

BUILDING SAFETY AND LEADERSHIP IN THE US CONSTRUCTION INDUSTRY

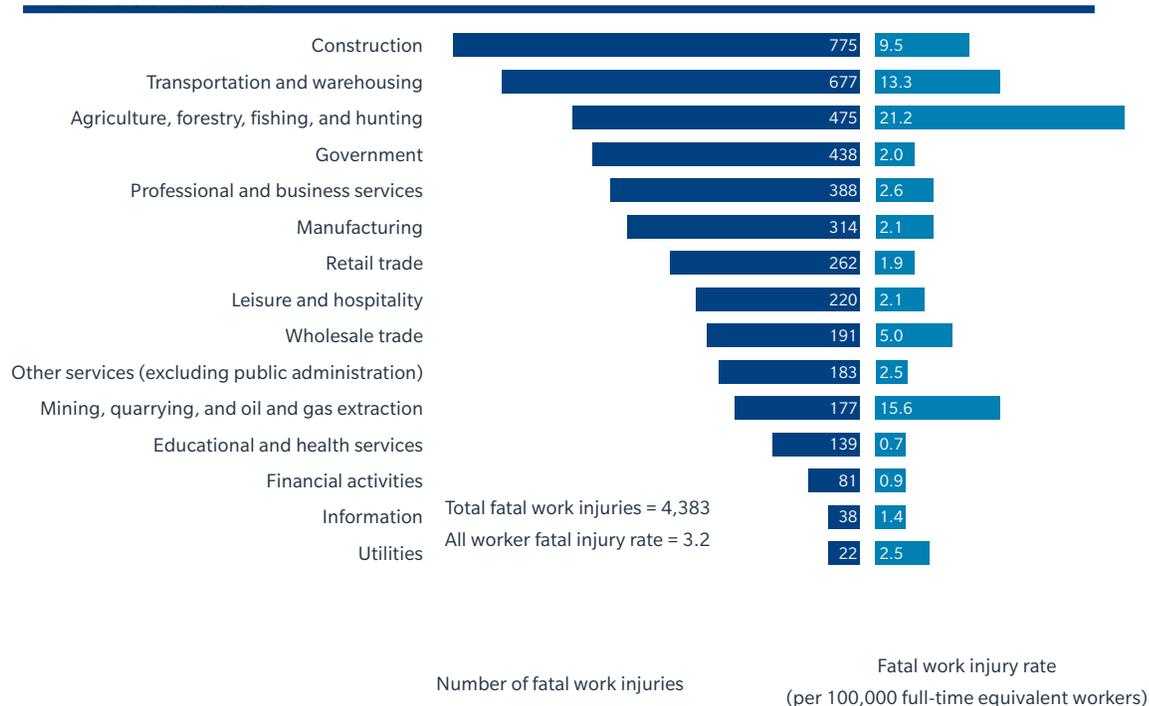
NOVEMBER 2013

As the economy grows and construction employment surges in the US, contractors are being forced to pay higher wages and offer additional benefits to attract and sustain workers, especially in the skilled trades. As wages increase, so does the cost of construction, straining the limited financial resources available to fund projects. At times, such a situation may have constrained the number of new starts, but construction has been stagnant for so long that there is a strong need to begin projects for both business and public infrastructure. The result is pressure to complete projects quickly, safely, and within budget. At the same time, a rise in construction-related fatalities and a looming labor shortage underscore the need for construction companies to increase their focus on the intertwined areas of leadership and safety.

CONSTRUCTION FATALITIES INCREASE

Private construction sector deaths in the US climbed 5% to 775 in 2012, accounting for the highest number of fatal work injuries of any industry sector, according to a US Bureau of Labor Statistics (BLS) report (see Figure 1). Although the figures are preliminary — and could increase when final data is released in April 2014 — they mark the first annual increase in work-related fatalities in the private construction sector since 2006.

