still working to overcome.

DRIVERS:

- 📉 ISM
- 📉 Industrial production
- 📉 Capacity utilization slightly
- 📉 Durable goods orders
- 📉 Manufacturing inventories

MANUFACTURING CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



NONBUILDING STRUCTURES

Power

Power construction picked up strongly in 2014 to gain 11% and reach \$100.8 billion. We are forecasting a sharp slowdown for 2015 of -5.0%. Growth should again turn positive in 2016. The power industry is in flux due to changing fuel supplies using more natural gas and less coal as well as variable rates of growth in alternative energy sources like solar and wind. Power plants must be updated to keep up with changing requirements as well as managing distributed generation sources. Despite losing subsidies and the lower cost of oil and gas, wind and solar power generation facilities continue to grow. The power industry will continue to consolidate as the average consumer reduces power use, although demand will continue to grow due to population growth.

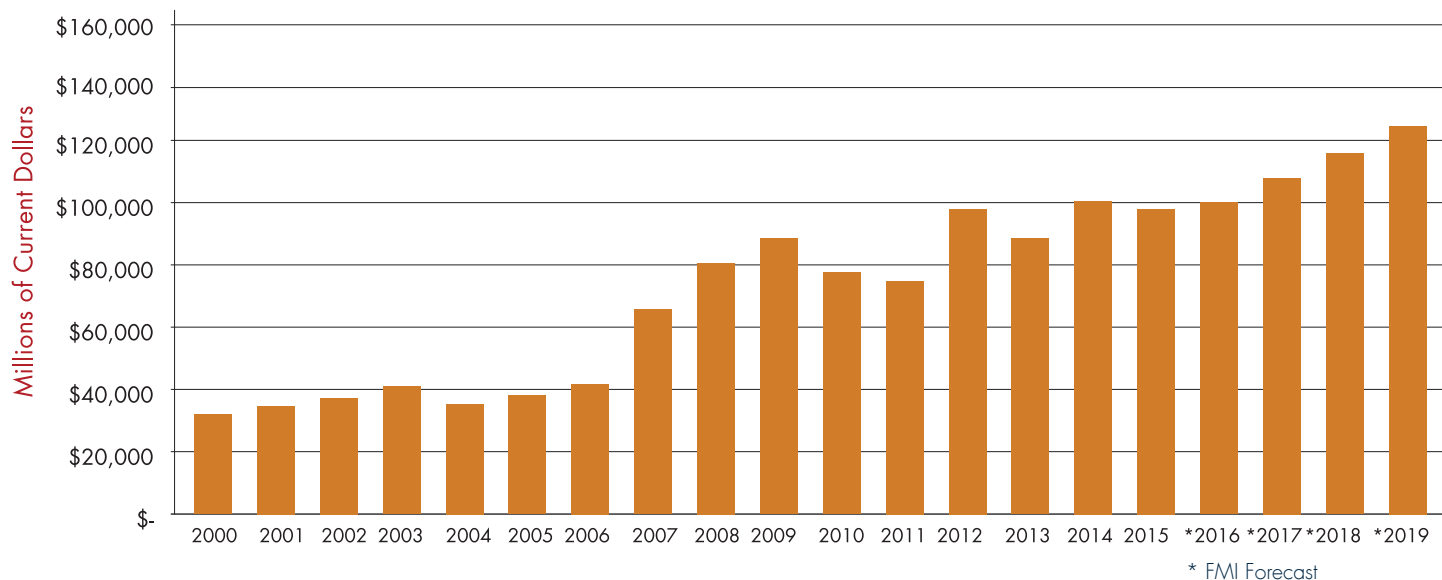
TRENDS:

- Power companies are placing greater emphasis on flexibility to respond to peak needs alongside hydropower, solar and wind-generating facilities.
- According to the “Annual Energy Outlook 2014,” energy consumption “including both purchases from electric power producers and on-site generation” will grow “from 3,826 billion kWh in 2012 to 4,954 billion kWh in 2040, an average annual rate of 0.9%.” Due to increased manufacturing activity, most growth will come from the industrial sector.
- Consumer electricity demand has been slowing due to appliances that are more efficient.

DRIVERS:

- 🔴 Industrial production
- 🔴 Population
- 🔴 Nonresidential structure investment

POWER CONSTRUCTION PUT IN PLACE
Forecast as of Q2 2015



Highway and Street

There was better-than-expected growth of 3% for 2014, but our forecast calls for a drop of 2% in 2015 and very slow growth through 2019. Reauthorization of MAP-21 is only good until July 31, 2015. This constant brinkmanship and short reauthorizations may solve the problem of insolvency for the near future, but it is devastating to an industry that needs to make longer-term plans for projects that take more than a few months to complete.

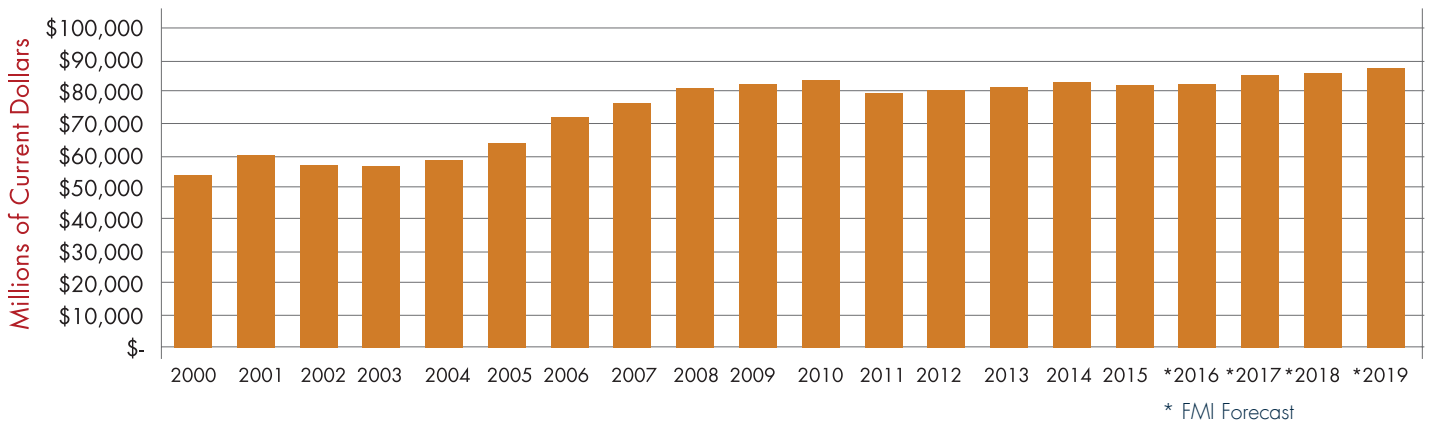
TRENDS:

