



**2023**

# North American Engineering and Construction Outlook

**Second Quarter Edition**



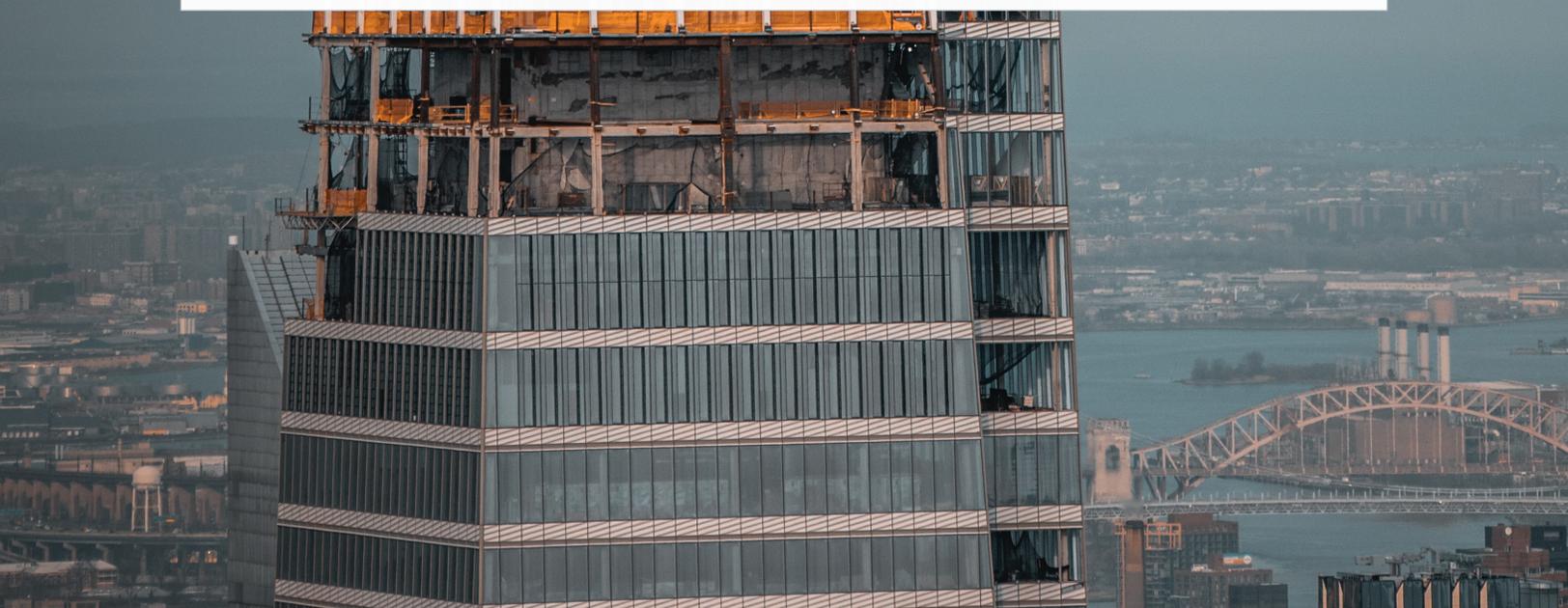
**April 2023**



Last year FMI altered base case assumptions for our forecasts to include a multiyear recession spanning into 2023. As with historical cycles, impact on the construction industry will be longer-lasting.

Economic factors influencing this forecast include the recent banking challenges impacting expectations on lending standards and ongoing consolidation; shortages of key materials and labor across various industries; ongoing strain on global logistics infrastructure; volatility across real estate; Federal Reserve policy; and continued inflationary pressures. We also considered wartime and economic turmoil in various countries (e.g., Russia, Ukraine, China) adding to strain and uncertainty on each of the items listed above.

It is important to recognize that FMI anticipates the U.S. economy will fare better than most countries, as reflected by strong demand for labor and the long-term commitment to infrastructure investments. As a result, the engineering and construction industry is expected to play a major role in our economy's foundational strength over the coming years, offering a combination of both challenges and opportunities.



## U.S. Key Takeaways

- Total engineering and construction spending for the U.S. is forecast to end 2023 down 1% compared to up 11% in 2022.
- Steep declines in single-family residential and residential improvements will lead a contraction in overall industry spending while most nonresidential building and nonbuilding structure segments are expected to experience growth through 2023.
- Strong investment growth is expected across lodging, commercial, transportation, manufacturing, highway and street, water supply, and conservation and development, each with year-over-year growth rates nearing or exceeding 10%. Additionally, above-average investment growth is anticipated across office, health care, amusement and recreation, and sewage and waste disposal.
- Corrections in residential construction spending are anticipated into 2026, due to softening economic conditions tied to rate hikes and a recession. Consistent with historical industry cycles, similar corrections are expected to bleed over into nonresidential segments beginning late 2023 and into 2024.
- The latest Nonresidential Construction Index (NRCI) reflects the fourth straight quarter of ongoing challenges with a reading of 48.0, up slightly from 46.4 in the quarter prior. Sentiment this quarter was slightly improved based on increased optimism toward the overall U.S. economy and local factors impacting the economy and nonresidential industry where participants are operating their businesses. However, the index remains below the growth threshold of 50 and reflects declining engineering and construction opportunities ahead.

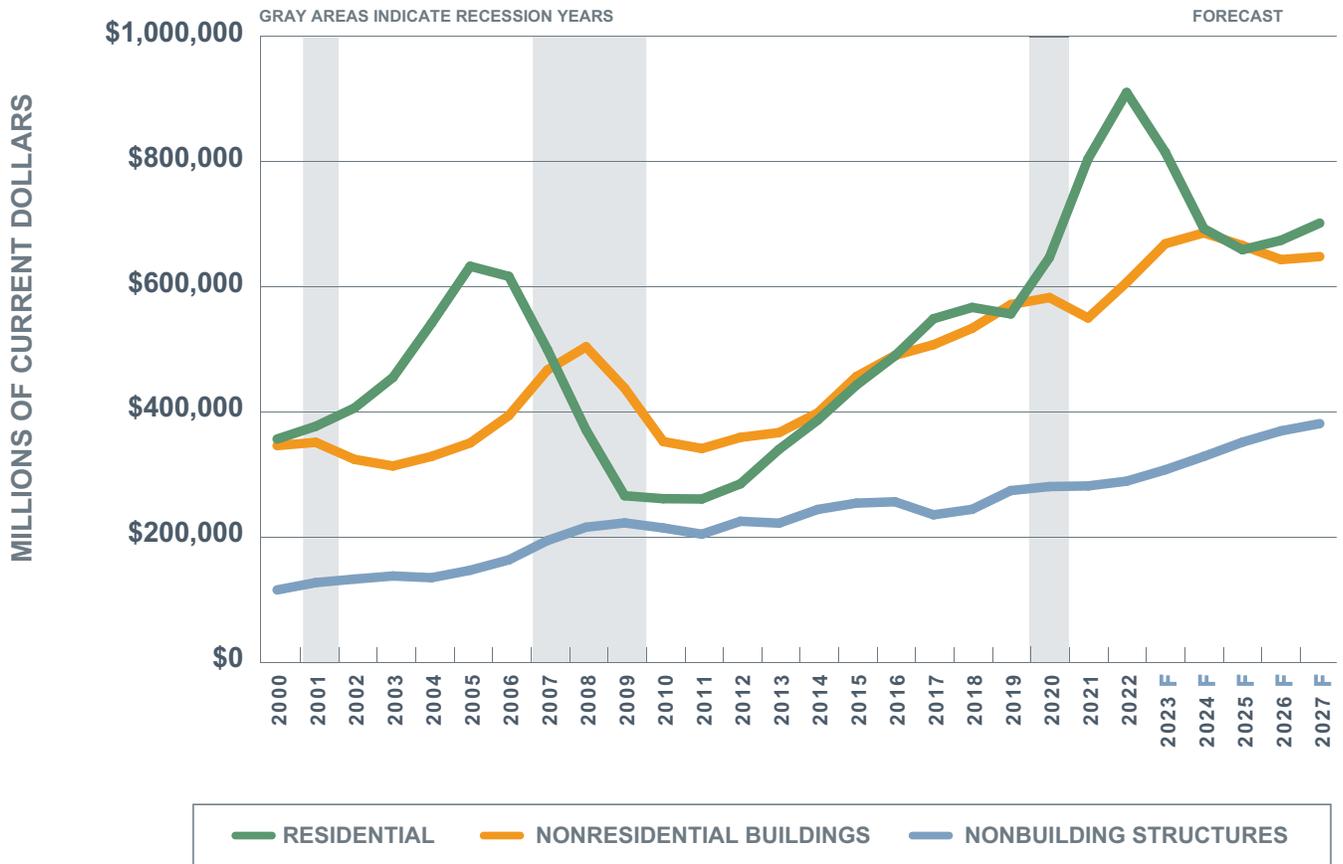
## U.S. 2023 Segment Performance

2023/2022 Comparison

 <p><b>UP</b> 5% or more</p>	 <p><b>STABLE</b> 0% to 4%</p>	 <p><b>DOWN</b> Under 0%</p>
<ul style="list-style-type: none"> <li>Multifamily</li> <li>Lodging</li> <li>Commercial</li> <li>Office</li> <li>Health Care</li> <li>Amusement and Recreation</li> <li>Transportation</li> <li>Manufacturing</li> <li>Highway and Street</li> <li>Sewage and Waste Disposal</li> <li>Water Supply</li> <li>Conservation and Development</li> </ul>	<ul style="list-style-type: none"> <li>Educational</li> <li>Religious</li> <li>Public Safety</li> <li>Communication</li> <li>Power</li> </ul>	<ul style="list-style-type: none"> <li>Single-family Improvements</li> </ul>