FIGURE 1: NUMBER AND RATE OF FATAL OCCUPATIONAL INJURIES, BY INDUSTRY SECTOR, 2012*



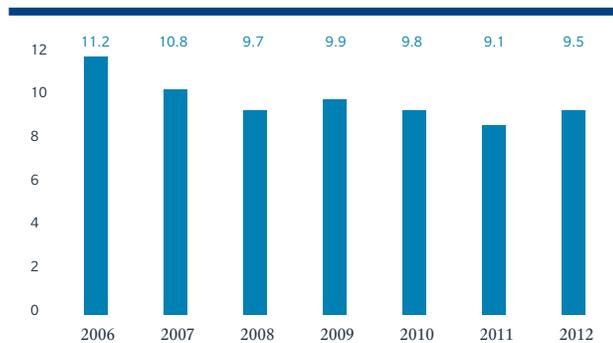
Source: Bureau of Labor Statistics

*Data for 2013 are preliminary.

NOTE: All industries shown are private with the exception of government, which includes fatal injuries to workers employed by governmental organizations regardless of industry. Fatal injury rates exclude workers under the age of 16 years, volunteers, and resident military. The number of fatal work injuries represents total published fatal injuries before the exclusions. For additional information on the fatal work injury rate methodology, please see <http://www.bls.gov/iif/oshnotice10.htm>.

The private construction industry's 2012 fatality rate significantly increased to 9.5 per 100,000 workers from 9.1 per 100,000 in 2011 (see Figure 2). These fatality rates are normalized to adjust for fluctuations in employment rates, such as those experienced during the post-recession reduction in construction employment as well as 2012's modest 1% employment increase.

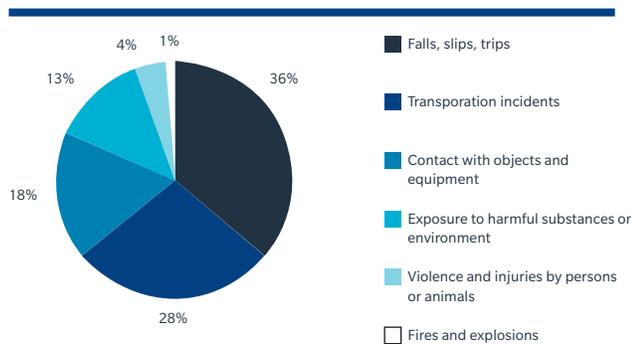
FIGURE 2: CONSTRUCTION INDUSTRY FATALITY RATES (PER 100,000 WORKERS)



Source: Bureau of Labor Statistics (<http://www.bls.gov/iif/>)

Causes of construction fatalities: The ranking by cause of events or exposures that led to construction fatalities remained consistent with prior years (see Figure 3). Although fatalities related to slips, trips and falls, transportation incidents, and incidents involving individuals contacting objects and equipment have increased, fatalities related to environmental conditions, violence, and fires or explosions declined compared to 2011. Fall-related fatalities continue to be a major, yet preventable, safety problem.

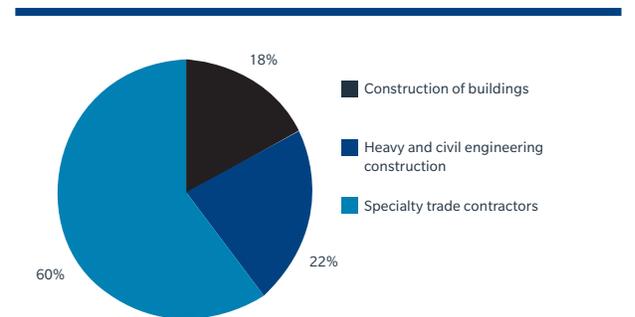
FIGURE 3: 2012 CONSTRUCTION FATALITIES BY EVENT OR EXPOSURE



Source: Bureau of Labor Statistics (<http://www.bls.gov/iif/>)

Assistant Secretary of Labor Dr. David Michaels at the Occupational Safety and Health Administration (OSHA) recently said: “Falls are the leading cause of death in construction, so it is vitally important for employers to provide the right equipment and properly train their workers in a language they understand so they can do their jobs safely.” For this reason, the Center for Construction Research and Training, the National Institute for Occupational Safety and Health (NIOSH), and OSHA have relaunched the “Campaign to Prevent Falls in Construction” (<http://stopconstructionfalls.com/>), with a goal to raise awareness around fall prevention.