- According to Finance and Commerce, “About \$163 billion is needed annually over a six-year period for highways, bridges and transit systems, yet only about \$105 billion is being invested, according to a December report from the American Association of State Highway and Transportation Officials and the American Public Transportation Association.” (finance-commerce.com/2015/04)
- President Obama’s 2015 budget calls for \$317 billion over six years for Map-21 and other programs.

DRIVERS:

- 📍 Population
- 🏛️ Government spending
- 🏠 Nonresidential structure investment

HIGHWAY AND STREET CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Sewage and Waste Disposal

The good news for sewage and waste disposal construction is that we expect modest growth of 5% for the next two years. That is an improvement over the last few leaner years, and growth may be helped in some industrial areas with a growing manufacturing sector. Nonetheless, this key sector will continue to compete with other infrastructure sectors for public funds.

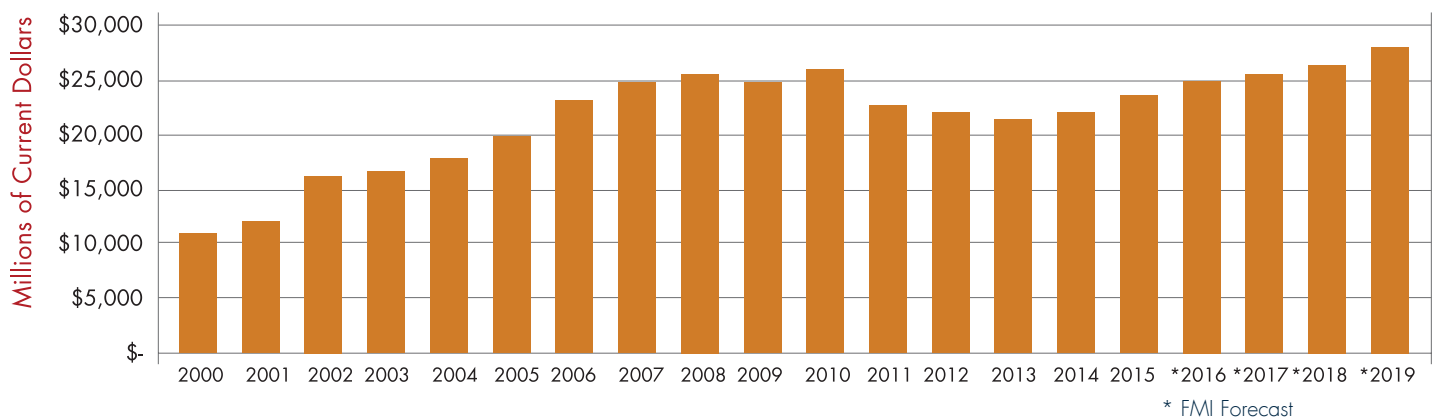
TRENDS:

- Growth, driven by aging infrastructure and regulation, is on the horizon, but the length of the horizon is still unknown. Slow water infrastructure markets in the aftermath of the recession continue to build the backlog of necessary work as existing infrastructure ages.
- In need of replacement and upgrades, the 16,000 wastewater systems nationwide discharge more than 850 billion gallons of untreated sewage into surface waters each year.
- Combined sewer systems (stormwater and sewage) serve roughly 950 communities with about 40 million people. Most communities with CSOs are located in the Northeast and Great Lakes.
- The Clean Water State Revolving Fund (CWSRF) programs have provided more than \$5 billion annually in recent years to fund water-quality protection projects.

DRIVERS:

- 📍 Population
- 📍 Industrial production
- 📍 Government spending

SEWAGE AND WASTE DISPOSAL CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Water Supply

As in other areas of public infrastructure, the need for improvements in our water supply is great, but the investment is lean. Water supply construction fell 4% in 2014, and we expect it to drop another 2% to \$12.7 billion in 2015. The drought crisis in California will be instructive for the rest of the nation, as California will have to increase spending on water resources. Voluntary reductions in water use have been insufficient, and now Gov. Jerry Brown has mandated more stringent cutbacks. According to Gregg Powell of FMI, "In today's market, there is arguably no sector facing a more critical shortfall between demand and investment than the U.S. water market. The country's water and wastewater infrastructure suffers from subpar conditions throughout the supply chain, encompassing water intake, diversion, transportation, storage, treatment and delivery." ("Challenges and Opportunity in the U.S. Water Infrastructure Market," FMI Quarterly 4, 2014)

