



2021
North American Engineering
and Construction Outlook
Fourth Quarter Edition






OCTOBER 2021

U.S. Key Takeaways

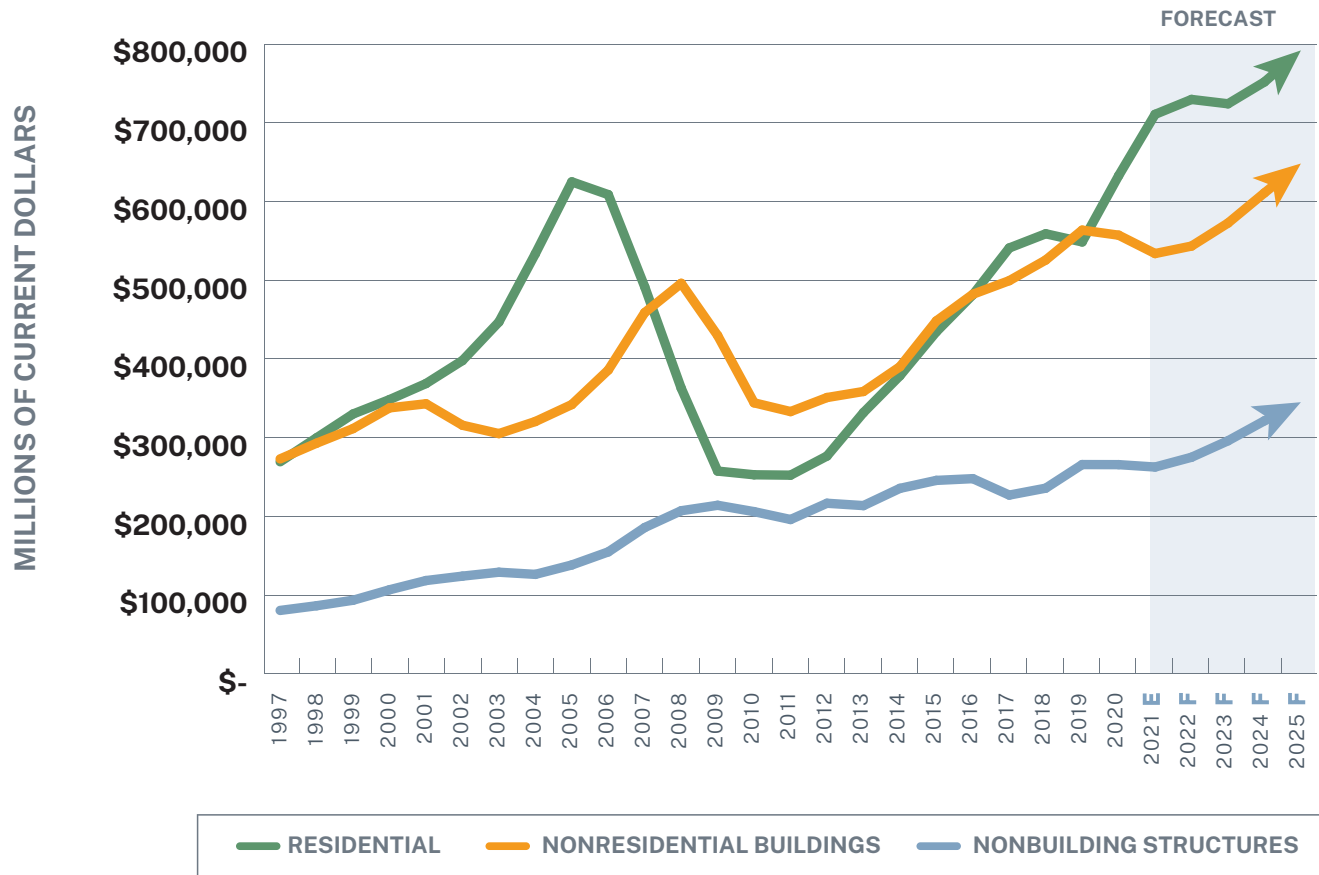
- Total engineering and construction spending for the U.S. is forecast to end 2021 up 3%, compared to up 6% in 2020.
- Strong growth across the residential sector, especially within single-family and improvements, will continue to uphold industry spending levels in 2021. No segments within nonresidential building or nonbuilding structures are expected to realize spending growth exceeding 4% this year.
- Declines in 2021 will be led by nonresidential building investment. Significant double-digit decline will be realized in lodging, religious, public safety, and amusement and recreation. Additional moderate declines will be realized across office, educational, transportation, communication, power, highway and street, and conservation and development.
- Commercial, health care, manufacturing, sewage and waste disposal, and water supply are all expected to end the year with low growth, between 0% and 4%. While these low growth rates are considered stable, they are now meeting or slightly below anticipated inflationary levels for 2021.
- The latest Nonresidential Construction Index (NRCI) feedback suggests ongoing, albeit challenged, optimism heading into the fourth quarter of 2021, at 53.8, down from 59.7 in the quarter prior. The NRCI reflects short-term weakening economic and industry sentiment but remains expansionary and suggests increased opportunities ahead.

