



2023
**HEAVY CIVIL
CONSTRUCTION INDEX**
First Quarter Report



March 2023

EXECUTIVE SUMMARY

The first quarter 2023 Heavy Civil Construction Index (HCCI) rose slightly to 51.3 from 50.8 in the prior quarter.

Three of the 4 economic measures showed improvement, while respondents' views on engineering and construction where they do business receded. Additionally, sentiment remained strong and improved for backlogs while labor costs, material costs and productivity all continue to pose challenges into early 2023.

Most segments showed improved expectations for next quarter, indicating that the heavy civil sector is on solid footing.

The port, marine and docks segment is a standout segment, with 33% of participants expecting activity to increase for this type of work in the coming months. Exceptions remain in building site development with nearly two-thirds, or 64%, of respondents expecting quarter-over-quarter contraction across residential site development and nearly 1 in 4, or 24%, expecting contraction across commercial site development.

Backlogs, book/burn rates and margins are all improved over last quarter. Just under half, or 49%, of respondents reported increased book/burn rates, compared to 39% last quarter. A majority of respondents, or 62%, indicate backlogs are higher this quarter compared to a year ago, and just under half, or 42%, report that backlogs are at higher levels than what is needed or anticipated at this point in the year.

A majority, or 78%, of respondents indicate that their margins are the same or better than they were one year ago, and 79% report margins were up on a quarter-over-quarter basis. Only a small number of survey participants expect increased margin pressures as various building segments slow down and competition increases. Just over two-thirds of respondents, or 67%, report an increase in competitors, which is up slightly from last quarter. Similarly, however, approximately two-thirds, or 66%, of respondents report that bid prices have continued to rise.



HCCI INDEX MOVEMENT			
Current Reading for Q1 2023		Previous Reading for Q4 2022	
51.3		50.8	
		Q1 2023	Q4 2022
Overall U.S. Economy	↑	38.1	36.8
Economy Where We Do Business	↑	44.9	43.2
Our Engineering and Construction Business	↑	54.0	53.2
Engineering and Construction Where We Do Business	↓	50.6	54.2
Backlog	↑	62.8	57.2
Book/Burn Rate	↑	68.2	60.0
Cost of Materials	↓	21.5	24.4
Cost of Labor	↑	18.6	16.7
Productivity	↓	44.7	45.6

This quarter respondents were asked a series of current issues questions on their firms' capacity, hiring and labor force needs, 2023 revenue and strategy influence from the various policies impacting heavy civil opportunities (i.e., the infrastructure bill, the Inflation Reduction Act, and the CHIPS and Science Act), and top risks for 2023.

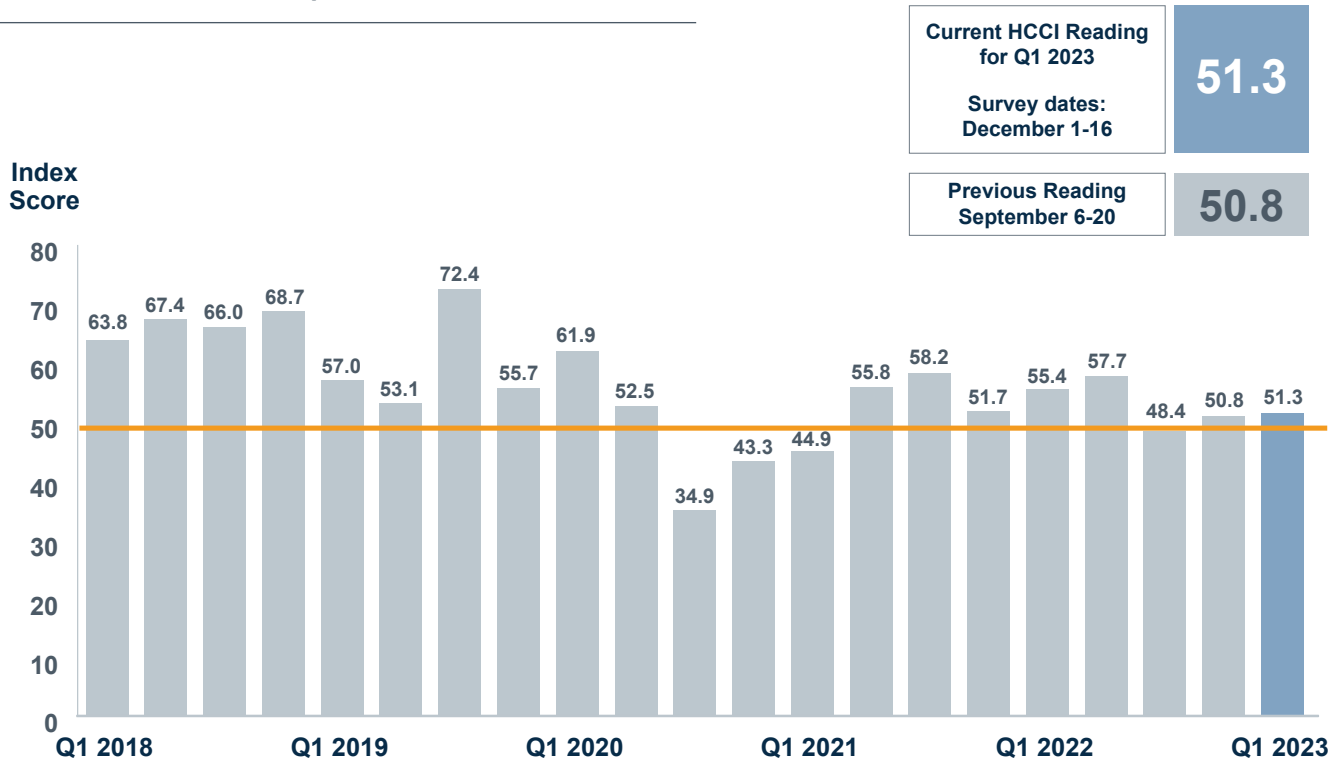
EXECUTIVE SUMMARY



Heavy Civil Construction Index (HCCI)