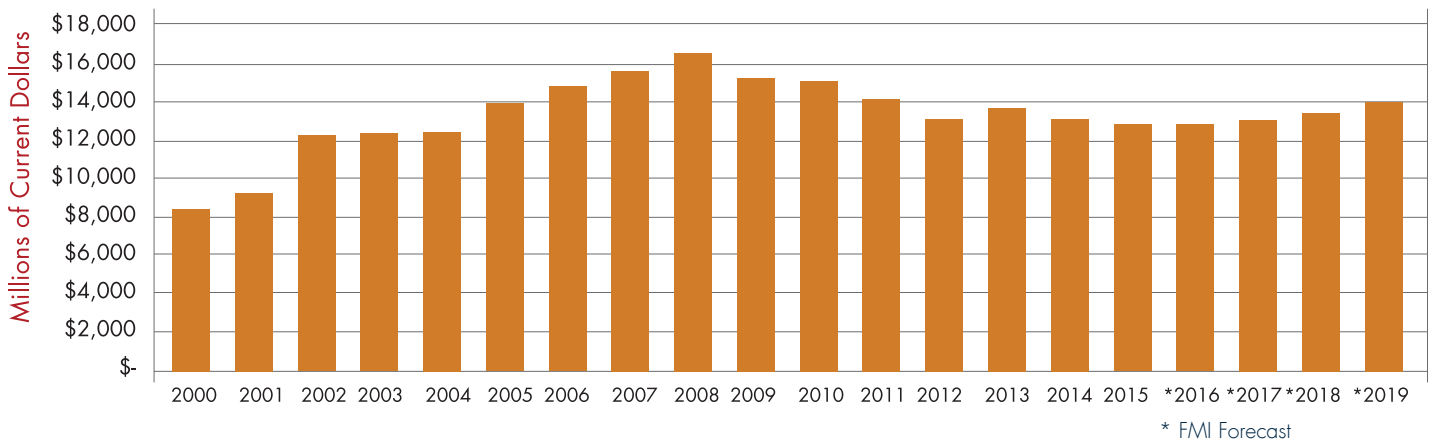
TRENDS:

- Recent research from the EPA reports, "\$72.5 billion is needed to prevent contamination of 73,400 water systems across the country, as well as water systems in American Indian, Alaska Native Village and other U.S. territories." (Wengian Zhu, CNN Money, June 5, 2013)
- Strength in the mining sector creates a tremendous amount of water infrastructure work throughout North America and abroad. Strength in commodity markets continues to drive increased levels of mining activity through the development of new mines and redevelopment of existing mining assets. Heightened mining activity leads to increased demand for related infrastructure, including water.
- Federal assistance for the safe drinking water State Revolving Fund (SRF) in the 11-year period between 1997 and 2008 totaled \$9.5 billion, just slightly more than the investment gap for each of those years.
- Green construction practices, such as controlling runoff to help increase groundwater, will become the norm for improvements and new construction.
- Water for shale oil and gas mining will increase demand in selected areas of the country.

DRIVERS:

- 📈 Population
- 📈 Industrial production
- Government spending

WATER SUPPLY CONSTRUCTION PUT IN PLACE Forecast as of Q2 2015



Conservation and Development

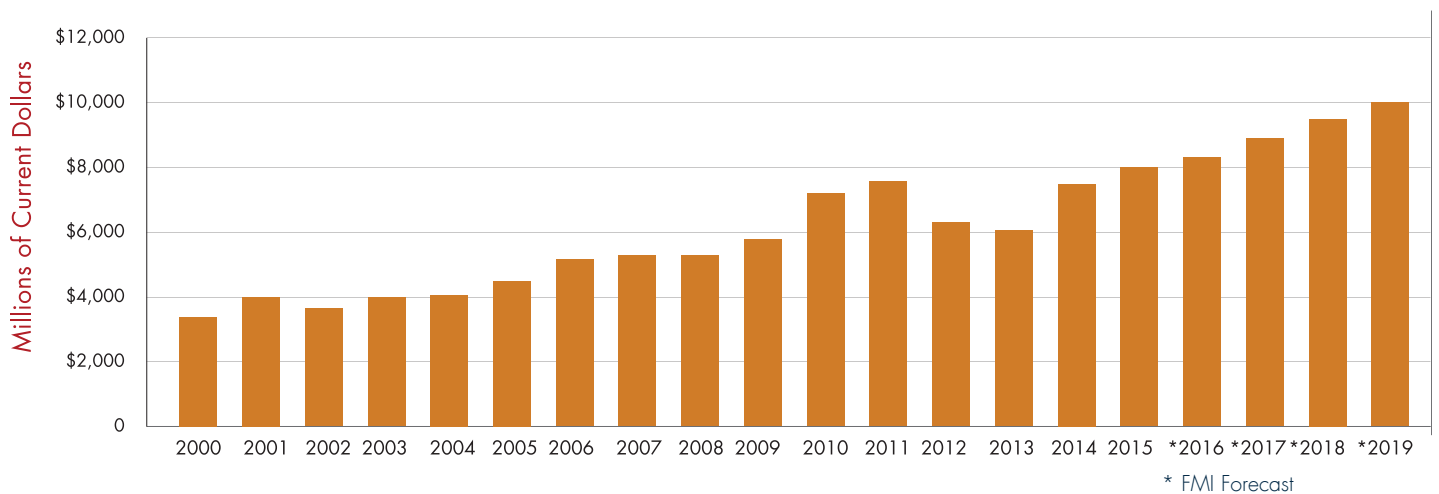
Due in large part to the strength in the industrial market, conservation and development construction jumped 25% in 2014 and will continue to grow 6% in 2015. The industrial market continues to flourish behind the strength in the natural resource sector. In addition, the low cost of energy is driving an onshoring phenomenon in other industrial sectors, such as chemical and automotive. Conversely, Department of Defense and Department of Energy markets continue to struggle against the headwinds of budget constraints. Industrial market strength should increase the size of the overall environmental market, albeit much more slowly as public markets contract.

