



**2021**  
**HEAVY CIVIL  
CONSTRUCTION INDEX**  
Fourth Quarter



November 2021

## HCCI INDEX MOVEMENT Q4-Q3

Current Reading  
for Q4 2021

51.7

Previous Reading  
for Q3 2021

58.2

		Q4 2021	Q3 2021
Overall U.S. Economy	↓	50.00	73.33
Economy Where We Do Business	↓	52.43	73.33
Our Engineering and Construction Business	↓	57.34	67.78
Engineering and Construction Where We Do Business	↓	55.56	66.79
Backlog	↑	57.25	54.20
Book/Burn Rate	↓	55.10	56.59
Cost of Materials	↓	3.55	4.23
Cost of Labor	↑	11.35	10.00
Productivity	↓	43.62	47.67

The Heavy Civil Construction Index ended its yearlong streak of upward movement going into the fourth quarter of 2021, retreating from 58.2 to 51.7. The index remains only slightly above 50 but continues to suggest increased opportunities and industry expansion over the weeks ahead.

Index components signal sentiment has declined toward both the broader U.S. economy and local markets where respondents conduct business. Confidence has also declined in their engineering and construction operations. This reversion is likely tied to the delayed passage of the Bipartisan Infrastructure Bill that was anticipated late September, as this survey questionnaire ran into late October with no resolution. The bill finally passed the House of Representatives on November 5 and was signed into law by President Biden on November 15.

Respondent sentiment remained positive for nearly all segments. More than 90% of respondents anticipate short-term stable or improving industry conditions in most heavy civil segments except for transit/rail, aviation and other heavy civil construction.

Participants have continued to grow backlogs faster than they are burning them off, and more report greater backlogs today than a year ago (48% higher versus 28% lower). In contrast, however, about one-third reported backlogs below what they had anticipated or needed at this point in the year.

The gap between actual and desired backlogs is perhaps associated with the reported regression in margins. Half our respondents report that margins have been stable from the same quarter last year, but 30% suggest that margins in 2021 are now lower. A similar trend in results is seen quarter over quarter.

Rising competition continues. Most, or 70%, report some increase in competitors within the past quarter, and over half, or 57%, reported increasing bid prices. Over the past six months, approximately 1 in 4 respondents have experienced an increase of non-traditional civil firms entering their markets.

Current issues questions this quarter asked for annual inflationary factors used in bidding to account for wage and material price increases. In both cases, most respondents are factoring these as 3% or higher. Far more respondents, or 39%, are factoring material price increases greater than 5%, compared to only 12% of respondents factoring wage increases exceeding 5%.

Passage of the Bipartisan Infrastructure Bill in 2021 was in FMI's base-case assumptions used in developing construction put in place forecasts over the past several quarters. Though passage of the bill was delayed, curtailing growth somewhat in 2021, mid- and long-term growth expectations are elevated significantly over historical levels.

Most segments are expected to experience strong (in some cases double-digit) annual growth for a sustained period beginning in 2023. Over the five-year forecast period, growth through 2025 will be led by water supply, bridge and rail/transit construction spending.



## Heavy Civil Construction Index (HCCI) Q1 2018 to Q4 2021

HCCI scores are based on a diffusion index where scores above 50 represent improving or expanding industry conditions, a score of 50 represents conditions remaining the same, and a score below 50 represents worse conditions than last quarter (or contraction).

