

FMI's CONSTRUCTION OUTLOOK

2nd Quarter 2013 Report

The Super Bowl, The Masters, The Indy 500, The Daytona 500, and The Kentucky Derby are all highly competitive harbingers of summer. So now summer is here, and it's time to "play ball!"

"Take me out to the ballgame." It's time for the boys of summer to take their bases, and it's time for the other men and women of summer to step up their game while the sun shines and build out our infrastructure, homes, malls and high-rises. Competition. In sports, we love it, spending billions a year building stadiums for our favorite teams, buying Cracker Jacks®, hot dogs, beer, popcorn, giant LCD screens, T-shirts and ball caps and teaching the kids how to participate. In sports, we also like it to be a fair competition—but we don't mind too much if the umpires make a few calls in our team's favor. The Super Bowl, the Masters, the Indy 500, the Daytona 500, and the Kentucky Derby are all highly competitive harbingers of summer. So now summer is here, and it's time to "play ball!"

Here Comes China

Loving competition, especially sports, is a global phenomenon. And when it comes to business, American-based companies have led the world in spreading market competition. The Great Recession made competition even fiercer in the construction industry as more companies vied for less work. And now, here comes China: it wants to play in our markets too. As the rapid growth in China slows, the Chinese are reinvesting their profits from all those gadgets they sold us and moving into new markets in a big way. Actually, China has been competing here and around the world for some time now, but a couple of headlines recently describe China—or Chinese companies, if they can be separated from the mother ship—planning to build a canal in Nicaragua. The proposed canal would become a competitor for the nearly completed rebuild of the Panama Canal. A monumental challenge, but China is a big country. Like Texas in the U.S. China thinks big, and it is thinking big in the construction machinery business too, working to compete with Caterpillar and other global giants. After all, China needs somewhere to invest more than a trillion U.S. dollars' worth of securities.

So competition is the underlying modus operandi of the "new normal" being fought out in the political arena in addition to on the sporting

grounds and in the business world. However, in U.S. politics there seem to be only two teams—we call that a monopoly in business—both with what they think is the winning ideology. (China, a one-party state, is also a good example of a business monopoly.) Both Democrats and Republicans have plans that will save the future of America and the world. However, both are seemingly ignoring what is happening in the real world to the people working to make a living. They don't seem to have a game plan to address global competition. They are watching us, as has been recently confirmed, but they aren't really listening.

Unfair Advantage

We could, and many will, cry foul and send the competition to the courts, the courts of law, that is. Fighting it out in the courts is really just a higher intellectual form of competition, with lawyers as high-paid gladiators. When it comes to good business investments, paying lawyers doesn't produce much. It's not so much that the laws are unfair—although some may be, since they were formed in a competitive arena—it is a matter of who has the best champions. So what can an upstanding ethical company do to gain a fair competitive advantage? Be more competitive. Be realistic. Prepare for action and execute strategic plans. There was a time—and maybe you can find a grandfather who can tell you about this—that American ingenuity and market savvy was the hottest thing since the invention of the refrigerator in the early 1900s by GE in Fort Wayne, Ind. There are some who think we can do this again, but what does that mean in a global economy? For instance, GE now operates "in over 100 countries and territories."

The decline in energy prices, particularly the new supply of natural gas found in shale deposits, may engender a resurgence of manufacturing in the U.S. That would mean better-paying jobs and more secure wages. The not-so-secret secret to regaining our foothold on growth is getting more people back to work. The unemployment rate has been sitting at around 7.6% to 7.8% for the last six months. That's better than it was in the

recession, but the number is misleading, since, now that we have a slightly improving economy, more people are looking for work. The unemployment rate for construction has improved significantly, but it is still around 15.8%, or about double the national rate. The more telling number is the civilian labor force participation rate (from the Bureau of Labor), which is at 63.4%, down from 66.4% in January 2003. Getting that 3% or more back would go a long way in reducing the deficit and increasing spending on construction of new homes, commercial buildings, modern manufacturing facilities, etc.

Full employment at this time is more like wishful thinking. There are other problems that more industries will realize once they try to grow again. We are talking about structural unemployment. There are many people who want work but do not have the skills and experience required for the growing number of companies that want to hire. Even the unemployed older than 50 are still trainable if given the opportunity, but it is taking too long for investors to get new ideas off the ground. This is also a potentially great opportunity to put more of the fresh, young graduates to work building the future; but America seems to have lost its vision of the future, or that vision just looks more like the past seen in the rearview mirror. We are wasting a lot of potential talent and production. It will take vision, leadership, training, partnerships and courage to get the economy to work its way out of the doldrums and be competitive again with the Chinese or anyone else around the world. Competition is an evolutionary force for change. Americans have always valued it as the basis of our success, but we need to renew our thinking about how to compete. There are individual companies that are doing this now. They are the companies that have thrived during the recent downturn. They are a step ahead, and others are wondering how they got so lucky. They understand the competition and are bold enough to innovate and plan for the future.

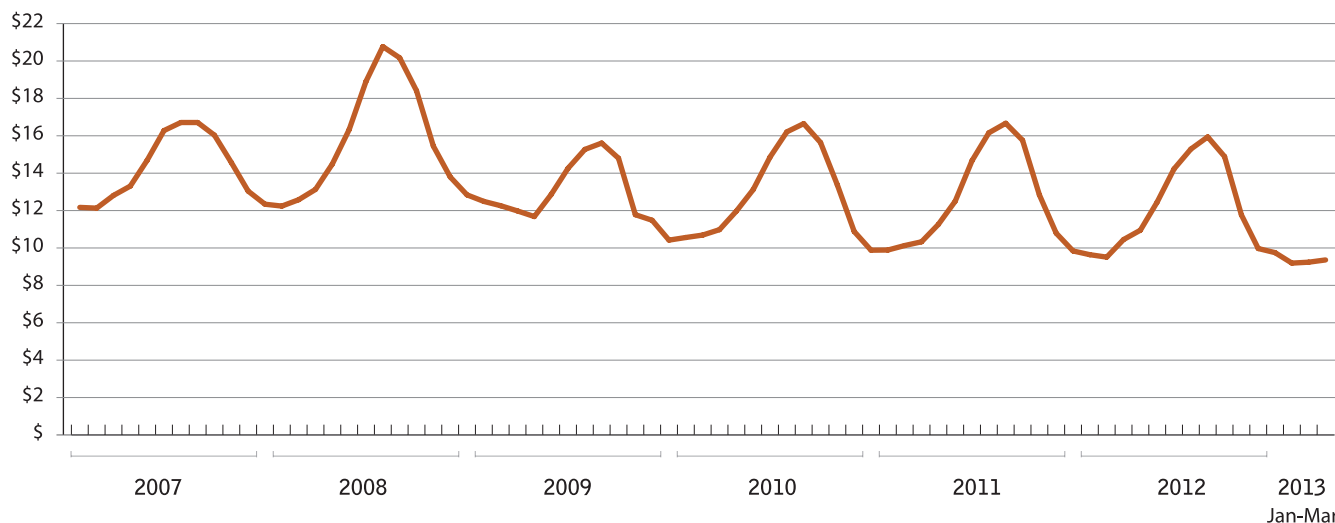


Looking for a Sign

Bumps in the road. Bridge out. Under construction. We are all looking for signs of the next big thing. Some are not just looking for it, but are creating the next big thing. However, there are a couple of big things currently growing fast enough to achieve potential bubble level. Shale oil exploration and mining and residential housing. Both have gotten a lot of press recently, and the news is mostly good for the economy. However, there are analysts and investors, especially in regard to housing, who want to hedge their bets and for good reasons. For instance, a recent report by Wells Fargo points out that, while homes are still affordable, prices are being driven up on the high end by investors more than by individuals purchasing their primary place of residence. In addition, although new household formation is growing again, it is still below historical levels. That means more people are looking for rental housing, which is a growing market, although it amounts to less than 11% of all residential construction and only 3.75% of total construction put in place. Too many investors looking for a sure thing makes a sure bubble. It would be better, according to some, if we saw a significant increase in household formation and private homebuyers.

Nonetheless, we do not want to downplay the continuing improvement in residential construction. The improvement in residential construction is the primary area of growth in our forecast for 2013. Most other sectors, while still improving over 2012, are growing at a somewhat slower rate. One of the primary reasons for this slow growth continues to be uncertainty caused by the federal budget competition that has gone well beyond the allotted overtimes for the game. (This happens because the players are also the rule makers and referees.) When we asked the panelists for FMI's "Nonresidential Construction Index" how sequestration is affecting their business both in the public and private sectors, we found that, in the public sector, 19% reported they have already seen the impact of sequestration on their public work. The amount that sequestration might reduce their public work varies widely, but the majority of the panelists expect a reduction anywhere from zero to 4%. Only 6% say they are now seeing some reduction in private work due to sequestration, and 69% of panelists expect that figure to be no more than -1%. When we are forecasting 7% growth in total construction put in place for 2013—a reduction of 1% compared with 2012—losing more revenue due to sequestration is a frustration for growth. It also continues to keep the heat on industry competition if the mostly larger companies that make their livelihood in government construction start looking for work in already competitive private sectors.

United States Price of Natural Gas Delivered to Residential Consumers (Dollars Per Thousand Cubic Feet)



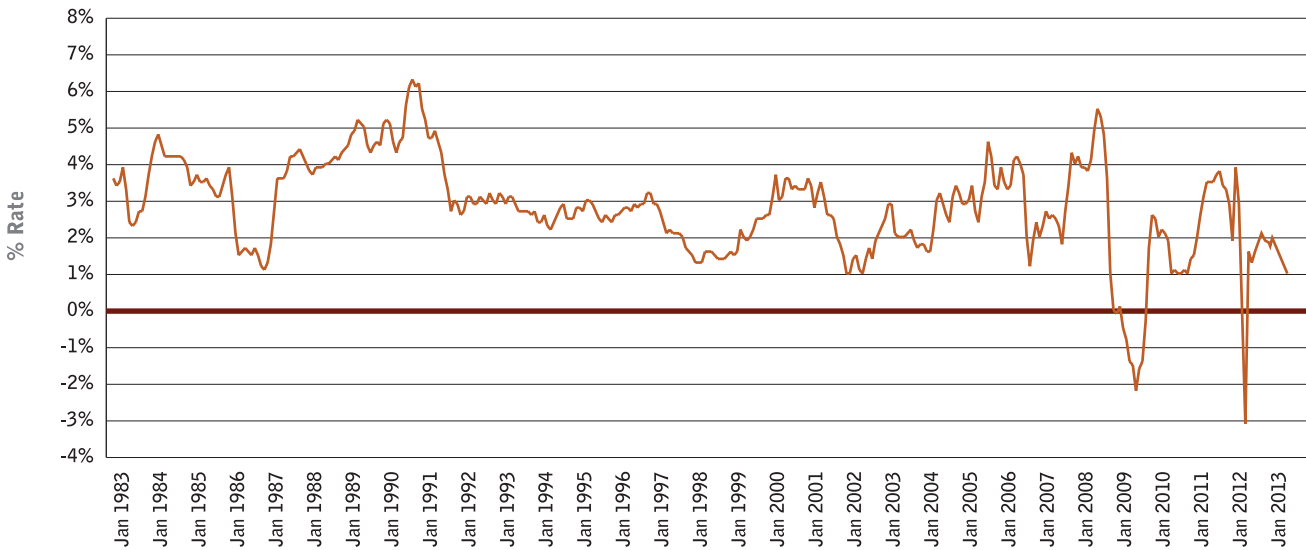
Source: U.S. Energy Information Administration