DRIVERS:

- ↑ Population
- Government spending

CONSERVATION AND DEVELOPMENT CONSTRUCTION PUT IN PLACE

Forecast as of Q2 2015



Construction Put in Place Estimated for the United States

Millions of Current Dollars

2nd Quarter 2015 Forecast (based on Q1 2015 Actuals)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
RESIDENTIAL BUILDINGS										
Single-Family	113,310	109,984	131,816	167,364	193,198	209,534	228,579	251,841	278,214	303,995
Multi-Family	17,405	17,821	26,293	39,031	52,866	57,947	64,907	70,609	75,933	83,078
Improvements*	118,398	124,853	128,738	135,809	108,051	114,368	118,448	124,205	131,819	140,229
Total Residential	249,112	252,657	286,847	342,203	354,115	381,849	411,933	446,654	485,966	527,302
NONRESIDENTIAL BUILDINGS										
Lodging	11,635	9,129	10,836	13,585	16,107	18,059	19,837	21,205	22,680	24,015
Office	37,850	36,011	37,800	37,620	44,630	49,684	52,671	54,660	58,441	63,491
Commercial	40,100	42,816	47,335	50,992	57,276	64,999	69,265	71,840	76,078	80,370
Health Care	39,344	40,204	42,544	41,484	38,979	39,564	41,012	43,506	46,055	48,986
Educational	88,405	84,985	84,672	77,996	78,429	78,309	81,211	84,305	88,358	94,036
Religious	5,288	4,239	3,846	3,678	3,566	3,393	3,422	3,489	3,565	3,665
Public Safety	11,153	10,407	10,431	9,652	9,334	9,065	9,288	9,696	10,126	10,654
Amusement and Recreation	16,943	15,995	15,480	15,513	16,672	18,123	19,276	19,872	20,810	21,832
Transportation	38,340	34,737	37,862	39,731	41,865	44,657	48,501	52,536	55,802	59,390
Communication	17,730	17,685	16,165	17,294	16,075	16,416	16,964	17,438	18,114	18,805
Manufacturing	41,178	40,559	47,741	47,945	55,526	64,927	69,997	73,902	79,207	84,993
Total Nonresidential Buildings	347,966	336,767	354,712	355,490	378,459	407,197	431,444	452,450	479,236	510,236
NONBUILDING STRUCTURES										
Power	77,945	75,185	97,434	90,639	100,752	96,071	99,454	106,126	117,101	127,099
Highway and Street	82,529	79,322	80,546	81,212	84,013	82,560	82,924	84,901	85,783	87,076
Sewage and Waste Disposal	25,991	22,710	22,261	21,676	22,691	23,923	25,074	26,137	26,889	27,807
Water Supply	15,322	14,163	13,218	13,515	12,941	12,718	12,864	13,111	13,486	13,999
Conservation and Development	7,172	7,538	6,228	6,028	7,509	7,988	8,405	8,784	9,398	10,023
Total Nonbuilding Structures	208,959	198,918	219,687	213,070	227,906	223,260	228,721	239,060	252,657	266,005
Total Put in Place	806,037	788,342	861,246	910,763	960,480	1,012,306	1,072,098	1,138,164	1,217,859	1,303,543

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

Construction Put in Place Estimated for the United States

Change From Prior Year - Current Dollar Basis

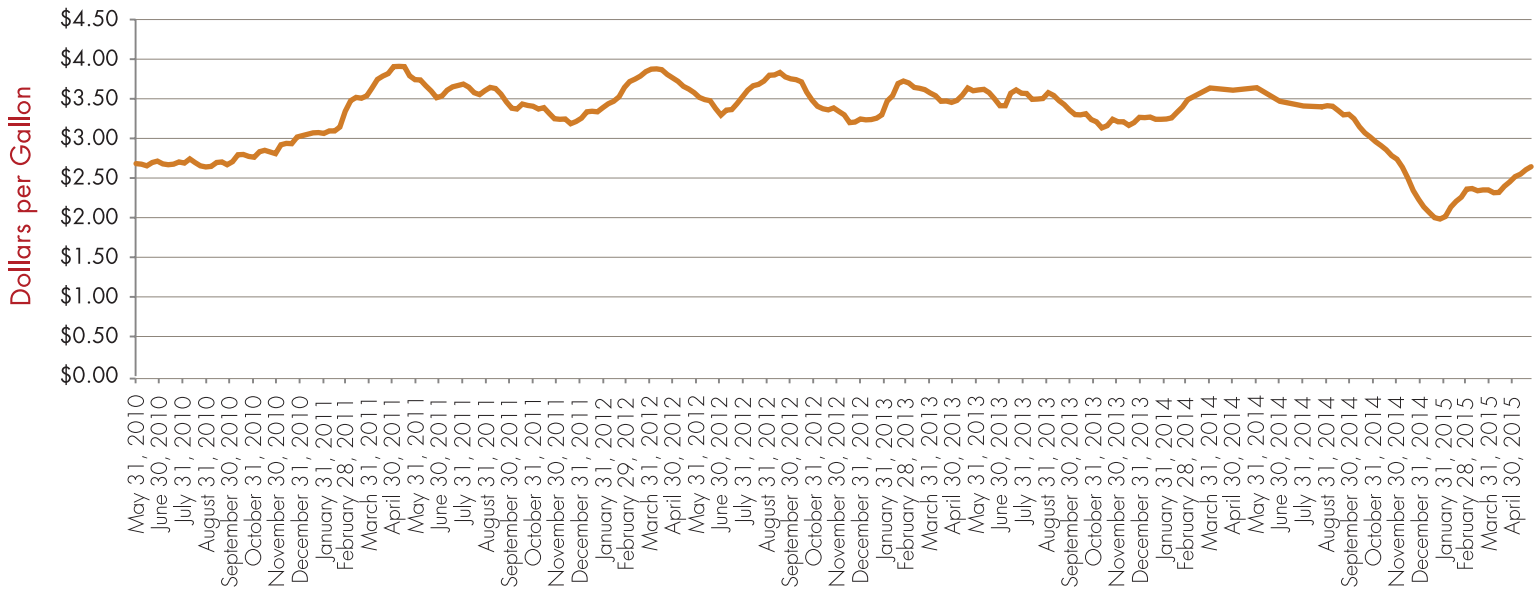
2nd Quarter 2015 Forecast (based on Q1 2015 Actuals)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
RESIDENTIAL BUILDINGS										
Single-Family	6%	-3%	20%	27%	15%	8%	9%	10%	10%	9%
Multi-Family	-46%	2%	48%	48%	35%	10%	12%	9%	8%	9%
Improvements*	3%	5%	3%	5%	-20%	6%	4%	5%	6%	6%
Total Residential	-2%	1%	14%	19%	3%	8%	8%	8%	9%	9%
NONRESIDENTIAL BUILDINGS										
Lodging	-54%	-22%	19%	25%	19%	12%	10%	7%	7%	6%
Office	-27%	-5%	5%	0%	19%	11%	6%	4%	7%	9%
Commercial	-27%	7%	11%	8%	12%	13%	7%	4%	6%	6%
Health Care	-12%	2%	6%	-2%	-6%	2%	4%	6%	6%	6%
Educational	-14%	-4%	0%	-8%	1%	0%	4%	4%	5%	6%
Religious	-15%	-20%	-9%	-4%	-3%	-5%	1%	2%	2%	3%
Public Safety	-19%	-7%	0%	-7%	-3%	-3%	2%	4%	4%	5%
Amusement and Recreation	-13%	-6%	-3%	0%	7%	9%	6%	3%	5%	5%
Transportation	4%	-9%	9%	5%	5%	7%	9%	8%	6%	6%
Communication	-10%	0%	-9%	7%	-7%	2%	3%	3%	4%	4%
Manufacturing	-29%	-2%	18%	0%	16%	17%	8%	6%	7%	7%
Total Nonresidential Buildings	-20%	-3%	5%	0%	6%	8%	6%	5%	6%	6%
NONBUILDING STRUCTURES										
Power	-12%	-4%	30%	-7%	11%	-5%	4%	7%	10%	9%
Highway and Street	0%	-4%	2%	1%	3%	-2%	0%	2%	1%	2%
Sewage and Waste Disposal	5%	-13%	-2%	-3%	5%	5%	5%	4%	3%	3%
Water Supply	-1%	-8%	-7%	2%	-4%	-2%	1%	2%	3%	4%
Conservation and Development	25%	5%	-17%	-3%	25%	6%	5%	5%	7%	7%
Total Nonbuilding Structures	-4%	-5%	10%	-3%	7%	-2%	2%	5%	6%	5%
Total Put in Place	-11%	-2%	9%	6%	5%	5%	6%	6%	7%	7%