## Total Construction Put in Place Estimated for the U.S.

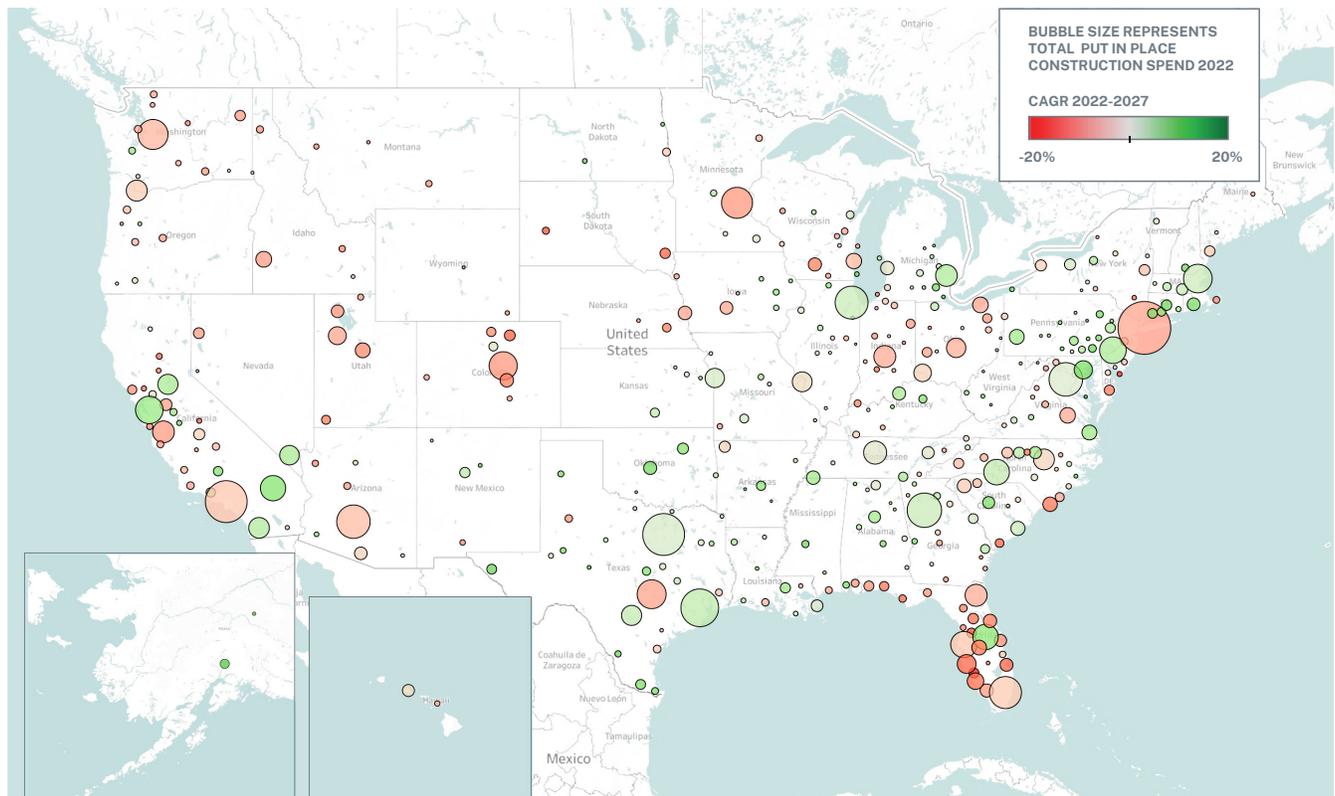


SOURCE: FMI FORECAST Q2 2023

Second quarter forecast is based on fourth quarter 2022 actuals and first quarter 2023 assumptions.



## Total Construction Spending Put in Place 2022 and Forecast Growth (2022 through 2027) by Metropolitan Statistical Area



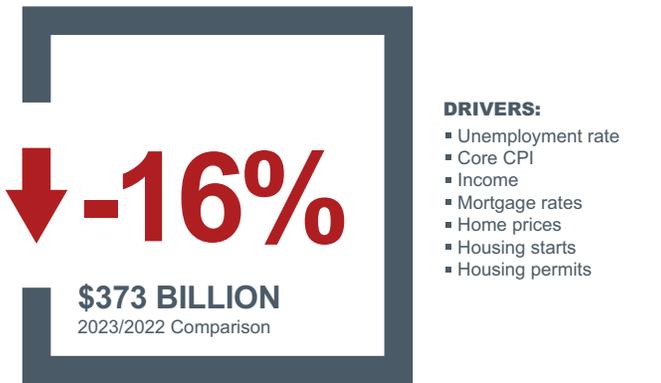
SOURCE: FMI FORECAST Q2 2023

# Residential Construction Put in Place





## SINGLE-FAMILY RESIDENTIAL



**DRIVERS:**

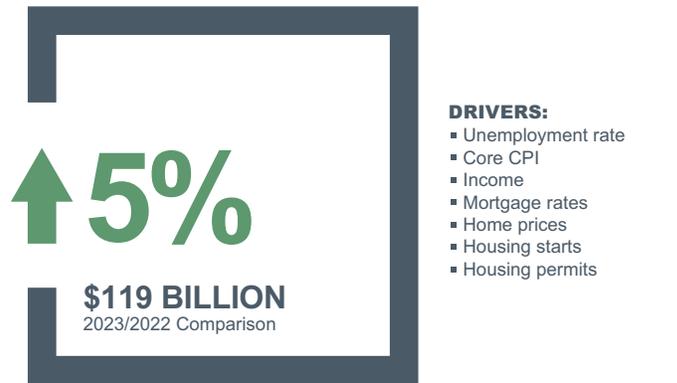
- Unemployment rate
- Core CPI
- Income
- Mortgage rates
- Home prices
- Housing starts
- Housing permits



2024	<b>DWN</b>	<b>-17%</b>	<b>\$308 B</b>
2025	<b>DWN</b>	<b>-3%</b>	<b>\$298 B</b>
2026	<b>STA</b>	<b>3%</b>	<b>\$307 B</b>
2027	<b>UP</b>	<b>5%</b>	<b>\$324 B</b>

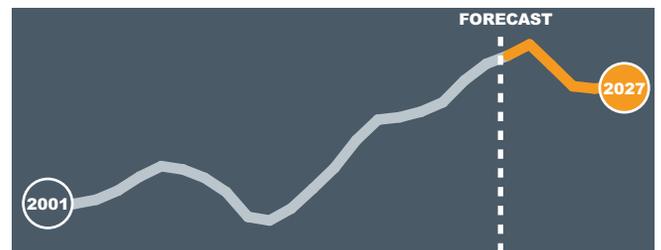
- New home sales are down nearly 20% year over year while median new home prices have fallen more than 10%. High interest rates and inflation have sidelined many first-time buyers and most institutional investors.
- Builders continue to sacrifice margin, using a combination of incentives, rate buydowns and price cuts across select markets to help maintain volumes. Land acquisitions have stalled due to pricing imbalance.
- A slowdown in rate hikes into 2023 will help stabilize pricing, though market dynamics will remain dependent on supply conditions. Active listings remain historically low.
- Resource constraints and pricing of key inputs are expected to ease with declining new home starts and permits.

## MULTIFAMILY RESIDENTIAL



**DRIVERS:**

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

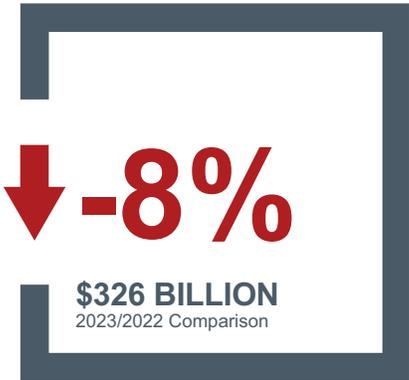


2024	<b>DWN</b>	<b>-9%</b>	<b>\$108 B</b>
2025	<b>DWN</b>	<b>-10%</b>	<b>\$97 B</b>
2026	<b>DWN</b>	<b>-1%</b>	<b>\$96 B</b>
2027	<b>STA</b>	<b>1%</b>	<b>\$97 B</b>

- Alongside a steadily increasing vacancy rate, apartment rental rates over the past six months have contracted in most markets between 1% and 5%.
- A significant wave of nearly 960,000 multifamily units in development is expected to come online over the next several quarters.
- Policies to support affordable housing will become a higher priority in select expensive markets.



## IMPROVEMENTS



**DRIVERS:**

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



2024	<b>DWN</b>	<b>-14%</b>	<b>\$279 B</b>
2025	<b>DWN</b>	<b>-5%</b>	<b>\$266 B</b>
2026	<b>STA</b>	<b>3%</b>	<b>\$274 B</b>
2027	<b>STA</b>	<b>3%</b>	<b>\$283 B</b>

- Improvements spending is expected to decline since people will likely stay in place due to lock-in lower interest rates.
- Falling home values will push people to invest in lower-cost or more affordable improvements options. However, the luxury market will also be supported since many people will opt not to move.
- New homebuyers will likely invest in upgrades since homebuilders will continue to reduce luxury and customization options on new homes.

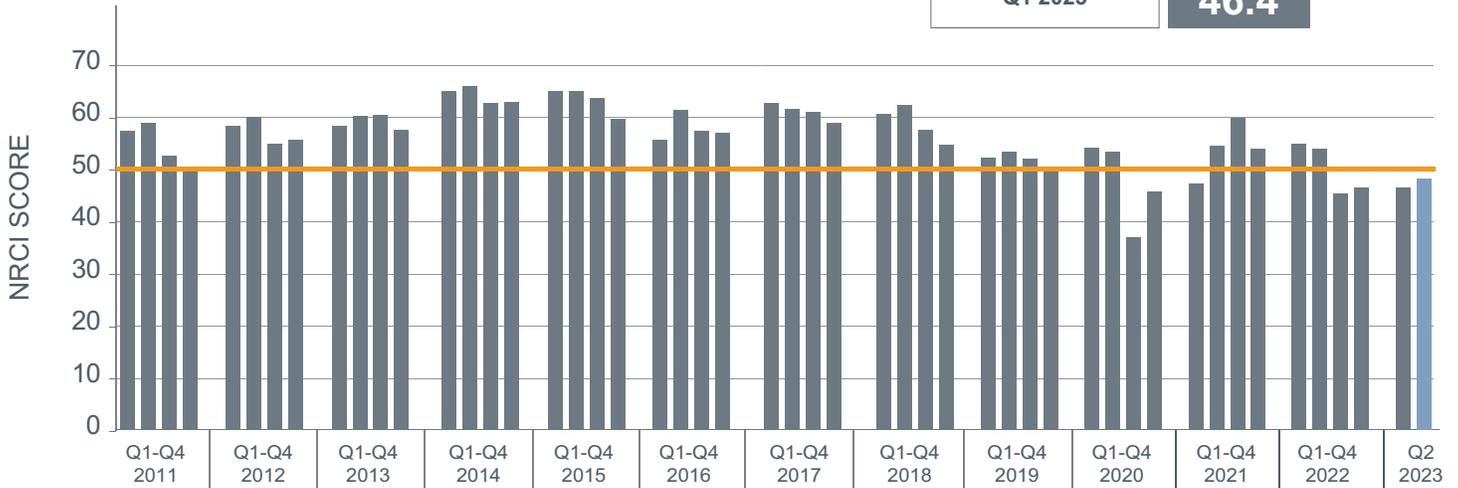
# Nonresidential Construction Put in Place



# Nonresidential Construction Index (NRCI) Q1 2011 to Q2 2023

Scores above 50 indicate expansion, scores below 50 indicate contraction.