Q1 2018 to Q1 2023

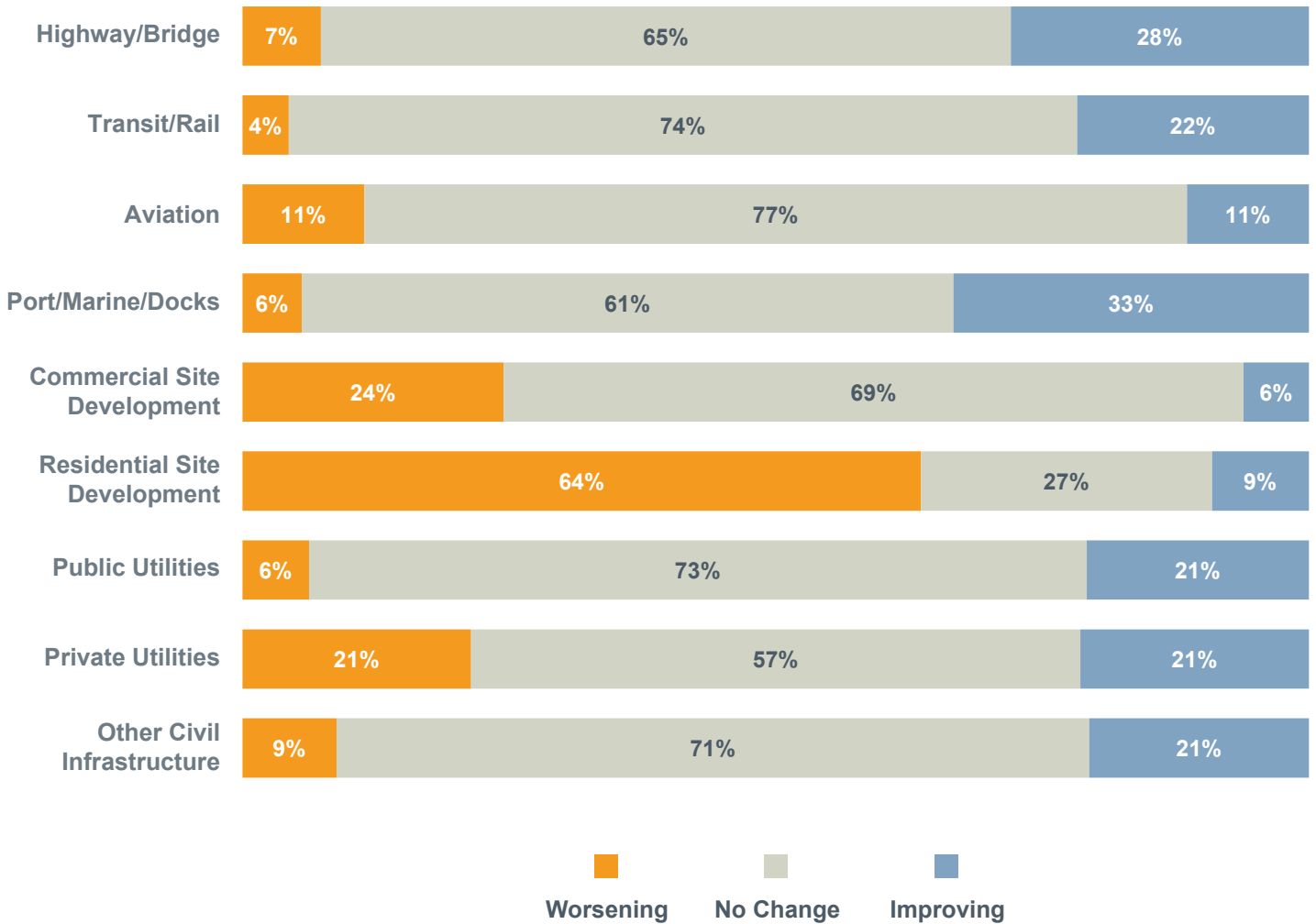
Scores above 50 indicate expansion; below 50, contraction