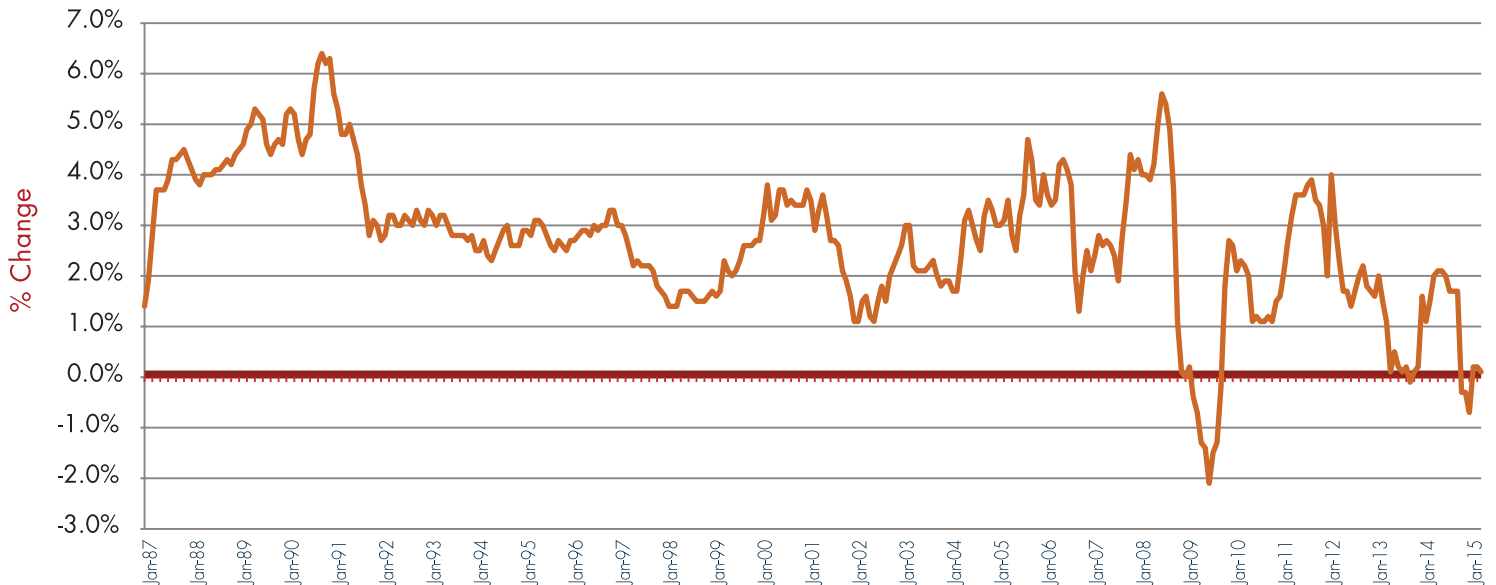
*Improvements includes additions, alterations and major replacements. It does not include maintenance and repairs.