Weekly U.S. Regular Conventional Retail Gasoline Prices (Dollars Per Gallon)

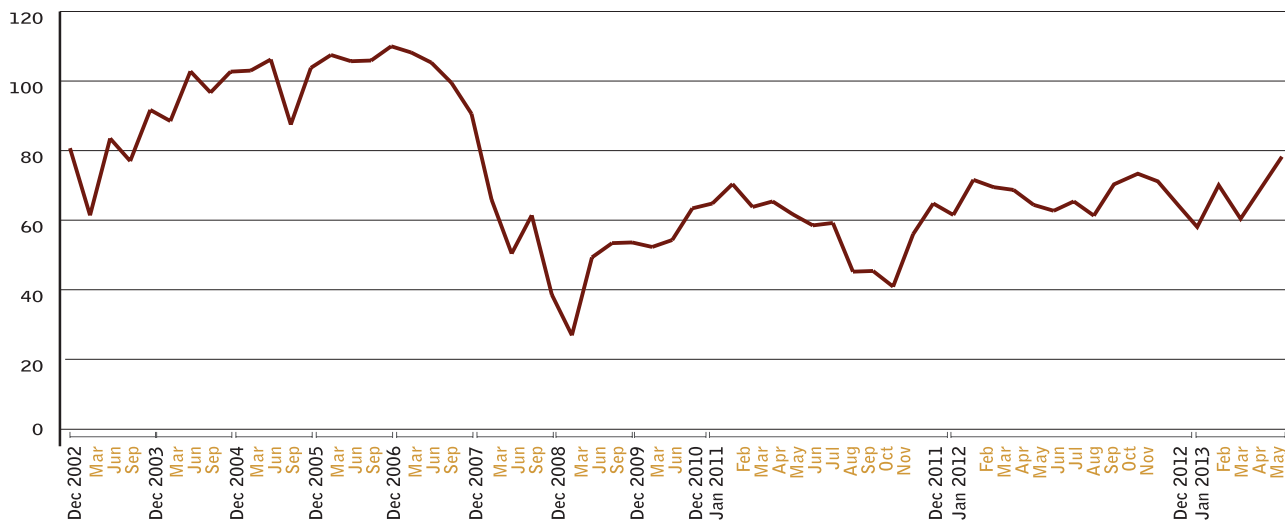


Source: <http://www.eia.gov/petroleum/gasdiesel/>

Consumer Price Index Inflation Remains Under Control

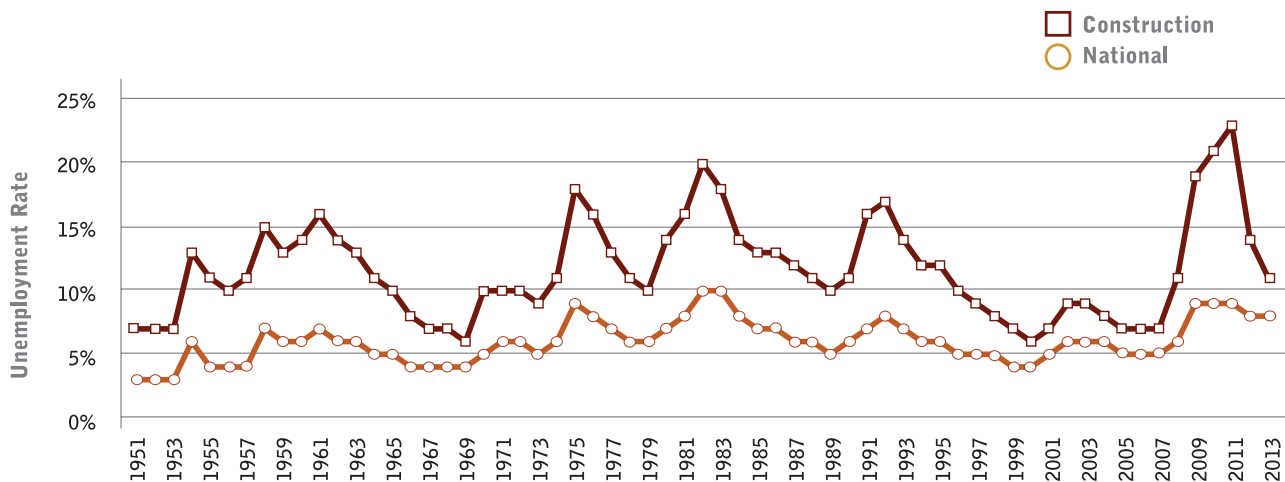


Consumer Confidence Index



Source: The Conference Board

Construction Unemployment Rates



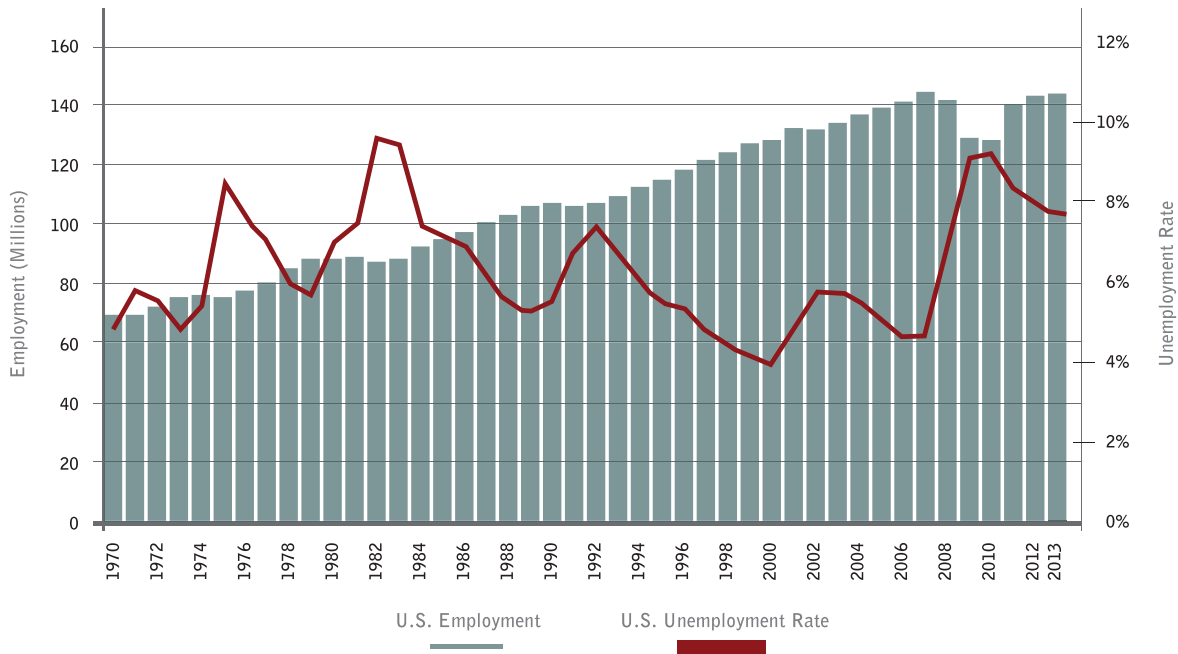
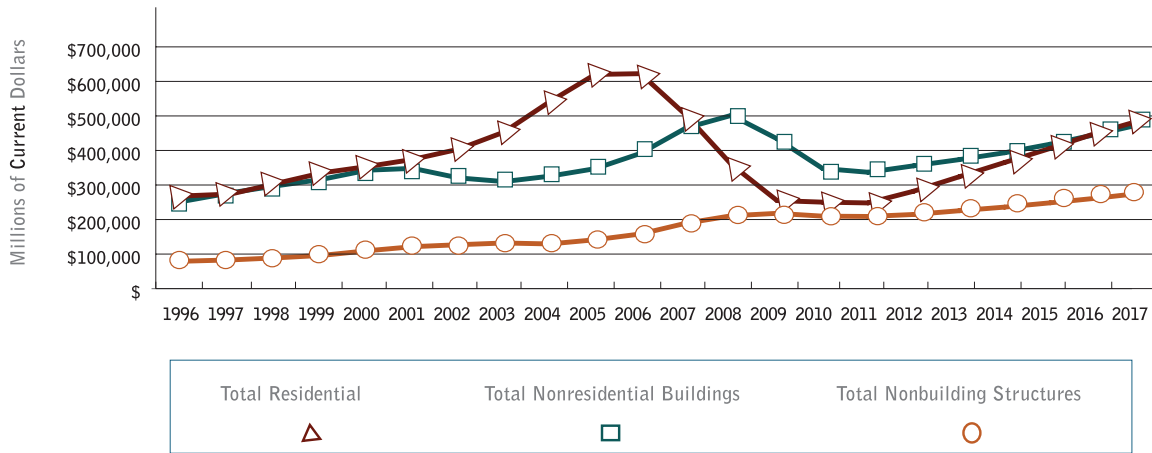
"Construction employment gained 7,000 jobs in May." (BLS)

Construction Forecast

Our overall forecast for U.S. construction put in place has been revised down from 8% last quarter to 7% in the second quarter. The revised figure for total construction put in place is \$913 billion for 2013, but we expect growth to return to 8% in 2014 to hit \$989 billion. The major markets downwardly adjusted for a slower growth forecast include residential improvements (-1.8%), commercial construction (-0.8%), health care (-3.15%), public safety (-2.5%), amusement and recreation (-2.0%), sewage and waste disposal (-3.8%), and water supply (-3.2%). While there is no singular reason for the drop in these markets—each is evaluated on its own criteria—there are a few economic concerns that touch all of them. The first is the decline in public construction and expectations of more as the sequestration continues. Second, lenders are still tight with their lending criteria. Consumers are still cautious about increasing their debt load.

Interest rates, while still low by historical standards, are creeping up for consumers. Most seem to have absorbed the new tax structures into their budgets, but are uncertain as to the cost of health care. The boom areas of shale oil exploration are helping tremendously in some regions, but haven't flowed over to the rest of the nation. If, as many have suggested, energy prices in the U.S. continue to stay low and exports increase in the coming years, this will help fuel the economy in several ways; but that will take some more time. Still, the outlook is better than it has been for some years.

