

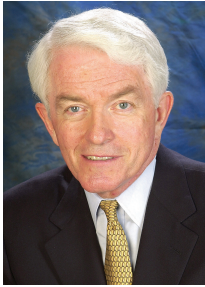
**Q4**  
2018

USG CORPORATION + U.S. CHAMBER OF COMMERCE

# Commercial Construction Index

POWERED BY  
**DODGE** DATA & ANALYTICS

## THE USG CORPORATION + U.S. CHAMBER OF COMMERCE COMMERCIAL CONSTRUCTION INDEX



**Thomas J. Donohue**  
President and CEO  
U.S. Chamber of  
Commerce

Throughout 2018, USG Corporation and the U.S. Chamber of Commerce surveyed contractors about the health and outlook of the commercial construction industry. We are pleased to share contractors in the fourth quarter report healthy backlog levels and ongoing optimism about demand for new business, although they remain challenged by the effects of a scarce talent pool and rising material costs.

This report marks seven straight quarters of labor challenges and the highest number of builders who cited difficulty finding skilled workers this year. In 2018, contractors shared they believe the skilled labor shortage is impacting productivity, schedule performance and safety on the jobsite, and they are looking for new innovations and solutions to respond to time and labor constraints. For example, in the first quarter, more than 80 percent of contractors identified offsite construction as a way to improve productivity and performance.



**Jennifer F. Scanlon**  
President and CEO  
USG Corporation

This quarter, we explored the topic of technology on the jobsite and found contractors believe advanced technologies like drones, wearable devices and augmented reality will also be useful in improving workforce management, labor productivity and safety. In fact, improved labor productivity was reported by 66 percent of contractors as the top reason for companies to invest in advanced technologies.

The findings show that while the commercial construction industry has embraced some technologies, 74 percent of contractors expect the emergence of tech in construction to grow considerably in the next three years. Wider adoption is expected particularly among general contractors and large firms, which suggests that investments in offsite construction and technologies such as wearables, building information modeling (BIM) and drones could ease labor woes and enable us to achieve necessary building growth.

The commercial construction industry is home to more than three million workers and contributes more than \$700 billion in construction spending to the U.S. economy. The health of this sector is important for broader economic growth and job creation and has an impact on people and communities everywhere.

In 2019, we will continue to shine a light on the commercial construction industry's most relevant topics to better understand the greatest challenges and opportunities facing our industry. We hope this Index provides valuable insights into how we can all work together to foster growth now and in the coming year.

Sincerely,



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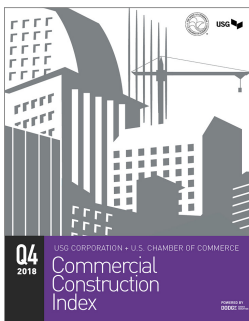
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The USG Corporation + U.S. Chamber of Commerce Commercial Construction Index (CCI) is a quarterly economic index designed to gauge the outlook for and resulting confidence in the commercial construction industry. Recognizing a need to highlight the important contributions of this sector to the nation's economy, USG Corporation and the U.S. Chamber of Commerce partnered to produce this first-of-its-kind index. Each quarter, contractors across the country are surveyed in order to better understand their levels of confidence in the industry and top-of-mind concerns.

## CONTRACTOR OPTIMISM REMAINS HIGH DUE TO STRONG BACKLOGS AND A HEALTHY 12-MONTH NEW BUSINESS OUTLOOK; HOWEVER, CONCERNS EMERGE ABOUT MATERIAL COSTS AND AVAILABILITY.

### OVERVIEW

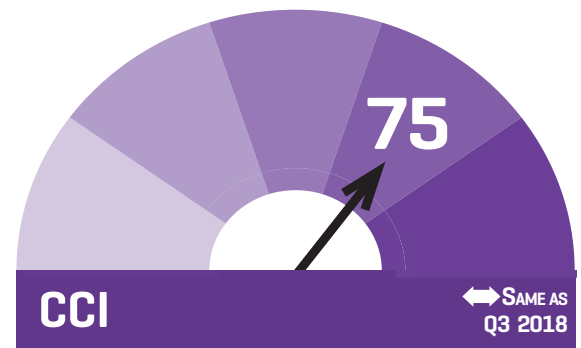
The overall Commercial Construction Index (CCI) number remains stable quarter-over-quarter, reflecting a robust commercial construction market. However, ongoing concerns about labor shortages and increasing anxiety about materials costs led to greater caution about the ability of the industry to sustain current levels of activity beyond 2019.

### KEY DRIVERS OF CONFIDENCE

In Q4 2018, an increase in contractors who are optimistic about new business opportunities in the next year contributed to the healthy index number. Additionally, the ratio of current to ideal average levels of backlog largely sustained the eight-point growth in backlogs from Q3 and increased five points year-over-year. Revenue expectations for the next year, though, continue to remain at the slightly reduced levels noted in Q3. Notably, tempered expectations for revenue growth beginning in Q2 2018 align with increased concern over material cost fluctuations seen during the past six months. *See Drivers of Confidence on pages 4–6.*

### QUARTERLY SPOTLIGHT

This quarter's spotlight focuses on contractors' use of advanced technology on jobsites. The findings reveal that while the industry has embraced some technologies, contractors expect the emergence of tech in construction to grow considerably in the next three years. Wide adoption of drones, wearables and equipment tagging is expected, particularly among general contractors and large firms. While technologies such as virtual and/or



augmented reality, 3D printing and automated equipment or robotics are currently used by some contractors, respondents expect utilization of these innovations to grow throughout the industry. According to this quarter's findings, contractors believe that technology could ease labor challenges, streamline processes, boost efficiency and create a safer work environment. Plus, as public awareness of commercial construction innovation grows, it may improve the industry's image and help attract future talent. *See Quarterly Spotlight on pages 7–11.*

### MARKET TRENDS

The top market trend in Q4 2018 is the growing unease among contractors about material cost fluctuations and shortages. This issue was likely exacerbated in Q2 2018 with the announcement of tariffs on select construction materials like steel. The availability and skill level of workers has also been a chronic concern for seven straight quarters, although most contractors say they plan to employ more people in the next six months. *See Market Trends on pages 12–17.*

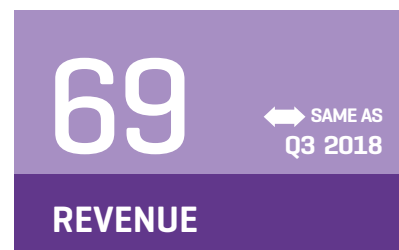
## KEY DRIVERS OF CONTRACTOR CONFIDENCE



The ratio between actual [10.0 months] and stated ideal [12.6 months] backlog remains close, sustaining most of the eight-point boost experienced last quarter.



Contractors express increased confidence in the market's ability to provide new business opportunities in the next 12 months, up two points from last quarter.