APPENDIX

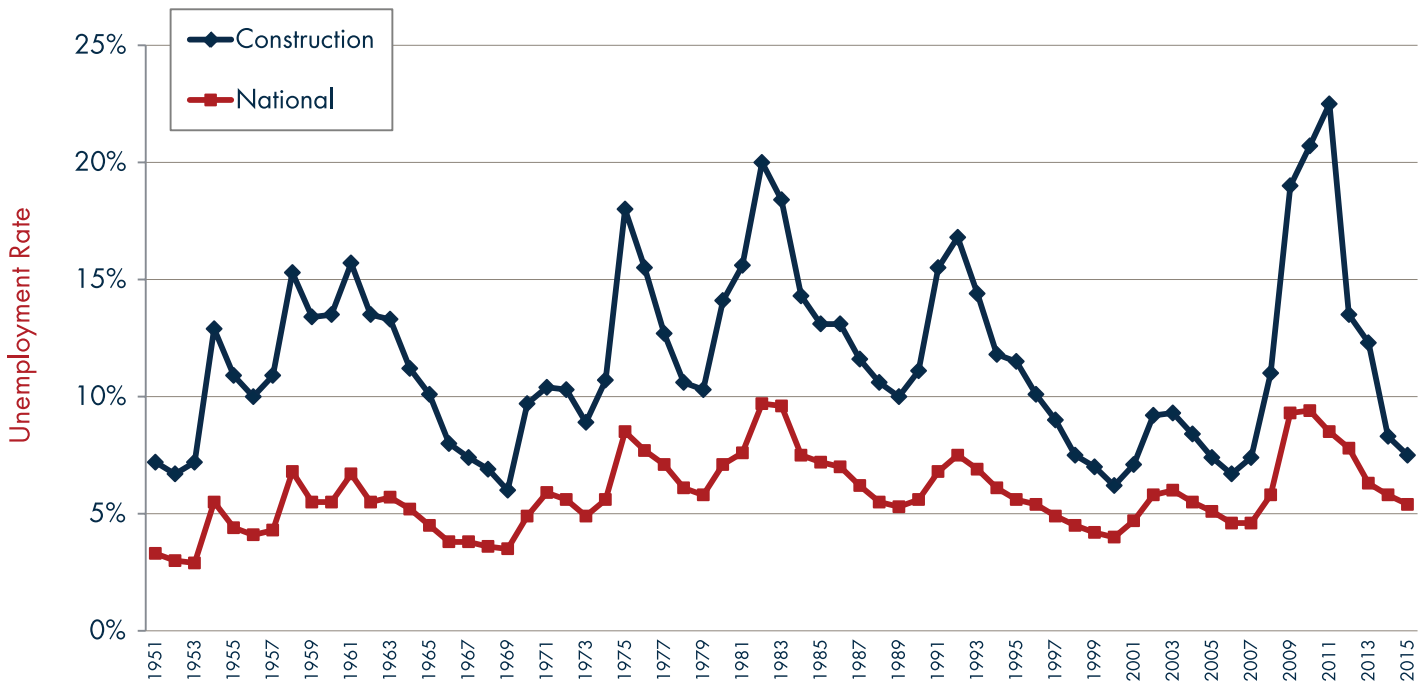
WEEKLY U.S. REGULAR CONVENTIONAL RETAIL GASOLINE PRICES Dollars Per Gallon



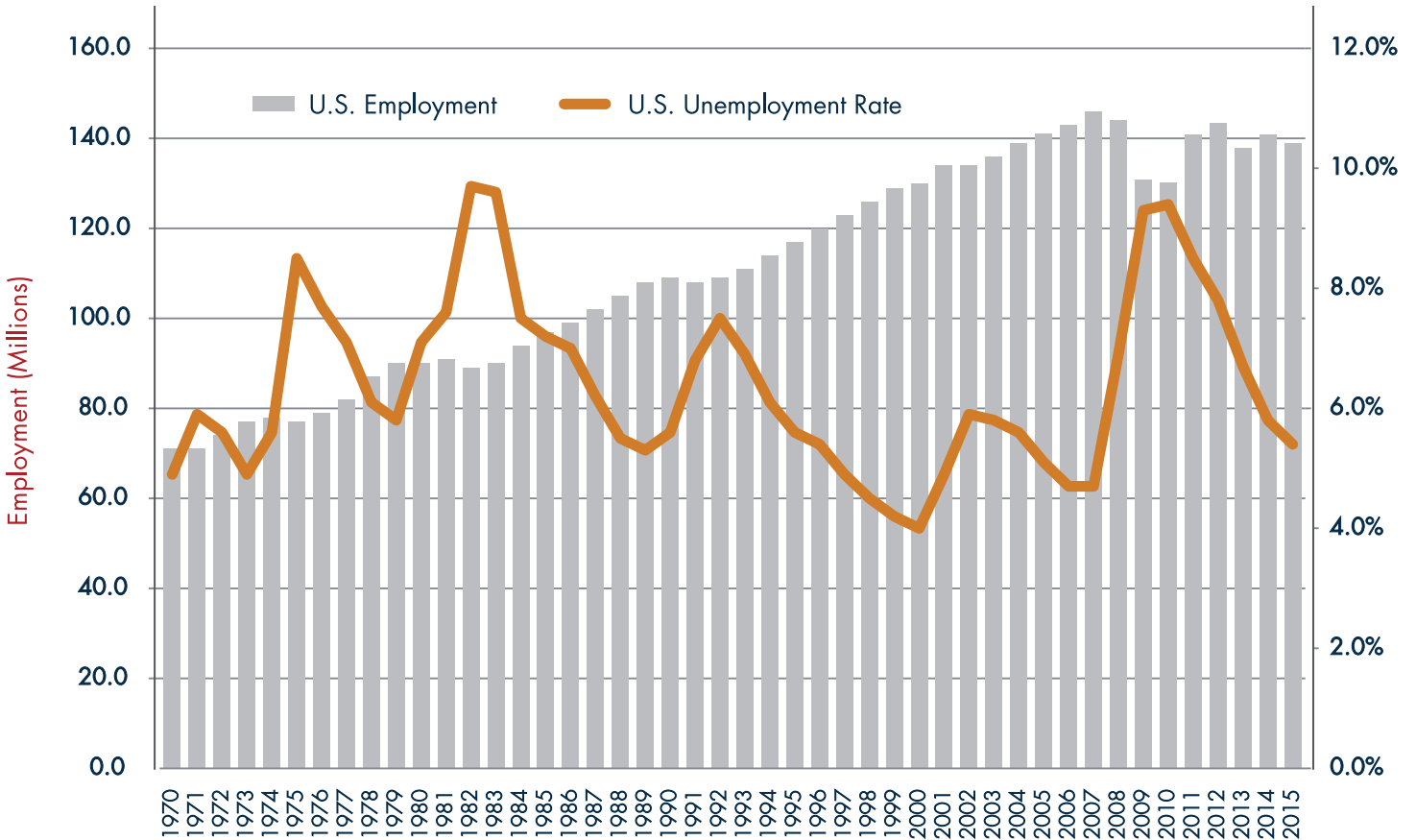
CONSUMER PRICE INDEX Inflation Remains Low