U.S. 2021 Segment Performance 2021/2020 Comparison

 UP 5% or more	 STABLE 0% to 4%	 DOWN Under 0%
Single-family Multifamily Improvements	Commercial Health Care Manufacturing Sewage and Waste Disposal Water Supply	Lodging Office Educational Religious Public Safety Amusement and Recreation Transportation Communication Power Highway and Street Conservation and Development



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

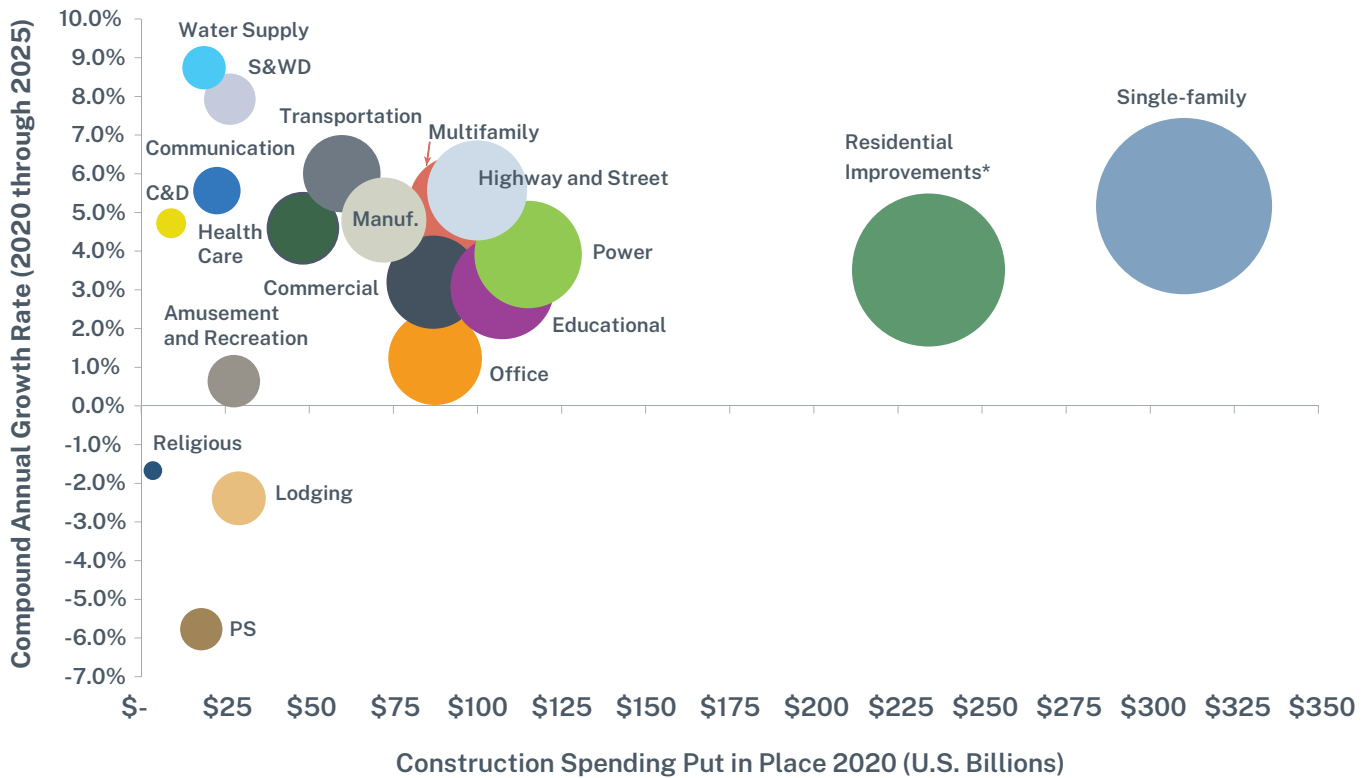


SOURCE: FMI FORECAST Q4 2021

Fourth quarter 2021 forecast based on second quarter actuals and third quarter assumptions.