Most contractors believe they will see revenue growth in the next 12 months, despite a small decline in revenue expectations since early 2018.

## ADDITIONAL MARKET TRENDS



### HIRING

Hiring expectations rebound from a small but steady decline over the last three quarters, up four percentage points to 60%. *See page 12 for more details.*



### SKILL LEVEL

Concern about skill levels have increased for the third consecutive quarter, up three points in Q4 2018. *See page 14 for more details.*



### FINANCING

Two-thirds [67%] of builders believe owner access to financing will get easier or remain the same in the next six months, unchanged from Q3 2018. *See page 15 for more details.*



### TOOLS & EQUIPMENT

The percentage of contractors who expect to spend more on tools and equipment dropped by six points quarter-over-quarter, perhaps in response to cost concerns. *See page 16 for more details.*

Current pipelines of work indicate a strong commercial construction market, sustaining the jump in backlog seen in Q3 2018.

### CHANGE OVER LAST QUARTER

Most contractors [80%] report stable or increased backlogs. While this is a step back from the 83% who reported this in Q3 2018, it is consistent with the overall findings in 2018, and continues to suggest that contractors are able to build sufficient pipelines of work in the current market.

### CURRENT BACKLOG

The average level of backlog this quarter is 10 months, which exceeds the levels reported in Q1 and Q2 2018 but is slightly lower than the average of 10.3 reported last quarter. Backlog levels exceeded 10 months for the first time since the start of the index in Q3 2018. Similarly, the ratio between current and ideal average backlogs is 80%, just under the Q3 figure of 81%, but notably larger than the Q1 and Q2 ratios of 73%.

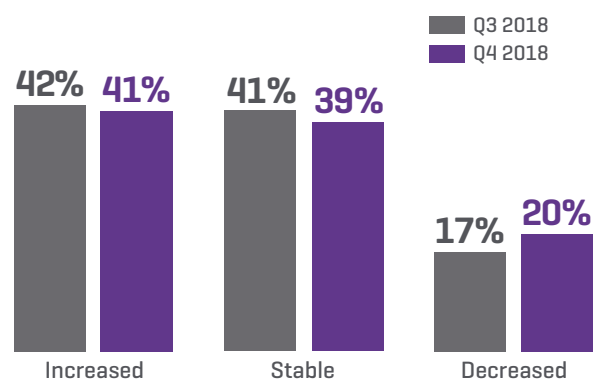
**AMOUNT OF BACKLOG REPORTED** The percentage of contractors who report six to 12 months of backlog increased in Q4, with slight drops in those reporting backlogs of more than 12 months and less than six months.

#### VOICE OF THE CONTRACTOR

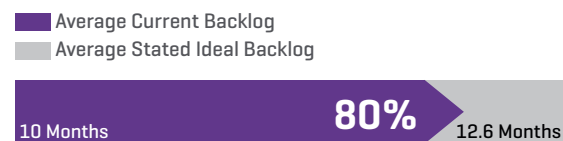
*Greatest concern: "Being able to manage our backlog of work with newly hired project managers and superintendents."*

—CCI Survey Respondent

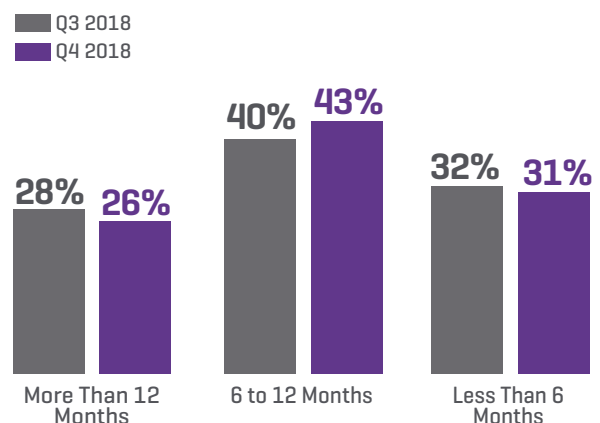
### Change in Backlog in the Last Three Months



### Current vs. Ideal Backlog



### Amount of Backlog Reported



### Contractors close 2018 with renewed confidence in the market's ability to provide new business opportunities.

#### NEXT 12 MONTHS

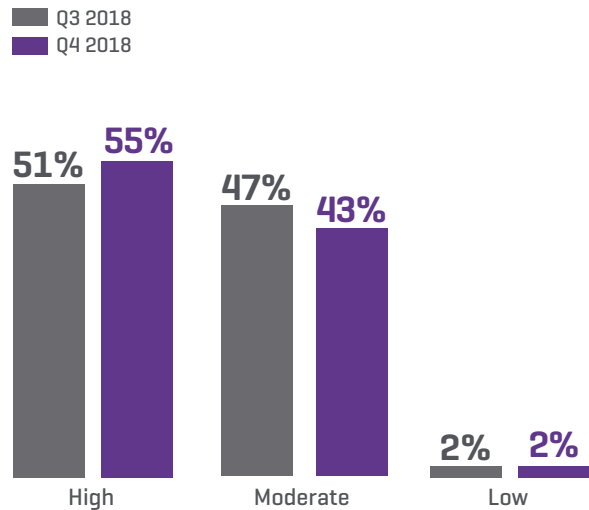
Nearly all contractors (98%) report either high or moderate confidence over the next 12 months. The four-point jump to 55% in those who express high confidence reverses a downward trend throughout 2018. While it still does not match the 61% who reported high confidence in Q1 2018, it shows renewed optimism in the market.

#### NEXT 24 MONTHS

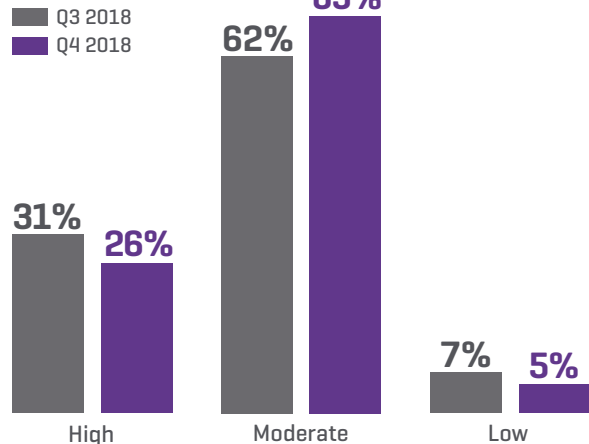
Ninety-five percent of contractors report at least moderate optimism in the two-year outlook, with one-quarter who report high levels of confidence. There has been a steady decline in the number of contractors who are highly confident about new business opportunities since the high of 40% in Q1 2018. This is in accord with anecdotal concerns among contractors that the economy may not continue to sustain constant growth, impacting their longer-term outlook.