FIGURE 4: 2012 FATALITIES BY CONSTRUCTION SECTOR



Source: Bureau of Labor Statistics (<http://www.bls.gov/iif/>)

Specialty trades: Specialty trade contractors continue to suffer the highest number of occupational fatalities in the construction industry, followed by heavy and civil engineering and buildings. Thirteen of 19 specialty trades experienced an increase in fatalities over this past year, with only a few declining (see Figure 4 and Appendix).

LABOR SHORTAGES PUSHING COSTS HIGHER

Workers lost approximately 2.1 million construction jobs across the US from December 2007 through January 2011, when industry employment hit its lowest level since 1996. Some workers who lost jobs may not return to the industry. The economy forced many to swap their physically demanding work — often performed in inclement weather and with erratic work schedules — for more stable work in more comfortable environs. The pay may not always be as lucrative as it is in construction, but many have found the quality of life changes to be rewarding.

Demand outpacing supply: As commercial and new-home construction is picking up in some markets, demand for construction workers is increasing. Yet, builders are reporting a shortage of skilled workers in

markets across the US, including Pittsburgh, Seattle, and Phoenix. Construction job openings increased in June to 133,000, marking a 30% rise over the prior month, the largest percentage change of any industry and the highest number of job opportunities in construction since May 2008. The US Department of Labor reports that 20,000 new jobs were added in September 2013. Moreover, the unemployment rate in construction fell to 8.5%, a six-year low. It is anticipated that wages for skilled trades will likely increase 5% to 6% through 2016. The 2.1 million construction jobs lost during the recent recession are expected to return by 2017.

In a recent survey conducted by Associated General Contractors of America, 74% of respondents reported a decrease in skilled trade professionals, while 53% said they could not find enough construction professionals, such as supervisors, estimators, and engineers. In a separate study, more than half of the contractors surveyed by the National Association of Home Builders (NAHB) said that recent labor constraints have caused them to pay higher wages or increase the bid costs of subcontractors. The study also indicated that 46% of builders subsequently experienced delays in completing projects due to labor-related issues.

Impact on safety: Experience has proven that safety may suffer as a result of budget issues. Even after such issues are resolved, there typically is an underlying pressure to control costs and regain eroded profit margins, which may prompt some managers and frontline supervisors to avoid expenses perceived as nonessential and to cut corners. Unfortunately, these shortcuts often result in unnecessary accidents, injuries, insurance claims, and other indirect costs.

CHANGING WORKFORCE DEMOGRAPHICS

The increase in new construction activity is bringing an influx of new, inexperienced workers. In this environment, some contractors are stretching their hiring standards to meet project demands. This is a problem at both the entry level and in the management ranks. A shortage of experienced workers in the construction industry is forcing many unskilled workers into supervisory roles faster than ever before, exacerbating many problems. Many new managers and supervisors are unfamiliar with the industry's changing views on safety and risk management, which have transformed from "necessary evils" to core business principles that are integral to success.

There are a number of reasons the construction workforce is undergoing and will continue to experience this shift.

Economics: During the recession, many construction workers lost their jobs and were forced out of the trades where they had honed their skills. Many have exchanged their vocation in construction for steady, less demanding occupations.

Aging workforce: As the US population ages, many skilled construction workers can no longer meet the rigorous physical demands of construction work. The alarming fact is that there may not be enough entrants into the construction sector to replace them. Approximately 76 million baby boomers soon will be leaving the American workforce, with only about 55 million workers available to step in behind them, according to a 2010 *Occupational Health & Safety* report, "The Aging Worker in the US Construction Industry." Since baby boomers account for more than 40% of the construction workforce and construction spending is on the rise, there will be a significant void to fill.

Immigration reform: As baby boomers nationwide retire, an immigrant workforce is filling many of the blue-collar jobs this generation once occupied. Contractors must realize that this solution is politically charged and thus subject to legislative changes that could include significant restrictions on the number of immigrant workers.