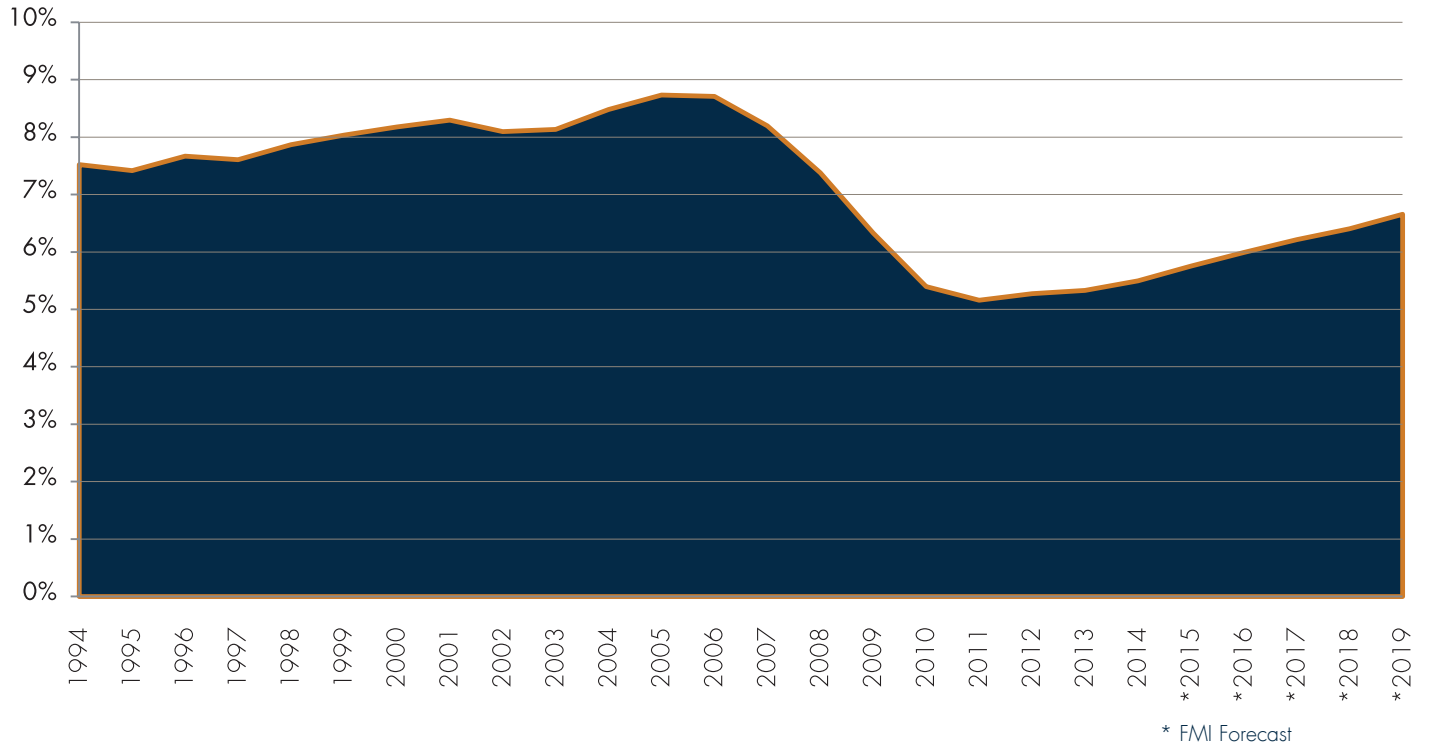
CONSTRUCTION UNEMPLOYMENT RATES



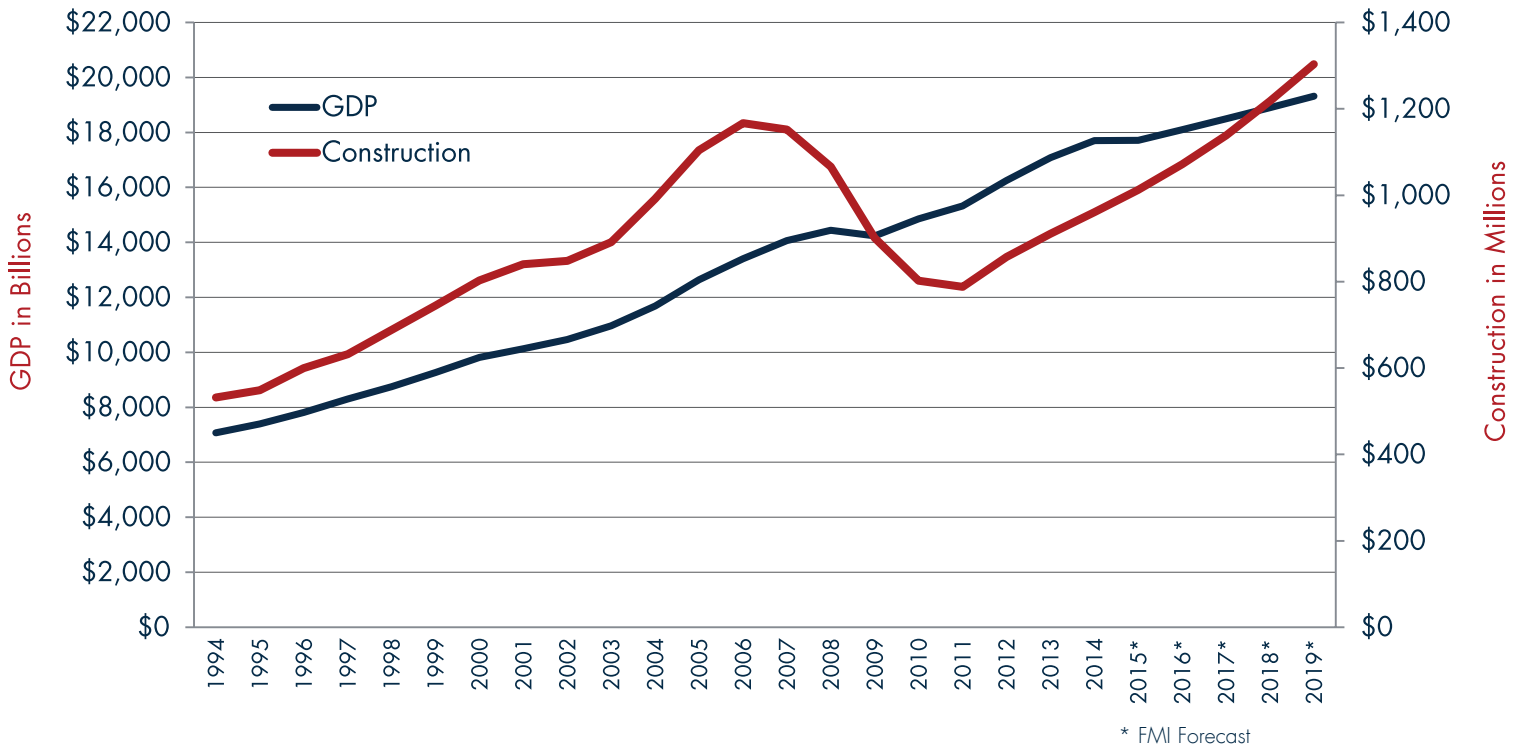
EMPLOYMENT AND UNEMPLOYMENT RATE COMPARISON