Total U.S. Construction Spending Put in Place 2020 and Forecast Growth (2020 through 2025) by Construction Segment



*Improvements includes additions, alterations and major replacements. Maintenance and repairs are not included.

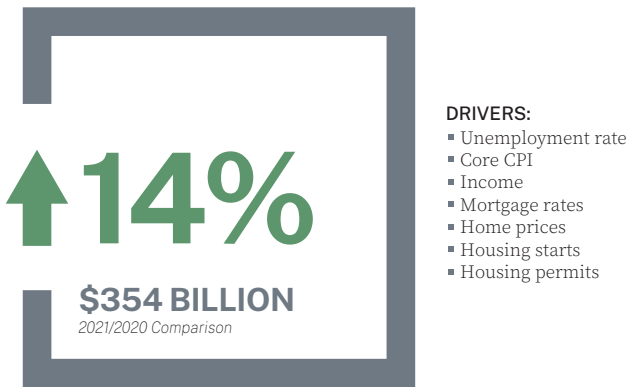
SOURCE: FMI FORECAST Q4 2021

Residential Construction Put in Place

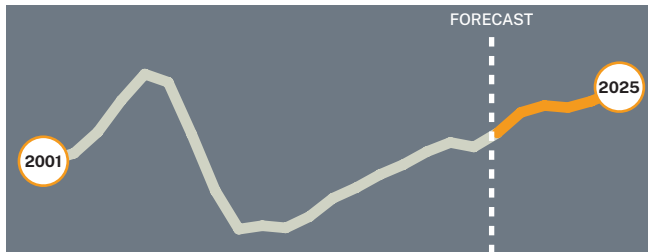




SINGLE-FAMILY RESIDENTIAL



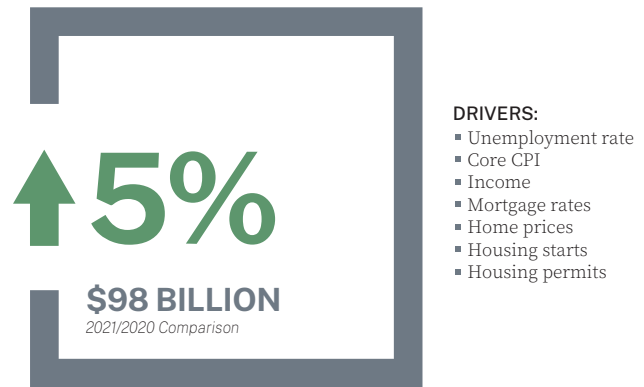
- DRIVERS:**
- Unemployment rate
 - Core CPI
 - Income
 - Mortgage rates
 - Home prices
 - Housing starts
 - Housing permits