#### *Degree of Confidence Among Contractors That the Market Will Provide Sufficient New Business Opportunities*

##### Next 12 Months



##### Next 24 Months



Note: Percentages are based on ratings using a 10-point scale, where the three points at the bottom [1-3] indicate a low level of confidence and the three points at the top [8-10] indicate a high level of confidence.

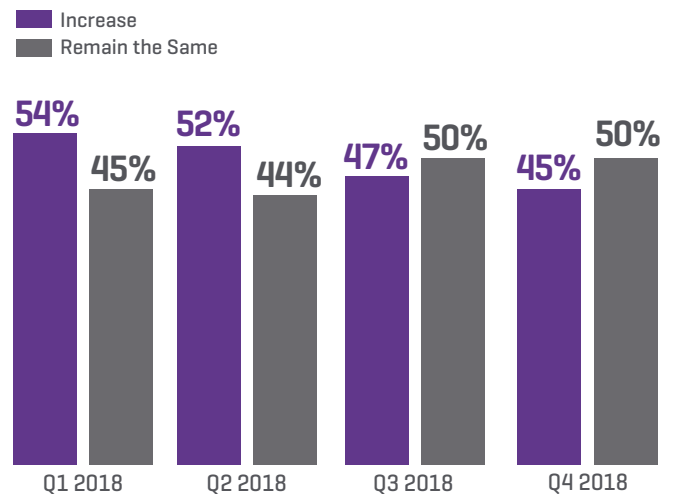
### Contractors have modest expectations about revenue and profit margin growth in the next 12 months.

#### REVENUE EXPECTATIONS

In the beginning of 2018, more contractors expected to see revenues increase in the next 12 months, compared with those who expected them to remain the same. That sentiment is now reversed, with the number of contractors who expect stable revenues higher than those who anticipate increases. However, both hover at around 50%, so there is little expectation of declining revenues.

**PERCENTAGE INCREASE IN REVENUE OVER THE NEXT 12 MONTHS** Almost one-third [31%] of contractors expect increases of 7% or more, a finding consistent with the last three quarters.

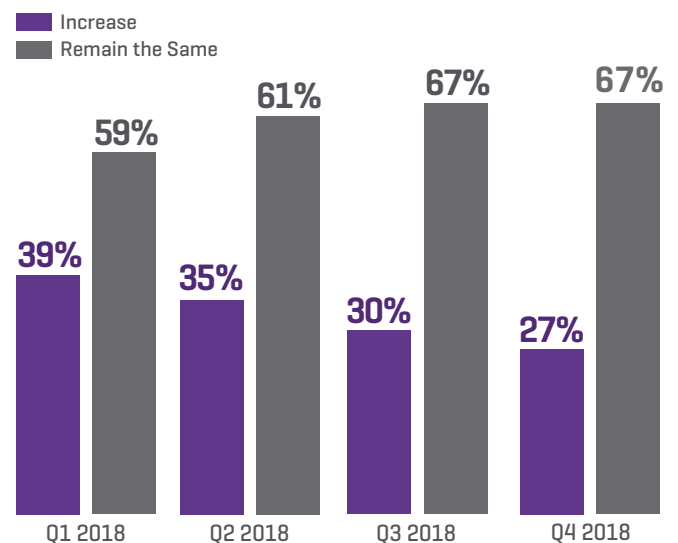
*Expected Revenue Changes in the Next 12 Months*



#### PROFIT MARGIN EXPECTATIONS

Most contractors [94%] expect profit margins to increase or remain the same in the next year. However, similar to the expectations for revenue growth over the course of 2018, contractors expect profits to remain at current levels.

*Expected Profit Changes in the Next 12 Months*



Note: Percentages for revenue and profit margins are based on ratings using a 10-point scale, where the three points at the bottom [1-3] indicate a decrease, three points in the middle indicate it has stayed about the same and four points at the top [7-10] indicate an increase.



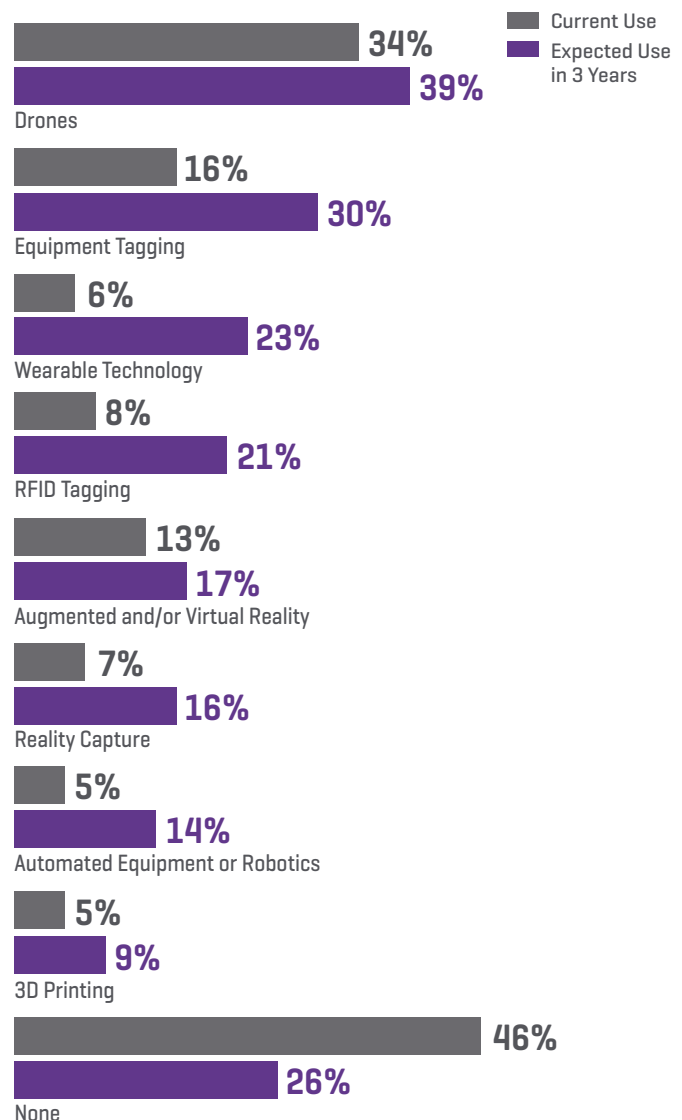
The use of advanced technologies in commercial construction is expected to grow significantly in the next three years, with wider adoption of drones, equipment tagging and wearables on jobsites.

### CURRENT USE OF ADVANCED TECHNOLOGIES BY CONTRACTORS

This quarter, contractors were asked about the use of advanced technologies in their construction projects. Over half [54%] of contractors report that they have used at least one of these technologies on their jobsites, with drones selected as the most widely used technology in this survey. Nearly three-quarters [74%] of contractors expect to adopt one or more of these technologies in the next three years.