CONTROLLING TURNOVER

Concern regarding turnover has rarely been such a widespread concern in construction as it is today and will be in the future. While hiring new and qualified employees is critical to meeting construction demands, retaining solid existing employees is equally critical. High turnover can be extremely harmful to a contractor, affecting budgets, scheduling and productivity, quality, safety, and the environment. This is especially true if skilled workers are being replaced by novices.

The combined direct and indirect cost of turnover is estimated to be 20% of unskilled employees' annual remuneration package, and up to 150% for skilled labor. Direct costs include termination, replacement, and transition costs, while indirect costs include loss of production, reduced performance levels, unnecessary overtime, and low morale. This is a significant financial and organizational burden that few companies are making a meaningful effort to control.

One way for a company to evaluate how effective it is at retaining current employees is to analyze its employee turnover rate and compare performance to industry benchmarks. Employee turnover ratios (voluntary and involuntary) are the degree to which a company gains

or loses employees during a year. These ratios are calculated based on the following formula:

$$\frac{\text{\# of employees that ceased employment during the year}}{\text{average total \# of employees}} \times 100$$

In addition to the fatal occupational injury data referenced above, BLS also tracks employee turnover ratios and establishes industry national averages. The agency provides Job Opening and Labor Turnover Survey (JOLTS) reports monthly that deliver updated counts and ratios regarding job openings, hires, and total separations (turnover) for construction and other industries. The total separation rates are also further broken down into two sub-categories: quits (voluntary turnover) and layoffs/discharges (involuntary turnover), so contractors can and should monitor accordingly. Companies not performing as well as industry peers need to analyze their personnel, programs, and processes to determine why their employee retention performance is lagging, make changes accordingly, and help reduce the financial and organizational burdens of employee turnover.

LEADERSHIP AND SAFETY AS DIFFERENTIATORS

This is a pivotal time for the construction industry, and it comes with a dilemma for contractors. Some increase in project overhead may be expected by customers as construction firms harness the skills of available labor, protect older workers, and train the new employees required for successful project completion. However, contractors will continue to struggle to offer adequate compensation and benefits packages to retain employees while holding down project costs as competition for labor with other builders grows.

Experts generally agree that there are three key drivers behind employee turnover:

- Inadequate compensation and benefits.
- Poor leadership.
- Unsafe and unhealthy conditions.

For construction workers, compensation and benefits represent extrinsic motivators, while leadership and safety are intrinsic motivators. Companies can pay higher wages and offer other benefits, but that still does not address two key motivators that can make work a personally rewarding experience.

Organizations that have not already done so should invest in high-quality leadership as a means of both keeping valued workers and maintaining a safe work environment. And for those that have started down this path, continuous training, review, and application of lessons learned are critical.

Management training: The immediacy of the rebounding building industry should not force contractors to blindly place unskilled workers into supervisory roles without preparing them. Although these workers may have experienced exemplary leadership throughout their careers, actually being a supervisor is different. Professional development is critical to ensure that their business values are in the right place regarding all construction principles and related risks, including budgets, schedules, productivity, quality, the environment, and safety. To effectively manage or lead in these core business areas, supervisors must first understand each principle's importance, respect their criticality to business success, and be passionate about performance.

Managers and supervisors have responsibilities for safety beyond those addressed in field employee safety orientations. These supervisors are the critical link between the ideals, goals, and initiatives of their companies and the employees that perform the work. Contractors should conduct manager and supervisor orientation training to inform prospective leaders of their responsibilities regarding the policies and procedures that facilitate occupational safety and health.

Leadership development: Effective management can drive baseline performance, but companies must understand the difference between effective management and true leadership. Under the guise of effective management, performance can be expected to meet managers' and supervisors' minimum standards. Leadership, on the other hand, drives discretionary effort, which is the level of effort at which employees can perform if engaged and motivated. Leadership is thus the craft of bringing out the best in people. In addition to driving exceptional performance, leadership fosters an environment in which employees reap intrinsic gratification for their work.

In order to retain valuable employees and maintain a culture of safety, contractors need to build a favorable workplace environment by developing strong leadership skills among managers and supervisors. Among its advantages, strong leadership can help stem employee attrition to competitors by building confidence that concerns will be handled fairly and in a timely manner.