EXECUTIVE SUMMARY



Perception of Change by Segment for Next Quarter

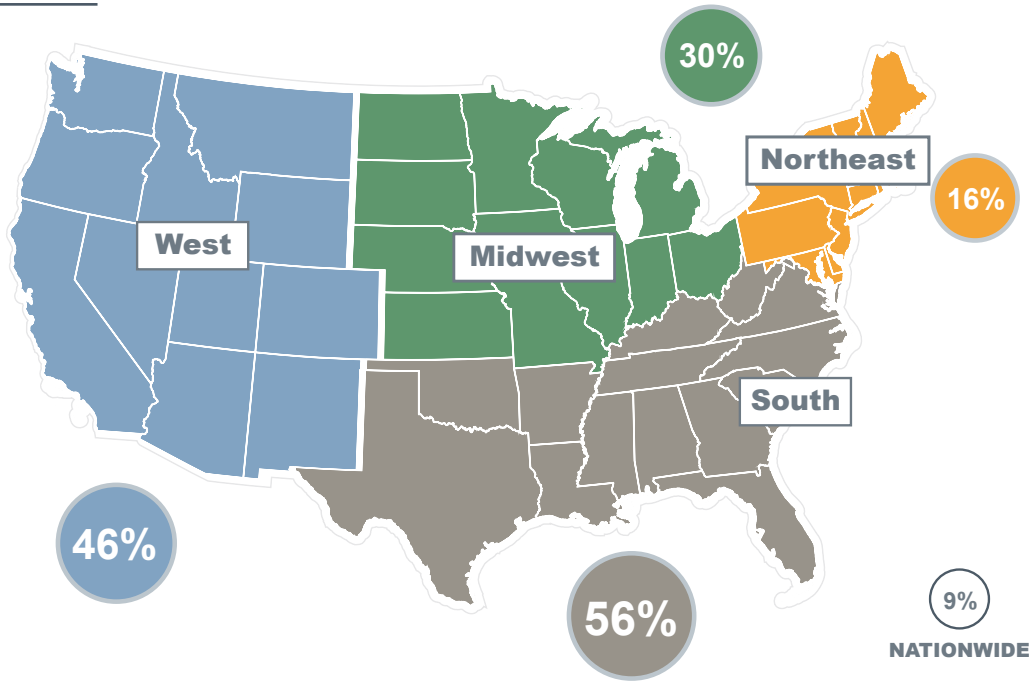


DEMOGRAPHIC INFORMATION

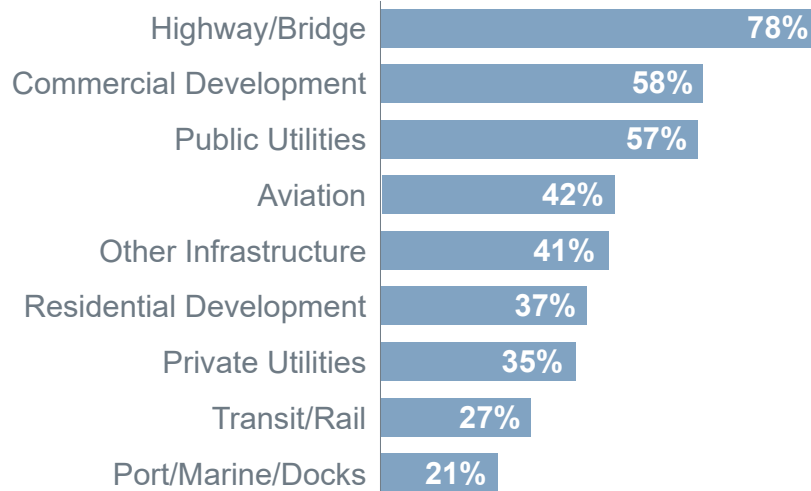


Where Survey Participants Work

By Geography



By Discipline



Respondents are able to select more than one option.



MARKET CONDITIONS

MARKET CONDITIONS

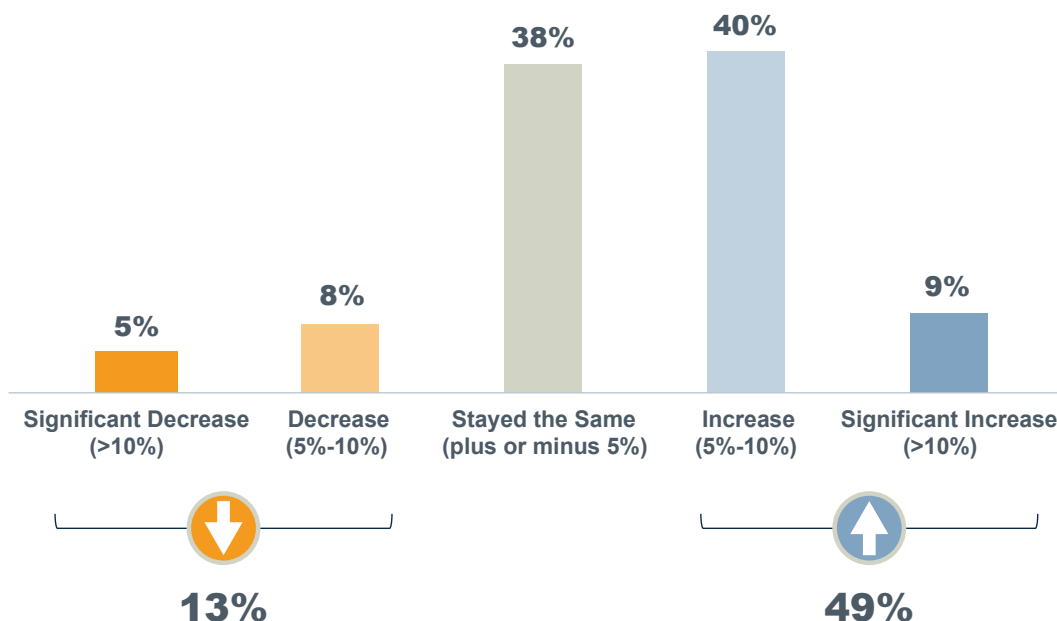


Key Findings

- Contractors continue to build backlogs faster than they are burning them. In this survey, 49% of respondents increased their book/burn rate, compared to 39% last quarter.
- Additionally, a majority of respondents, or 62%, report their backlogs are higher this quarter compared to a year ago, and just under half, or 42%, report that backlogs are at higher levels than what is needed or anticipated at this point in the year.
- Open-ended survey commentary on backlogs indicates recent improvements are based on seasonal factors, bid timing and project delays from 2022. These comments reinforce many discussions and findings across our client engagements over recent months.
- While a majority, or 78%, of respondents indicate that their margins are the same or better than they were one year ago, the remaining 22% report margins have fallen. A similar share of participants, or 79%, report margins were up on a quarter-over-quarter basis.
- Just over two-thirds of respondents, or 67%, report an increase in competitors, which is up slightly from last quarter. Similarly, however, approximately two-thirds, or 66%, of respondents report that bid prices have continued to rise.

Backlog Book/Burn Rate (Year Over Year)

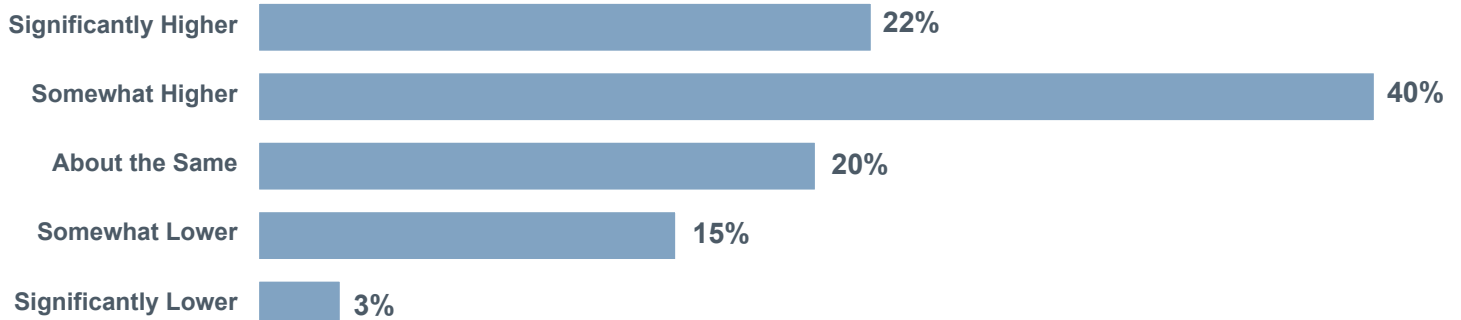
Book/burn rate is the pace backlog is added compared to how quickly it is used.