Contractors indicated which technologies their companies were most likely to adopt in the next three years. Notably, all of the technologies included in the survey are expected to grow in use. Respondents expect drones, equipment tagging, wearable technologies and RFID tagging to be most widely adopted, with the use of wearables expected to increase by the greatest amount. These findings suggest that the commercial construction industry is beginning to embrace many of the emerging technologies available in the marketplace.

### Current and Expected Future Use of Advanced Technologies Onsite by Contractors



## Use of advanced technology is driven primarily by general contractors and large firms.

### OVERALL USE OF ADVANCED TECHNOLOGIES BY FIRM TYPE/SIZE

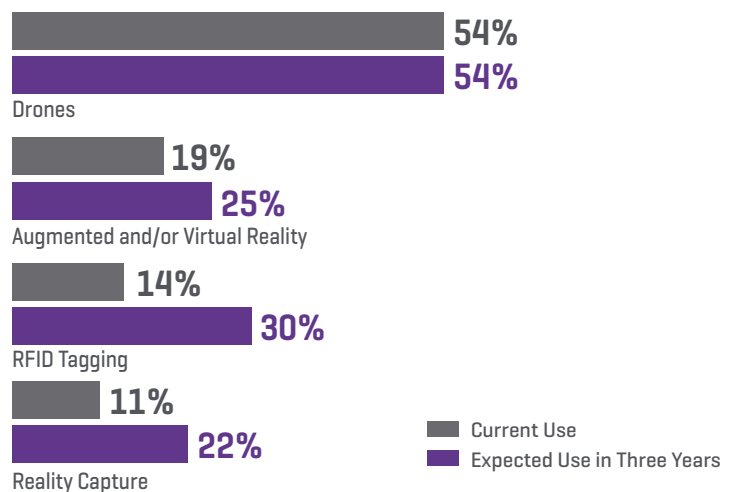
Use of advanced technologies is much higher among general contractors (GCs) than trade contractors, with 73% of GCs reporting that their companies use at least one of the technologies listed on page 7, compared with just 21% of trade contractors. Use among large companies is even higher, with 83% reporting that they use at least one of the technologies.

While technology use is expected to increase among all companies by 2021, far more GCs (85%) and large companies (88%) expect to use these technologies than do the trades (59%) or smaller companies (69%).

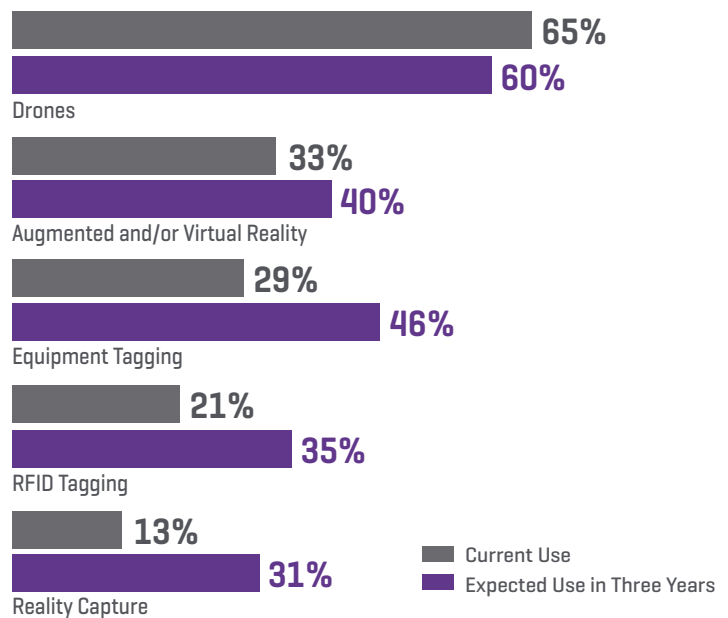
### USE OF SPECIFIC TECHNOLOGIES

Large contractors have already embraced the use of drones, and increased engagement is expected with augmented/virtual reality, RFID tagging and reality capture. Nearly half (46%) of large companies also expect to use equipment tagging. Clearly, these are the technologies to watch in the near future.

#### Use of Advanced Technologies Onsite by General Contractors



#### Use of Advanced Technologies Onsite by Large Companies



## Contractors are more likely to adopt technologies that help them achieve specific goals, such as increased labor productivity.

### BENEFITS THAT ENCOURAGE INVESTMENT IN ADVANCED TECHNOLOGIES

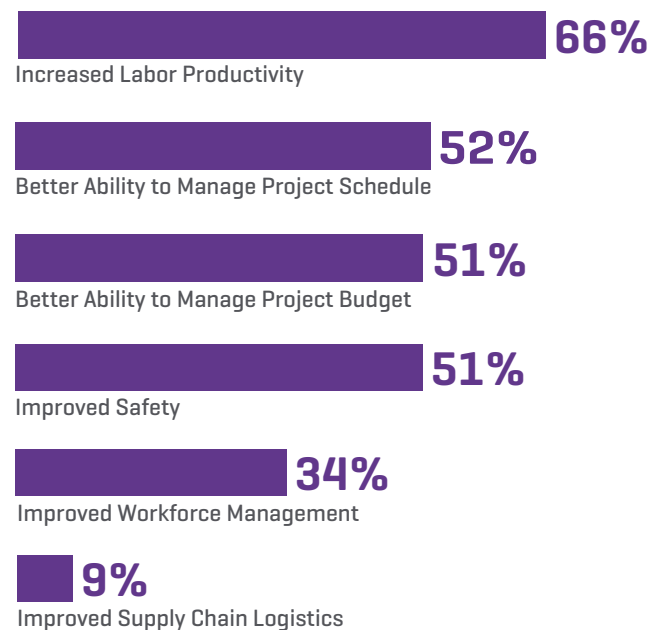
Since many of the technologies covered in this report are emerging in the construction marketplace, contractors were asked to select the top three benefits that would encourage them to make those investments. Key project performance indicators like schedule [52%], budget [51%] and safety [51%] are considered top benefits by about half of the contractors.

Labor productivity [66%] is by far the top benefit selected by contractors, likely driven by the cost of labor and ongoing concerns about workforce shortages.

**VARIANCE BY FIRM TYPE** Almost two-thirds [62%] of GCs select the ability to manage project schedule as a benefit that would encourage technology investments, compared with just 39% of trade contractors.

On the other hand, more than three-quarters of trade contractors [77%] select increased labor productivity as a top factor that would encourage investment, compared with 57% of GCs.

### Top Benefits That Encourage Contractors to Invest in Advanced Technologies



## Three-quarters of contractors believe advanced technologies have the potential to improve labor productivity and project scheduling.

### TECHNOLOGIES TO IMPROVE LABOR PRODUCTIVITY

Three-quarters of contractors believe that one or more of the technologies included in the survey would improve labor productivity on jobsites. The top technologies cited include equipment tagging (40%), automated equipment or robotics (37%) and wearable technologies (36%).