<b>Q2 2023</b> <i>(Survey Dates March 6-17)</i>	<b>48.0</b>
<b>Q1 2023</b>	<b>46.4</b>

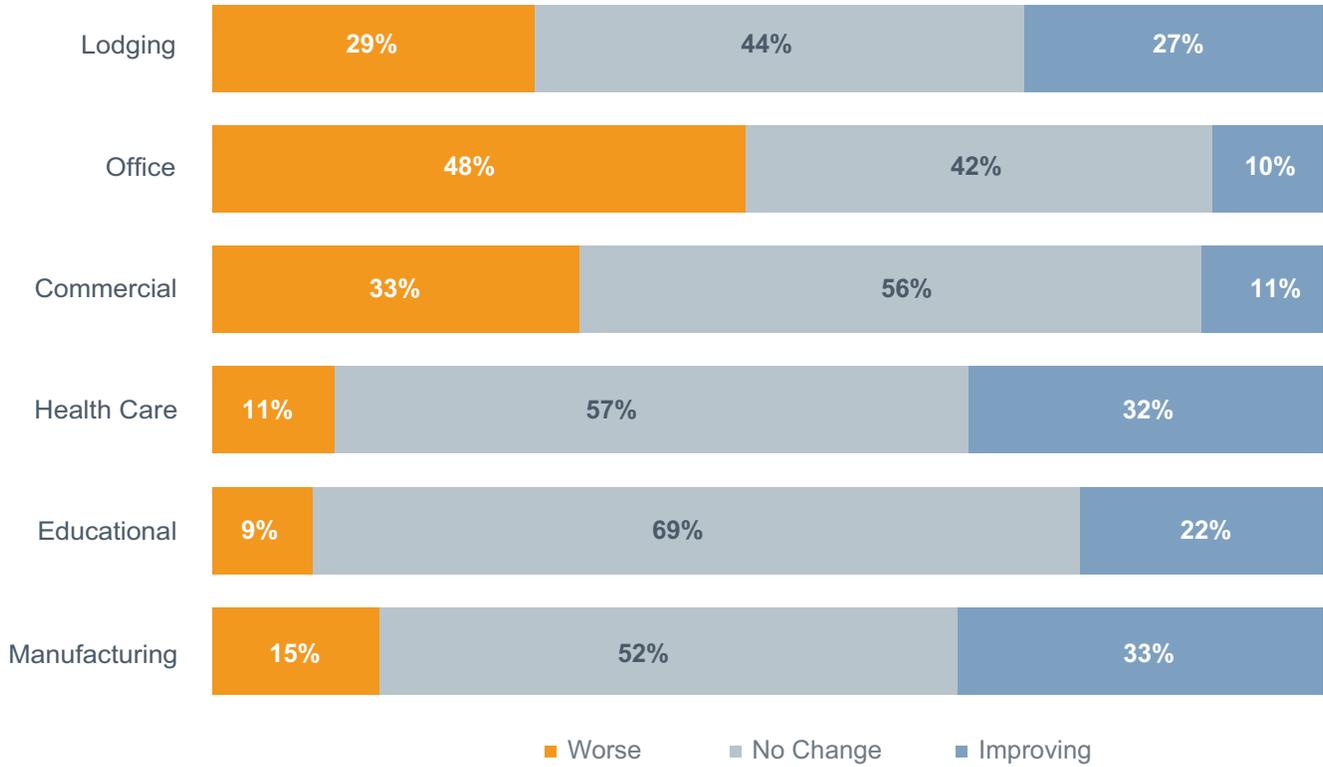


NRCI INDEX MOVEMENT		Q2 2023	Q1 2023
Overall U.S. Economy	↑	43.2	38.5
Economy Where We Do Business	↑	45.7	42.0
Our Engineering and Construction Business	↓	58.0	60.0
Engineering and Construction Where We Do Business	↑	48.1	46.0
Backlog	↑	58.0	54.7
Cost of Materials	↓	33.3	35.3
Cost of Labor	↓	20.4	24.0
Productivity	↑	50.6	50.0

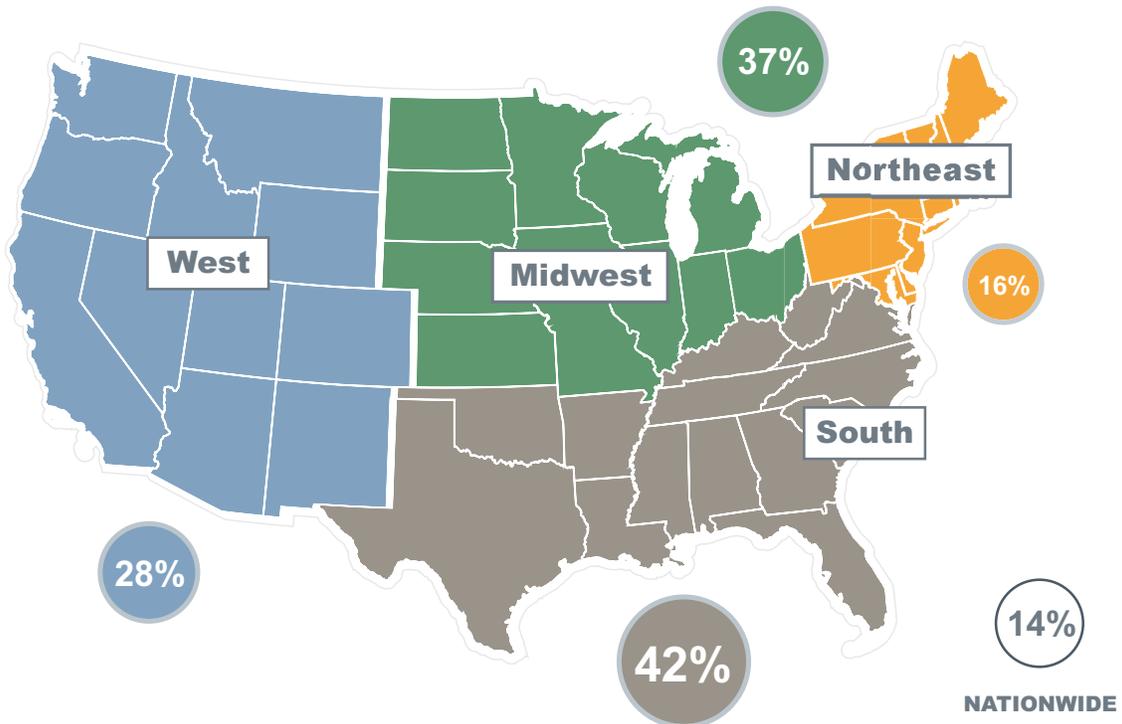
The data in the NRCI is presented as a sampling of construction industry executives voluntarily serving as panelists for this FMI survey. Responses are based on their experience and opinions, and the analysis is based on FMI's interpretation of the aggregated results.

If you are interested in participating in this important industry index, please submit a request via our [NRCI Participation Request form](#).

## Perception of Change by Segment for Next Quarter



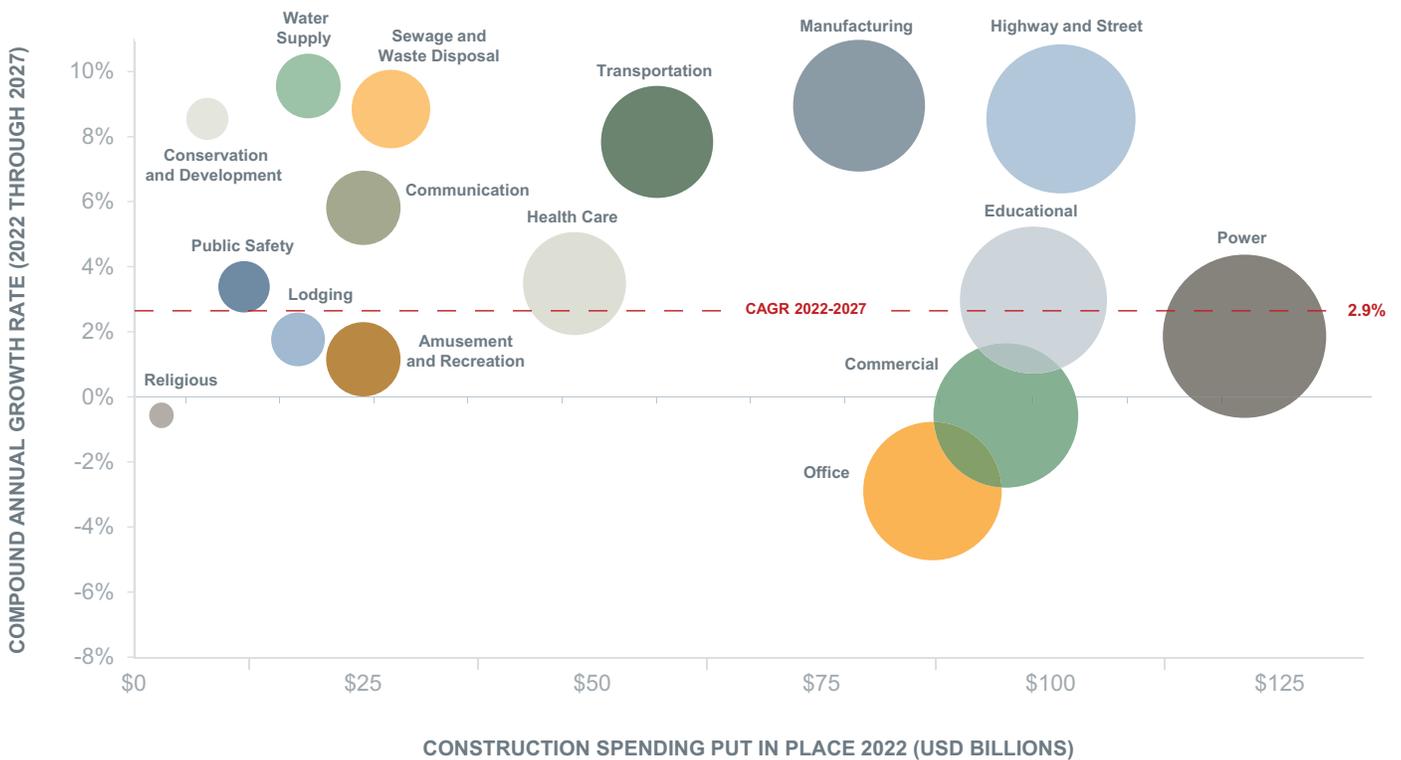
## Where Survey Participants Work by Geography



Respondents are able to select more than one option.