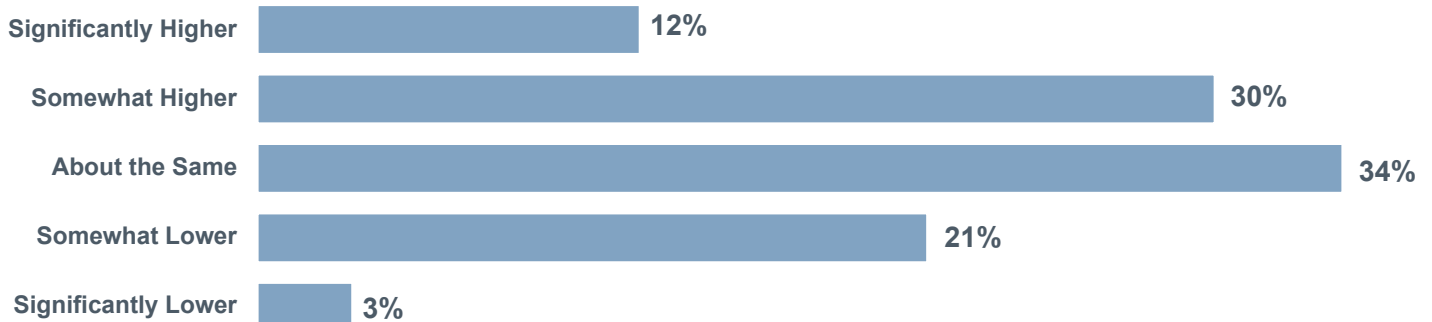


Backlogs

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



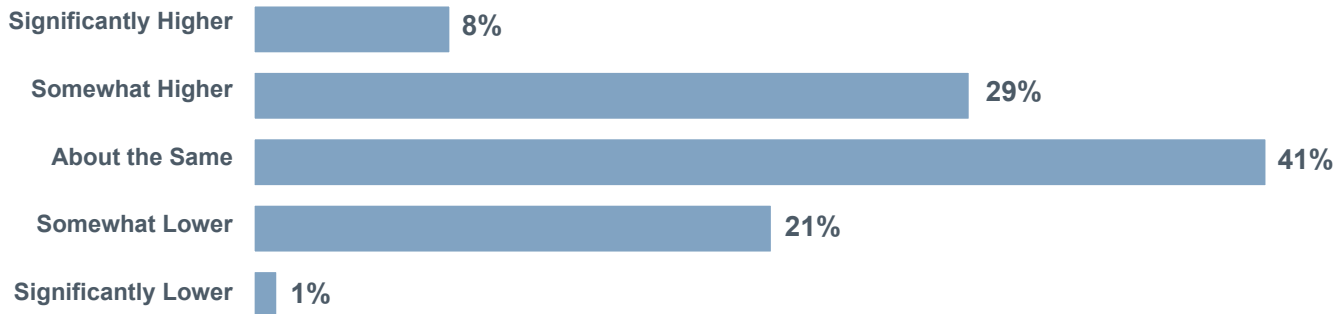
What is your current backlog compared to your anticipated/needed backlog at this point in the year?



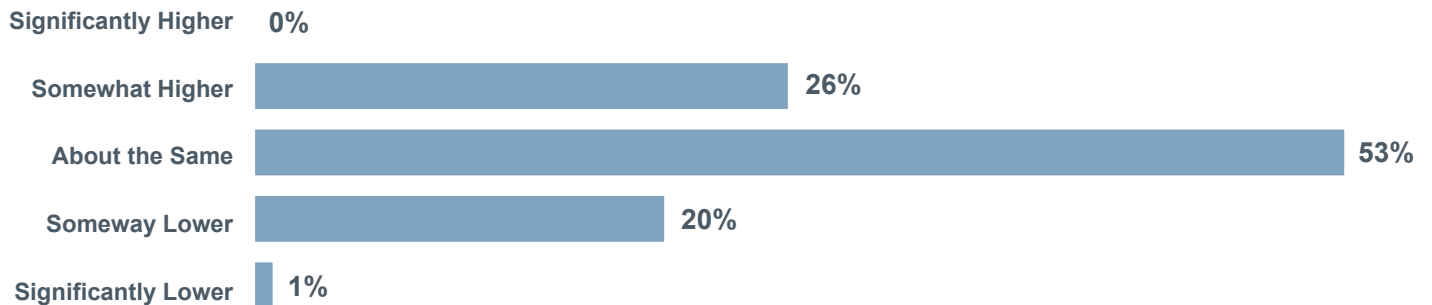


Margins

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



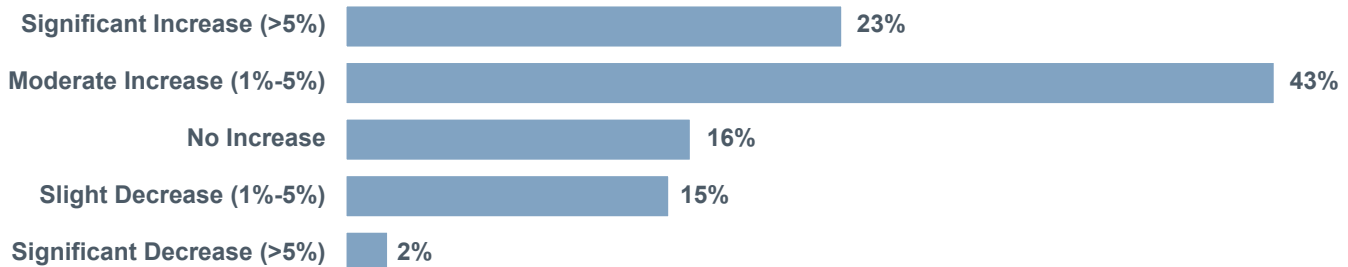


Competitive Landscape

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) in the market?





CURRENT ISSUES

This quarter respondents were asked a series of current issues questions on their firms' capacity, hiring and labor force needs, 2023 revenue and strategy influence from the various policies impacting heavy civil opportunities (i.e., the infrastructure bill, the Inflation Reduction Act, and the CHIPs and Science Act), and top risks for 2023.

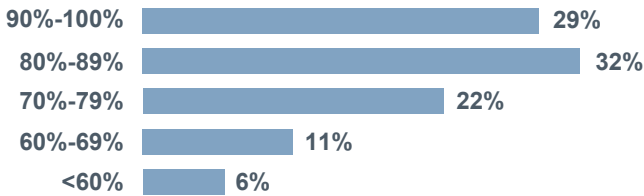
CURRENT ISSUES



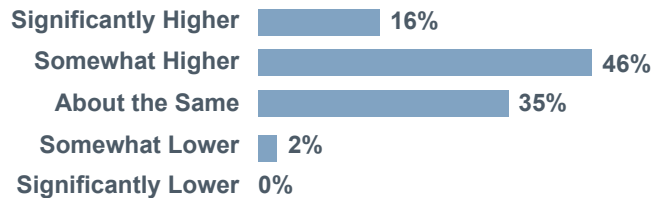
Firm Capacity, Hiring and Labor Force

Going into the new year, just over half of the survey participants, or 61%, reported firm capacity at 80% or higher, given their current project workload, with most, or 86%, identifying their labor forces as the largest limiting factor. Additionally, 62% of participants suggest they plan to hire more people this year than in 2022, and 65% of participants feel their labor force is low, relative to backlog needs.