**VARIANCE BY FIRM SIZE AND TYPE** Large companies more frequently selected all three technologies than smaller firms. GCs more frequently select automated equipment or robotics than do trade contractors.

### TECHNOLOGIES TO HELP MANAGE PROJECT SCHEDULE

About three-quarters (76%) of respondents believe advanced technology would help manage project schedules. The top three technologies selected include equipment tagging (38%), RFID tagging (33%) and reality capture (29%).

**75%** Believe advanced technology would be useful to improve labor productivity

#### Top Technologies to Improve Labor Productivity

According to those who think advanced technology would be useful for this issue

**40%**  
Equipment Tagging

**37%**  
Automated Equipment or Robotics

**36%**  
Wearable Technology

**76%** Believe advanced technology would help manage project schedule

#### Top Technologies to Manage Project Schedule

According to those who think advanced technology would be useful for this issue

**38%**  
Equipment Tagging

**33%**  
RFID Tagging

**29%**  
Reality Capture

Most contractors agree that advanced technologies have the potential to support better management of project budgets and improve safety on jobsites.

## TECHNOLOGIES TO HELP MANAGE PROJECT BUDGETS

More than three-quarters [77%] of contractors believe that one or more advanced technologies could help them manage project budgets. Around half believe equipment tagging [51%] and RFID tagging [46%] could be effective for this purpose.

**VARIANCE BY TYPE** More GCs [38%] than trade contractors [14%] regard automated equipment or robotics as one of the most likely technologies to do so.

## TECHNOLOGIES USEFUL TO IMPROVE SAFETY ONSITE

More than three-quarters [78%] of contractors believe that one or more advanced technology can improve jobsite safety, and there is a strong consensus [83%] that wearable technologies will do so. Around one-quarter also regard automated equipment or robotics [28%] and equipment tagging [20%] as useful in this effort. Notably, equipment tagging is the one technology that appears in the top three for all four categories [labor productivity, scheduling, budgeting and safety].

**77%** Believe advanced technology would help manage project budget

### Top Technologies to Help Manage Project Budget

According to those who think advanced technology would be useful for this issue

**51%**  
Equipment Tagging

**46%**  
RFID Tagging

**29%**  
Automated Equipment or Robotics

**78%** Believe advanced technology would be useful to improve safety onsite

### Top Technologies to Improve Safety

According to those who think advanced technology would be useful for this issue

**83%**  
Wearable Technology

**28%**  
Automated Equipment or Robotics

**20%**  
Equipment Tagging

## Contractors report plans to hire more workers in the next six months despite continued difficulties finding employees with the right skills.

### HIRING EXPECTATIONS

The percentage of contractors who expect to employ more workers in the next six months jumped four points quarter-over-quarter, marking the strongest hiring expectations seen in 2018. There was also a small increase in those who expect to employ fewer workers, so more data over the next few quarters is necessary to see if this is a sustained hiring push.

**VARIANCE BY SIZE** More than three-quarters [77%] of large companies expect to hire more workers in the next six months, far more than midsize [59%] or small [50%] companies.

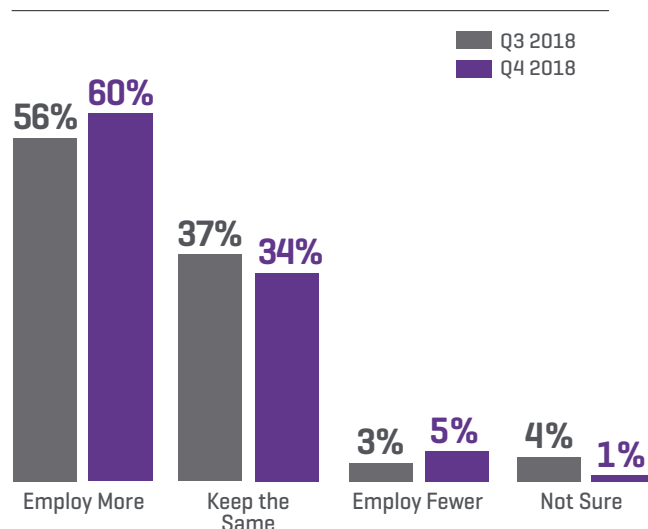
### FINDING SKILLED WORKERS

The proportion of builders who report a high, moderate or low level of difficulty in finding skilled workers has remained stable since Q3, with well over half [58%] reporting a high level of difficulty. The drop in contractors experiencing low difficulty first reported in Q3 is also sustained this quarter, suggesting that workforce concerns remain an issue.

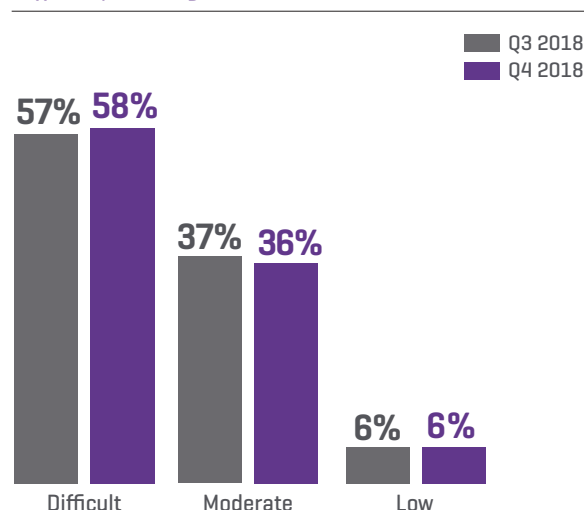
**VARIANCE BY REGION** Contractors in the West [70%] report more difficulty finding skilled workers compared with their counterparts in the Midwest [58%], South [53%] and Northeast [52%].

Note: Percentages for difficulty levels are based on ratings using a 10-point scale, where the three points at the bottom [1-3] indicate a high level of difficulty and the three points at the top [8-10] indicate a low level of difficulty.

Contractor Hiring Plans Over the Next Six Months



Difficulty Finding Skilled Workers



## Concerns linger over shortages of concrete, electrical and masonry workers.

### TRADES LABOR AVAILABILITY

Concrete, electrical and masonry workers continue to top the list for skilled worker shortages. This quarter, shortages in steel erection and glazing increased in ranking, while several other categories, including plaster and drywall, interior finishes/millwork and plumbing, were lower than in previous quarters.

### THE COST OF SKILLED LABOR

Concerns about the cost of skilled labor remained consistent with the previous quarter, with 40% of contractors reporting high concern and 50% reporting moderate concern. Increasing labor scarcity is likely to continue to impact costs.