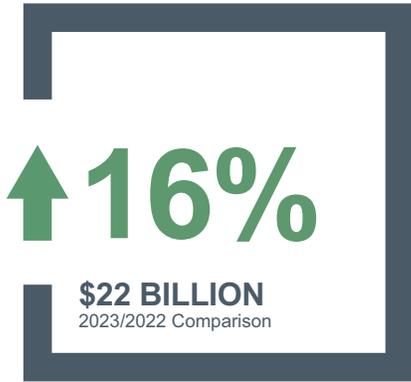
## Total Nonresidential Construction Spending Put in Place 2022 and Forecast Growth (2022 through 2027) by Construction Segment



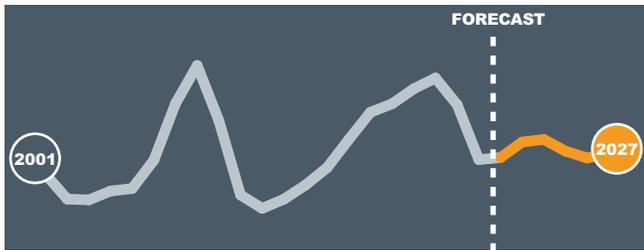
SOURCE: FMI FORECAST Q2 2023



## LODGING



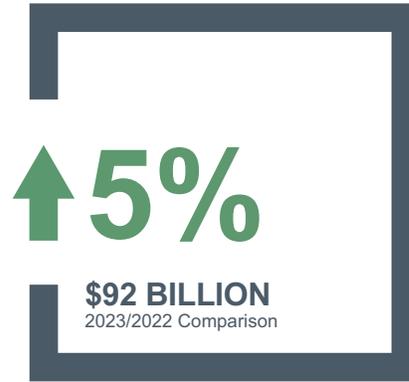
- DRIVERS:**
- Occupancy rate
  - RevPAR
  - Average daily rate
  - Room starts



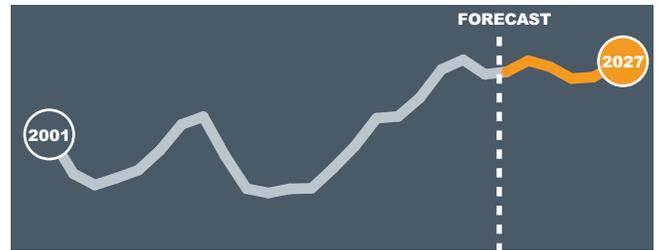
2024	STA	2%	\$22 B
2025	DWN	-10%	\$20 B
2026	DWN	-7%	\$19 B
2027	STA	4%	\$19 B

- Average daily rates (ADR) and revenue per available room (revPAR) well exceeded 2019 levels, though occupancy remains just under 2019 levels. All three industry measures exceed levels set this time last year.
- Leisure and hospitality employment continues to have about 400,000 fewer jobs than pre-pandemic levels.
- The industry's current large wave of projects in planning and development will be challenged in the coming years by recession as business and leisure travel pulls back alongside anticipated higher unemployment rates and tighter lending standards.

## OFFICE



- DRIVERS:**
- Office vacancy rate
  - Unemployment rate



2024	DWN	-3%	\$90 B
2025	DWN	-6%	\$85 B
2026	STA	1%	\$85 B
2027	UP	6%	\$91 B

- Office construction spending will be challenged by high vacancies, increasing sublease activity, rising unemployment and tighter lending standards.
- Demand for the newest Class A office space has been upheld in most major markets while less desirable Class B or C office space creates investment opportunities for renovation or repurpose projects.
- Data centers (a subset of office) will continue to outperform traditional office space.

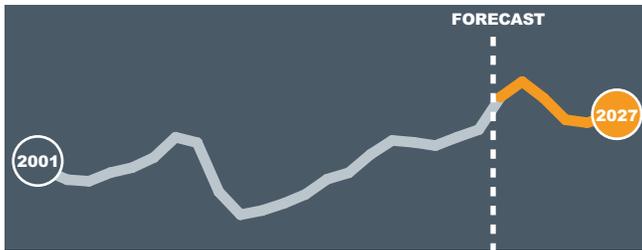


## COMMERCIAL



**DRIVERS:**

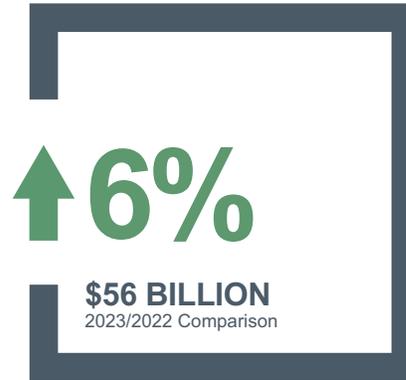
- Retail sales
- CPI
- Income
- Home prices
- Housing starts



2024	<b>DWN</b>	<b>-8%</b>	<b>\$115 B</b>
2025	<b>DWN</b>	<b>-12%</b>	<b>\$101 B</b>
2026	<b>DWN</b>	<b>-2%</b>	<b>\$99 B</b>
2027	<b>STA</b>	<b>4%</b>	<b>\$103 B</b>

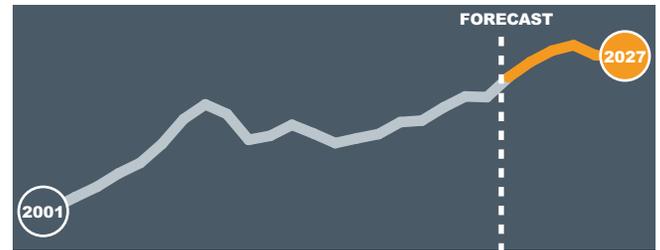
- Consumers continue to shift spending toward necessities from discretionary items, with much of that being driven by e-commerce.
- Warehouse and distribution, a subset of commercial, remains in high demand and has grown in recent years to represent more than 50% of U.S. commercial investment.
- Following the office market, future leasing activity favors smaller spaces in the most desirable submarkets and Class A buildings. Larger big-box stores continue to consolidate space and invest in e-commerce services and infrastructure.

## HEALTH CARE



**DRIVERS:**

- Population change
- Population change in ages 75 and up
- Uninsured population
- Government spending
- Nonresidential structure investment

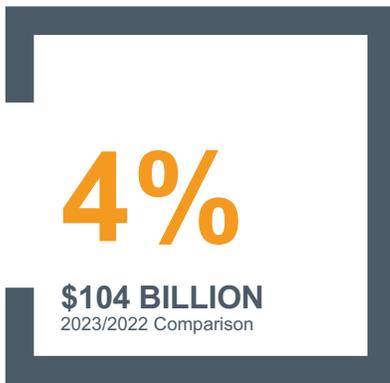


2024	<b>STA</b>	<b>4%</b>	<b>\$58 B</b>
2025	<b>STA</b>	<b>2%</b>	<b>\$60 B</b>
2026	<b>DWN</b>	<b>-4%</b>	<b>\$57 B</b>
2027	<b>DWN</b>	<b>-1%</b>	<b>\$57 B</b>

- Demand for health care construction spending remains strong through 2023, led by large hospital expansions and a resurgence in demand for outpatient and medical offices.
- Significant ongoing and planned projects are supported by recent volatility in demographics, capacity and maintenance needs, and new technologies impacting health services (e.g., wearables, telehealth).
- Large, new facilities will increasingly utilize prefabrication and modularization to improve flexibility and compression of project schedules and budgets.
- Specialty care and nursing home facilities remain severely resource-constrained, limiting construction activity.

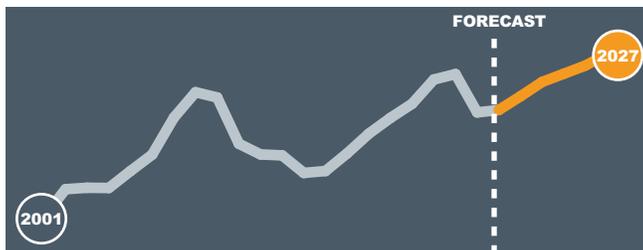


## EDUCATIONAL



### DRIVERS:

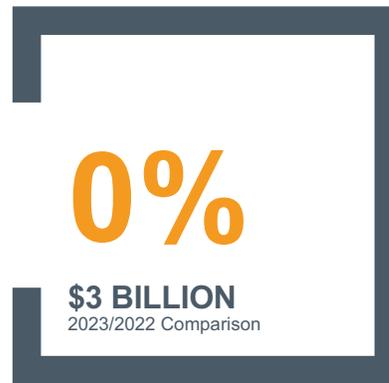
- Population change younger than age 18
- Population change ages 18-24
- Stock markets
- Government spending
- Nonresidential structure investment



2024	STA	4%	\$108 B
2025	STA	2%	\$111 B
2026	STA	2%	\$113 B
2027	STA	3%	\$117 B

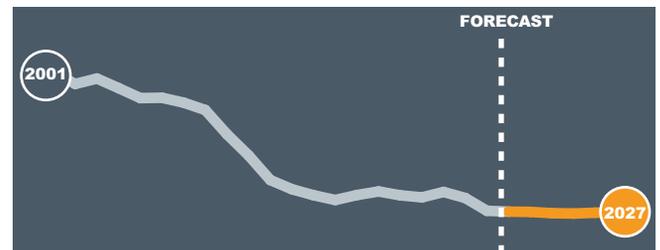
- Both public and private investment in educational construction will grow over the forecast period due to increased tax collections, new bond measures and the Renew America's Schools grant programs.
- Demand for higher education services will benefit from a weakened labor market, though capital investment will remain challenged due to strained budgets, higher operational costs and ongoing staffing challenges.
- Significant deferred maintenance and recent demographic shifts demanding new capacity additions will drive increased K-12 construction spending.

## RELIGIOUS



### DRIVERS:

- GDP
- Population
- Income
- Personal savings



2024	DWN	-2%	\$3 B
2025	DWN	-1%	\$3 B
2026	STA	1%	\$3 B
2027	STA	1%	\$3 B

- Recessionary factors (i.e., rising unemployment) will weigh on income levels and ultimately decrease donations while religious participation and community involvement are expected to rise.
- The permanence and preference for online or hybrid services will reduce overall construction needs.
- Owner investments will continue to favor alternative community-facing options to improve engagement.
- Churches are closing at a faster rate than they are opening, presenting renovation or repurposing opportunities.



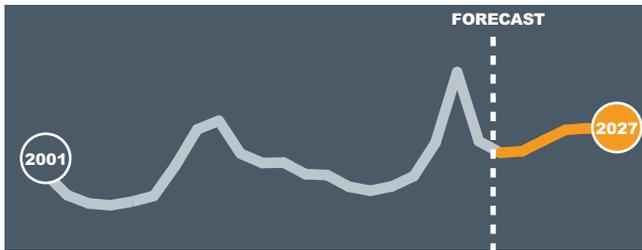
## PUBLIC SAFETY

1%

\$11 BILLION  
2023/2022 Comparison

**DRIVERS:**

- Population
- Government spending
- Incarceration rate
- Nonresidential structure investment



2024	UP	8%	\$12 B
2025	UP	7%	\$13 B
2026	STA	1%	\$13 B
2027	DWN	-1%	\$13 B

- Law enforcement departments face ongoing staffing challenges and difficulties attracting new recruits.
- Heightened tax collections, alongside the recent 2023 Omnibus Appropriations Bill, will result in expanded state and municipal budgets, lending to anticipated spending on correctional, enforcement and border control facilities over the coming years.
- Homicide rates have fallen, but violent crime is still significantly higher than pre-pandemic levels.