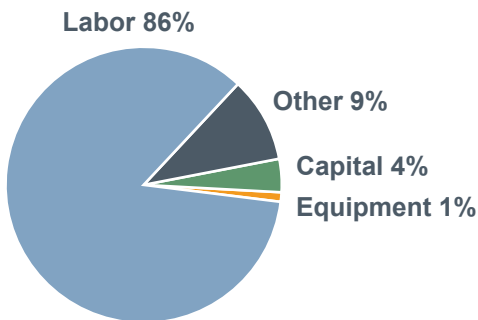
At what capacity do you estimate your firm to be, given current project workload going into 2023?



How would you describe your hiring goals for 2023 compared to 2022?



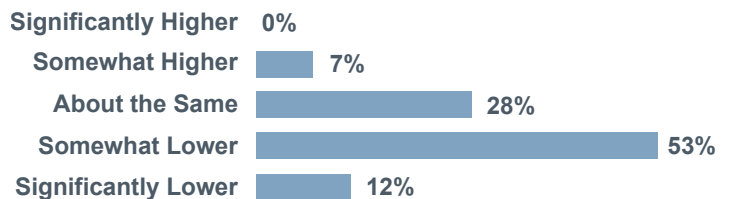
Which of the following is your most limiting factor against your firm's capacity estimates?



Other includes competitiveness, market conditions and project management / supervision talent.

How would you describe your labor force capacity relative to your 2023 backlog?

"Our labor force is _____ relative to our backlog needs."



CURRENT ISSUES

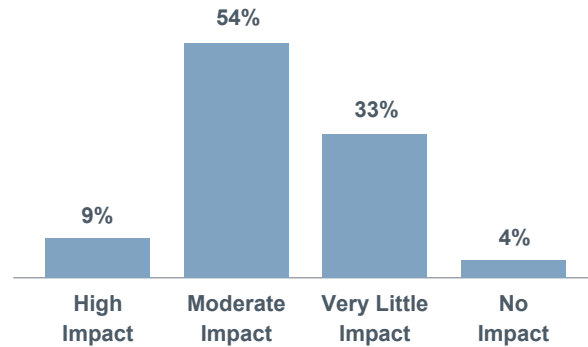


Policy Impact

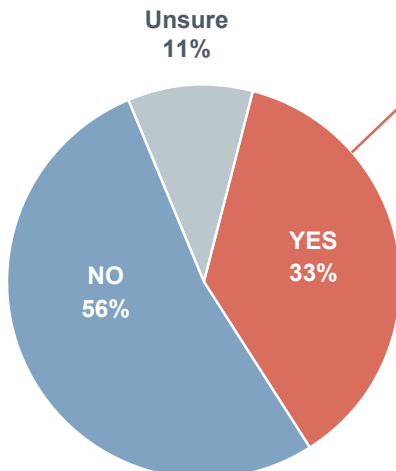
In response to the combined policies impacting heavy civil opportunities, nearly all respondents, or 96%, indicated that those policies have some level of impact on anticipated 2023 revenue. However, just over half, or 56%, indicate that their firm has made no adjustments to their 2023 business strategy or planning around the policies.

Conversely, of the 33% of respondents that made strategic adjustments, nearly all suggest these policies have affected their hiring plans (86%), and a large share of respondents indicate strategic adjustments to geographic market expansion plans (46%) and improving internal processes and productivity (36%).

To what extent do you anticipate the recently passed infrastructure packages (packages for considerations include IJA/BIL, IRA and CHIPS Act) to impact 2023 revenues?



Has the passage of the most recent infrastructure bill, the Inflation Reduction Act, and/or the CHIPS and Science Act made an impact on your 2023 business/strategy planning?



If yes, select the top two components of your 2023 planning most impacted from these new packages.