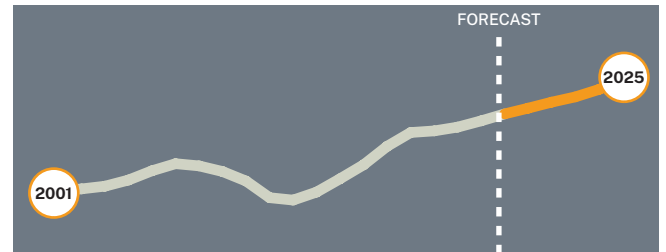
2021	UP	14%	\$354 B
2022	STA	4%	\$368 B
2023	DWN	-1%	\$364 B
2024	STA	4%	\$378 B
2025	UP	6%	\$399 B

- Many single-family indicators have begun to waiver in the third quarter. Months' supply of homes has risen from 3.6 to 6.1 between January and June, indicating we have returned to balanced market conditions.
- Developers will continue to add through 2022, but at a slower rate and more carefully. Higher construction costs and ongoing resource constraints layer increasing risk against softened demand.
- Investor interest will shift as home price appreciation slows and rents rise. Expect mortgage rates to rise and home prices to fall as the Federal Reserve tapers asset purchasing in 2022.
- Affordability will weigh on future demand as rising living expenses counterbalance the cost of debt. Low buyer sentiment is opposite of high builder sentiment.

MULTIFAMILY RESIDENTIAL



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



2021	UP	5%	\$98 B
2022	UP	5%	\$103 B
2023	STA	4%	\$107 B
2024	UP	5%	\$113 B
2025	UP	7%	\$121 B

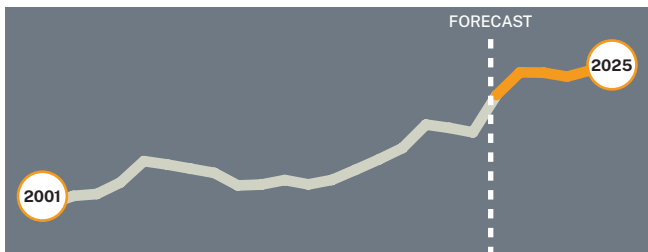
- Expect increased eviction activity, rising rental rates and ongoing historically low (albeit rising) vacancy rates through 2022 and 2023.
- Delays or cancellations tied to supply chain constraints and high material and labor costs will continue through most of 2022.
- There is a short-term shift away from mixed-use development. Multifamily redevelopment will be explored in unused existing office, retail and lodging.



IMPROVEMENTS



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



2021	UP	13%	\$264 B
2022	STA	0%	\$264 B
2023	DWN	-2%	\$259 B
2024	STA	3%	\$267 B
2025	STA	4%	\$278 B

- There will be fewer improvement projects across many markets in 2022 and 2023 due to reduced refinancing, buying and selling activities.
- Demographics suggest improvements will remain most healthy in those high-growth/high-performance secondary and tertiary markets proven favorable through the pandemic.