FMI Construction Put in Place, Estimated for the United States

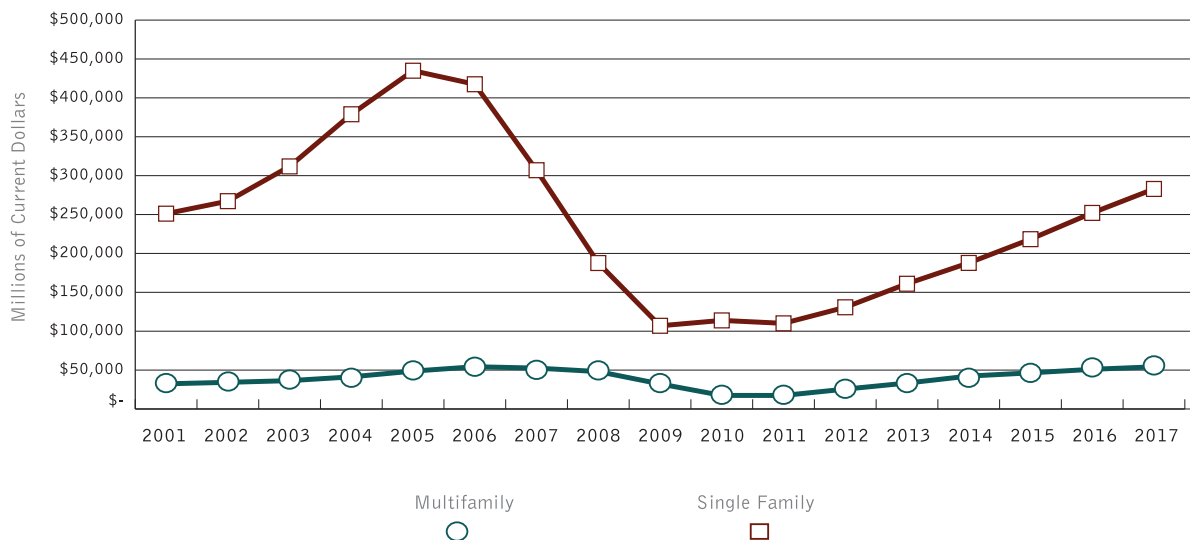


RESIDENTIAL

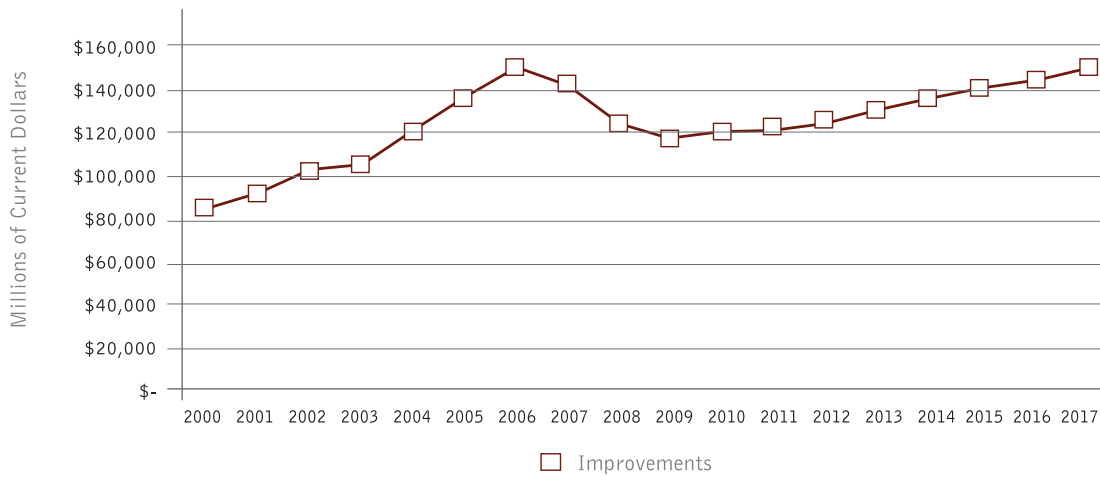
The recent growth in residential construction continues to show some sustainability, even though there has been some slippage; but some of that may be due to the bad spring weather. We continue to forecast a 23% increase in construction put in place for single-family housing, but our forecast for multifamily housing has dropped from a strong increase of 42% in 2012 to a current 31% increase for 2013. Our total forecast for residential, including improvements, is \$322 billion compared with \$282 billion for 2012. This is approximately half the total for the boom years before the crash, but a steady improvement is good for business.

The numbers for housing starts are a little bit jagged. According to the latest report from the U.S. Census Bureau, "Privately-owned housing units authorized by building permits in May were at a seasonally adjusted annual rate of 974,000. This is 3.1 percent ($\pm 0.9\%$) below the revised April rate of 1,005,000, but is 20.8 percent ($\pm 1.3\%$) above the May 2012 estimate of 806,000." We might expect this to be a jagged line over the year, partly seasonal and partly economics, as the government and other large businesses, like the giant IBM, continue to downsize. However, the shadow inventory of homes in foreclosure is diminishing, and that is helping to bring housing prices up. At the same time, housing inventory has increased to 15.2%, according to Calculated Risk (June 04, 2013.) On one hand, that helps both sales and prices go up. On the other hand, if inventories stay too high, new building will slow. This push/pull supply and demand will keep the rise of residential housing in check until wages catch up with price gains, which is happening for the high-wage earners, but not for the middle-class homebuyers.

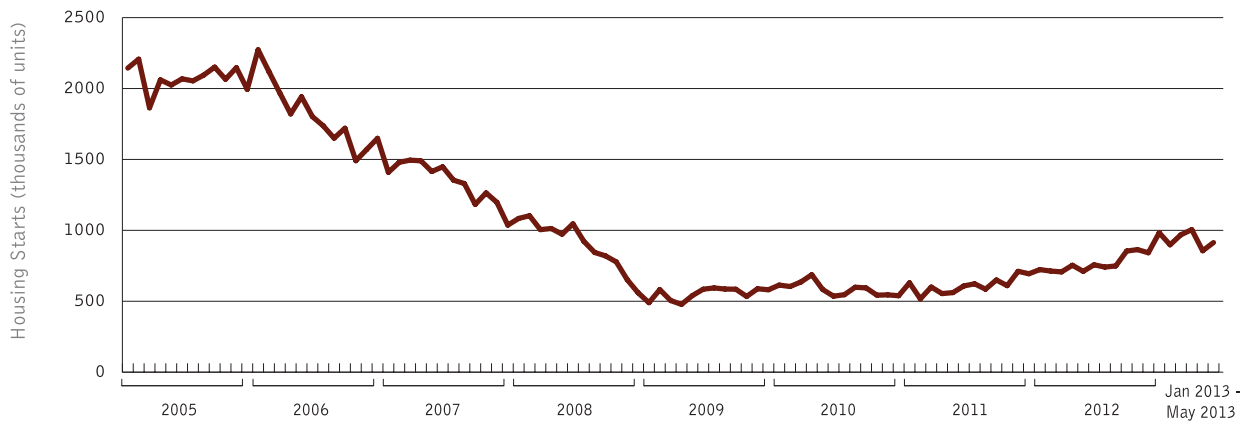
Residential Construction Put in Place



Residential Construction Improvements Put in Place Forecast as of Q2 2013



New Privately Owned Housing Units Started (Thousands of Units, Monthly, Seasonally Adjusted Annual Rate)



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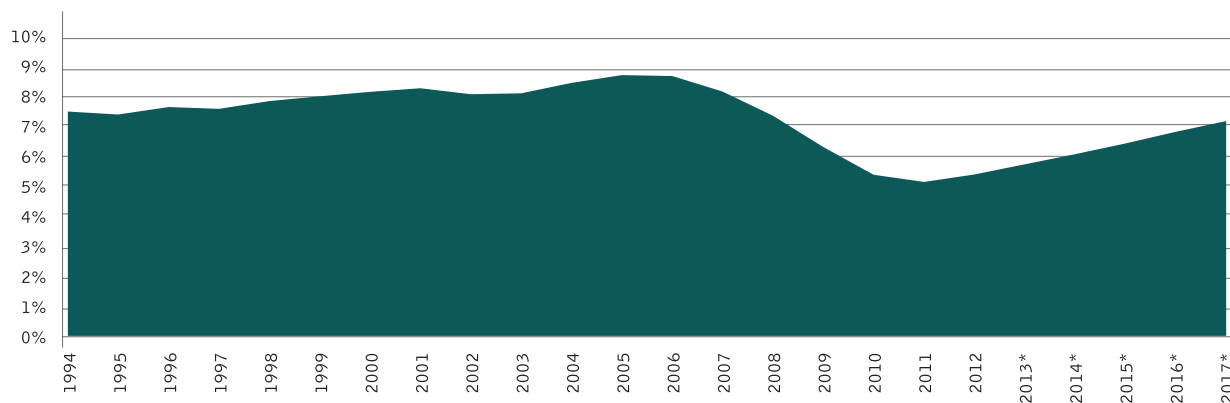
- “According to CoreLogic, there were 52,000 completed foreclosures in the U.S. in April 2013, down from 62,000 in April 2012, a year-over-year decrease of 16 percent. On a month-over-month basis, completed foreclosures remained flat at 52,000, the same number reported for March 2013.” (CoreLogic press release May 29, 2013)
- According to the May 28, 2013, report from S&P/Case-Shiller, “The 10-City and 20-City Composites increased by 10.3% and 10.9% in the year to March with the national composite rising by 10.2% in the last four quarters. All 20 cities posted positive year-over-year growth.”
- According to the U.S. Census Bureau, “Privately-owned housing units authorized by building permits in May were at a seasonally adjusted annual rate of 974,000. This is 3.1 percent (±0.9%) below the revised April rate of 1,005,000, but is 20.8 percent (±1.3%) above the May 2012 estimate of 806,000.” (June 18, 2013)

DRIVERS:

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

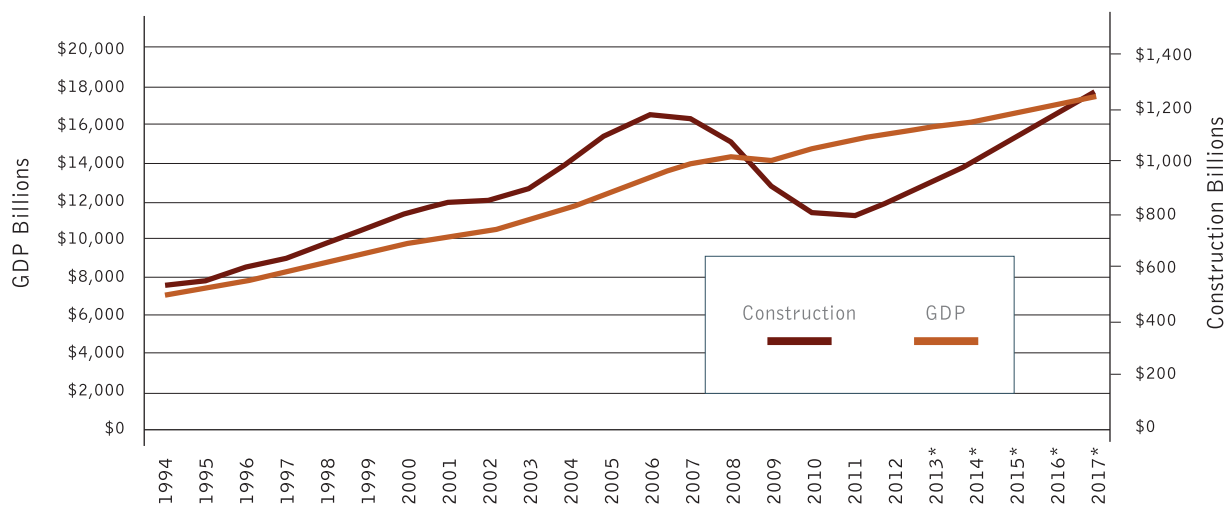
NONRESIDENTIAL BUILDINGS

Construction as a Percentage of GDP



*FMI Forecast

Construction Spending and Nominal GDP



*FMI Forecast

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 (Q1 2012)	% of Total Construction Put in Place (Q1 2012)	Total Construction Put in Place (Q1 2013)	% of Total Construction Put in Place (Q1 2013)
*Public Construction	\$277,228	33%	\$265,255	29%
*State and Local	\$251,108	30%	\$241,386	26%
*Federal	\$26,120	3%	\$24,647	3%
FMI Forecast: Private Construction Put in Place	\$610,981	72%	\$647,873	71%
FMI Forecast Construction Put in Place	\$848,698	100%	\$913,128	100%

* Source: U.S. Census Bureau Construction Spending

Lodging

Lodging construction came back to life in 2012. Although the pace has slowed since last year, we have increased our forecast from 10% last quarter to 12% growth this quarter to reach a total of \$12.4 billion. One of the key measures of the hospitality market is revenue per available room (RevPar), which is expected to be up 5.9% in 2013; however, early reports for 2013 show double-digit increases. Interest rates remain low for those looking to improve existing properties or build new, but lenders are still conservative. That means, the high-end properties and major business destinations like New York City will have the best chance of expansion.