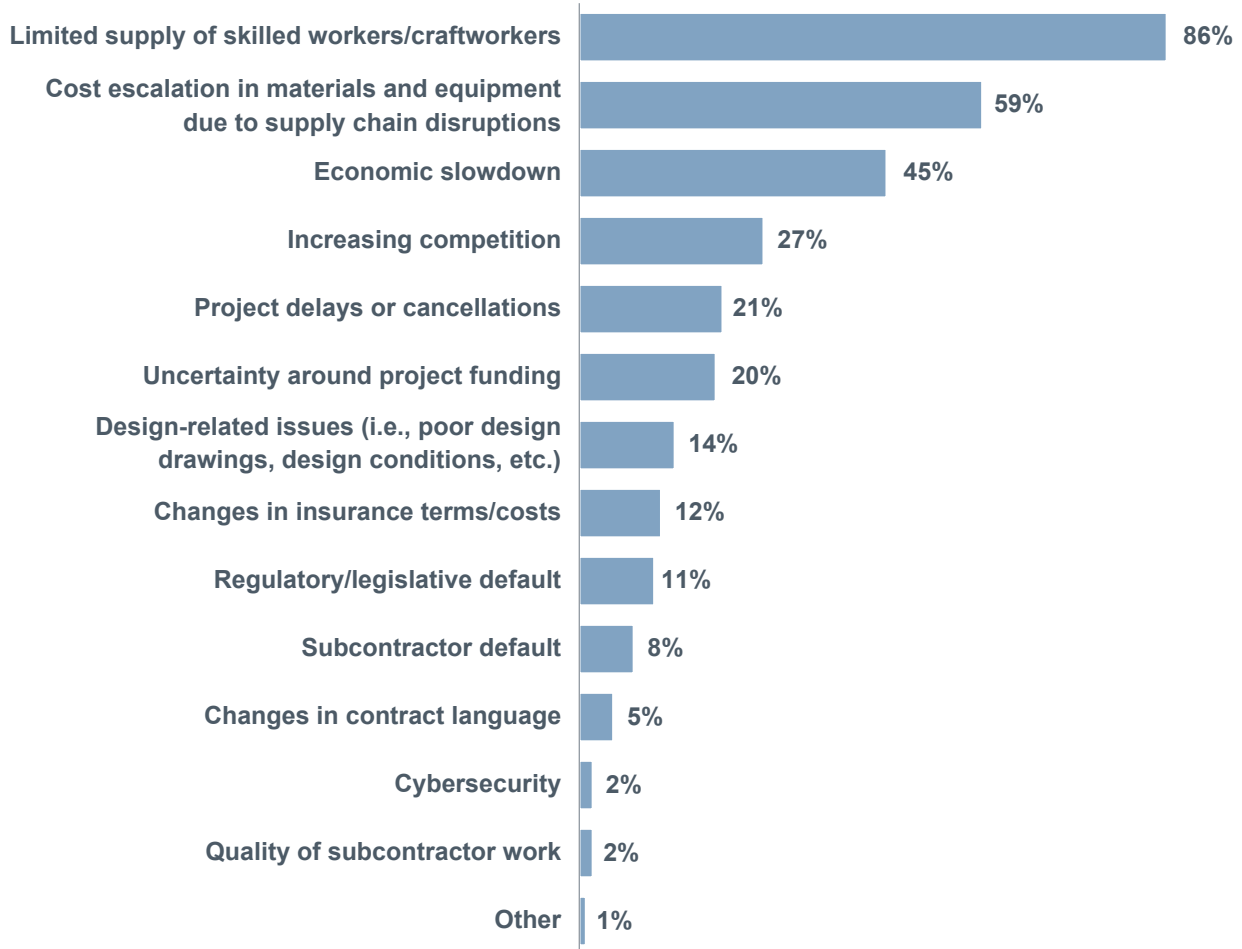
CURRENT ISSUES



Market Risks

Considering top risks for 2023, participants frequently identified those as the limited supply of skilled workers (86%), cost escalations (59%), the economic slowdown (45%) and increasing competition (27%).

Looking to 2023, what three risks do you expect to increase the most?





HEAVY CIVIL CONSTRUCTION OUTLOOK

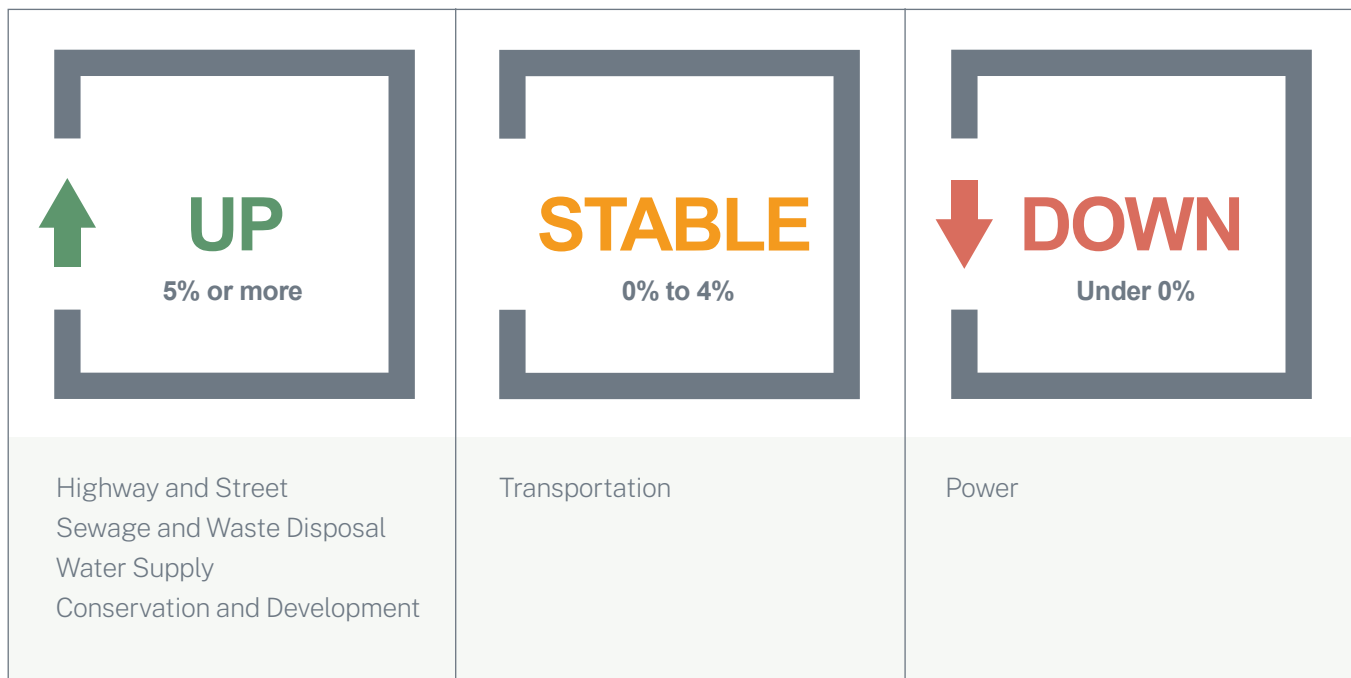
HEAVY CIVIL CONSTRUCTION OUTLOOK



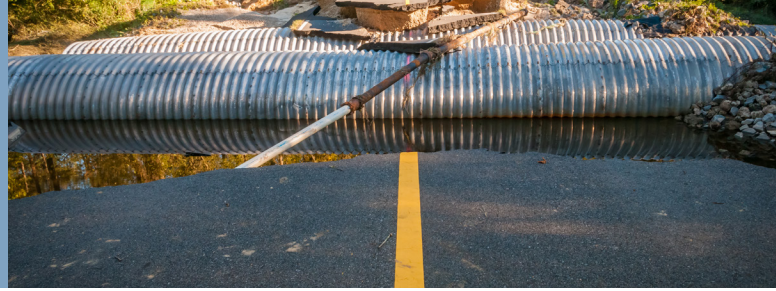
Key Findings

- Total heavy civil construction put in place is anticipated to grow by 8.5% in 2023, led by water supply, highway and street, and sewage and waste disposal spending.
- Bridge construction, a subset of highway and street, is expected to quickly become a top-performing area of the heavy civil market with annual spending anticipated to more than double over the forecast period.
- Power construction spending had a weak year in 2022 and is expected to continue to underperform total heavy civil growth through 2024.