#### VOICE OF THE CONTRACTOR

*"[My single most important concern about my business in the next 12 months is] Hiring the right people; keeping the right people."*

—CCI Survey Respondent

### Top Categories of Skilled Labor With Greatest Shortages

[According to General Contractors Reporting Difficulty Finding Skilled Labor]

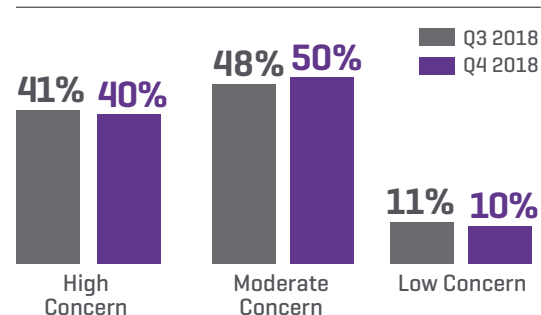
Skilled Labor Shortage Ranking		Current Ranking	Previous Ranking
		Q4 2018	Q3 2018
Concrete	=	1	1
Electrical	=	2	2
Masonry	=	3	3 tie
Steel Erection	▲	4	5 tie
Plaster and Drywall	▼	5	4
Glazing	▲	6 tie	8
HVAC	=	6 tie	6 tie
Interior Finishes/Millwork	▼	6 tie	3 tie
Plumbing	▼	6 tie	5 tie
Wall and Ceiling	=	7	7 tie
Mechanical	▼	8	7 tie
Sheet Metal	▼	9	7 tie

▲ Shortage Increased Since Last Period

= Shortage Remained the Same Since Last Period

▼ Shortage Reduced Since Last Period

### Degree of Contractor Concern About Cost of Skilled Labor



Note: Percentages for degree of concern contractors have about the cost of skilled labor are based on ratings using a 10-point scale, where the three points at the bottom [1-3] indicate a high level of concern and the three points at the top [8-10] indicate a low level of concern.

## Skilled workforce challenges continues to grow, with 58% concerned about the pool of available talent having adequate skills.

### ADEQUATE SKILL LEVELS

The number of contractors concerned about finding workers with adequate skill levels continues to grow. Well over half now report a high level of concern, compared with 55% in Q3 and 50% in Q2. Moderate concerns also increased slightly, and only those with a low level of concern declined.

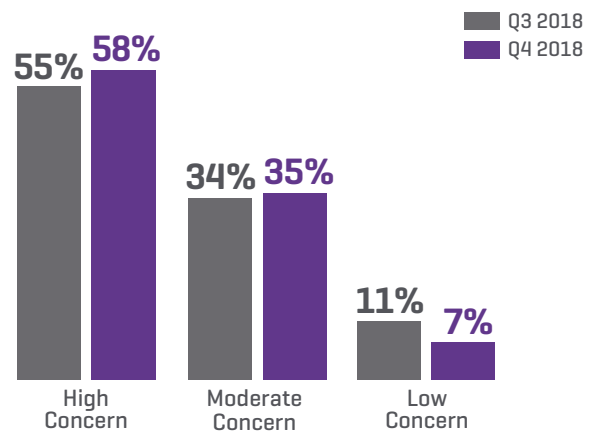
**VARIANCE BY TYPE OF COMPANY** GCs are more concerned about skill levels than are trade contractors, with a significantly higher percentage of the trades reporting a low level of concern [11% compared with 3% of GCs] and a directionally higher percentage of GCs reporting high concern [61% compared with 55% of trades].

### CHANGE IN SKILL LEVELS IN PREVIOUS SIX MONTHS

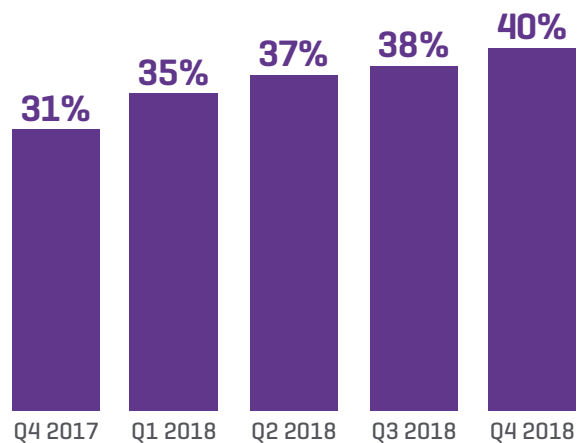
Since Q4 2017, a growing number of respondents indicated that finding skilled workers has worsened in the previous six months. These results show that skilled labor challenges have increased since this time last year and represent a persistent problem for the industry.

Note: Percentages for degree of contractor concern about workers having adequate skill levels are based on ratings using a 10-point scale, where the three points at the bottom [1-3] indicate a high level of concern and the three points at the top [8-10] indicate a low level of concern.

*Degree of Contractor Concern About Adequate Worker Skill Levels*



*Problem of Finding Skilled Workers Worsened in the Last Six Months*  
[According to Those Concerned About Skill Level]



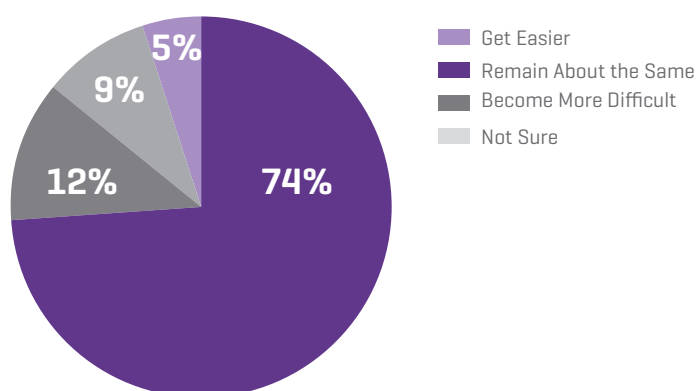


Project financing is still widely available, but opportunities to access to working capital have increased slightly.

## CONTRACTOR WORKING CAPITAL

The vast majority of contractors [79%] believe that access to financing will get easier or remain the same in the next six months. However, this is lower than the 84% of contractors in Q3 who reported that level of confidence. In fact, the percentage of respondents who feel that access to working capital will get easier has declined by seven points from 12% in Q1 2018 to 5% in Q4, demonstrating reduced optimism.