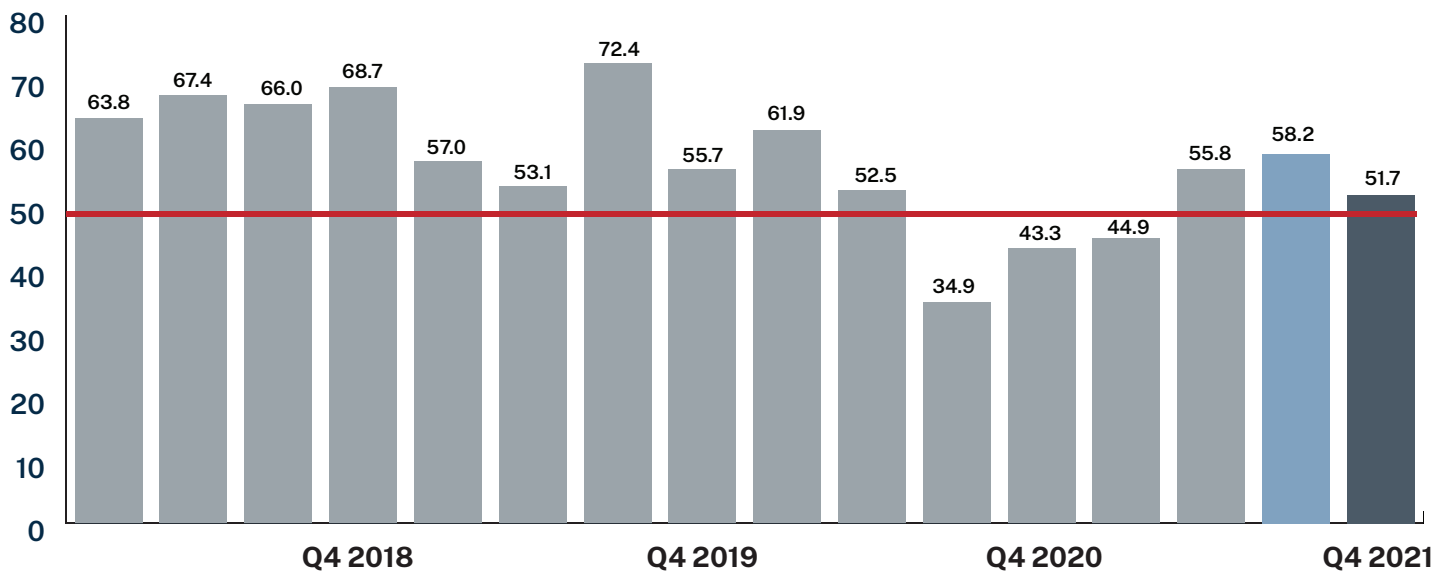
**Current HCCI Reading  
for Q4 2021**

**51.7**

Survey dates:  
October 13-29

**Previous Reading  
July 8-12**

**58.2**

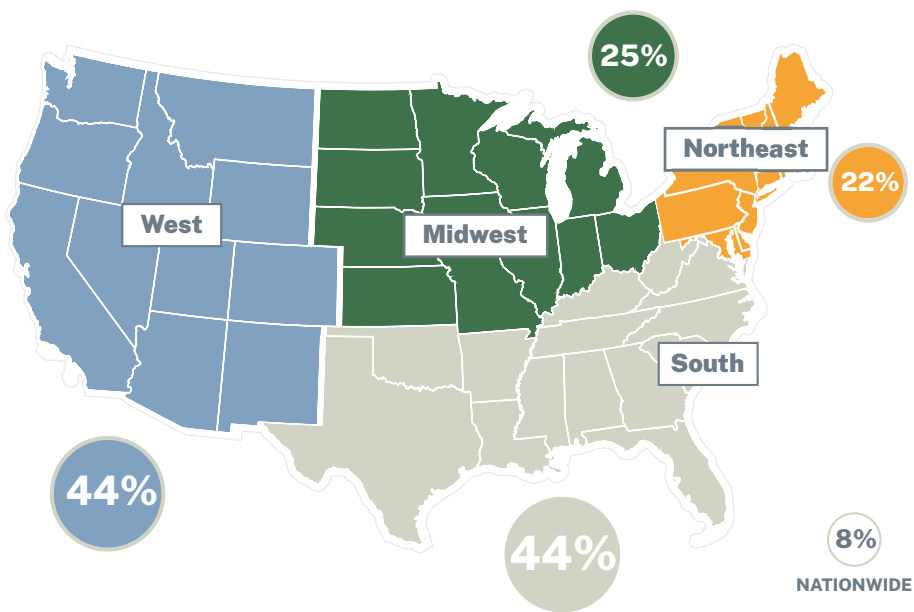


Source: FMI Heavy Civil Construction Index Q4 2021

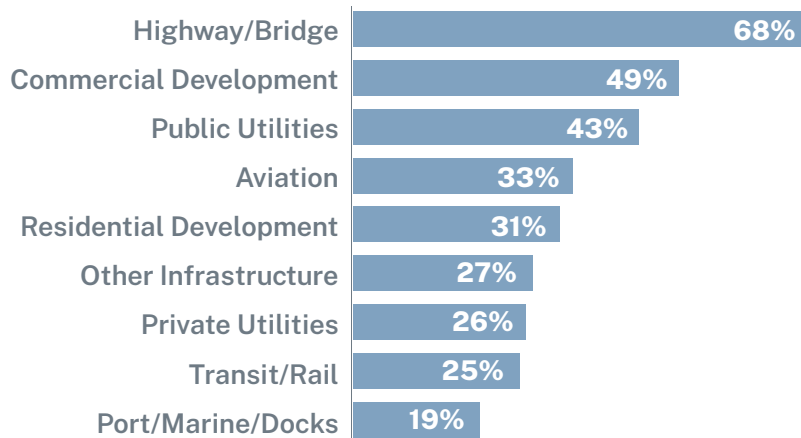


## Where Survey Participants Work

### By Geography



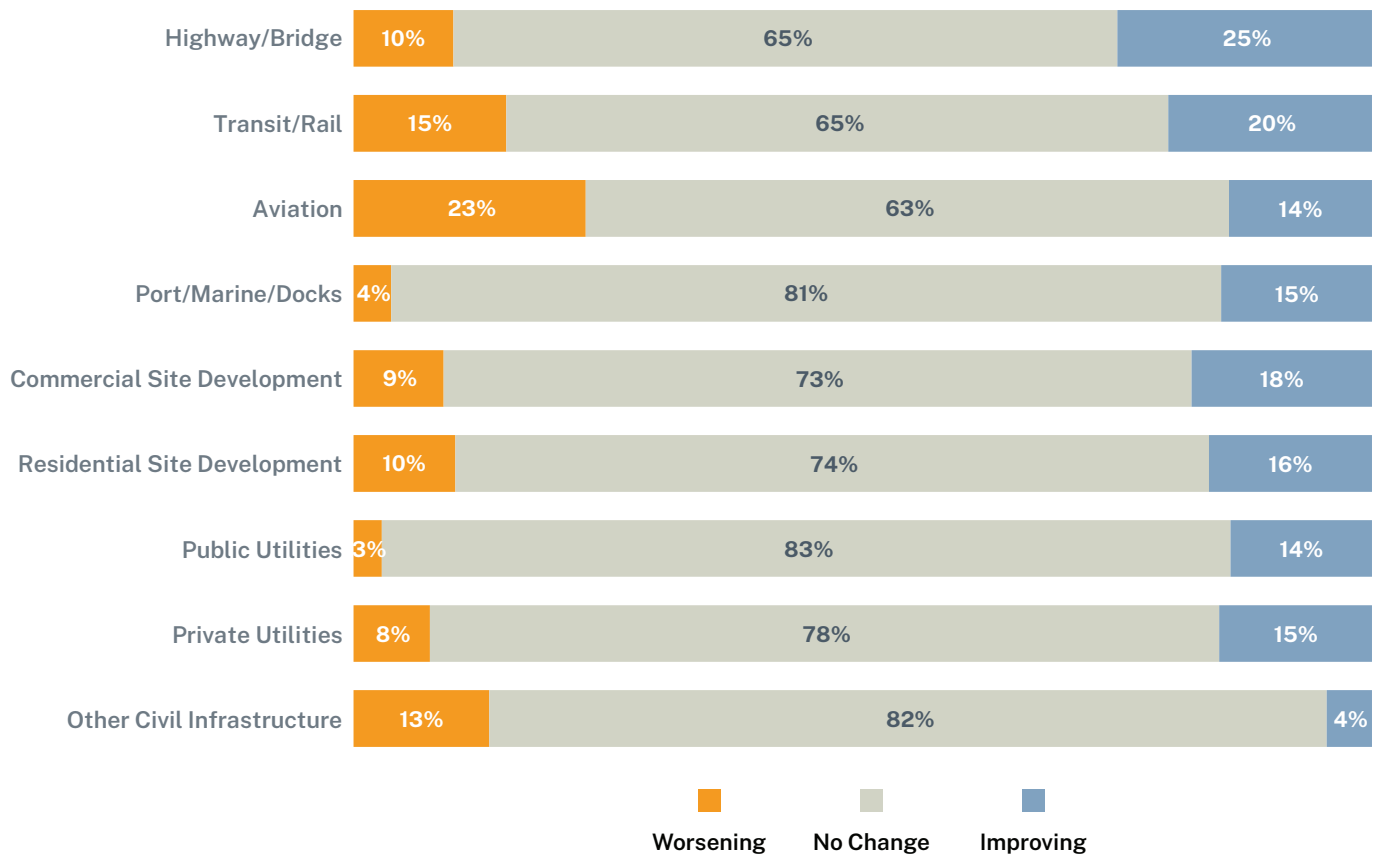
### By Discipline



Respondents are able to select more than one option.