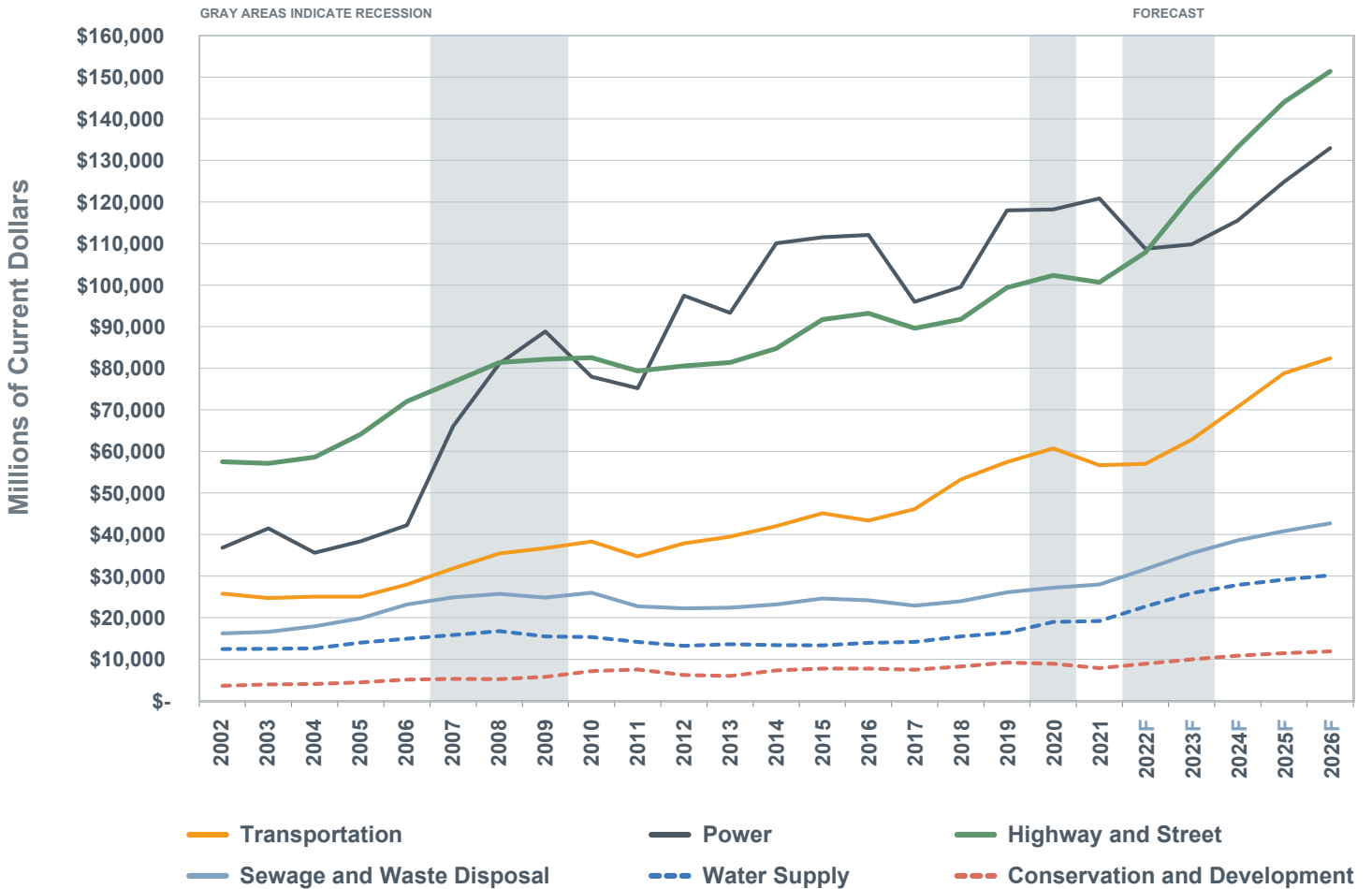
U.S. 2022 Segment Performance 2022/2021 Comparison