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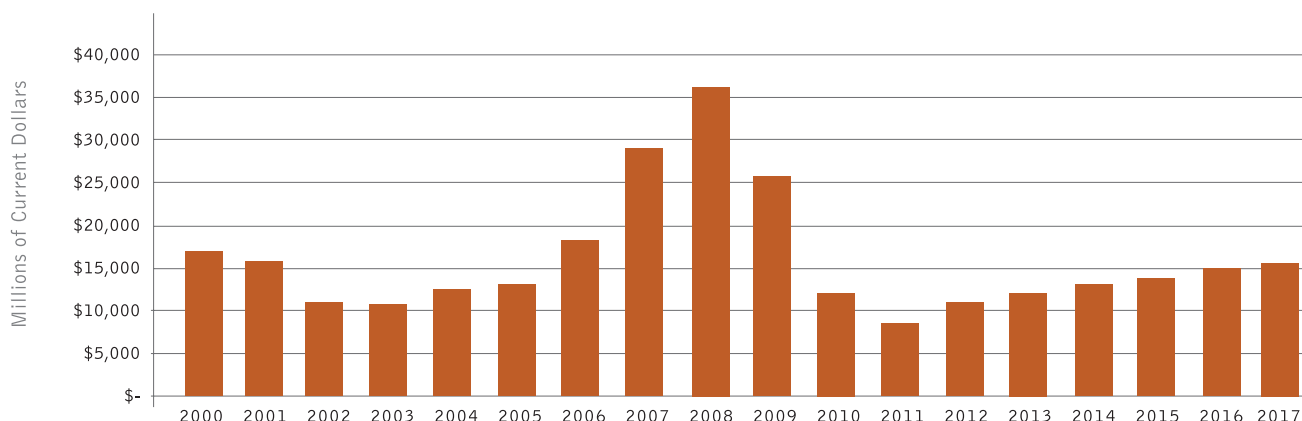
- According to a report by PriceWaterhouseCoopers (PwC), RevPar growth is expected to be 5.9% for 2013 overall. (PwC “Hospitality Directions U.S.” June 2013)
- Average daily rates per room will continue to remain low as the business and vacation travelers shop for the best buy.
- Hotel developers will renovate before building new properties.
- As the economy continues to improve, business and vacation travelers are taking to the roads and airways, but this will be a slow transition.
- International travel is still steady due to the weak dollar.
- 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 2013



Office

Little changed from last quarter, office construction is finally showing a solid, but slow, turnaround with 5% growth in 2012 and another 5% increase expected in 2013. High unemployment rates and sharp downsizing in the financial sector took their toll on office vacancy rates since the recession. Now companies enjoying higher profits are again looking at growth and expansion. New office space is being absorbed at a faster rate, thus allowing for increased rents. According to the National Association of Realtors, “Office rents should increase 2.6% in 2013 and 2.8% next year, following a 2.0% gain in 2012.” In the first quarter, Reis reported that “[The] office vacancy rate declined slightly to 17.0% from 17.1% in Q4 2012.” (<http://www.calculatedriskblog.com/2013/04/reis-office-vacancy-rate-declines.html>) While all this looks positive for the office market, it is tempered by Reis: “Only 1.578 million SF [square feet] of new office space came online in the first quarter of 2013, the lowest quarterly figure for new completions since Reis began publishing quarterly data in 1999.” (Ibid.)

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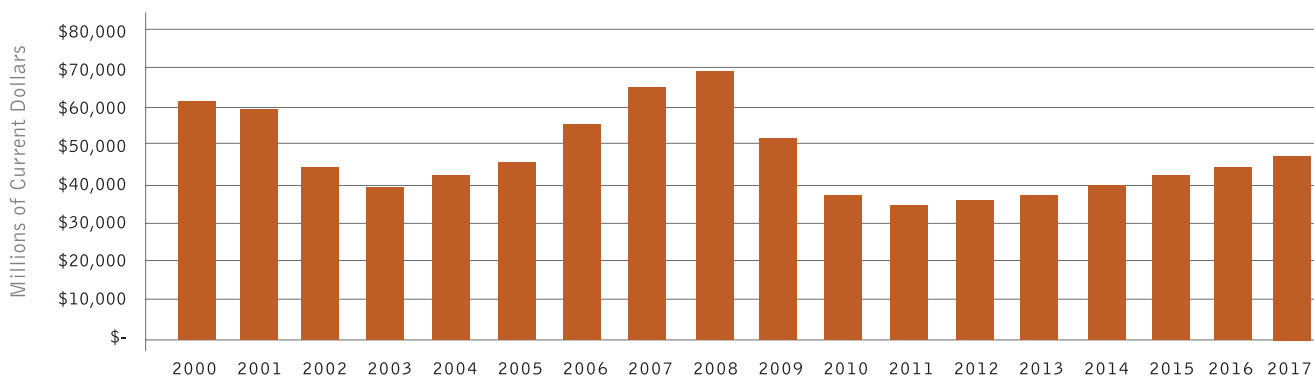
- According to the National Association of Realtors, “Net absorption of office space is projected to total 31.7 million square feet by year-end. Office vacancies are expected to decline to 15.6 percent by the end of 2013. . . . Rents for office properties are expected to increase 2.6 percent over the year.”
- Asking rents increased 0.8% to an average \$28.46 per square foot, according to Reis.

DRIVERS:

- 📉 Office vacancy rate
- Unemployment rate

Office Construction Put in Place

Forecast as of Q2 2013



Commercial

Our current forecast calls for about a 1% drop in commercial construction from our last forecast. We are now looking at a more modest increase of 6%, to \$49.8 billion for 2013. All things considered, that is still a significant improvement over the lows of 2010. Sales for retail and food service, according to the latest report from the U.S. Census Bureau, showed only a 0.4% increase in the consumer price index for the month and only a 1.1% increase over last year. Sales for retail and food services as of May 2013 were reported as “\$421.1 billion, an increase of 0.6 percent (±0.5%) from the previous month, and 4.3 percent (±0.7%) above May 2012. Total sales for the March through May 2013 period were up 3.7 percent (±0.5%) from the same period a year ago.”

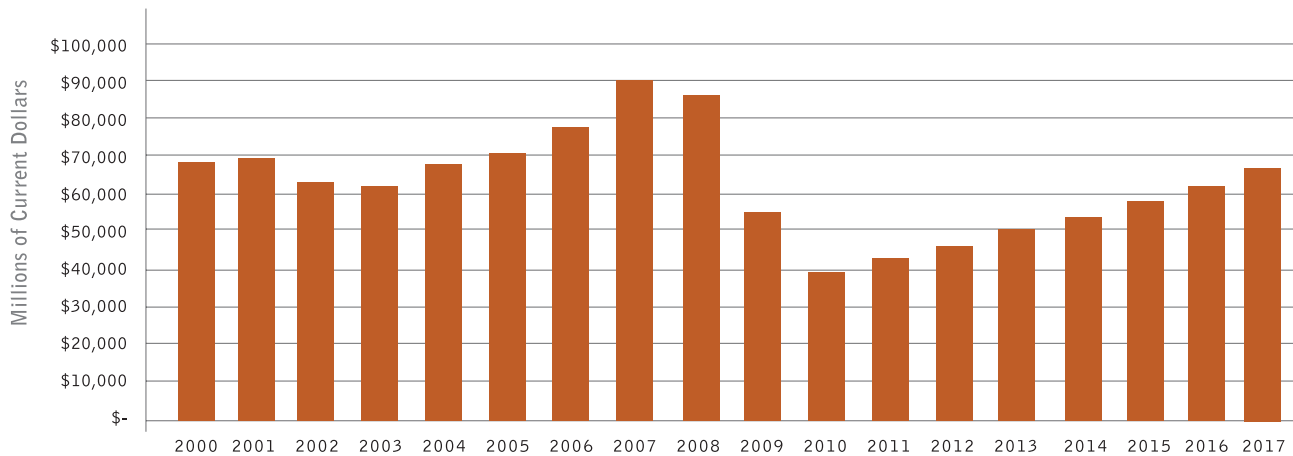
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- According to the Department of Commerce, “retail and food services sales for May, adjusted for seasonal variation and holiday and trading-day differences, but not for price changes were \$421.1 billion, an increase of 0.6 percent (±0.5%) from the previous month, and 4.3 percent (±0.7%) above May 2012. Total sales for the March through May 2013 period were up 3.7 percent (±0.5%) from the same period a year ago.”
- Nonstore retail sales slipped a little since February but “were up 11.3 percent (±2.1%) from May 2012.”
- Consumer confidence rose to 76.2 in May, a jump of 8.1 points over April 2013. (The Conference Board)
- Expect more rethinking of commercial construction space to accommodate smaller stores and to combine in-store sales with online shopping.
- Increased store remodeling could stall new construction.
- Look for increasing multiuse projects.

DRIVERS:

- Retail sales
- CPI
- Unemployment rate
- Income
- Housing starts
- Building permits

Commercial Construction Put in Place Forecast as of Q2 2013



Health Care

Our health care construction forecast slipped 3.1% since last quarter, but it is still expected to grow 5% in 2013 to \$42.7 billion. Otherwise, little has changed in our outlook since last quarter. Demographics continue to drive our forecast, and baby boomers are retiring in larger numbers and more likely to need greater health care. However, there is a larger elephant in the room that makes prediction a bit dicey right now. The Affordable Health-care Act, Obamacare, is set to provide access to affordable health insurance for millions of Americans who are currently uninsured. This looks like a potentially sudden shock to the system, even though it has been coming for three years now, because many have ignored it or tried to legislate it away. The “2013 CFO Outlook, Survey of U.S. Senior Financial Executives” by Bank of America/Merrill Lynch cites 58% of CFOs as seeing rising health care costs as a chief concern. That response isn't based solely on the coming changes due to Obamacare, but also the concern for the continually rising health care costs that Obamacare seeks to improve. Meantime, health care providers will continue to focus on reducing costs for new facilities through use of technology and fewer frills.