*Expected Change in Access to Working Capital Financing by Contractors in the Next Six Months*

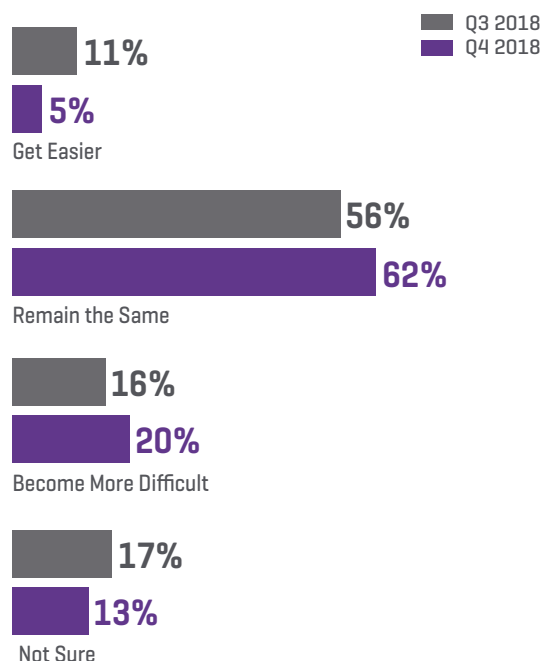


## CONSTRUCTION FINANCING

More than two-thirds of contractors [67%] believe that owner access to financing will get easier or remain the same over the next six months. While this is the same overall percentage as in Q3, there was a notable decrease in the number of contractors who believe access will get easier and an increase in those who think it will remain the same.

In fact, the number who believe it will become more difficult to gain access to financing has grown from 16% to 20%. This is an increase over last quarter and the highest percentage reported since Q2 2017, suggesting that contractors are concerned about the ability of owners to finance projects.

*Expected Change in Building Owner Access to Financing in the Next Six Months*



### Contractors are uneasy about material costs and expect fluctuations to impact their business.

#### SPENDING ON TOOLS AND EQUIPMENT

The last few quarters have seen a decline in the percentage of contractors expecting to spend more on tools and equipment. This quarter, that percentage has dropped to under one half for the first time since Q1 2017. While the drop is moderate and could rebound, it may signal a new trend that rising costs are becoming a factor in the industry.

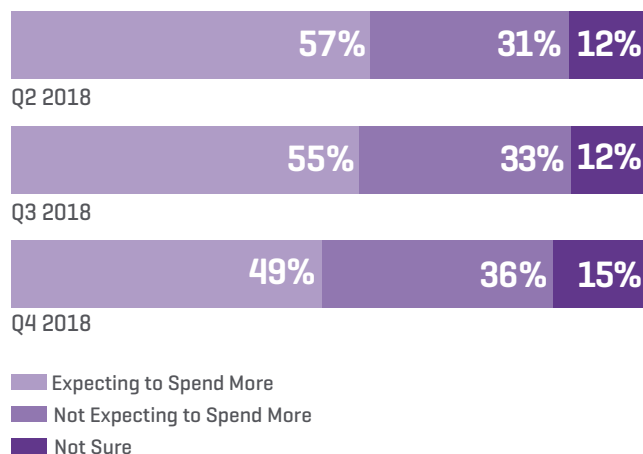
#### IMPACT OF MATERIAL COST FLUCTUATIONS

From Q1 2017 to Q1 2018, only a small percentage of contractors reported high concern over how material cost fluctuations would impact their business. However, this number jumped by 20-plus percentage points in Q2 2018, and remained high through Q4. Although the percentage of contractors who expect material costs to have a moderate impact hovers around 50%, the findings show that the cost of building materials became a greater concern in 2018.

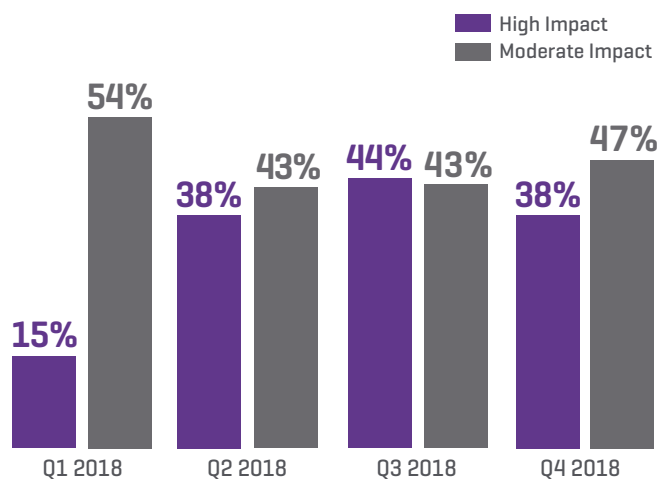
**VARIANCE BY REGION** Contractors in the West [54%] report a higher impact from material cost fluctuations compared with contractors in the South [39%], Midwest [28%] and Northeast [27%].

Note: Percentages for Expected Material Shortages' Impact on Contractors are based on ratings using a 10-point scale, where the three points at the bottom indicate a high impact and the three points at the top indicate a low impact.

#### Contractors' Expected Spending on Tools and Equipment



#### Contractors Who Expect Material Cost Fluctuations to Have a High/Moderate Impact on their Business

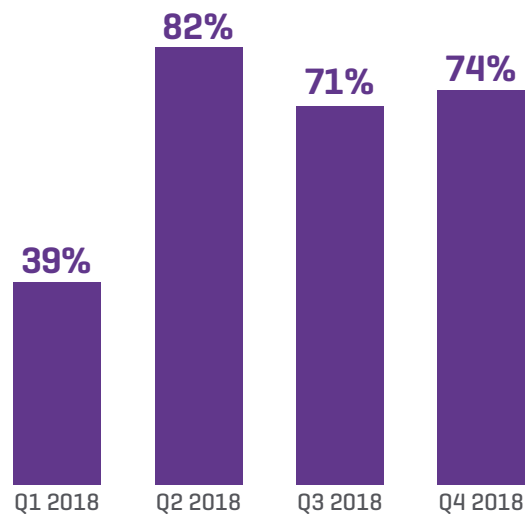


General contractors remain anxious over the cost of steel, while concerns about the impacts of material shortages on projects creep upward.

## CONCERN ABOUT STEEL PRICES AMONG GENERAL CONTRACTORS

Almost three-quarters [74%] of the GCs who are impacted by material cost fluctuations select steel as their area of greatest concern. This is a drop from Q2 [82%] when steel tariffs were first announced, but a slight increase from Q3 [71%] after the tariffs were first put in place, indicating potential effects of the recent policy. Year-over-year, this result stands in sharp contrast to the 37% of GCs who reported concern about cost fluctuations in steel in Q4 2017.