CONSTRUCTION AS A PERCENTAGE OF GDP



CONSTRUCTION SPENDING AND NOMINAL GDP



Value of Public Construction Put in Place (Seasonally Adjusted Annual Rate)

Millions of dollars. Details may not add up to totals due to rounding.

Value of Construction Put in Place — Seasonally Adjusted Annual Rate (Millions of Dollars)	Total Construction Put in Place (December 2013)	% of Total Construction Put in Place (Q4 2013)	Total Construction Put in Place (January 2015)	% of Total Construction Put in Place (Q4 2014)
*Public Construction	\$280,019	29%	\$264,170	28%
*State and Local	\$256,096	27%	\$241,886	24%
*Federal	\$23,924	2%	\$22,284	2%
FMI Forecast: Private Construction Put in Place	\$680,461	71%	\$748,136	74%
FMI Forecast: Construction Put in Place	\$960,480	100%	\$1,012,306	100%

* Source: U.S. Census Bureau Construction Spending

Benefits

A Construction Market Forecast From FMI's Research Services Group Can:

- Supply the market-oriented, economy-driven dimension essential for preparing, implementing and monitoring strategic plans.
- Be a significant aid in defining, targeting, implementing and monitoring other critical corporate decisions, such as long- and short-term sales goals or redirecting resources (i.e., on a geographic or a product-line basis).
- Provide the basis for estimating submarkets.
- Provide the basis for comparing performance among markets.
- Provide the basis for identifying activities that are beneficial or detrimental to performance.

Features

Each Standard Construction Market Forecast:

- Details construction put in place in three residential building, 11 nonresidential building and five nonbuilding structure categories. It covers the current year, eight previous years and five forecast years. It is available for any county in the U.S. or any combination of counties, metropolitan statistical areas, states, regions, etc.
- Includes both construction values and annual percentage changes. Delivery time depends on the size of the request but is usually only a few days. It can be delivered in printed or electronic form and in most major text or spreadsheet formats. Graphs can be provided at additional cost.

About FMI's Research Services Group

As the construction industry becomes increasingly competitive, market intelligence becomes an important tool for the building industry. A more complete understanding of the market, market trends, customer perceptions, buying practices, competitor profiles and other market influencers will enhance craft labor studies.

Since 1953, FMI has provided consulting and training services specialized for the construction industry. FMI's market research includes both secondary and primary research designed to meet clients' specific needs. Both types of research are used to provide accurate assessments in a timely, efficient and concise manner for clients.

Typical project work performed includes customer buying practices, competitive analyses, market-size modeling, market forecasts and trends, channel performance analyses, customer satisfaction surveys and sales performance evaluations.

Basis

- Historical information in FMI's standard Construction Market Forecast is based on building permits and construction put in place data as provided by the U.S. Commerce Department. Forecasts are based on econometric and demographic relationships developed by FMI, on information from specific projects gathered from trade sources, and on FMI's analysis and interpretation of current and expected social and economic conditions.

Other Reports

- Reports on state and federally financed highway construction are available for most counties or combinations of counties.
- Custom reports on a wide variety of construction-related topics can be prepared by FMI.
- Reports are based on multiple sources and are appropriate for preliminary analytical and planning purposes but contain little or no direct observation of the area described and are not guaranteed by FMI to be accurate.

**For more information,
call 919.785.9268.**



J. Randall (Randy) Giggard
Managing Director
Research Services

Randy Giggard is responsible for design, management and performance of primary and secondary market research projects and related research activities, including economic analysis and modeling, construction market forecasting and database management. Randy's particular expertise is in the areas of market sizing and modeling, competitive analysis, sales and market performance evaluations, buying practices and trends analysis.

Randy holds undergraduate degrees in mechanical engineering from Southern Illinois University and in English from Illinois State University and a master's of marketing and management policy from Northwestern University.

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About FMI

FMI is a leading provider of management consulting, investment banking[†] and people development to the engineering and construction industry. We work in all segments of the industry providing clients with value-added business solutions, including:

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- Market Research and Business Development
- Leadership and Talent Development
- Project and Process Improvement
- Mergers, Acquisitions and Financial Consulting[†]
- Risk Management Consulting
- Compensation Benchmarking and Consulting

Founded by Dr. Emol A. Fails in 1953, FMI has professionals in offices across the U.S. We deliver innovative, customized solutions to contractors, construction materials producers, manufacturers and suppliers of building materials and equipment, owners and developers, engineers and architects, utilities, and construction industry trade associations. FMI is an advisor you can count on to build and maintain a successful business, from your leadership to your site managers.

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