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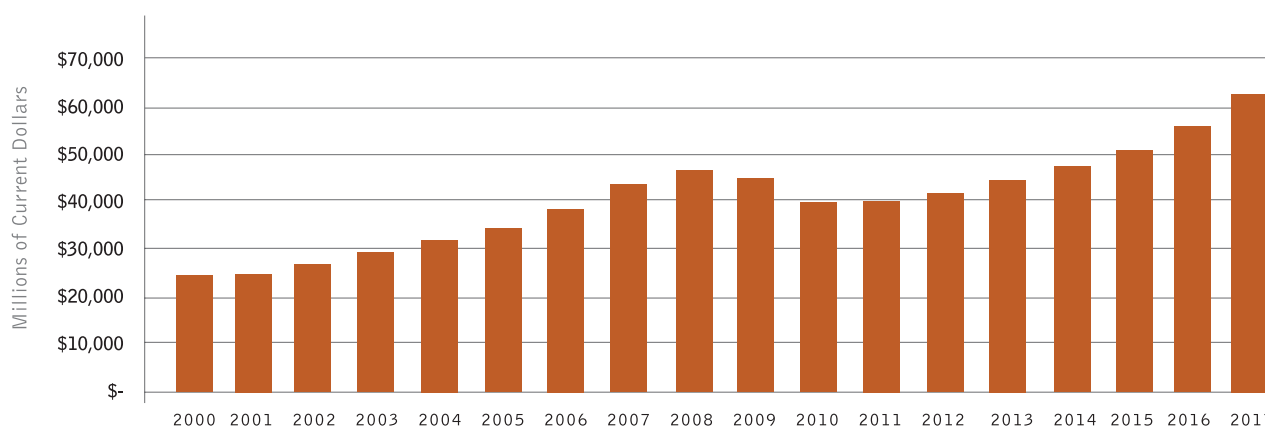
- Hospital beds per 1,000 people trending downward.
- Shorter patient stays.
- Increasing use of growing number of ambulatory-care facilities.
- Health care industry still not prepared for increased number of insured starting in 2014.
- Trend toward rebuilding existing facilities to use modern hospital 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 2013



Educational

Education construction will hold at a low level of growth for the remainder of 2013. Due to budget cuts for government spending at all levels, schools will pick up slightly in 2013 to just 2% higher than 2012 levels at an annual rate for construction put in place of \$86.1 billion. The increases in residential construction and tax revenues for states and municipalities will help bring this market back in many areas of the country. At the same time, states and communities with decreasing populations, due to people moving to find better jobs, continue to try to consolidate older, underutilized schools. Private schools may continue to suffer, as parents facing tight budgets avoid the higher costs. For higher education, students are becoming more discerning about their return on investment and taking a closer look at the growing number of degree programs offered online.

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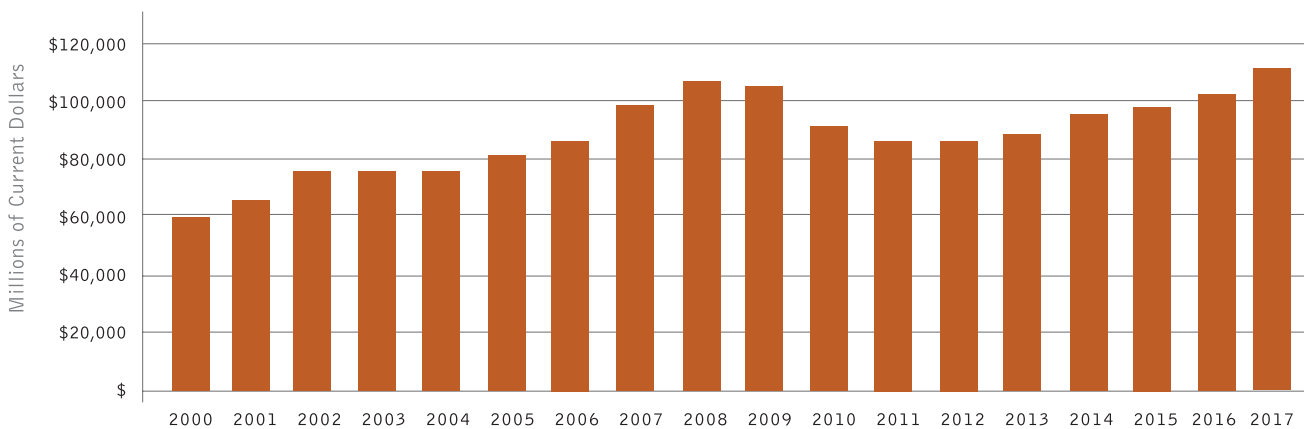
- Significantly less funding from states for K-12 schools.
- Enrollment growth 2.5 million in the next four years.
- New school modifying designs more flexible for changing classrooms and greater use of natural light.
- Greater attention to reducing energy use and employing green building technologies.
- Harvard installs 600-kilowatt solar array.
- Greater focus on safe schools after recent horrific shootings on campus.

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 Q 2013



Religious

After nine years of being in a shrinking market, religious construction is set to grow just 1% in 2013 to \$3.9 billion. Much of this growth is likely to be renovation, as newly formed congregations move into vacated retail space or reoccupy church buildings abandoned by other faiths. As the housing market slowly continues a growth trend in the coming years, we may also see more expendable income for contributing to new community houses of worship.

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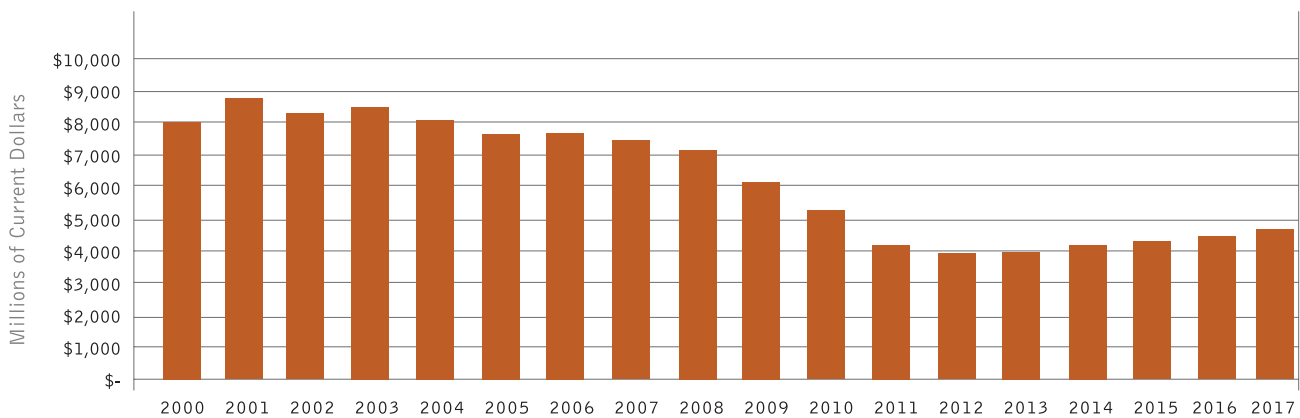
- The lending environment continues to be a challenge for many congregations.
- Establishing a capital campaign is becoming increasingly common.
- Many churches are seeing tremendous declines in contributions and tithes.
- More parishioners are relying on their houses of worship to provide guidance and assistance, further stretching thin resources.
- New methods for charitable giving, including online giving and donation collections, are empowering religious organizations.
- Improved space utilization and additions are taking the forefront, as new construction is increasingly not an option.
- Churches are becoming smarter about attracting parishioners who are drawn in by facilities and the church building itself.
- Energy efficiency, green sustainability and long-lasting quality are becoming top features many congregations want in worship houses..

DRIVERS:

- ⬇ GDP (slowing)
- ⬆ Population
- ⬆ Income
- ⬇ Personal savings rate

Religious Construction Put in Place

Forecast as of Q2 2013



Public Safety

A new report from the Congressional Research Services states, “The growing prison population is taking a toll on the infrastructure of the federal prison system. The BOP reports that it has a backlog of 154 modernization and repair projects with an approximate cost of \$349 million for FY2012.” (The Federal Prison Population Buildup: Overview, Policy Changes, Issues and Options, January 22, 2013) According to the report, “[The] federal prison system was 39% over its rated capacity in FY2011, but high- and medium-security male facilities were operating at 51% and 55%, respectively, over rated capacity.”

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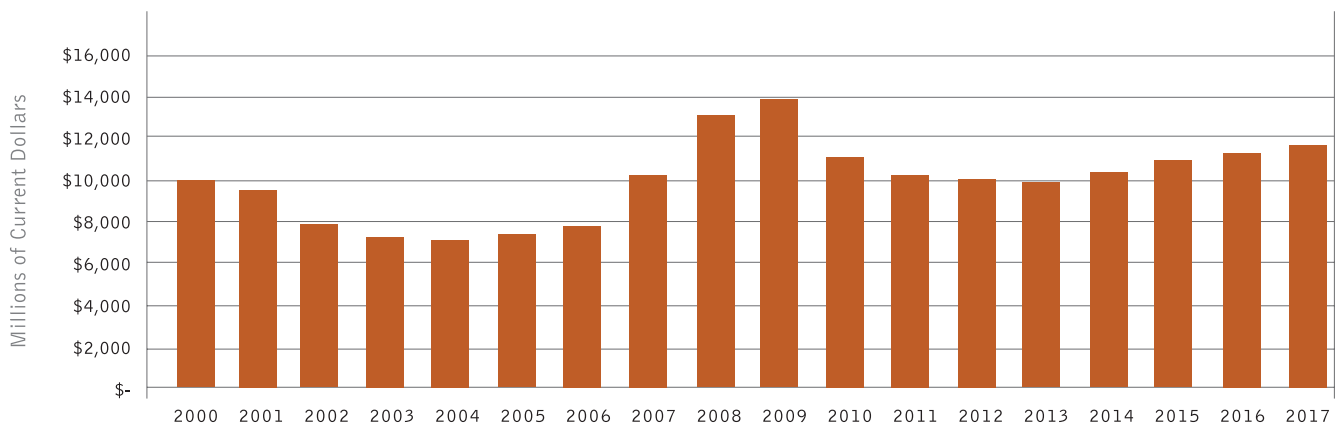
- “Over the past 30 years, according to a new report by the Congressional Research Service (CRS), the federal prison population has jumped from 25,000 to 219,000 inmates, an increase of nearly 790 percent. Swollen by such figures, for years the United States has incarcerated far more people than any other country, today imprisoning some 716 people out of every 100,000.” (www.ipsnews.net/2013/02/u-s-prison-population-seeing-unprecedented-increase/)
- The Pentagon is seeking a “\$150 million overhaul of the U.S. detention facility at Guantanamo Bay, Cuba,” according to a report at WorldNews on NBC news.com.
- Adult correctional facilities’ population decreased 1.3% in 2010.
- Privately managed secure facilities are increasing.
- 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.
- Government appointed its first chief greening officer (under GSA) to oversee aggressive pursuit of sustainable practices in government buildings.
- 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 2013



Amusement and Recreation

Amusement and recreation is a competitive business, not just for contractors, but for the cities and teams involved. Given the belt-tightening attitude across the country right now, it will likely be much more difficult to get funding from taxes and municipalities to build new stadiums in the near future. We have dropped our forecast from the first quarter by 2% to just 1% growth, and most of that will be for ongoing projects. It hasn't happened in America, but Brazil's latest protest over rising costs to average citizens for sporting events that benefit the rich may spill over around the globe.