Managers and supervisors that exhibit strong, effective leadership can help to address the human element of

construction that often has been lacking. Although the industry has invested time and resources into understanding and optimizing its use of materials, tools, and equipment, little has been invested into understanding and optimizing the workforce. Contractors will find that effective leadership helps overcome some safety and labor problems by:

- Ensuring that all employees are guided and engaged in a way that is mindful of and attentive to core construction business principles and risks, including budget, schedule, quality, environment, and safety.
- Building loyalty among employees to their managers and supervisors, and, subsequently, to organizations.

How to achieve a leadership culture is perplexing to many managers. Many companies dismiss leadership training because they do not want to pay “big money” to have a charismatic speaker come and inspire their management staff only to see the results trickle away a few days or weeks later and things settle back to business as usual. Building leadership involves a paradigm shift, one that can only be achieved through sharing knowledge and through practice.

In order to develop and grow effective leaders, construction firms should first assess existing management systems to identify what is working and what needs improvement — and what simply does not exist. Some managers, whether new to the task or seasoned veterans, may need to be taught basic leadership principles while others, in a different stage of leadership development, may benefit from a higher level of skill building. And like the construction work they oversee, managers’ and supervisors’ leadership performance must be properly and effectively monitored.

Continuous safety improvement (CSI): Safety is an intrinsic human need. Famed psychologist Abraham Maslow postulated that safety is second only to physiological and survival needs in terms of motivational value in driving human behavior.

That said, too many people lose their livelihood — and at times their lives — due to the inherent dangers of the building industry. Contractors and employees must work together to seek continual safety improvements. Like other business principles, continuous improvement in safety performance is achieved through five key functions:

- **Planning:** Contractors and employees must work together to ensure adequate planning of work to address real or potential safety issues.
- **Communication:** Organizations must make certain that all employees are effectively trained to ensure

their understanding and attention to safety hazards and planned controls.

- **Observation:** Employees must be vigilant and diligent in their observation of work behaviors and conditions to ensure that the organization is following the established plan and safety is adequately addressed.
- **Control:** Managers and supervisors must enforce safety compliance and reinforce desired safety performance. Workers should be empowered and encouraged to intervene as needed to help protect their peers.
- **Review:** Companies and employees must continually review their safety programs and processes to identify and address opportunities for improvement.

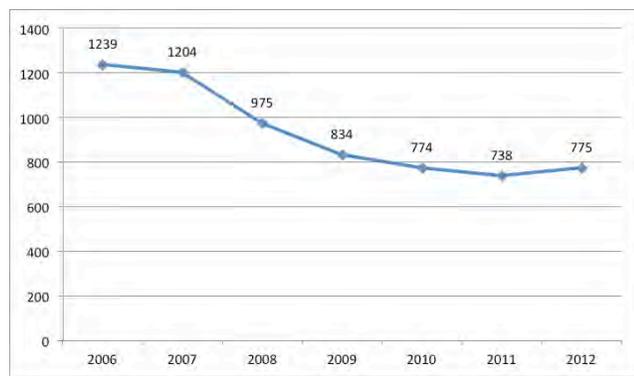
Effective leadership at all levels of the organization is critical to building a culture of safety. It takes multiple, resilient, and purposeful leaders — from the boardroom into middle management and out to the front lines — to push through the myriad of issues that distract from safety and other core business principles and risks inherent to the building industry.

APPENDIX

US CONSTRUCTION INDUSTRY FATALITIES

As noted at the outset of this report, the US construction industry saw the largest number of work-related fatalities of any industry in 2012. Following are some additional details from the Bureau of Labor Statistics regarding fatalities over time, and in the specialty trades.