## Perception of Change for Next Quarter



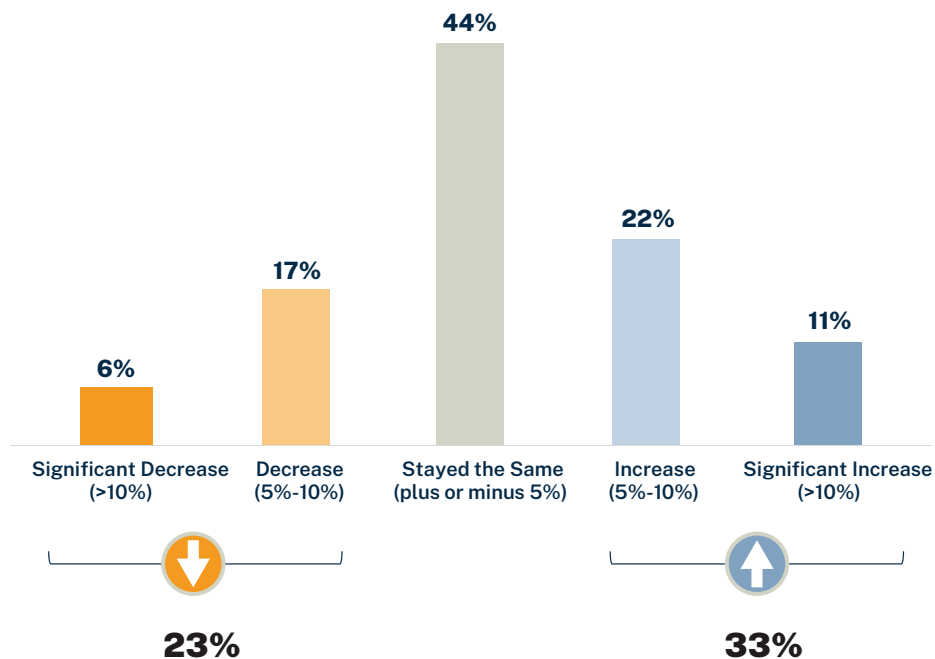


# Heavy Civil Market Conditions

- Participants have been able to continue to grow backlogs faster than they are burning them off, and more report greater backlogs today than a year ago (48% higher versus 28% lower). In contrast, however, about one-third reported backlogs that are currently below what they had anticipated or needed at this point in the year.
- Competition continues with most, or 70%, reporting some increase in competitors within the past quarter and more than half, or 57%, reporting increasing bid prices. During the past six months, approximately 1 in 4 respondents have experienced an increase of nontraditional civil firms entering their market.
- Approximately half of respondents say that margins have been stable year over year, but 30% suggest that margins in 2021 are now lower. A similar distribution in results is seen quarter over quarter.
- Current issues this quarter asked for annual inflationary factors used in bidding to adjust for wage and material prices. In both cases, a majority is currently factoring those as 3% or higher, or 73% and 85% respectively.

## Backlog Book/Burn Rate (Year Over Year)

Book/burn rate is the rate at which you add backlog compared to the rate at which you burn backlog.

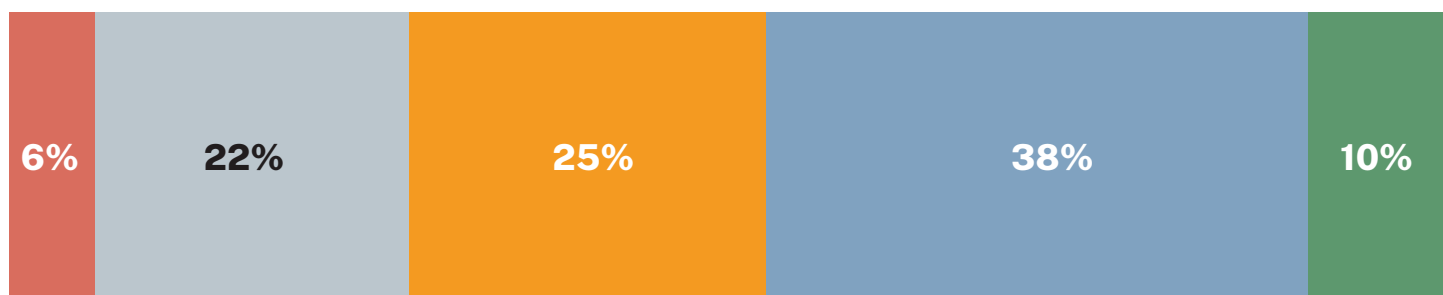


Source: FMI Heavy Civil Construction Index Q4 2021

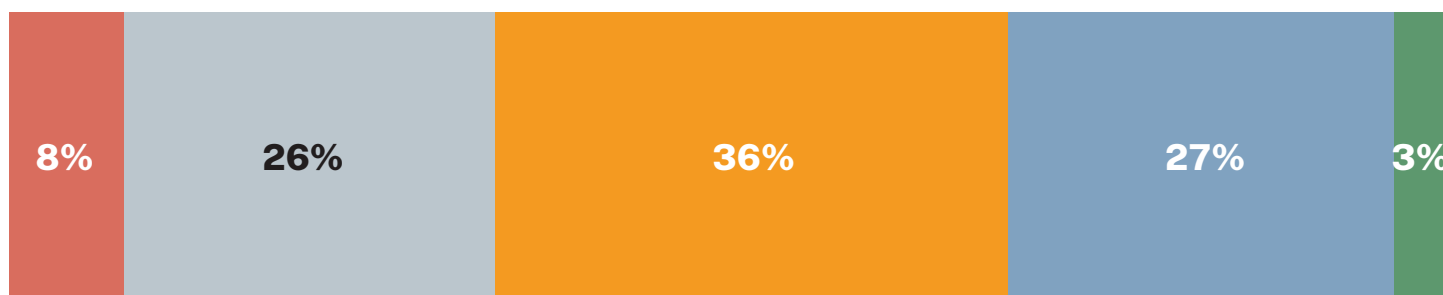


## Backlog

How does your backlog in the most recent quarter compare to the same quarter last year?