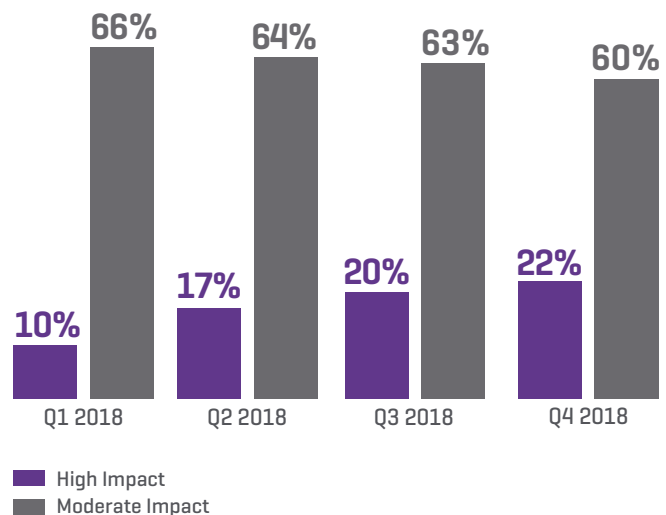
*General Contractors Very Concerned About Cost Fluctuations in Steel*



## IMPACTS OF SHORTAGES IN BUILDING PRODUCT/MATERIALS

Between Q1 2017 and Q1 2018, the percentage of contractors who expect a high impact from material shortages was nominal. However, that percentage has been rising since Q2 2018, and in Q4 2018, it makes up nearly one-quarter [22%] of the participants in the survey. When coupled with worries over material cost fluctuations, the data reported around shortages suggests that close tracking of both categories is needed over the next few quarters.

*Contractors Who Expect High/Moderate Impact on Their Projects Due to Shortages in Products/Materials*



## 5 METHODOLOGY

Dodge Data & Analytics (DD&A) in partnership with USG Corporation and the U.S. Chamber of Commerce conducts the Commercial Construction Index survey on a quarterly basis with the DD&A Contractor Panel. The majority of data represented in this report is from the Q4 2018 survey conducted online from October 4 to 26, 2018.

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### DD&A CONTRACTOR PANEL

In order to enable reliable market research in the construction industry, DD&A maintains a panel of more than 2,700 decision makers that includes general contractors, construction managers, design-builders and trade contractors. This panel allows DD&A to provide findings that are representative of the entire U.S. construction industry by geography, and by size and type of company.

### FOURTH QUARTER SURVEY DEMOGRAPHICS

202 contractors who do projects in the commercial and institutional sectors in the U.S. (including multifamily residential) responded to the survey.

**TYPE OF COMPANY** More than half (56%) of respondents are prime contractors (including general contractors, construction managers, design-builders and remodelers), and 44% are trade contractors.

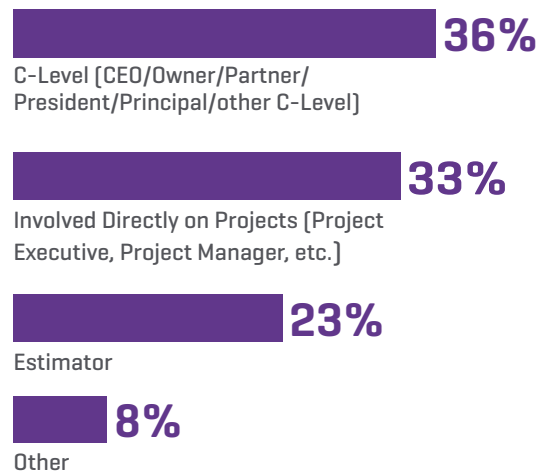
**JOB FUNCTION** Most are in leadership roles or engaged in projects.

**SIZE OF COMPANY** The percentage of small and midsize contractors is higher than that of large companies.

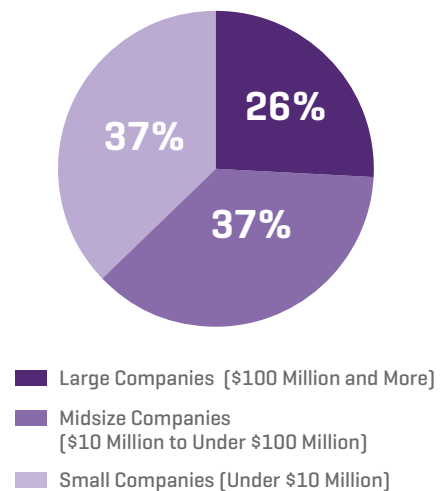
**LOCATION** 16% of the respondents are located in the Northeast, 31% in the South, 30% in the Midwest and 23% in the West.

The analysis includes comparisons to previous surveys conducted online with the DD&A Contractor panel since January 2017.

### Job Functions of Respondents



### Size of Company [by Annual Revenue]



### COMMERCIAL CONSTRUCTION INDEX

The Commercial Construction Index is an indicator of the health of the contractor segment of the U.S. building industry. It is comprised of three specific components reflecting aspects of the commercial contractors' situation.

**THE FIRST COMPONENT** calculates each respondent's ratio of current backlog to ideal backlog. It takes the mean of the ratio across all survey respondents.

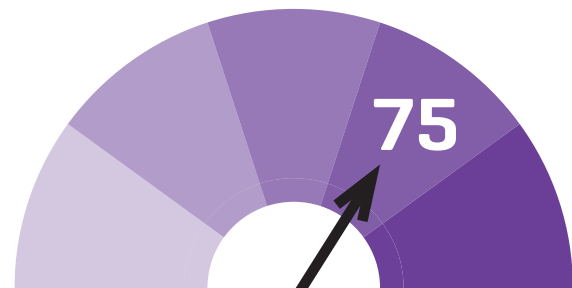
**THE SECOND COMPONENT** is the mean of all responses, on a scale of 1-10, to the question "How confident are you that the U.S. market will provide your company with sufficient new business opportunities?"

**THE THIRD COMPONENT** compiles contractors' ranges of expected revenue growth/decline and transposes those to a 10-point scale, then takes the mean of responses on that scale.

Each measure is drawn from the quarterly survey responses, and they are weighted evenly by one third (33.3%) to create the composite index.

### DEFINING COMMERCIAL CONSTRUCTION

For purposes of the CCI we define commercial construction as the following types of buildings: Office, Retail, Hospitality, Education, Healthcare, Multifamily Residential (mid-and high-rise), Government, Warehouses, Airport Terminals and other Transportation Buildings.



The Commercial Construction Index is 75 for the fourth quarter of 2018.



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**The U.S. Chamber of Commerce** is the world's largest business federation representing the interests of more than 3 million businesses of all sizes, sectors and regions, as well as state and local chambers and industry associations. Its International Affairs division includes more than 70 regional and policy experts and 25 country- and region-specific business councils and initiatives. The U.S. Chamber also works closely with 117 American Chambers of Commerce abroad.

**Dodge Data & Analytics** is North America's leading provider of analytics and software-based workflow integration solutions for the construction industry. Building product manufacturers, architects, engineers, contractors and service providers leverage Dodge to identify and pursue unseen growth opportunities and execute on those opportunities for enhanced business performance. Whether it's on a local, regional or national level, Dodge makes the hidden obvious, empowering its clients to better understand their markets, uncover key relationships, size growth opportunities and pursue those opportunities with success. The company's construction project information is the most comprehensive and verified in the industry. Dodge is leveraging its 100-year-old legacy of continuous innovation to help the industry meet the building challenges of the future. To learn more, visit [www.construction.com](http://www.construction.com).

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