## AMUSEMENT AND RECREATION

↑ 7%

\$29 BILLION  
2023/2022 Comparison

**DRIVERS:**

- Income
- Personal savings rate
- Unemployment rate
- Employment

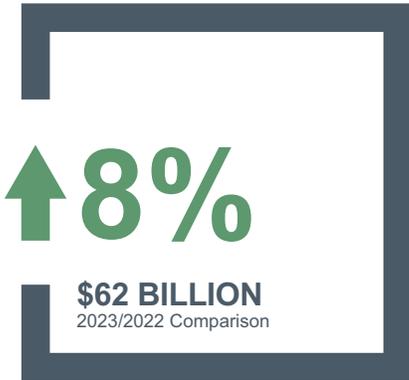


2024	STA	3%	\$30 B
2025	DWN	-8%	\$28 B
2026	DWN	-7%	\$26 B
2027	STA	1%	\$26 B

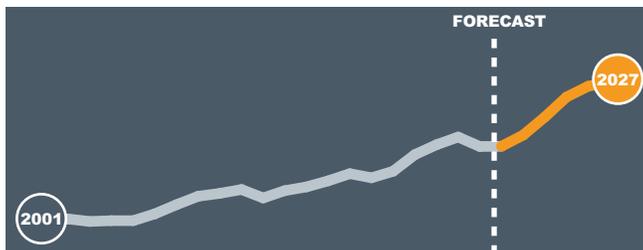
- High interest rates, tightened lending standards and recessionary pressures are expected to challenge a significant portion of the large projects in planning, many of which are important to growing local economies in secondary and tertiary markets.
- Infrastructure and transportation investments will support amusement and recreation construction spending in select competitive markets.
- Industry revenue will suffer against weakened consumer purchasing power and rising unemployment.



## TRANSPORTATION



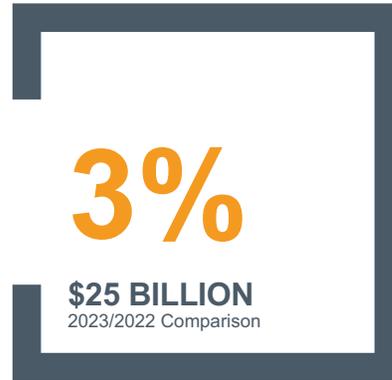
- DRIVERS:**
- Population
  - Government spending
  - Transportation funding



2024	UP	13%	\$69 B
2025	UP	12%	\$78 B
2026	UP	6%	\$82 B
2027	STA	2%	\$84 B

- More than 7,000 transportation projects, representing \$185 billion, were announced last year, upholding strong expectations for spending growth over the forecast period.
- Electrification investments and clean-energy facility upgrades represent an increasing area of focus.
- Rail/transit is expected to lead transportation investment growth in 2023, tied to increasing manufacturing construction and port activity.

## COMMUNICATION



- DRIVERS:**
- Population
  - Security and regulation standards
  - Private investment
  - Innovation and technology investment



2024	UP	6%	\$27 B
2025	UP	6%	\$28 B
2026	UP	6%	\$30 B
2027	STA	4%	\$31 B

- Investment of \$65 billion from the Infrastructure Investment and Jobs Act (IIJA) overlaps with growth and demands across connected devices, data centers (i.e., office), manufacturing, and logistics and distributions investment.
- High-speed 5G is expected to drive more than two-thirds of the mobile market by the end of the decade.
- Faster and more reliable networks will be needed to accommodate growing use of artificial intelligence and other cloud service offerings, the Internet of Things as well as virtual office, learning and entertainment demands.



## MANUFACTURING



**DRIVERS:**

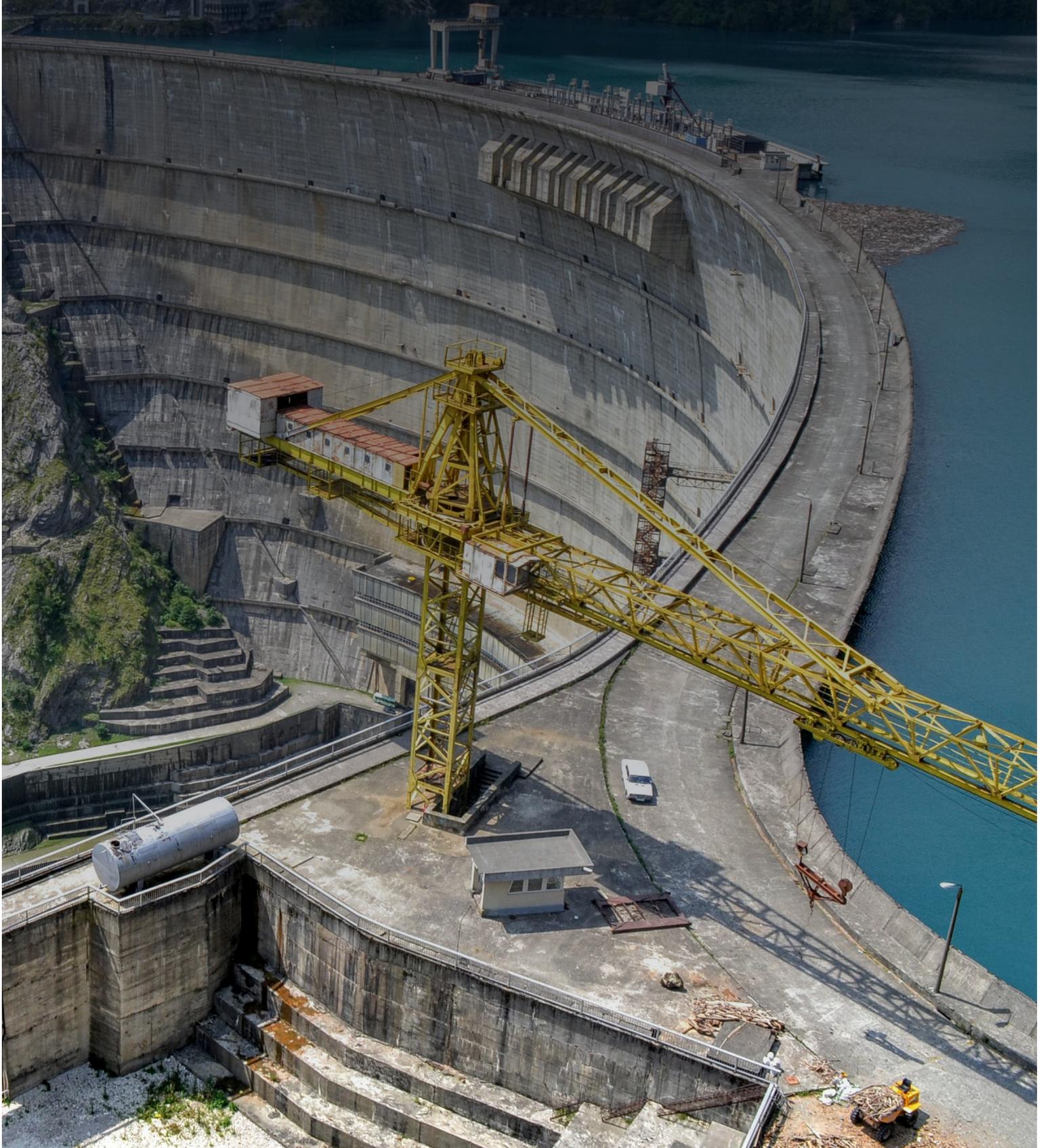
- PMI
- Industrial production
- Capacity utilization
- Durable goods orders
- Manufacturing inventories



2024	UP	9%	\$150 B
2025	DWN	-8%	\$138 B
2026	DWN	-18%	\$113 B
2027	DWN	-10%	\$101 B

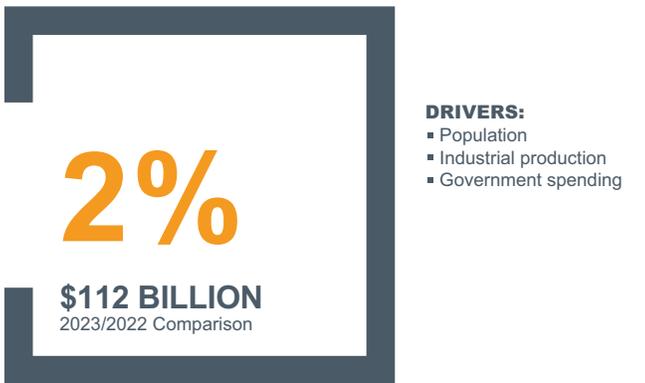
- Trade disputes and geopolitical tensions continue to encourage reshoring of manufacturing capacity investments, backed by policy support via the CHIPS and Science Act and Build America Buy America Act (BABAA) requirements.
- Conversely, the Institute for Supply Management’s Manufacturing Purchasing Managers Index (PMI) indicates ongoing demand challenges with four consecutive months of scores below 50, suggesting industry contraction.
- Active and planned megaprojects in manufacturing will result in significant volatility in construction spending over the forecast period as owners race to address current market demands, including electric vehicles, various energy technologies (batteries, wind, solar, etc.), semiconductors and biopharmaceuticals.

# Nonbuilding Structures Construction Put in Place





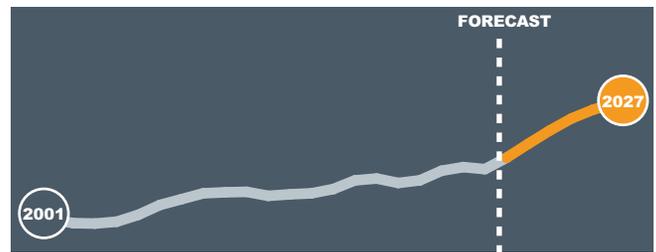
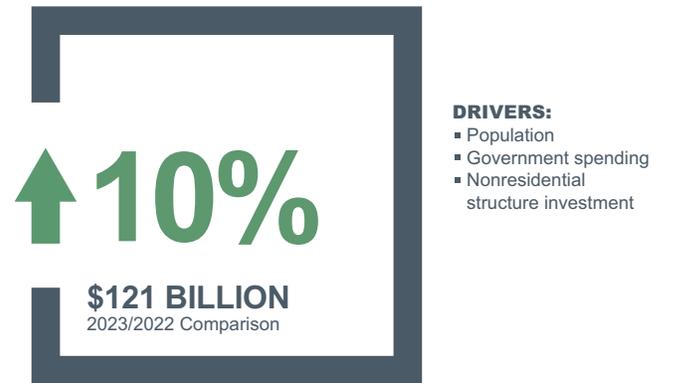
## POWER



2024	UP	6%	\$118 B
2025	UP	8%	\$128 B
2026	UP	7%	\$137 B
2027	STA	4%	\$142 B

- Several recent project starts within power (including multiple megaprojects) indicate strengthening investment levels over the forecast period.
- Significant planned renewable energy capacity additions create synchronized needs and opportunities in energy storage and transmission spending.
- Microgrid and distributed energy are expected to play an increasingly important role in the evolution of the U.S. energy sector.