What is your current backlog compared to your anticipated/needed backlog at this point in the year?



Significantly Lower

Somewhat Lower

About the Same

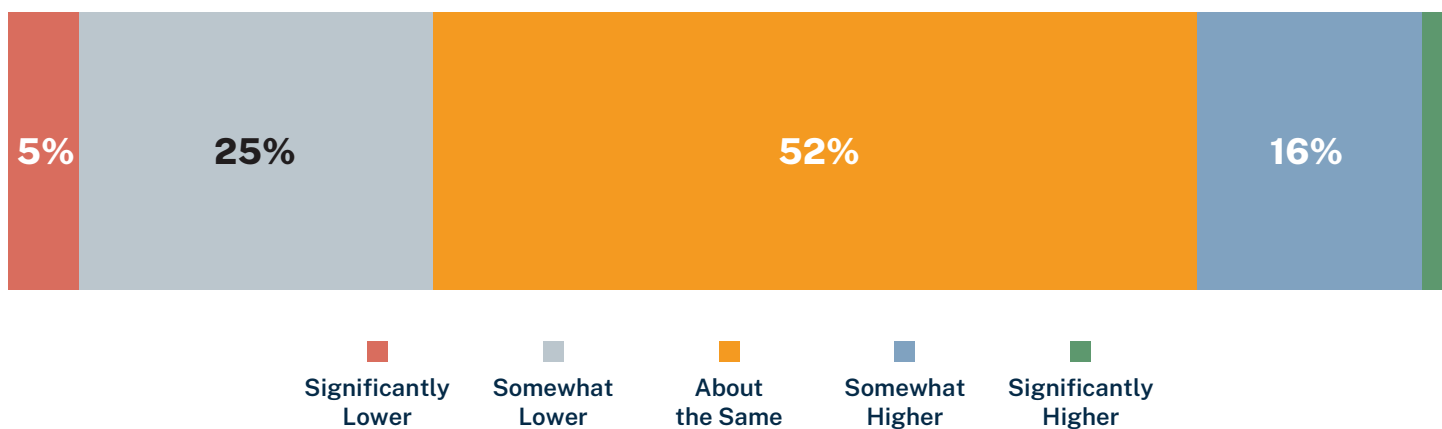
Somewhat Higher

Significantly Higher

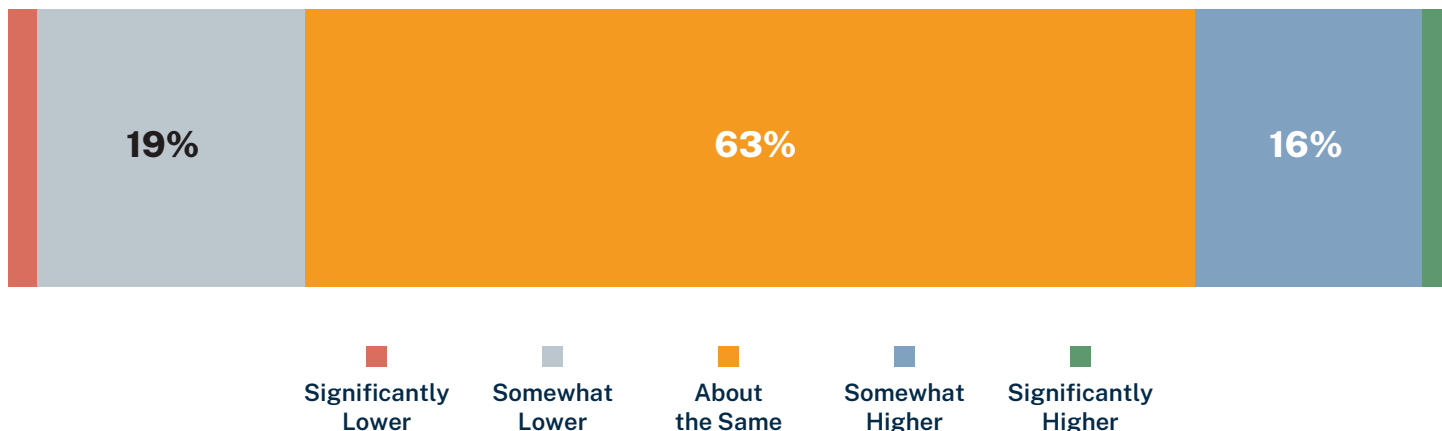


## Margin

How would you compare margin on the work you have acquired in this quarter compared to the same quarter last year? (i.e., year-over-year change)



How would you compare margin on the work you have acquired in this quarter compared to the previous quarter?