Nonresidential Construction Put in Place

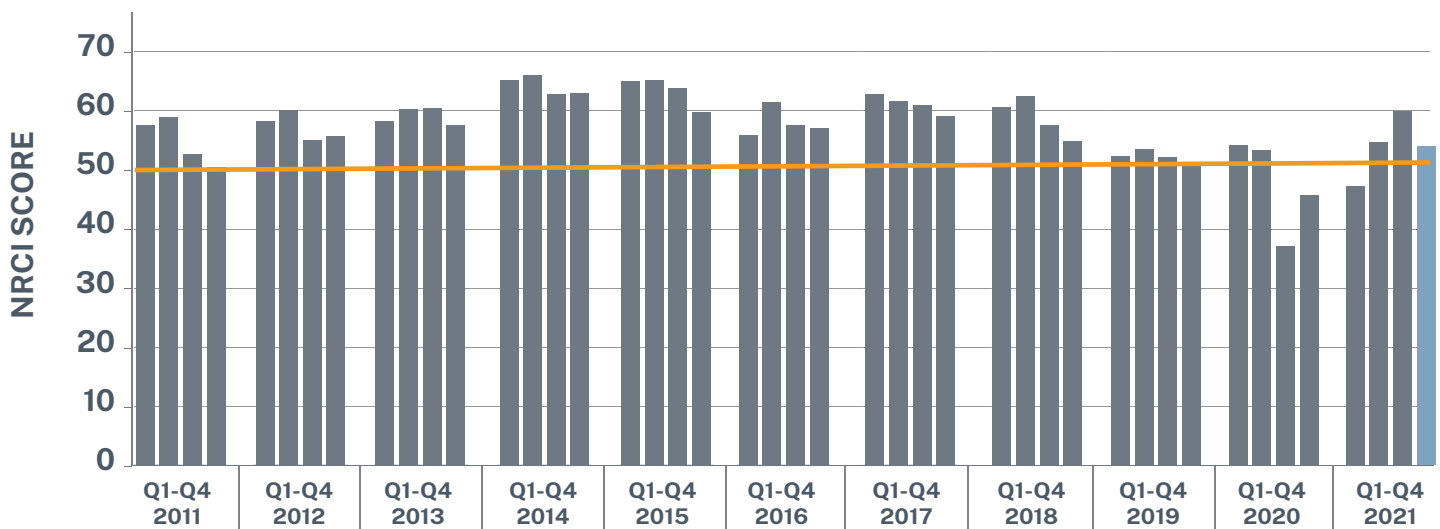




Nonresidential Construction Index (NRCI) Q1 2011 to Q4 2021

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

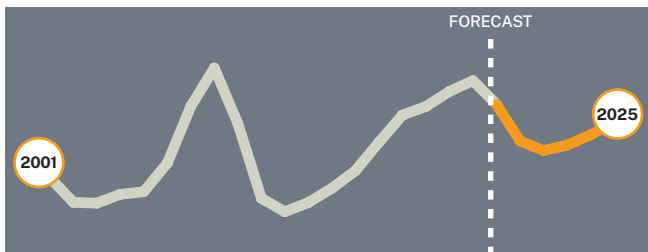
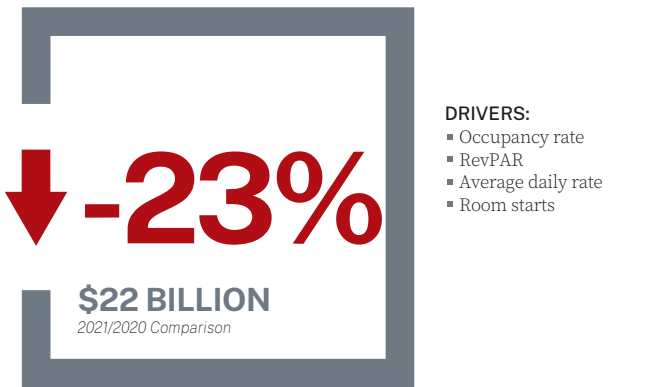
Current NRCI Reading for Q4 2021 <i>(Sept. 1 through Sept. 20)</i>	53.8
Previous Reading	59.7



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.



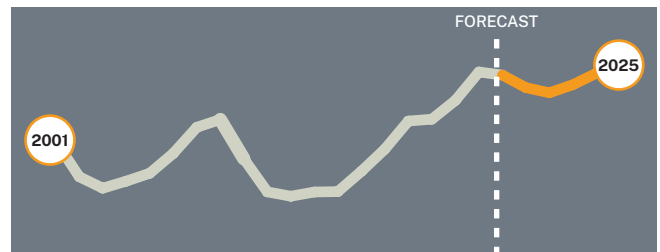
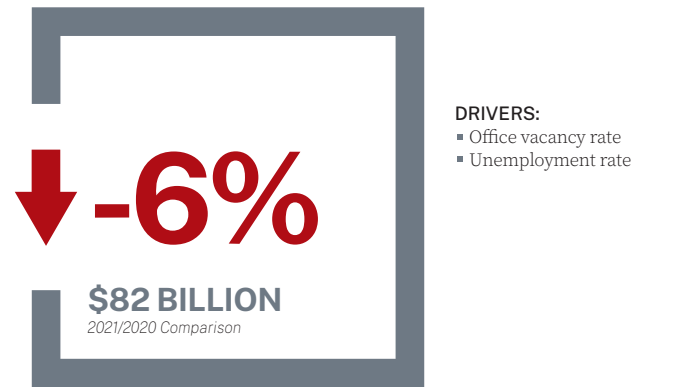
LODGING