## HIGHWAY AND STREET

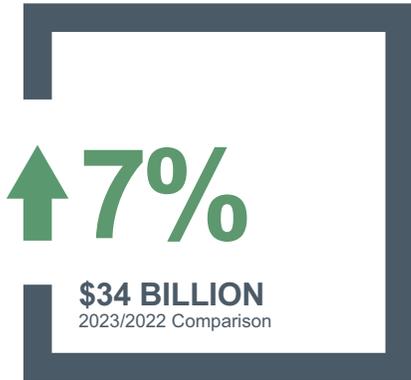


2024	UP	9%	\$132 B
2025	UP	7%	\$141 B
2026	UP	5%	\$148 B
2027	STA	3%	\$153 B

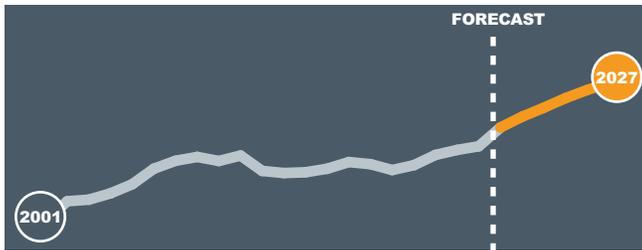
- Highway and street construction spending accelerated rapidly toward the end of 2022 and is expected to continue to strengthen into 2023, aided by stabilizing input prices and an increasing number of projects becoming active in the spring and summer months.
- Early IIJA infrastructure funds will prioritize system repairs and maintenance.
- Several new bridge programs indicate strong growth over the forecast period. States benefiting from recent grant awards include California, Connecticut, Illinois, Kentucky and Ohio.



## SEWAGE AND WASTE DISPOSAL



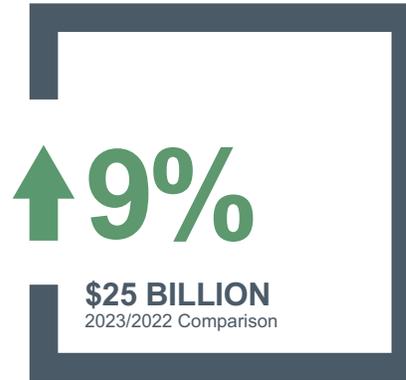
- DRIVERS:**
- Population
  - Industrial production
  - Government spending



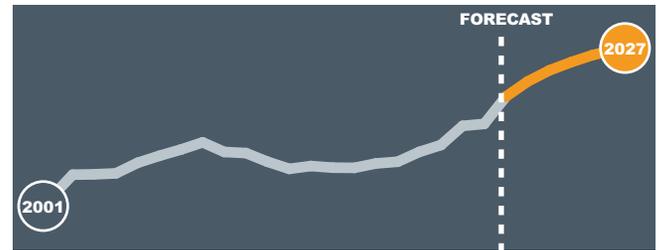
2024	UP	6%	\$36 B
2025	UP	6%	\$38 B
2026	UP	5%	\$40 B
2027	STA	4%	\$41 B

- Investment in sewage and waste disposal will continue to grow as residential and industrial demands increase.
- BABAA regulation will reduce owner and utility plans for facility upgrades and deferred maintenance.
- Severe weather events continue to promote resiliency programs to address increased flooding and cross contamination between stormwater and sewage infrastructure.

## WATER SUPPLY



- DRIVERS:**
- Population
  - Industrial production
  - Government spending

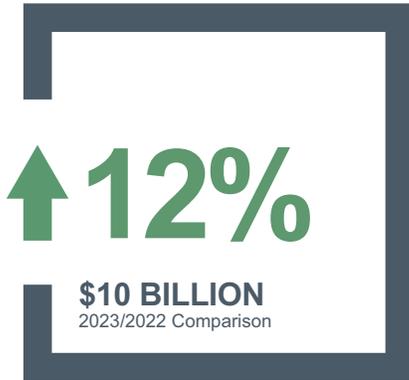


2024	UP	6%	\$26 B
2025	STA	4%	\$27 B
2026	STA	3%	\$28 B
2027	STA	3%	\$29 B

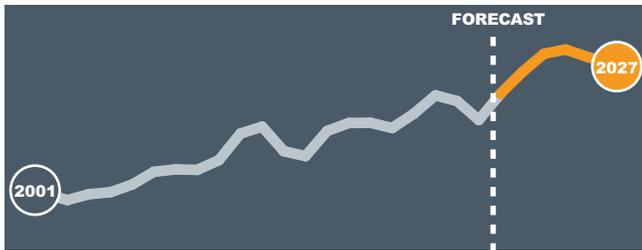
- Population growth and increased industrial investment will drive ongoing spending on clean water infrastructure.
- Industry research is becoming increasingly focused on understanding exposure and removal of perfluoroalkyl and polyfluoroalkyl substances (PFAS).
- Lead service line replacements funded by the IIJA will help balance losses due to stalled economic growth and decreased developer-led investment.



## CONSERVATION AND DEVELOPMENT



- DRIVERS:**
- Population
  - Government spending



2024	UP	9%	\$11 B
2025	STA	2%	\$12 B
2026	DWN	-3%	\$11 B
2027	DWN	-3%	\$11 B

- Investment levels from the 2022 Disaster Relief Supplemental Appropriations Act are expected to double in 2023.
- The focus of future projects will be on coastline resilience, major waterways and communities facing increased flooding.
- Significant investment is expected along the Gulf Coast to protect communities from dangerous storm surges while also reinforcing important trade routes.

## Construction Put in Place Estimated for the United States

Millions of Current Dollars

2nd Quarter 2023 Forecast, Based on 4th Quarter 2022 Actuals and 1st Quarter 2023 Assumptions

	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
<b>RESIDENTIAL BUILDINGS</b>										
Single-family	289,855	280,385	310,060	424,519	442,831	372,546	307,746	297,817	307,377	324,245
Multifamily	83,411	88,401	100,089	108,845	113,310	119,266	108,219	96,944	95,702	97,047
Improvements*	190,611	184,656	234,108	269,569	353,735	325,589	279,200	266,432	273,537	282,594
<b>Total Residential</b>	<b>563,877</b>	<b>553,442</b>	<b>644,257</b>	<b>802,933</b>	<b>909,876</b>	<b>817,400</b>	<b>695,166</b>	<b>661,193</b>	<b>676,615</b>	<b>703,887</b>
<b>NONRESIDENTIAL BUILDINGS</b>										
Lodging	31,464	33,461	28,483	18,236	18,612	21,510	21,994	19,816	18,527	19,326
Office	76,662	88,724	92,831	86,642	87,693	92,465	89,881	84,817	85,460	90,634
Commercial	86,422	84,345	89,714	94,553	115,385	125,296	114,682	100,878	99,000	103,124
Health Care	43,450	46,263	48,599	48,459	52,687	55,937	58,359	59,531	57,413	57,086
Educational	101,210	108,952	110,692	98,426	99,201	103,591	108,180	110,806	113,436	117,125
Religious	3,499	3,730	3,472	2,926	2,890	2,879	2,825	2,808	2,844	2,869
Public Safety	9,353	12,012	17,667	12,150	11,217	11,341	12,212	13,044	13,180	13,055
Amusement and Recreation	28,068	30,416	28,288	25,276	27,055	28,995	29,756	27,517	25,660	25,919
Transportation	53,219	57,448	60,734	56,689	56,785	61,547	69,260	77,786	82,410	84,157
Communication	24,502	22,184	23,876	24,696	24,341	25,180	26,578	28,304	30,057	31,225
Manufacturing	72,508	80,978	75,425	78,872	108,122	137,614	150,216	138,271	112,886	101,236
<b>Total Nonresidential Buildings</b>	<b>530,357</b>	<b>568,513</b>	<b>579,781</b>	<b>546,925</b>	<b>603,988</b>	<b>666,356</b>	<b>683,943</b>	<b>663,578</b>	<b>640,873</b>	<b>645,756</b>
<b>NONBUILDING STRUCTURES</b>										
Power	99,569	117,960	118,168	120,834	110,291	112,003	118,418	128,400	137,247	142,064
Highway and Street	91,745	99,402	102,321	100,679	109,809	120,939	131,673	141,274	148,296	153,256
Sewage and Waste Disposal	23,931	26,119	27,189	27,968	31,979	34,280	36,193	38,235	39,977	41,492
Water Supply	15,477	16,397	18,952	19,214	22,855	24,862	26,345	27,436	28,389	29,101
Conservation and Development	8,229	9,207	8,903	7,893	9,295	10,442	11,424	11,651	11,266	10,905
<b>Total Nonbuilding Structures</b>	<b>238,951</b>	<b>269,085</b>	<b>275,533</b>	<b>276,588</b>	<b>284,229</b>	<b>302,526</b>	<b>324,053</b>	<b>346,997</b>	<b>365,175</b>	<b>376,819</b>
<b>Total Put in Place</b>	<b>\$1,333,185</b>	<b>\$1,391,040</b>	<b>\$1,499,571</b>	<b>\$1,626,446</b>	<b>\$1,798,093</b>	<b>\$1,786,282</b>	<b>\$1,703,161</b>	<b>\$1,671,768</b>	<b>\$1,682,663</b>	<b>\$1,726,462</b>

## Construction Put in Place Estimated for the United States

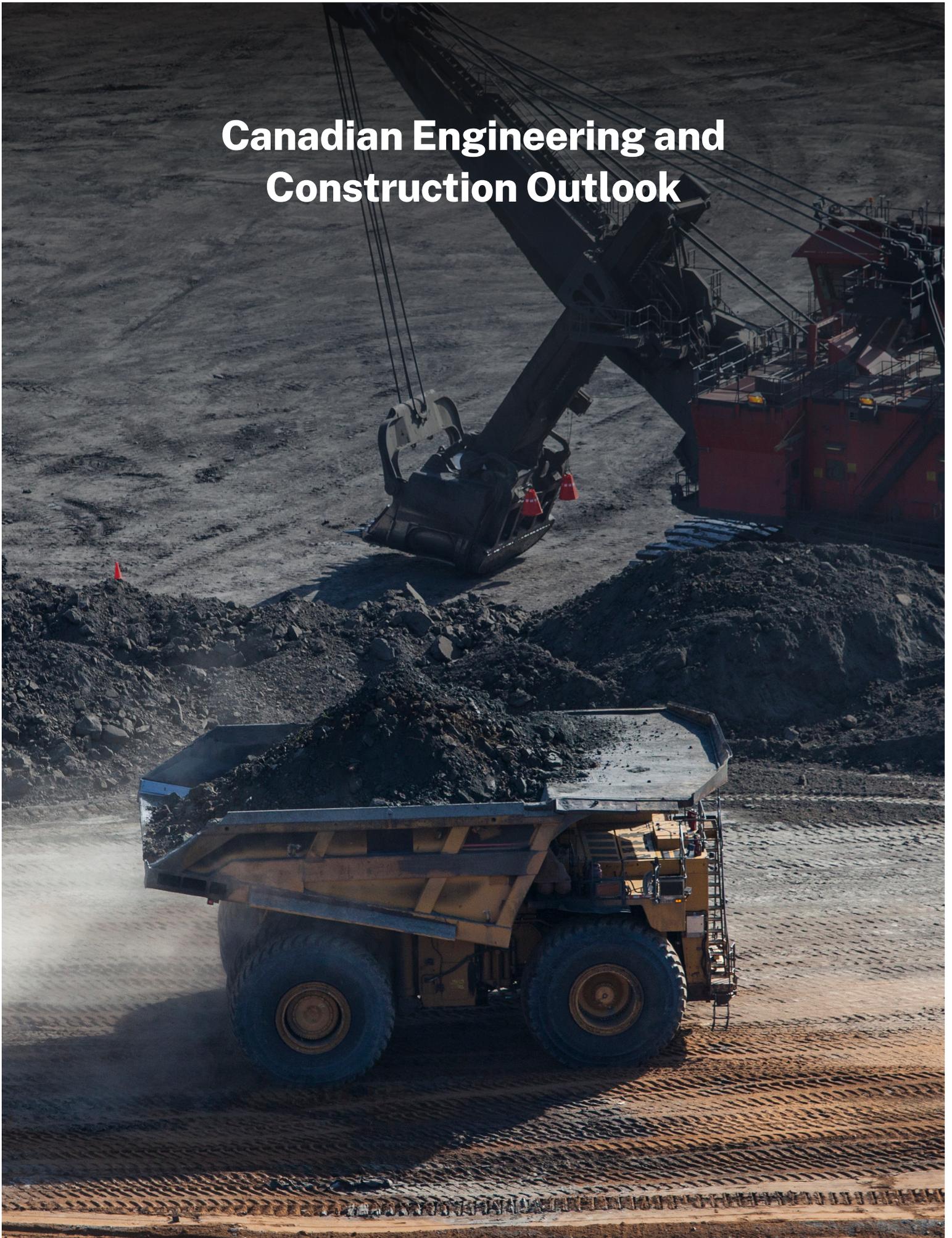
Change From Prior Year — Current Dollar Basis