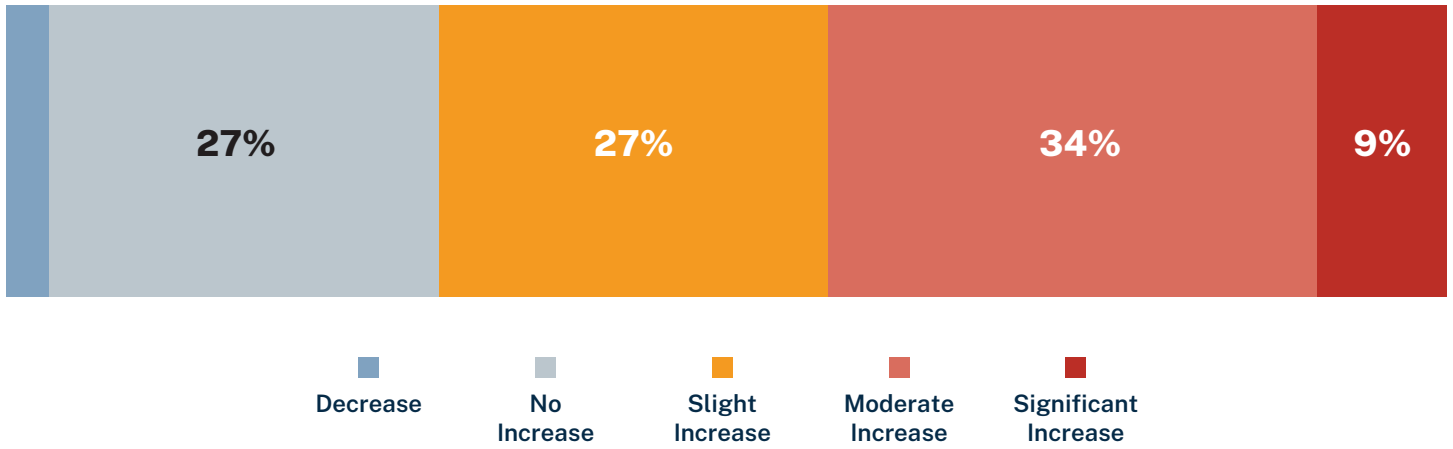




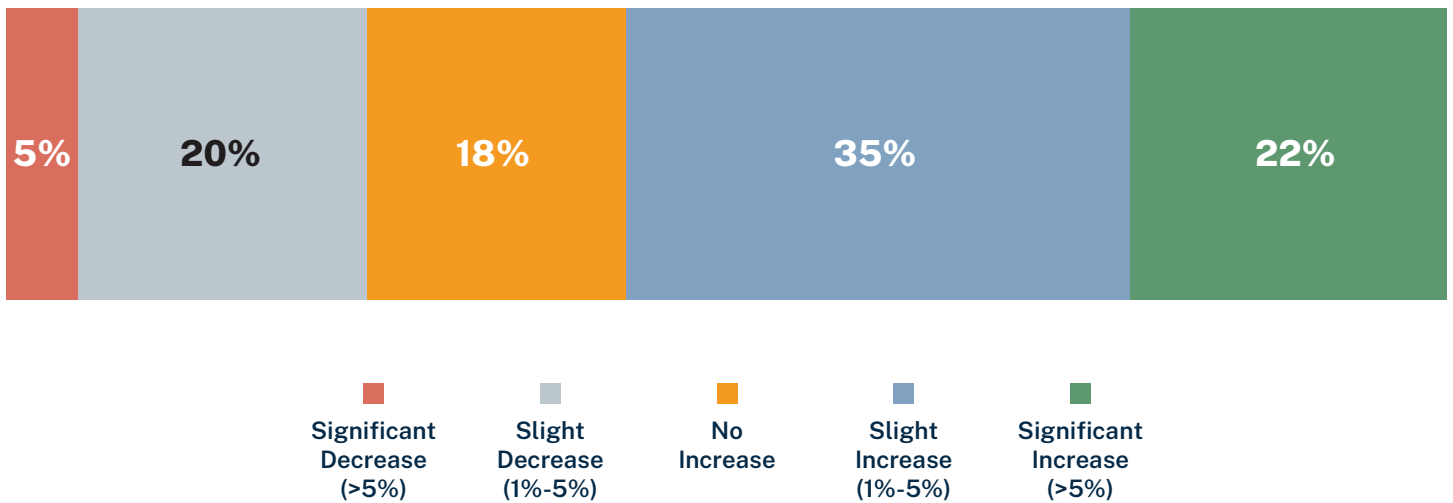


## Competitive Landscape

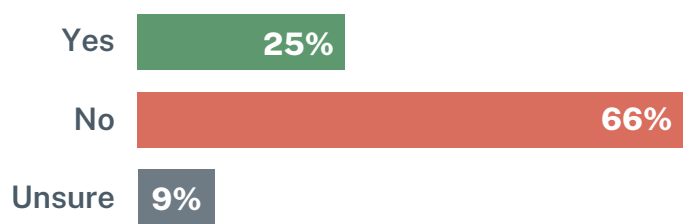
How has the competitive landscape changed in the last quarter in terms of the number of competitors?



How have bid prices been impacted in the last quarter?



In the past six months, have you experienced an increase in nontraditional civil firms (new entrants) entering the market?