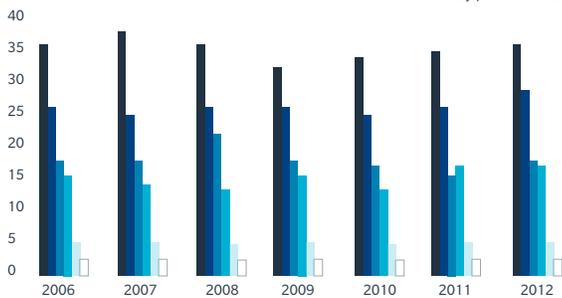
CONSTRUCTION INDUSTRY FATALITIES PER YEAR



Source: Bureau of Labor Statistics (<http://www.bls.gov/iif/>)

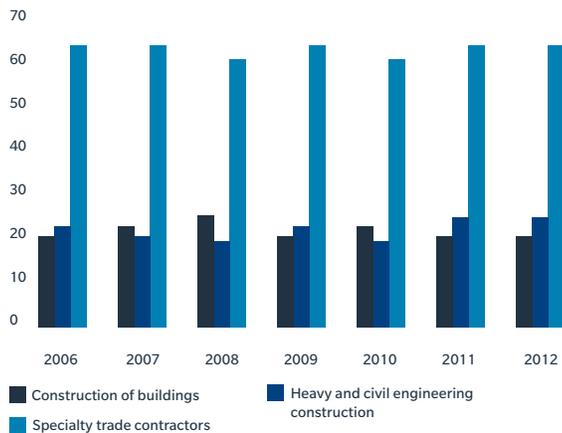
CONSTRUCTION FATALITIES BY EVENT OR EXPOSURE

- Falls, slips and trips
- Transportation incidents
- Contact with objects and equipment
- Fires and explosions
- Exposure to harmful substances or environment
- Violence and injuries by persons or animals



Source: Bureau of Labor Statistics (<http://www.bls.gov/iif/>)

FATALITIES BY CONSTRUCTION SECTOR



Source: Bureau of Labor Statistics (<http://www.bls.gov/iif/>)

FATALITIES BY TRADE CONTRACTORS

| Specialty Trade Contractors | 2012 | 2011 | 2010 | 2009 | 2008 | 2207 | 2006 |
|--|------|------|------|------|------|------|------|
| Poured concrete foundation and structure | 25 | 5 | 19 | 15 | 24 | 26 | 39 |
| Structural steel and precast concrete | 18 | 15 | 15 | 20 | 38 | 40 | 33 |
| Framing | 16 | 12 | 9 | 12 | 7 | 24 | 25 |
| Masonry | 21 | 27 | 19 | 23 | 45 | 38 | 32 |
| Glass and glazing | 3 | 0 | 3 | 5 | 7 | 6 | 5 |
| Roofing | 81 | 81 | 69 | 77 | 73 | 95 | 100 |
| Siding | 9 | 5 | 6 | 12 | 10 | 11 | 14 |
| Other foundation, structure, building exterior | 9 | 1 | 6 | 6 | 16 | 12 | 20 |
| Electrical | 54 | 54 | 59 | 77 | 61 | 91 | 87 |
| Plumbing, heating, air conditioning | 39 | 44 | 57 | 53 | 59 | 65 | 56 |
| Other building equipment | 7 | 10 | 10 | 7 | 11 | 15 | 11 |
| Drywall and insulation | 16 | 12 | 11 | 13 | 25 | 30 | 31 |
| Painting and wall covering | 33 | 31 | 37 | 32 | 46 | 50 | 47 |
| Flooring | 3 | 0 | 3 | 5 | 0 | 8 | 6 |
| Tile and terrazzo | 3 | 0 | 5 | 0 | 0 | 0 | 8 |
| Finish carpentry | 11 | 14 | 14 | 19 | 14 | 28 | 24 |
| Other building finish | 0 | 0 | 0 | 0 | 6 | 6 | 11 |
| Site preparation | 71 | 74 | 71 | 73 | 76 | 98 | 116 |
| Other specialty trade | 4 | 22 | 24 | 27 | 35 | 35 | 40 |

Source: Bureau of Labor Statistics (<http://www.bls.gov/iif/>)

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MRC's Workforce Strategies Practice prides itself on its team of loss control consultants who combine their extensive construction and safety education with years of industry experience to offer Marsh clients a team-based approach to continuous safety improvement, based on proven methods, industry best practices, and custom safety solutions, including leadership development. If you are interested in learning more about leadership development or any other MRC service, contact your local Marsh representative or MRC consultant.

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