2nd Quarter 2023 Forecast, Based on 4th Quarter 2022 Actuals and 1st Quarter 2023 Assumptions

	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
<b>RESIDENTIAL BUILDINGS</b>										
Single-family	7%	-3%	11%	37%	4%	-16%	-17%	-3%	3%	5%
Multifamily	4%	6%	13%	9%	4%	5%	-9%	-10%	-1%	1%
Improvements*	-2%	-3%	27%	15%	31%	-8%	-14%	-5%	3%	3%
<b>Total Residential</b>	<b>3%</b>	<b>-2%</b>	<b>16%</b>	<b>25%</b>	<b>13%</b>	<b>-10%</b>	<b>-15%</b>	<b>-5%</b>	<b>2%</b>	<b>4%</b>
<b>NONRESIDENTIAL BUILDINGS</b>										
Lodging	10%	6%	-15%	-36%	2%	16%	2%	-10%	-7%	4%
Office	12%	16%	5%	-7%	1%	5%	-3%	-6%	1%	6%
Commercial	-1%	-2%	6%	5%	22%	9%	-8%	-12%	-2%	4%
Health Care	1%	6%	5%	0%	9%	6%	4%	2%	-4%	-1%
Educational	5%	8%	2%	-11%	1%	4%	4%	2%	2%	3%
Religious	-2%	7%	-7%	-16%	-1%	0%	-2%	-1%	1%	1%
Public Safety	10%	28%	47%	-31%	-8%	1%	8%	7%	1%	-1%
Amusement and Recreation	6%	8%	-7%	-11%	7%	7%	3%	-8%	-7%	1%
Transportation	15%	8%	6%	-7%	0%	8%	13%	12%	6%	2%
Communication	3%	-9%	8%	3%	-1%	3%	6%	6%	6%	4%
Manufacturing	3%	12%	-7%	5%	37%	27%	9%	-8%	-18%	-10%
<b>Total Nonresidential Buildings</b>	<b>5%</b>	<b>7%</b>	<b>2%</b>	<b>-6%</b>	<b>10%</b>	<b>10%</b>	<b>3%</b>	<b>-3%</b>	<b>-3%</b>	<b>1%</b>
<b>NONBUILDING STRUCTURES</b>										
Power	4%	18%	0%	2%	-9%	2%	6%	8%	7%	4%
Highway and Street	2%	8%	3%	-2%	9%	10%	9%	7%	5%	3%
Sewage and Waste Disposal	4%	9%	4%	3%	14%	7%	6%	6%	5%	4%
Water Supply	9%	6%	16%	1%	19%	9%	6%	4%	3%	3%
Conservation and Development	10%	12%	-3%	-11%	18%	12%	9%	2%	-3%	-3%
<b>Total Nonbuilding Structures</b>	<b>4%</b>	<b>13%</b>	<b>2%</b>	<b>0%</b>	<b>3%</b>	<b>6%</b>	<b>7%</b>	<b>7%</b>	<b>5%</b>	<b>3%</b>
<b>Total Put in Place</b>	<b>4%</b>	<b>4%</b>	<b>8%</b>	<b>8%</b>	<b>11%</b>	<b>-1%</b>	<b>-5%</b>	<b>-2%</b>	<b>1%</b>	<b>3%</b>

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

# Canadian Engineering and Construction Outlook



## Canadian Key Takeaways

- Total engineering and construction spending for Canada is forecast to end 2023 down 1% after growing 13% in 2022. The high growth last year was fueled by strength across construction residential, nonresidential and nonbuilding construction.
- Growth in 2023 will be lower due to a weakening residential market. Segments expected to be stable or down include single-family, multifamily, residential improvements, lodging, office, commercial, and amusement and recreation.
- Health care, power, highway and street, sewage and waste disposal, water supply, conservation and development, manufacturing, communication, transportation, public safety and education are strong growth segments, with each anticipated to experience 2023 year-end growth rates of more than 5%.

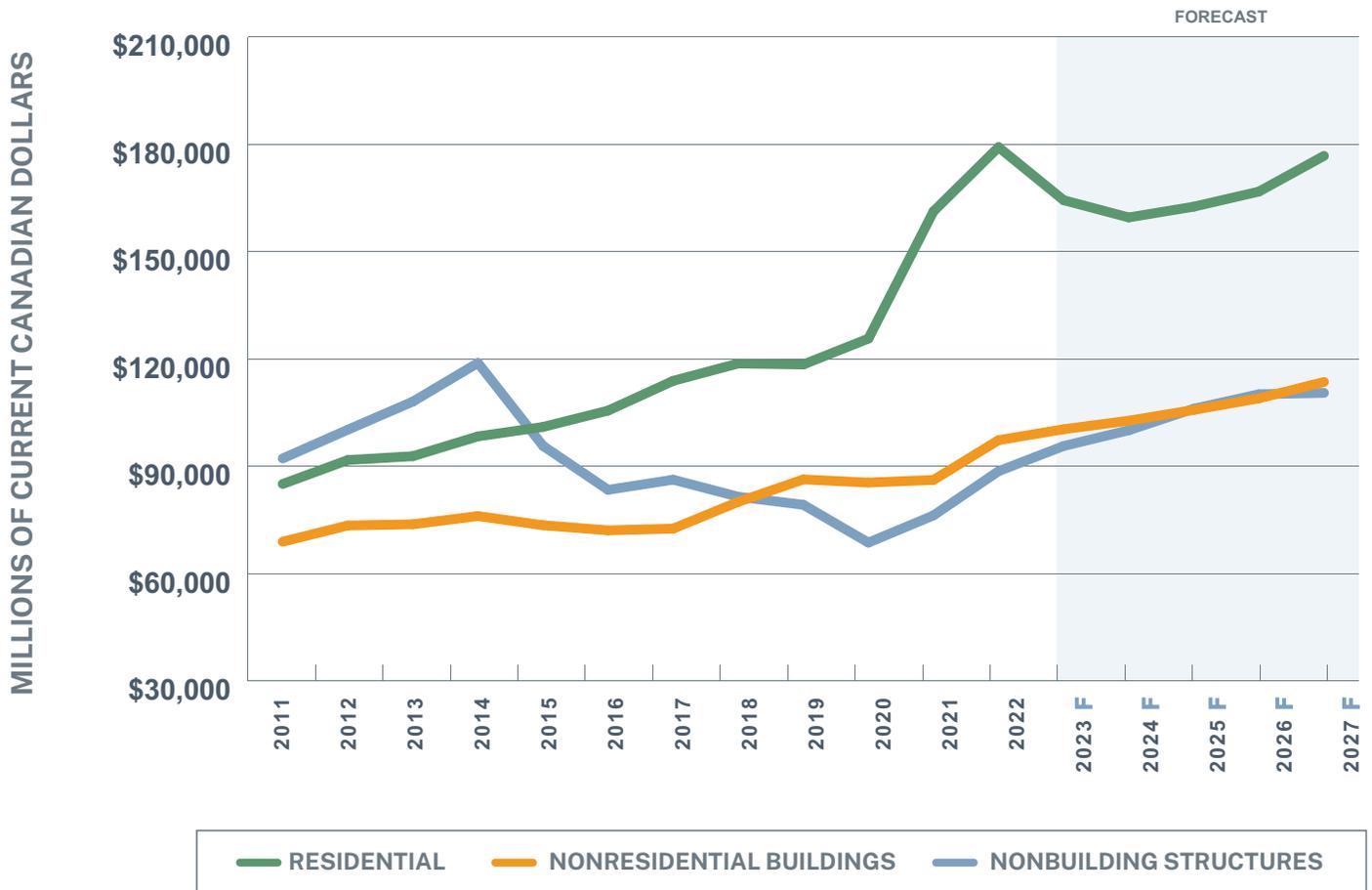
## Canadian 2023 Segment Performance

### 2023/2022 Comparison

 <p><b>UP</b> 5% or more</p>	 <p><b>STABLE</b> 0% to 4%</p>	 <p><b>DOWN</b> Under 0%</p>
<ul style="list-style-type: none"> <li>Transportation</li> <li>Communication</li> <li>Manufacturing</li> <li>Power</li> <li>Highway and Street</li> <li>Sewage and Waste Disposal</li> <li>Conservation and Development</li> <li>Water Supply</li> <li>Health Care</li> <li>Educational</li> <li>Public Safety</li> </ul>	<ul style="list-style-type: none"> <li>Amusement and Recreation</li> <li>Religious</li> </ul>	<ul style="list-style-type: none"> <li>Single-family</li> <li>Multifamily</li> <li>Residential Improvements</li> <li>Lodging</li> <li>Commercial</li> <li>Office</li> </ul>