2021	DWN	-23%	\$22 B
2022	DWN	-8%	\$20 B
2023	UP	5%	\$21 B
2024	UP	9%	\$23 B
2025	UP	10%	\$26 B

- Key lodging indicators (occupancy, ADR and RevPAR) are down from 2021 highs, coming out of summer travel months.
- Leisure demand and weekend travel for destination cities (e.g., Miami) have outperformed other areas. Anticipate permanent losses among business travelers.
- Ongoing lifting of travel restrictions at national borders will aid recovery into 2022.
- According to STR research, comparing 2019 data, the largest RevPAR deficits identify San Francisco/San Mateo and Washington, D.C.

OFFICE

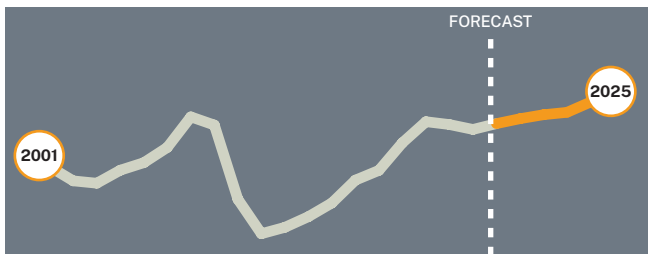
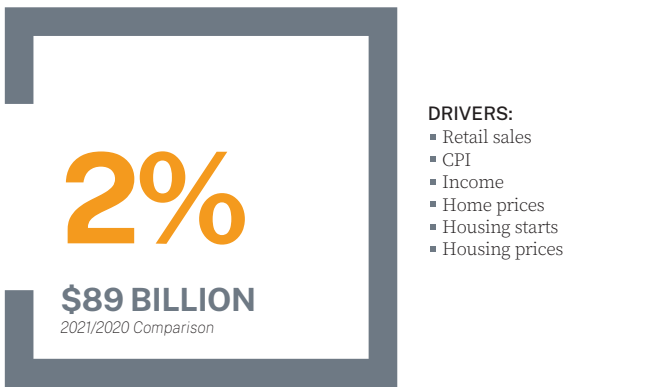


2021	DWN	-6%	\$82 B
2022	DWN	-3%	\$80 B
2023	STA	4%	\$83 B
2024	UP	6%	\$88 B
2025	UP	5%	\$93 B

- Rise in Delta coronavirus activity late summer has further delayed a return to office.
- Tight labor conditions have owners more willing to accommodate employees working remotely on a permanent basis.
- Expectations of higher corporate taxes, alongside heightened construction costs and ongoing social and political uncertainty, result in less capital spending through 2023.
- Corporations continue to migrate into states that offer a business friendly tax climate and a skilled workforce.
- Strong data center and life science investment upholds declines across banking and finance in 2021 and 2022.