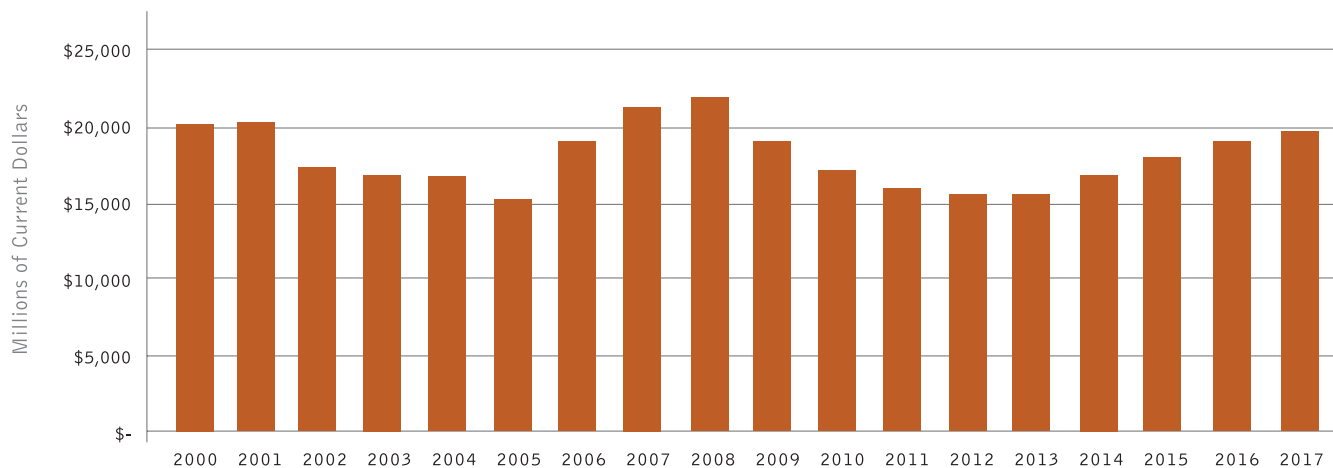
TRENDS:

- The San Francisco 49ers have recently broken ground on their new \$850 million stadium.
- Minnesota Vikings \$1.1 billion project has been approved by the state senate.
- 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, as well as other public arenas.

DRIVERS:

- Income up
- Personal savings rate
- Unemployment rate

Amusement and Recreation Construction Put in Place Forecast as of Q2 2013



Transportation

Transportation construction grew 8% in 2012 and will continue to show relative strength in 2013, growing another 8% to \$39.6 billion dollars. With the passage of MAP-21 and the expanded federal Transportation Infrastructure Finance and Innovation Act (TIFIA) loan program, the transportation market finally has some degree of certainty for its funding in the near term. According to a new report by the American Road and Transportation Builders Association, (ARTBA), the "U.S. Transportation Construction Market Forecast 2013" calls for sluggish growth in highway and bridge construction due to reduced federal and state budgets, but rail—especially private freight lines—and ports will continue a slow expansion in the forecast period through 2017.

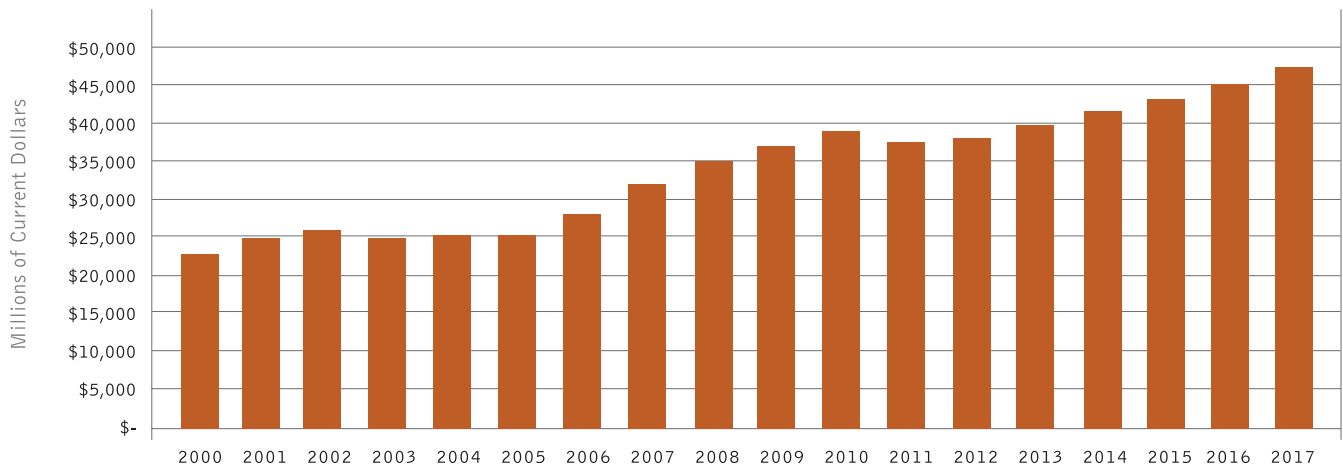
TRENDS:

- According to the American Association of Railroads, "Intermodal traffic in February 2013 totaled 983,078 containers and trailers, up 10.5% (93,231 units) compared with February 2012. The largest increase for carloads was for petroleum and petroleum products, up 69.5% over 2012."
- The FAA Modernization and Reform Act will provide \$63.6 billion for the agency's programs between 2012-2015.
- By 2021 more than 1 billion people a year will take to the air.
- High-speed rail is slow to get projects off the ground due to state funding and political resistance.
- Growth in container ports is recovering from the recession.
- Intermodal transportation will be the focus of new projects.

DRIVERS:

- 📈 Population
- 📈 Government spending
- 📈 Transportation funding

Transportation Construction Put in Place Forecast as of Q2 2013



Communication

We have revised the forecast for communication construction downward by 1.7% from last quarter to 2% growth, or \$17.5 billion. In part, this is to account for decreasing government spending and slower growth in general, but we are still looking at positive growth in line with GDP. As data centers continue to proliferate, there has been more attention on their insatiable need for energy. That will stimulate more energy-conscious facilities in the future. Communications security, especially over the Web, is a growing concern for businesses as well as for government, with the focus being on an increasing likelihood of attacks by terrorists and foreign governments. While one might think we are approaching market saturation for smartphones and wireless communications, the market keeps going up as more consumers hook up several devices and look for constant, high-speed connectivity.

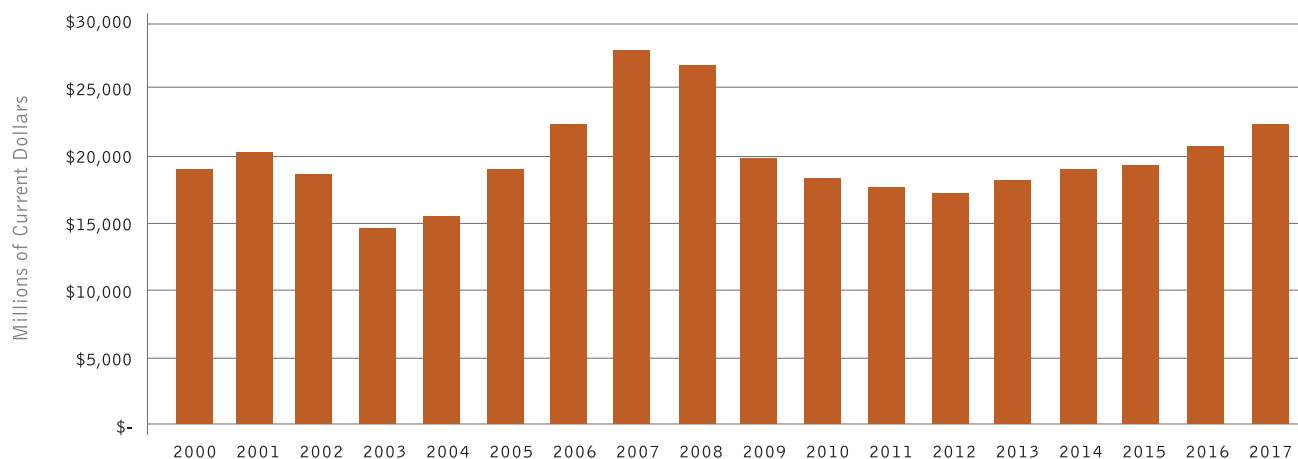
TRENDS:

- “Mini towers” for increasing coverage and spectrum will grow rapidly in the next five years.
- Wireless technology is fastest area for growth as telecoms roll out more 4G technology 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 2013



Manufacturing

Manufacturing construction increased 19% in 2012 and will continue with another 5% for 2013. Due to reduction in energy costs in the U.S. relative to other countries around the globe and the increase in transportation costs, manufacturing will continue to reconsider operations in the U.S. or returning to the U.S. The resurgence of the automotive industry is a big boost to manufacturing as is the continuing exploration and mining for shale oil and gas. This resurgence in manufacturing will be slow, but any improvement will be felt throughout the economy.

TRENDS:

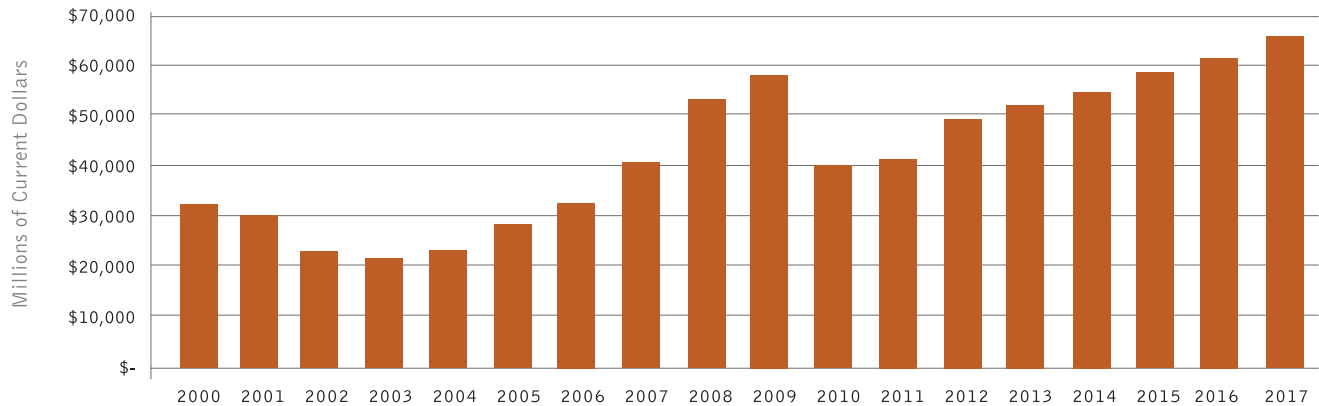
- The U.S. Census Bureau reports, "U.S. manufacturing corporations' seasonally adjusted after-tax profits in the first quarter of 2013 totaled \$152.5 billion, up \$14.4 (±0.2) billion from the after-tax profits of \$138.1 billion recorded in the fourth quarter of 2012, and up \$6.0 (±0.4) billion from the after-tax profits of \$146.5 billion recorded in the first quarter of 2012." (June 10, 2013)
- According to a Federal Reserve release (June 14, 2013), "In May, manufacturing production rose 0.1 percent after falling in each of the previous two months, and the output at mines increased 0.7 percent. The gains in manufacturing and mining were offset by a decrease of 1.8 percent in the output of utilities. At 98.7 percent of its 2007 average, total industrial production in May was 1.6 percent above its year-earlier level. The rate of capacity utilization for total industry edged down 0.1 percentage point to 77.6 percent, a rate 0.2 percentage point below its level of a year earlier and 2.6 percentage points below its long-run (1972–2012) average."
- "Reshoring of manufacturing" is happening slowly, in part due to availability of lower energy costs.