## Total Construction Spending Put in Place Estimated for Canada

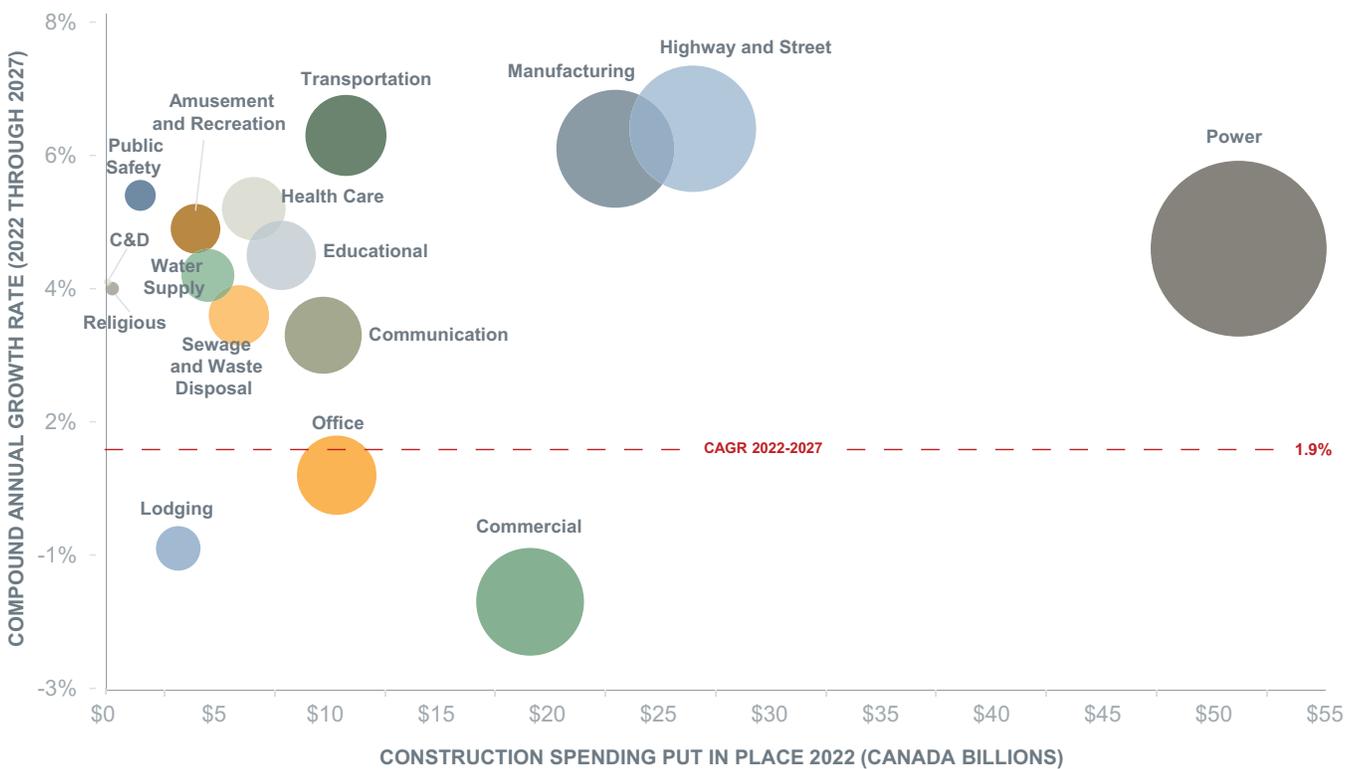


SOURCE: FMI FORECAST Q2 2023

Second quarter forecast is based on fourth quarter 2022 actuals and first quarter 2023 assumptions.



## Total Nonresidential Canadian Construction Spending Put in Place 2022 and Forecast Growth (2022 through 2027) by Construction Segment



SOURCE: FMI FORECAST Q2 2023

## Construction Put in Place Estimated for Canada

Millions of Current Dollars

2nd Quarter 2023 Forecast, Based on 4th Quarter 2022 Actuals and 1st Quarter 2023 Assumptions

	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
<b>RESIDENTIAL BUILDINGS</b>										
Single-family	26,394	22,839	24,582	34,778	35,947	33,886	32,223	32,785	33,618	35,513
Multifamily	31,860	34,475	38,253	46,166	48,169	45,410	43,456	44,416	46,559	50,298
Improvements*	60,444	61,093	62,864	80,567	95,467	85,367	84,130	85,634	86,900	91,318
<b>Total Residential</b>	<b>118,698</b>	<b>118,407</b>	<b>125,699</b>	<b>161,511</b>	<b>179,583</b>	<b>164,662</b>	<b>159,809</b>	<b>162,835</b>	<b>167,078</b>	<b>177,129</b>
<b>NONRESIDENTIAL BUILDINGS</b>										
Lodging	2,766	2,750	2,567	2,614	3,280	3,115	2,858	2,932	3,032	3,217
Office	10,138	11,311	11,596	10,291	10,437	10,090	9,659	9,783	10,273	10,781
Commercial	14,002	16,072	15,001	15,277	19,169	17,876	17,214	16,933	17,453	18,091
Health Care	5,252	5,319	5,745	6,289	6,686	7,288	8,059	8,126	8,261	8,424
Educational	7,678	6,744	6,829	7,610	7,925	8,331	8,662	8,998	9,343	9,648
Religious	382	444	419	320	300	314	324	337	346	357
Public Safety	1,250	1,698	1,741	1,545	1,567	1,653	1,705	1,834	1,933	1,994
Amusement and Recreation	4,569	3,983	3,896	3,405	4,055	4,185	4,319	4,544	4,761	5,026
Transportation	7,761	8,718	9,383	9,753	10,847	11,814	12,506	13,005	13,691	14,376
Communication	5,835	5,833	6,900	8,306	9,829	10,401	10,446	10,733	11,115	11,311
Manufacturing	20,116	23,189	21,110	20,509	23,023	25,129	26,848	28,409	28,668	30,280
<b>Total Nonresidential Buildings</b>	<b>79,749</b>	<b>86,063</b>	<b>85,187</b>	<b>85,918</b>	<b>97,119</b>	<b>100,196</b>	<b>102,599</b>	<b>105,635</b>	<b>108,876</b>	<b>113,504</b>
<b>NONBUILDING STRUCTURES</b>										
Power	53,538	51,840	39,478	45,269	51,162	54,823	56,841	61,171	63,371	62,441
Highway and Street	20,029	18,557	19,782	21,685	26,507	28,940	31,003	32,531	33,980	35,334
Sewage and Waste Disposal	3,638	4,637	5,047	4,988	6,016	6,645	6,810	6,824	7,092	7,008
Water Supply	3,657	3,456	3,772	3,771	4,617	4,968	5,152	5,346	5,493	5,539
Conservation and Development	335	430	196	220	86	91	97	98	102	103
<b>Total Nonbuilding Structures</b>	<b>81,197</b>	<b>78,920</b>	<b>68,275</b>	<b>75,933</b>	<b>88,388</b>	<b>95,467</b>	<b>99,903</b>	<b>105,969</b>	<b>110,038</b>	<b>110,425</b>
<b>Total Put in Place</b>	<b>\$279,644</b>	<b>\$283,390</b>	<b>\$279,161</b>	<b>\$323,362</b>	<b>\$365,089</b>	<b>\$360,325</b>	<b>\$362,311</b>	<b>\$374,439</b>	<b>\$385,992</b>	<b>\$401,058</b>

## Construction Put in Place Estimated for Canada

Change From Prior Year — Current Dollar Basis

2nd Quarter 2023 Forecast, Based on 4th Quarter 2022 Actuals and 1st Quarter 2023 Assumptions

	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
<b>RESIDENTIAL BUILDINGS</b>										
Single-family	-6%	-13%	8%	41%	3%	-6%	-5%	2%	3%	6%
Multifamily	12%	8%	11%	21%	4%	-6%	-4%	2%	5%	8%
Improvements*	6%	1%	3%	28%	18%	-11%	-1%	2%	1%	5%
<b>Total Residential</b>	<b>4%</b>	<b>0%</b>	<b>6%</b>	<b>28%</b>	<b>11%</b>	<b>-8%</b>	<b>-3%</b>	<b>2%</b>	<b>3%</b>	<b>6%</b>
<b>NONRESIDENTIAL BUILDINGS</b>										
Lodging	8%	-1%	-7%	2%	25%	-5%	-8%	3%	3%	6%
Office	13%	12%	3%	-11%	1%	-3%	-4%	1%	5%	5%
Commercial	4%	15%	-7%	2%	25%	-7%	-4%	-2%	3%	4%
Health Care	2%	1%	8%	9%	6%	9%	11%	1%	2%	2%
Educational	-1%	-12%	1%	11%	4%	5%	4%	4%	4%	3%
Religious	-1%	16%	-6%	-23%	-6%	4%	3%	4%	3%	3%
Public Safety	-3%	36%	3%	-11%	1%	5%	3%	8%	5%	3%
Amusement and Recreation	1%	-13%	-2%	-13%	19%	3%	3%	5%	5%	6%
Transportation	28%	12%	8%	4%	11%	9%	6%	4%	5%	5%
Communication	1%	0%	18%	20%	18%	6%	0%	3%	4%	2%
Manufacturing	24%	15%	-9%	-3%	12%	9%	7%	6%	1%	6%
<b>Total Nonresidential Buildings</b>	<b>10%</b>	<b>8%</b>	<b>-1%</b>	<b>1%</b>	<b>13%</b>	<b>3%</b>	<b>2%</b>	<b>3%</b>	<b>3%</b>	<b>4%</b>
<b>NONBUILDING STRUCTURES</b>										
Power	-8%	-3%	-24%	15%	13%	7%	4%	8%	4%	-1%
Highway and Street	2%	-7%	7%	10%	22%	9%	7%	5%	4%	4%
Sewage and Waste Disposal	-14%	27%	9%	-1%	21%	10%	2%	0%	4%	-1%
Water Supply	17%	-5%	9%	0%	22%	8%	4%	4%	3%	1%
Conservation and Development	-30%	28%	-54%	12%	-61%	6%	6%	2%	4%	0%
<b>Total Nonbuilding Structures</b>	<b>-6%</b>	<b>-3%</b>	<b>-13%</b>	<b>11%</b>	<b>16%</b>	<b>8%</b>	<b>5%</b>	<b>6%</b>	<b>4%</b>	<b>0%</b>
<b>Total Put in Place</b>	<b>3%</b>	<b>1%</b>	<b>-1%</b>	<b>16%</b>	<b>13%</b>	<b>-1%</b>	<b>1%</b>	<b>3%</b>	<b>3%</b>	<b>4%</b>

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

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**Jay Bowman** assists a broad range of stakeholders in the architecture, engineering and construction industry. As the leader of FMI's research and analytics discipline, he develops data-driven, fact-based market intelligence to bring insights that catalyze exceptional company performance and competitive advantage. The research services he oversees include market sizing, forecasting, buying practices, preferences, competitive behaviors and response. He can be reached at [jay.bowman@fmicorp.com](mailto:jay.bowman@fmicorp.com).



**Brian Strawberry** 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. Brian can be reached at [brian.strawberry@fmicorp.com](mailto:brian.strawberry@fmicorp.com).



**Emily Beardall** develops creative analytical tools that deliver powerful solutions for FMI's clients. She is committed to utilizing these strategic tools to improve company performance and profitability. In addition to leading client engagements, Emily is currently responsible for FMI's quarterly construction activity forecast for Canada. She is an active member of FMI's research team and assists with FMI's Heavy Civil Index as well as white papers. Emily can be reached at [emily.beardall@fmicorp.com](mailto:emily.beardall@fmicorp.com).



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