HEAVY CIVIL CONSTRUCTION OUTLOOK



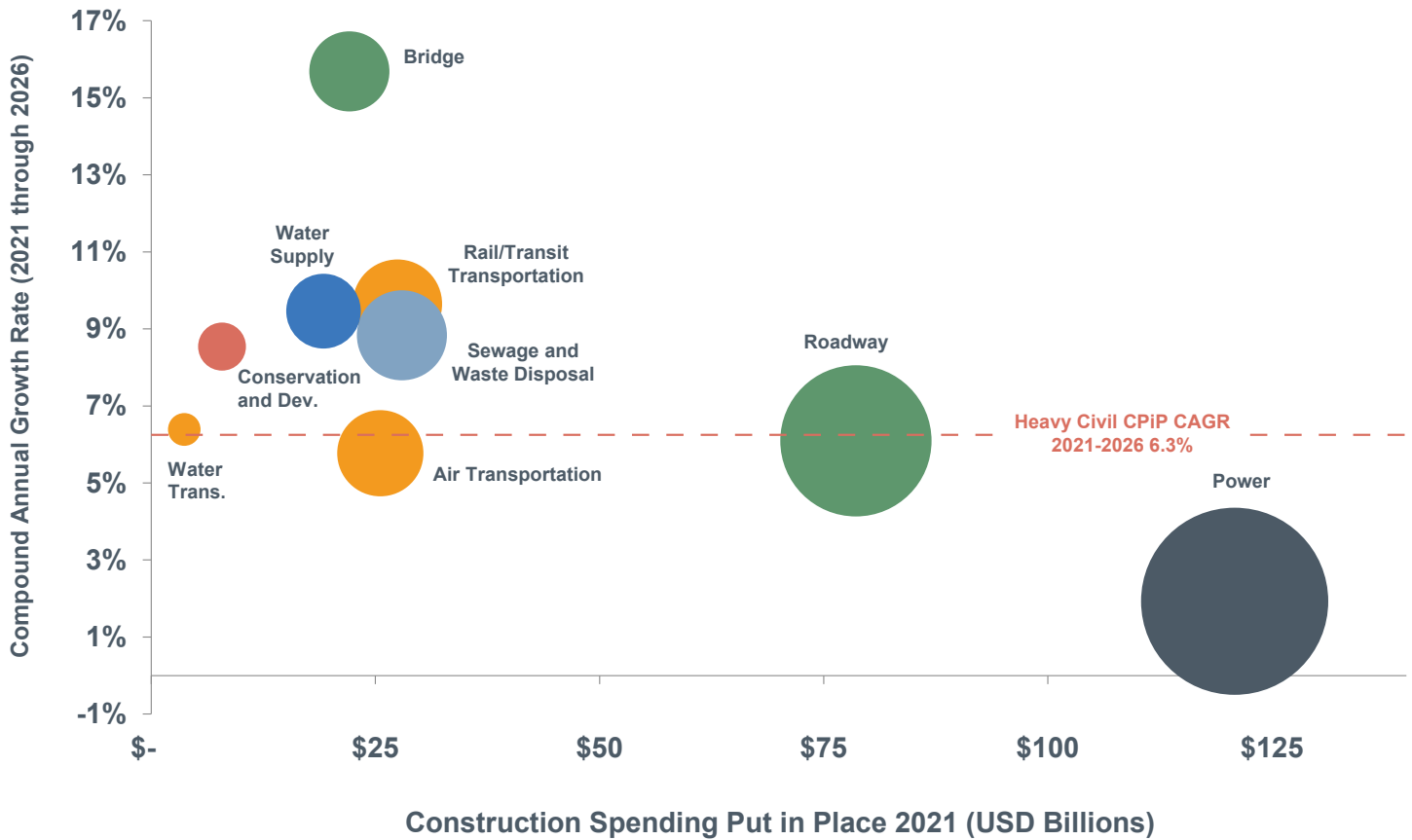
Heavy Civil Construction Put in Place



HEAVY CIVIL CONSTRUCTION OUTLOOK



Heavy Civil Construction Spending Put in Place 2021 and Forecast Growth (2021 through 2026) by Segment



HEAVY CIVIL CONSTRUCTION OUTLOOK



Heavy Civil Construction Put in Place Estimated for the United States

Millions of Current Dollars

1st Quarter 2023 Forecast (Based on 3rd Quarter 2022 Actuals and 4th Quarter 2022 Assumptions)

	2017	2018	2019	2020	2021	2022F	2023F	2024F	2025F	2026F
TRANSPORTATION	46,138	53,218	57,449	60,733	56,689	56,976	62,780	70,688	78,761	82,355
Air	17,194	22,008	24,428	27,736	25,551	25,210	27,171	29,326	31,963	33,825
Rail/Transit	26,588	28,200	28,898	28,874	27,455	28,055	31,530	36,874	41,893	43,510
Port/Water	2,356	3,010	4,123	4,123	3,683	3,712	4,079	4,489	4,906	5,020
POWER	95,951	99,569	117,960	118,168	120,834	108,735	109,787	115,536	124,800	132,937
HIGHWAY AND STREET	89,620	91,745	99,402	102,321	100,679	107,870	121,483	133,208	144,018	151,405
Roadway	59,188	63,344	72,675	80,332	78,594	86,352	96,396	101,650	103,961	105,641
Bridge	30,432	28,401	26,727	21,989	22,085	21,518	25,087	31,558	40,058	45,763
SEWAGE AND WASTE DISPOSAL	22,901	23,931	26,119	27,189	27,968	31,632	35,528	38,574	40,824	42,702
WATER SUPPLY	14,168	15,477	16,397	18,952	19,214	22,693	25,871	27,851	29,165	30,194
CONSERVATION AND DEVELOPMENT	7,464	8,229	9,207	8,903	7,893	8,922	9,977	10,867	11,486	11,890
TOTAL HEAVY CIVIL PUT IN PLACE	\$276,242	\$292,169	\$326,534	\$336,266	\$333,277	\$336,829	\$365,426	\$396,726	\$429,055	\$451,483

Heavy Civil Construction Put in Place Estimated for the United States

Change From Prior Year Current Dollar Basis

1st Quarter 2023 Forecast (Based on 3rd Quarter 2022 Actuals and 4th Quarter 2022 Assumptions)

	2017	2018	2019	2020	2021	2022F	2023F	2024F	2025F	2026F
TRANSPORTATION	6.5%	15.3%	8.0%	5.7%	-6.7%	0.5%	10.2%	12.6%	11.4%	4.6%
Air	20.8%	28.0%	11.0%	13.5%	-7.9%	-1.3%	7.8%	7.9%	9.0%	5.8%
Rail/Transit	-0.8%	6.1%	2.5%	-0.1%	-4.9%	2.2%	12.4%	16.9%	13.6%	3.9%
Port/Water	1.8%	27.8%	37.0%	0.0%	-10.7%	0.8%	9.9%	10.0%	9.3%	2.3%
POWER	-14.4%	3.8%	18.5%	0.2%	2.3%	-10.0%	1.0%	5.2%	8.0%	6.5%
HIGHWAY AND STREET	-3.8%	2.4%	8.3%	2.9%	-1.6%	7.1%	12.6%	9.7%	8.1%	5.1%
Roadway	-2.5%	7.0%	14.7%	10.5%	-2.2%	9.9%	11.6%	5.5%	2.3%	1.6%
Bridge	-6.4%	-6.7%	-5.9%	-17.7%	0.4%	-2.6%	16.6%	25.8%	26.9%	14.2%
SEWAGE AND WASTE DISPOSAL	-5.2%	4.5%	9.1%	4.1%	2.9%	13.1%	12.3%	8.6%	5.8%	4.6%
WATER SUPPLY	1.6%	9.2%	5.9%	15.6%	1.4%	18.1%	14.0%	7.7%	4.7%	3.5%
CONSERVATION AND DEVELOPMENT	-3.6%	10.2%	11.9%	-3.3%	-11.3%	13.0%	11.8%	8.9%	5.7%	3.5%
TOTAL HEAVY CIVIL PUT IN PLACE	-6.2%	5.8%	11.8%	3.0%	-0.9%	1.1%	8.5%	8.6%	8.1%	5.2%

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Brian Moore is a partner at FMI, focusing 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).



Brian Strawberry is chief economist at FMI. Brian leads FMI's efforts in market sizing, forecasting, building products and construction material pricing, and consumption trends. He focuses on primary research methods, including the implementation and analysis of surveys and interviews. Brian also leads and manages various external market research engagements and constructs tools and models for efficiently performing high-quality analyses. He can be reached at [***brian.strawberry@fmicorp.com***](mailto:brian.strawberry@fmicorp.com).



Jackson Mathis conducts primary and secondary research for FMI's clients across the engineering and construction industry. He is responsible for conducting interviews with subject matter experts, designing surveys and analyzing market research data. Jackson works with partners and consultants to deliver quality projects that help drive growth and solve business problems. He can be reached at [***jackson.mathis@fmicorp.com***](mailto:jackson.mathis@fmicorp.com).



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