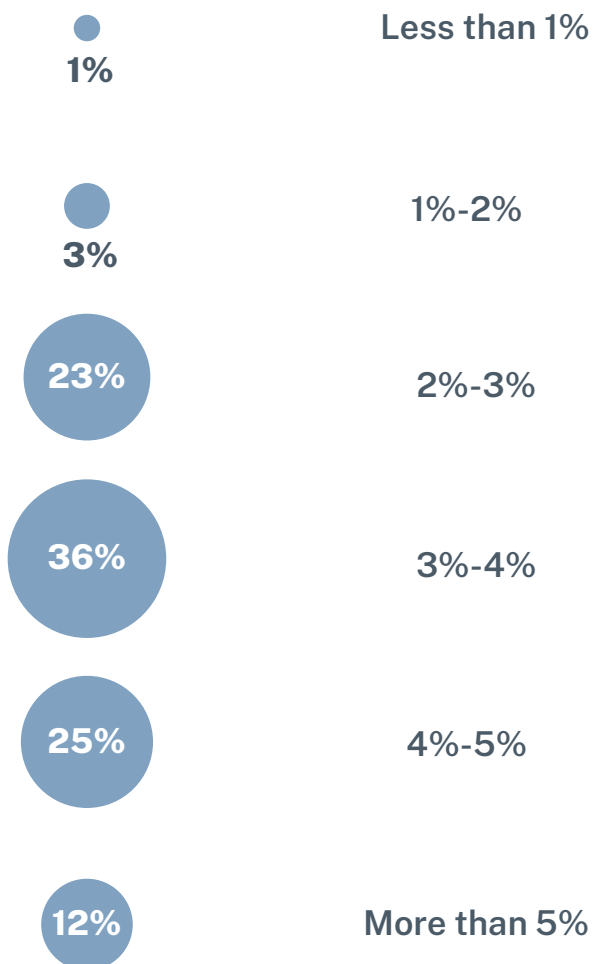




## Current Issues: Annual Inflation Factors Used in Bidding

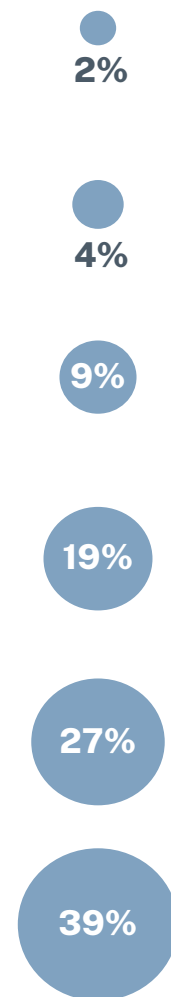
What levels of annual wage inflation are you currently factoring in on your bids?

### Wage Inflation Factors



What levels of annual materials price inflation are you currently factoring in on your bids?

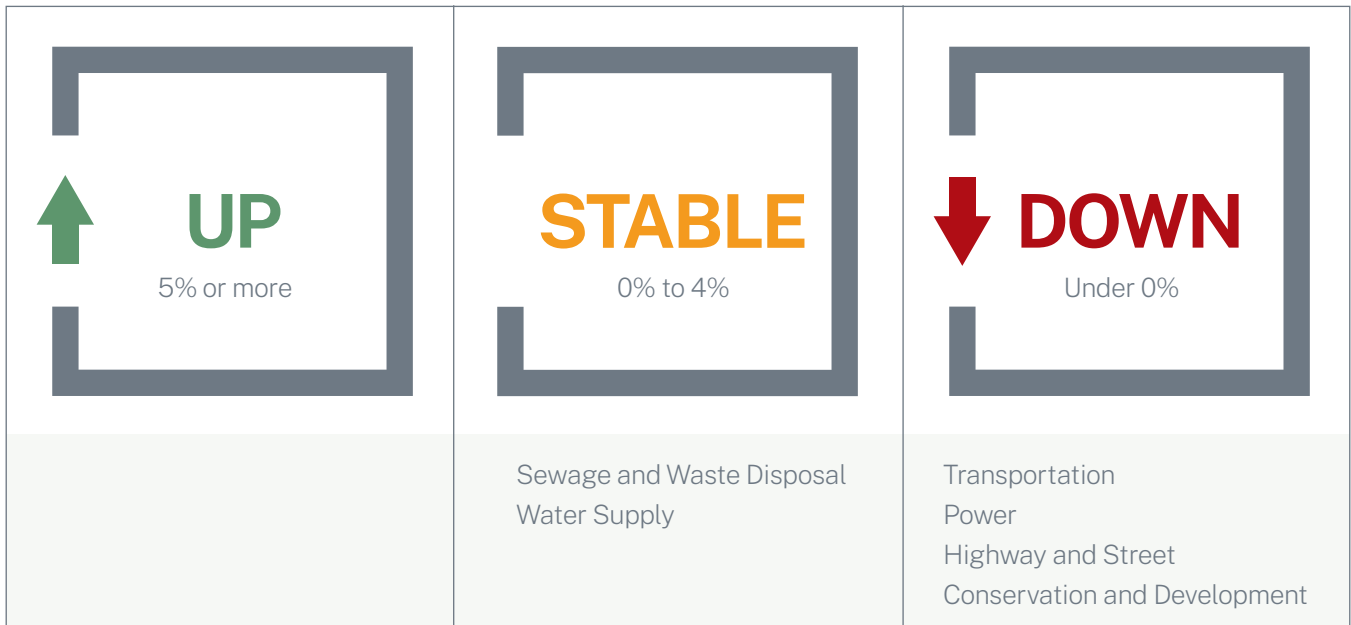
### Material Inflation Factors



# CONSTRUCTION SPENDING

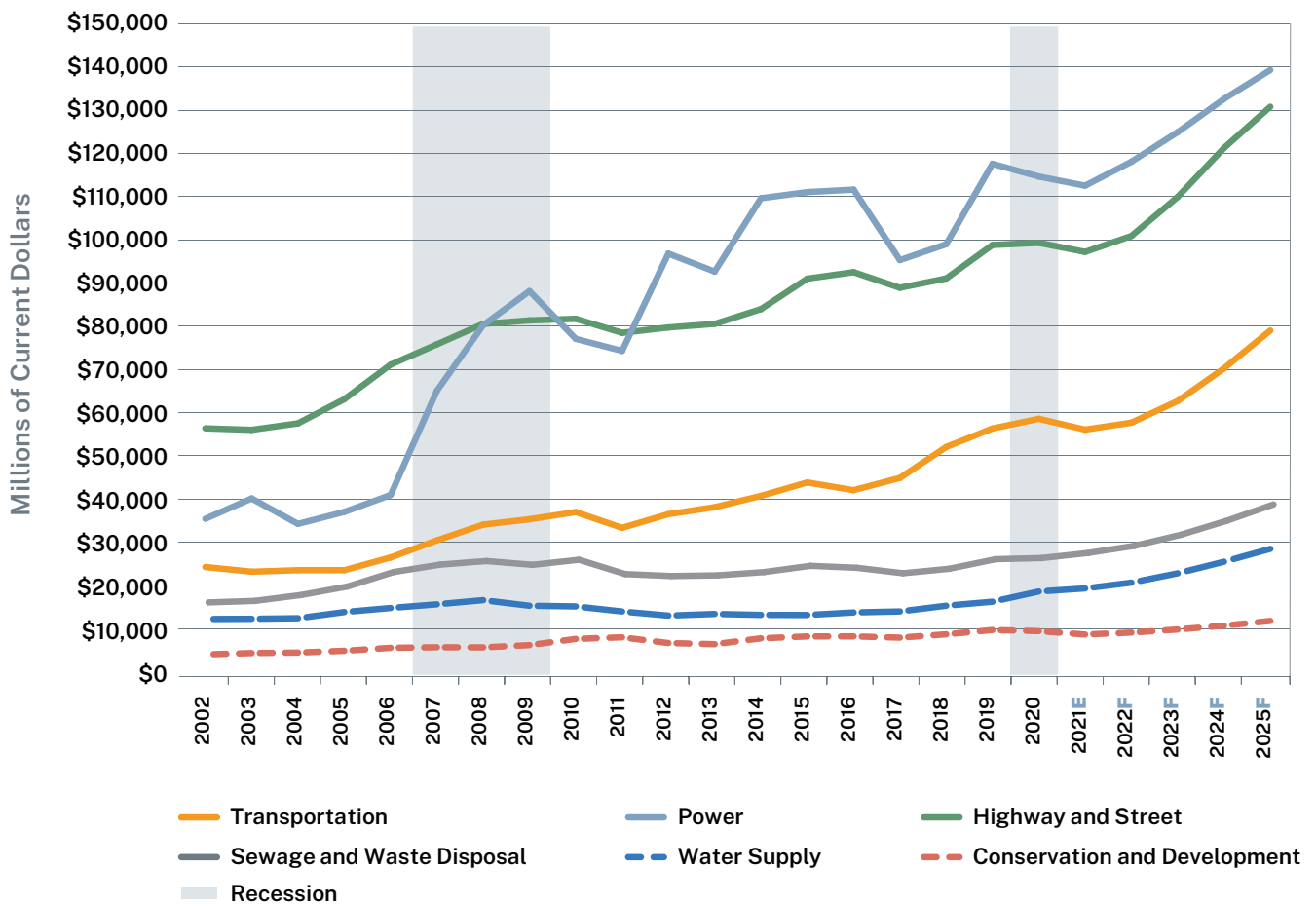
- Total heavy civil construction put in place is anticipated to fall 1.7% in 2021, with the largest declines in transportation (-10%) and conservation and development (-9%)
- Over the five-year forecast period, growth through 2025 will be led by water supply, bridge and rail/transit construction spending.
- Mid- and long-term growth expectations rise significantly over historical levels between 2022 and 2025 due to passage of the Bipartisan Infrastructure Bill.