DRIVERS:

- ⬇️ ISM
- ⬆️ Industrial production (slightly up)
- ⬇️ Capacity utilization (slightly up)
- ⬆️ Factory orders
- ⬆️ Durable goods orders
- ⬆️ Manufacturing inventories (slightly up)

Manufacturing Construction Put in Place

Forecast as of Q2 2013



NONBUILDING STRUCTURES

Power

Construction for the power market grew 14% in 2012 and will continue to grow between 8% and 9% through 2017. These markets offer a relative bright spot compared to other infrastructure markets, such as transportation and water. The shale story continues to unfold and change the nation's energy landscape, creating design and construction opportunity across the energy supply chain. According to the Interstate Natural Gas Association of America, the U.S. and Canada need 28,900 to 61,600 miles of additional pipeline by 2030. The U.S. Energy Information Administration forecasts that natural gas-fired plants will account for 63 percent of capacity additions from 2012 to 2040. In addition to shale, investment in power delivery systems continues to grow with no signs of stopping in the near term. The primary wild card in the power market is continuing uncertainty around EPA regulations on air and water quality. Despite regulatory uncertainty, the power market should continue to experience robust growth in 2013. Shale-related activity and power delivery opportunities should continue to drive the market.

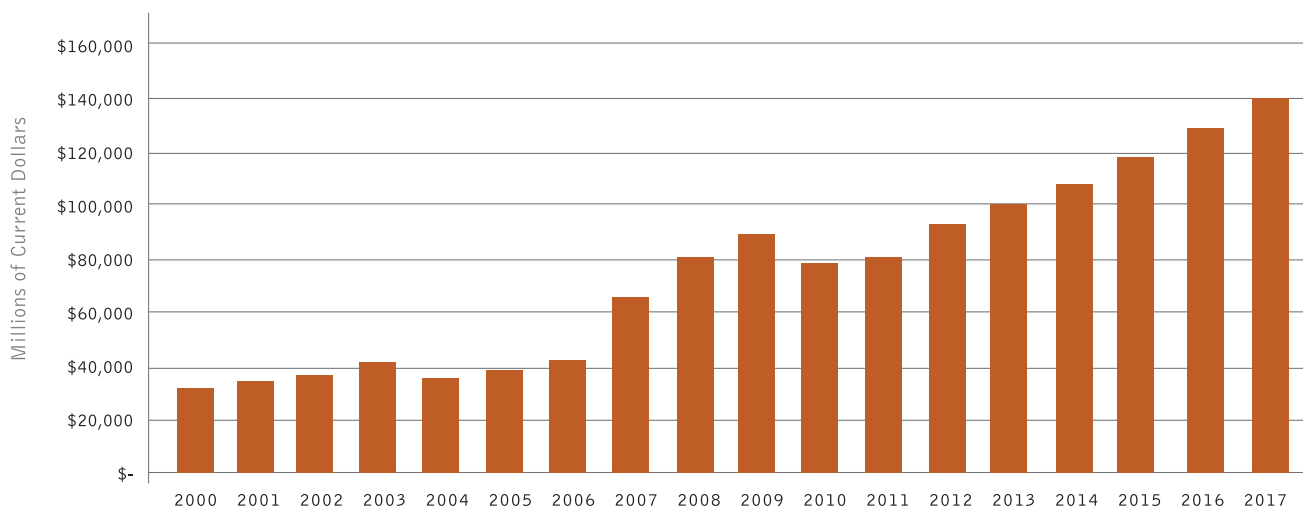
TRENDS:

- According to the "Annual Energy Outlook 2013" from the U.S. Energy Information Administration, "The advent and continuing improvement of advanced crude oil production technologies continue to lift projected domestic supply. Domestic production of crude oil increases sharply in AEO2013, with annual growth averaging 234 thousand barrels per day (bpd) through 2019, when production reaches 7.5 million bpd."
- U.S. Army Corps of Engineers has a proposal out for \$7 billion in locally generated renewable energy through power purchase agreements. The \$7 billion capacity would be expended for the purchase of energy over a period of 30 years or less from renewable energy plants that are constructed and operated by contractors using private-sector financing." (Renewablesbiz.com, Bill Opalka, Aug. 15, 2012)
- Following the recent rapid decline of natural gas prices, real average delivered electricity prices in the AEO2013 Reference case fall from 9.9 cents per kilowatt-hour in 2011 to as low as 9.2 cents per kilowatt-hour in 2015, as natural gas prices remain relatively low. (U.S. Energy Information Administration).
- Electricity demand slowing due to appliances that are more efficient.

DRIVERS:

- 🔍 Industrial Production
- 🔍 Population
- 🔍 Nonresidential Structure Investment

Power Construction Put in Place Forecast as of Q2 2013



Highway and Street

Funds from the MAP-21 and TIGER grants make up a large percentage of construction put in place included in FMI's 2013 forecast of \$81.4 billion for highways and streets, an increase of 2% for the year. The latest continuing resolution, signed by President Obama on March 26, 2013, sets the 2013 federal highway obligation limit at MAP-21 level of \$39.7 billion. The environment of sequestration, continuing resolutions and the end of temporary stimulus in the form of ARRA have led states to face the reality that the federal government will play a reduced role in funding going forward. One potential fly in the ointment is that repeatedly needing to pass continuing resolutions to keep the government in operation is expected to reduce funding for the new transportation program. The new program is in effect for only three years, so we expect the battle for funding to return.

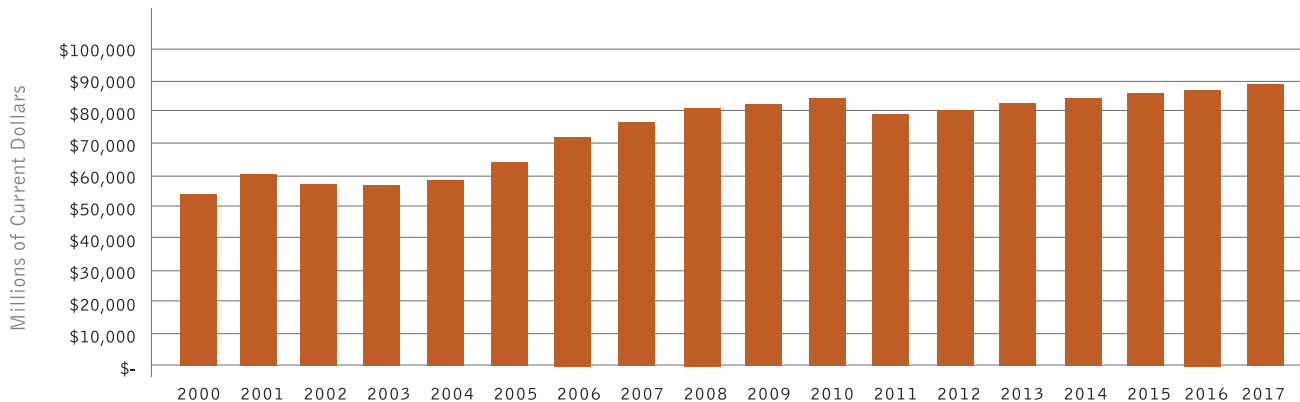
TRENDS:

- Passage of MAP-21 calls for \$37,476,819,674 for fiscal year 2013 and \$37,798,000,000 for fiscal year 2014 for the Federal-Aid Highway Program. It also calls for \$750 million for fiscal year 2013 and \$1 billion for fiscal year 2014 under the Transportation Infrastructure Finance and Innovation Program (TIFIA loans).
- State budgets will continue to be strained, and it will be difficult to get larger projects off the ground.
- According to ARTBA, "Since 1989, 24 states and D.C. have used P3s to build or finance 96 transportation projects valued at \$54.3 billion. Over half of the projects, 65%, have occurred in eight states. Traditionally P3s have accounted for two to five percent of annual market activity." ("U.S. Transportation Construction Market Forecast 2013")

DRIVERS:

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

Highway and Street Construction Put in Place Forecast as of Q2 2013



Sewage and Waste Disposal

Construction for sewage and waste disposal was off 2% in 2012 and we now forecast another 2% drop in 2013 to around \$21.8 billion. U.S. Census Bureau construction put in place figures for both the sewage and waste disposal market and the water supply market fell 4% in 2012 after falling 11% in 2011. The sewage and waste disposal segment fell 2% while the water supply segment fell 7%. The ability to fund necessary water infrastructure improvements is central to the decline as many municipal water systems still depend on the tax base for funding.

TRENDS:

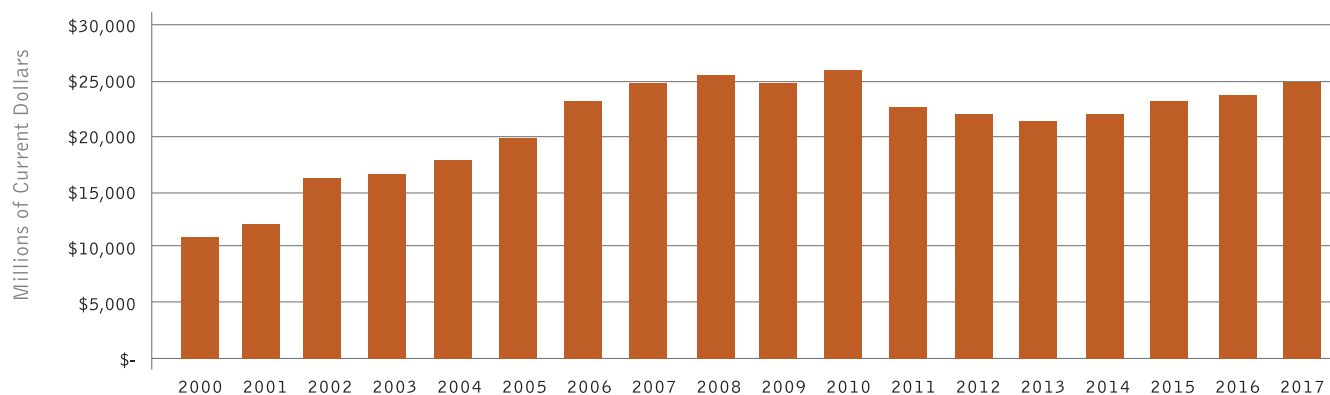
- Growth, driven by aging infrastructure and regulation, is on the horizon, but the length of the horizon is still unknown. Slow water infrastructure markets in the aftermath of the recession continue to build the backlog of necessary work as existing infrastructure ages.
- In need of replacement and 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 regions.
- 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 Construction Put in Place

Forecast as of Q2 2013



Water Supply

Construction for water supply projects will drop 1% in 2013 after dropping 7% in 2012. Most experts agree that the nation's infrastructure is not getting enough attention and, more importantly, funding. After spending years recovering from significant budget shortfalls, state governments had to look elsewhere for support in 2012 as the federal government began addressing its own fiscal woes. In 2012, \$36.5 billion of tax-exempt municipal bonds were used at the state and local level to address water infrastructure needs, which represents a 33 percent increase over 2011. Additionally, a number of states are making changes to tax systems in an attempt to find the right balance between growth and taxation. In March 2013, the Senate Environmental and Public Works Committee unanimously approved a Water Resources Development Act, including a measure to create the Water Infrastructure Finance and Innovation Act (WIFIA). WIFIA would provide \$50 million per year from 2014 to 2018 to help fund large-scale water infrastructure projects.