## U.S. 2021 Segment Performance 2021/2020 Comparison



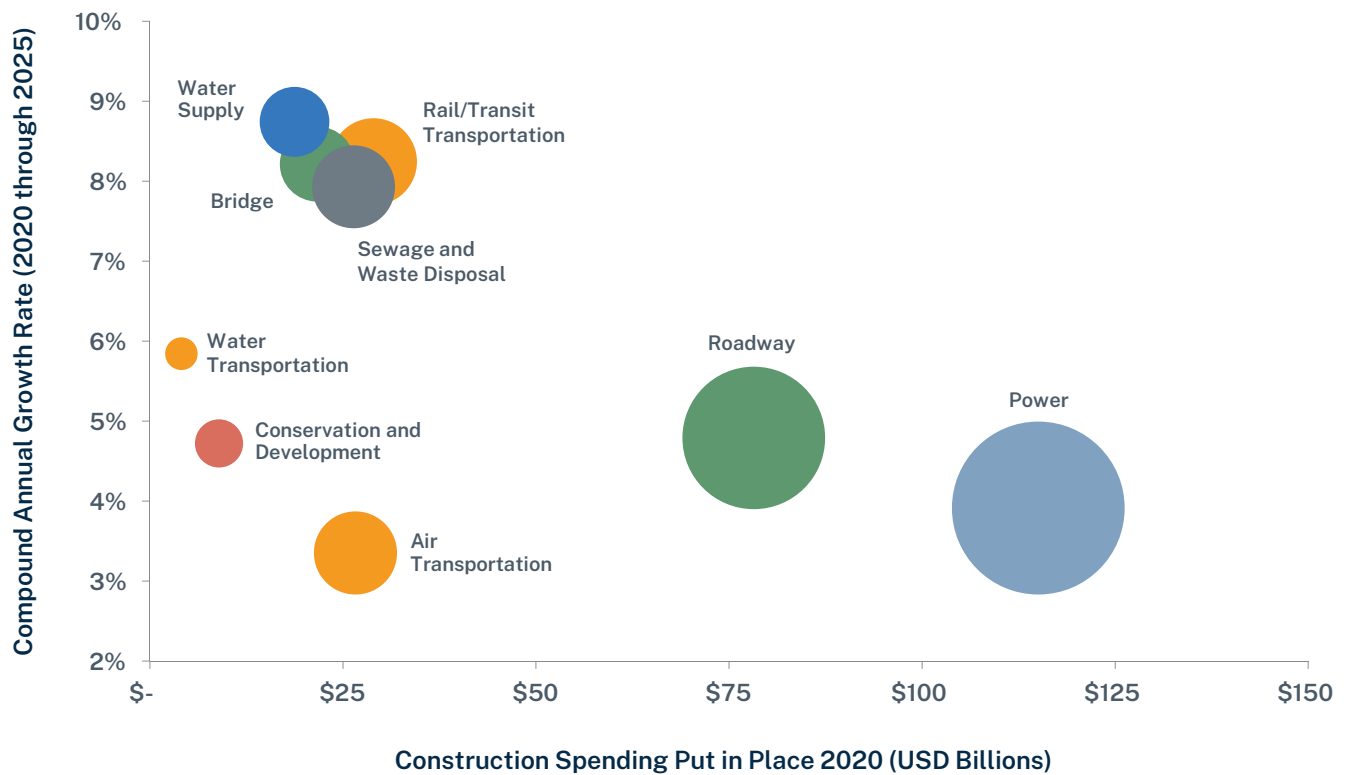


## Heavy Civil Construction Put in Place





## Heavy Civil Construction Outlook



# Construction Put in Place Estimated for the United States

Millions of Current Dollars

Fourth Quarter 2021 Forecast (based on 2nd Quarter 2021 Actuals and 3rd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
<b>TRANSPORTATION</b>	43,340	46,138	53,218	57,449	59,661	57,186	58,774	63,731	71,191	79,845
Air	14,232	17,194	22,008	24,428	26,619	24,878	25,144	26,424	28,693	31,391
Rail/Transit	26,794	26,588	28,200	28,898	28,956	28,637	29,847	33,201	37,834	43,027
Port/Water	2,314	2,356	3,010	4,123	4,086	3,672	3,784	4,106	4,664	5,427
<b>POWER</b>	112,067	95,951	99,569	117,960	115,048	112,958	118,436	125,196	132,784	139,391
<b>HIGHWAY AND STREET</b>	93,187	89,620	91,745	99,402	99,888	97,819	101,458	110,392	121,569	130,997
Roadway	60,679	59,188	65,087	72,678	78,203	77,233	79,277	84,746	91,647	98,817
Bridge	32,508	30,432	26,658	26,724	21,685	20,586	22,181	25,646	29,921	32,179
<b>SEWAGE AND WASTE DISPOSAL</b>	24,151	22,901	23,931	26,119	26,379	27,547	29,177	31,694	34,931	38,632
<b>WATER SUPPLY</b>	13,940	14,168	15,477	16,397	18,727	19,435	20,757	22,889	25,536	28,473
<b>CONSERVATION AND DEVELOPMENT</b>	7,745	7,464	8,229	9,207	8,955	8,182	8,622	9,324	10,199	11,278
<b>Total Heavy Civil Put in Place</b>	<b>\$294,430</b>	<b>\$276,242</b>	<b>\$292,169</b>	<b>\$326,534</b>	<b>\$328,658</b>	<b>\$323,127</b>	<b>\$337,224</b>	<b>\$363,226</b>	<b>\$396,208</b>	<b>\$428,615</b>

# Construction Put in Place Estimated for the United States

Change From Prior Year – Current Dollar Basis

Fourth Quarter 2021 Forecast (based on 2nd Quarter 2021 Actuals and 3rd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
<b>TRANSPORTATION</b>	-3.9%	6.5%	15.3%	8.0%	3.9%	-4.1%	2.8%	8.4%	11.7%	12.2%
Air	8.0%	20.8%	28.0%	11.0%	9.0%	-6.5%	1.1%	5.1%	8.6%	9.4%
Rail/Transit	-9.1%	-0.8%	6.1%	2.5%	0.2%	-1.1%	4.2%	11.2%	14.0%	13.7%
Port/Water	-6.4%	1.8%	27.8%	37.0%	-0.9%	-10.1%	3.1%	8.5%	13.6%	16.4%
<b>POWER</b>	0.5%	-14.4%	3.8%	18.5%	-2.5%	-1.8%	4.8%	5.7%	6.1%	5.0%
<b>HIGHWAY AND STREET</b>	1.6%	-3.8%	2.4%	8.3%	0.5%	-2.1%	3.7%	8.8%	10.1%	7.8%
Roadway	3.0%	-2.5%	10.0%	11.7%	7.6%	-1.2%	2.6%	6.9%	8.1%	7.8%
Bridge	-0.9%	-6.4%	-12.4%	0.2%	-18.9%	-5.1%	7.7%	15.6%	16.7%	7.5%
<b>SEWAGE AND WASTE DISPOSAL</b>	-1.8%	-5.2%	4.5%	9.1%	1.0%	4.4%	5.9%	8.6%	10.2%	10.6%
<b>WATER SUPPLY</b>	4.4%	1.6%	9.2%	5.9%	14.2%	3.8%	6.8%	10.3%	11.6%	11.5%
<b>CONSERVATION AND DEVELOPMENT</b>	0.1%	-3.6%	10.2%	11.9%	-2.7%	-8.6%	5.4%	8.1%	9.4%	10.6%
<b>Total Heavy Civil Put in Place</b>	<b>0.2%</b>	<b>-6.2%</b>	<b>5.8%</b>	<b>11.8%</b>	<b>0.7%</b>	<b>-1.7%</b>	<b>4.4%</b>	<b>7.7%</b>	<b>9.1%</b>	<b>8.2%</b>