TRENDS:

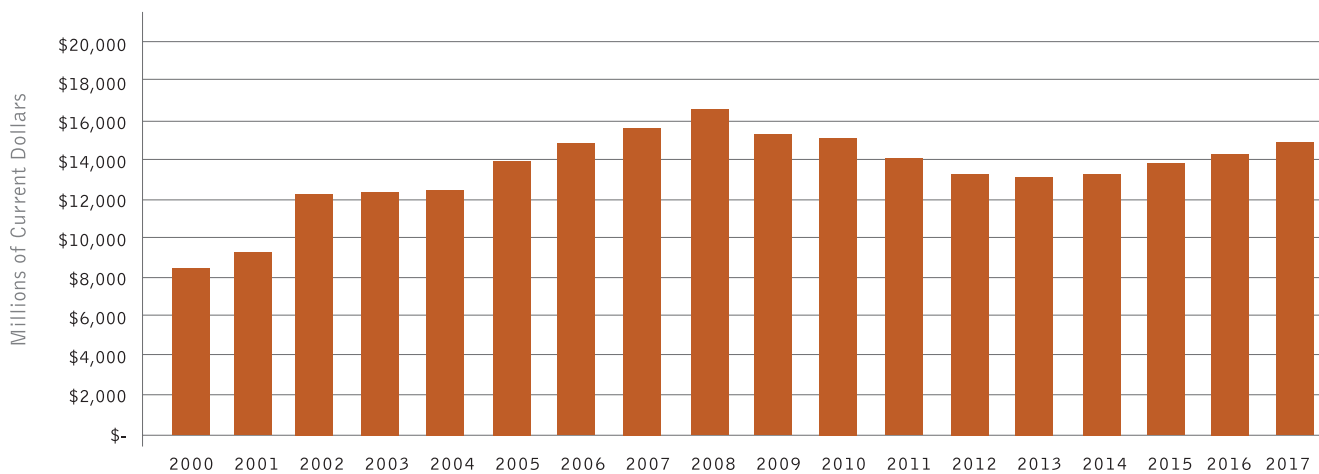
- Strength in the mining sector creates a tremendous amount of water infrastructure work throughout North America and abroad. Strength in commodity markets continues to drive increased levels of mining activity through the development of new mines and redevelopment of existing mining assets. Heightened 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 2013



Conservation and Development

After dropping sharply in 2012 by 17%, we have again revised our forecast expectations for conservation and development construction down to -1%, or just \$6 billion in construction put in place for 2013.

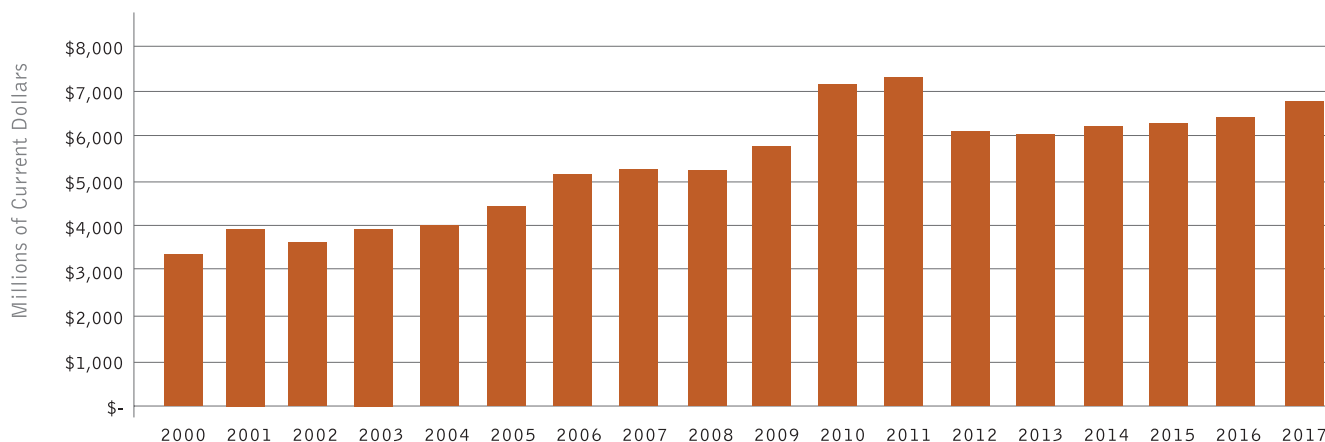
The private market is poised to grow in 2013 due to continued strength in the oil and gas sector as well as growth in related and energy-intensive industries. In stark contrast, the public market will continue to contract. The sequestration of funding and the continued lack of a federal budget will constrain funding for cleanup and remediation projects. In total, the environmental market should continue to grow slowly, at roughly 2 percent in 2013, as industrial market growth slightly overcomes DOD and DOE market contraction.

DRIVERS:

- ↑ Population
- ↓ Government spending

Conservation and Development Construction Put in Place

Forecast as of Q2 2013



Construction Put in Place

Millions of Current Dollars

2nd Quarter 2013 Forecast (Based on 1st Quarter 2013 Actuals)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
RESIDENTIAL BUILDINGS													
Single-Family	434,912	417,518	306,990	187,648	106,960	113,669	109,741	131,527	162,208	191,902	224,134	258,688	288,753
Multi-Family	48,699	54,324	52,570	48,083	32,231	17,405	17,401	26,012	34,006	43,011	47,632	52,341	55,369
Improvements*	133,896	147,973	140,909	122,016	114,738	118,038	119,397	124,526	125,910	130,170	134,828	140,877	146,196
Total Residential	617,507	619,814	500,468	357,747	253,928	249,112	246,538	282,065	322,124	365,083	406,593	451,906	490,317
NONRESIDENTIAL BUILDINGS													
Lodging	12,840	18,139	28,706	35,806	25,499	11,635	8,880	11,065	12,414	13,458	14,258	14,917	15,711
Office	45,763	54,187	65,259	68,563	51,908	37,850	34,647	36,478	38,268	40,566	42,477	44,240	46,036
Commercial	70,242	76,713	89,684	86,212	54,069	39,450	43,571	46,981	49,759	53,796	58,277	62,604	66,631
Health Care	34,430	38,472	43,766	46,902	44,845	39,344	39,713	40,873	42,718	46,363	50,952	56,287	62,072
Educational	79,687	84,928	96,758	104,890	103,202	88,405	84,320	84,815	86,133	90,970	95,131	101,417	108,602
Religious	7,735	7,749	7,540	7,225	6,192	5,288	4,224	3,902	3,926	4,046	4,186	4,334	4,559
Public Safety	7,314	7,768	10,201	13,083	13,787	11,153	10,236	10,111	9,876	10,305	10,818	11,258	11,699
Amusement and Recreation	15,236	19,033	21,212	21,829	19,404	16,943	16,022	15,898	15,986	16,427	17,247	18,528	19,769
Transportation	25,052	27,964	31,877	35,471	36,701	38,340	34,714	37,181	39,718	41,833	43,773	45,949	48,382
Communication	18,906	22,219	27,580	26,487	19,753	17,730	17,480	17,051	17,472	18,427	19,304	20,676	22,047
Manufacturing	28,568	32,677	40,633	53,234	56,836	40,350	41,745	49,496	52,089	55,880	58,696	62,265	66,450
Total Nonresidential Buildings	345,773	389,849	463,216	499,702	432,196	346,488	335,551	353,851	368,360	392,071	415,120	442,476	471,958
NONBUILDING STRUCTURES													
Power	38,371	42,244	66,055	81,075	88,861	77,945	80,717	92,372	100,374	108,152	118,070	128,242	139,674
Highway and Street	64,139	72,040	76,682	81,361	82,166	82,529	78,896	80,066	81,439	82,798	84,132	86,140	88,584
Sewage and Waste Disposal	19,867	23,186	24,872	25,696	24,830	25,991	22,502	22,146	21,768	21,903	22,661	23,782	24,894
Water Supply	14,028	14,960	15,798	16,752	15,471	15,322	14,031	13,107	13,010	13,200	13,757	14,418	15,130
Conservation and Development	4,453	5,130	5,260	5,234	5,750	7,172	7,357	6,138	6,053	6,138	6,232	6,422	6,658
Total Nonbuilding Structures	140,858	157,560	188,667	210,118	217,078	208,959	203,503	213,828	222,644	232,191	244,853	259,004	274,939
Total Put in Place	1,104,138	1,167,223	1,152,351	1,067,567	903,202	804,559	785,592	849,745	913,128	989,344	1,066,567	1,153,386	1,237,214

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

Change From Prior Year - Current Dollar Basis

2nd Quarter 2013 Forecast (Based on 1st Quarter 2013 Actuals)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
RESIDENTIAL BUILDINGS													
Single-Family	15%	-4%	-26%	-39%	-43%	6%	-3%	20%	23%	18%	17%	15%	12%
Multi-Family	18%	12%	-3%	-9%	-33%	-46%	0%	49%	31%	26%	11%	10%	6%
Improvements*	13%	11%	-5%	-13%	-6%	3%	1%	4%	1%	3%	4%	4%	4%
Total Residential	15%	0%	-19%	-29%	-29%	-2%	-1%	14%	14%	13%	11%	11%	8%
NONRESIDENTIAL BUILDINGS													
Lodging	4%	41%	58%	25%	-29%	-54%	-24%	25%	12%	8%	6%	5%	5%
Office	8%	18%	20%	5%	-24%	-27%	-8%	5%	5%	6%	5%	4%	4%
Commercial	5%	9%	17%	-4%	-37%	-27%	10%	8%	6%	8%	8%	7%	6%
Health Care	7%	12%	14%	7%	-4%	-12%	1%	3%	5%	9%	10%	10%	10%
Educational	7%	7%	14%	8%	-2%	-14%	-5%	1%	2%	6%	5%	7%	7%
Religious	-5%	0%	-3%	-4%	-14%	-15%	-20%	-8%	1%	3%	3%	4%	5%
Public Safety	4%	6%	31%	28%	5%	-19%	-8%	-1%	-2%	4%	5%	4%	4%
Amusement and Recreation	-9%	25%	11%	3%	-11%	-13%	-5%	-1%	1%	3%	5%	7%	7%
Transportation	0%	12%	14%	11%	3%	4%	-9%	7%	7%	5%	5%	5%	5%
Communication	22%	18%	24%	-4%	-25%	-10%	-1%	-2%	2%	5%	5%	7%	7%
Manufacturing	22%	14%	24%	31%	7%	-29%	3%	19%	5%	7%	5%	6%	7%
Total Nonresidential Buildings	7%	13%	19%	8%	-14%	-20%	-3%	5%	4%	6%	6%	7%	7%
NONBUILDING STRUCTURES													
Power	8%	10%	56%	23%	10%	-12%	4%	14%	9%	8%	9%	9%	9%
Highway and Street	9%	12%	6%	6%	1%	0%	-4%	1%	2%	2%	2%	2%	3%
Sewage and Waste Disposal	11%	17%	7%	3%	-3%	5%	-13%	-2%	-2%	1%	3%	5%	5%
Water Supply	11%	7%	6%	6%	-8%	-1%	-8%	-7%	-1%	1%	4%	5%	5%
Conservation and Development	10%	15%	3%	0%	10%	25%	3%	-17%	-1%	1%	2%	3%	4%
Total Nonbuilding Structures	9%	12%	20%	11%	3%	-4%	-3%	5%	4%	4%	5%	6%	6%
Total Put in Place	11%	6%	-1%	-7%	-15%	-11%	-2%	8%	7%	8%	8%	8%	7%

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.

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.**

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.



J. Randall (Randy) Giggard
Managing Director
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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 English from Illinois State University and a master of marketing and management policy degree from Northwestern University.

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About FMI

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

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