Historical CPIP reflects spending as reported by the U.S. Census through September 2021.

# ABOUT THE AUTHORS



**Brian Moore** is a principal and strategy practice leader with FMI. Brian focuses on consulting with contractors on various strategic, organizational and operational issues. Brian works in identifying future construction trends, market conditions and competitive issues that impact strategic decisions. Brian's clients count on him as a thought leader and trusted advisor as they plan the future of their business. Often this involves combining in-depth market and company analysis with judgment and experience to chart the organization's future. He works with clients to help them develop the organizational capabilities that match their chosen strategy so they can achieve desired results. Brian can be reached at [brian.moore@fmicorp.com](mailto:brian.moore@fmicorp.com).



**Paul Trombitas** is a senior consultant with FMI's strategy practice and works with clients across the engineering and construction industry. He is responsible for managing and delivering in-depth market insights focused on the built environment. He is actively involved with clients in developing market strategy, focusing on alternative project delivery methods. Paul has been quoted in multiple publications, including ENR, regarding the design-build market and maintains key stakeholder relationships that provide unparalleled industry access. Paul can be reached at [paul.trombitas@fmicorp.com](mailto:paul.trombitas@fmicorp.com).



**Brian Strawberry** is a senior economist with FMI. Brian's expertise is in economic and statistical modeling. He leads FMI's efforts in market sizing, forecasting, and building product/construction material pricing and consumption trends. Brian's combination of analytical skills and creative problem-solving abilities has proven valuable for many contractors, owners and private equity groups as well as industry associations and internal research initiatives. Brian can be reached at [brian.strawberry@fmicorp.com](mailto:brian.strawberry@fmicorp.com).



**Emily Beardall** is a consultant for FMI's strategy practice. Emily is responsible for creating and developing tools to deliver innovative solutions for our clients. She is committed to utilizing these strategic tools to improve company performance and profitability. Emily can be reached at [emily.beardall@fmicorp.com](mailto:emily.beardall@fmicorp.com).

**Denver**

44 Cook Street  
Suite 900  
Denver, CO 80206  
303.377.4740

**Houston**

1301 McKinney Street  
Suite 2000  
Houston, TX 77010  
713.936.5400

**Raleigh (headquarters)**

223 S. West Street  
Suite 1200  
Raleigh, NC 27603  
919.787.8400

**Tampa**

4300 W. Cypress Street  
Suite 950  
Tampa, FL 33607  
813.636.1364

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