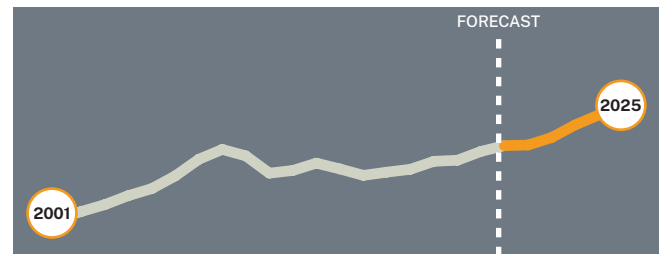
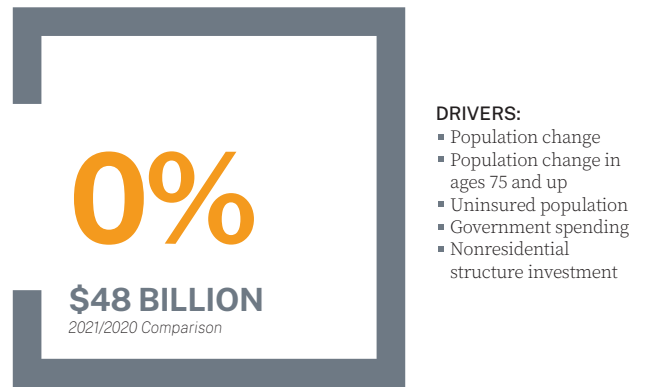
COMMERCIAL



2021	STA	2%	\$89 B
2022	STA	2%	\$91 B
2023	STA	1%	\$92 B
2024	UP	5%	\$96 B
2025	UP	6%	\$102 B

- Warehouse construction continues to lead and is stabilizing ongoing losses in shopping malls and food and beverage. Drug stores, building supply stores, parking and stand-alone retail appear in recovery.
- Share of e-commerce sales jumped significantly from 11% in 2019 to 14% in 2020. Share of sales fell just under 14% in the second quarter of 2021 (as brick-and-mortar retail reopened) but will remain elevated and expand from 2022 on.
- Investment in warehouse and distribution space now exceeds half of all commercial spending. Construction costs and competition for delivering these facilities have also risen dramatically.

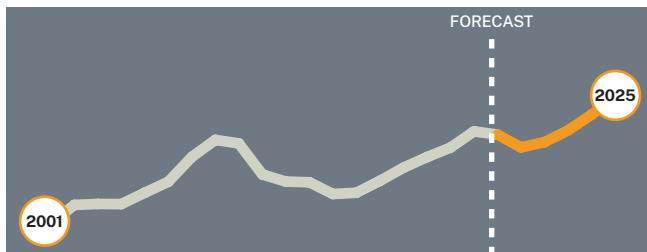
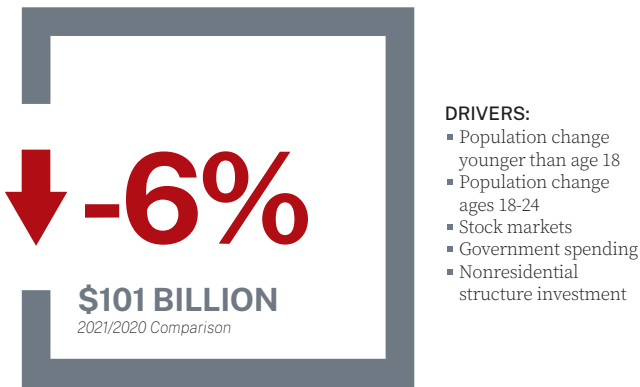
HEALTH CARE



2021	STA	0%	\$48 B
2022	UP	5%	\$51 B
2023	UP	8%	\$55 B
2024	UP	6%	\$58 B
2025	STA	4%	\$60 B

- Many large hospital investments are in planning stages, but expect ongoing challenges against staffing constraints, supply chain uncertainty and rising construction costs.
- Significant increased investment in emergency specialty care facilities (e.g., testing sites and drug clinics) through 2020 limited spending growth in 2021.
- Expect added federal investment in new facilities and facility upgrades (e.g., filtration, safety and automation) beginning late 2022.
- Hesitancy toward nursing care, alongside new technologies and services allowing in-home care/observation, will continue to reshape facilities. Aging demographics (i.e., baby boomers) support increased health care investment through the forecast period and beyond.

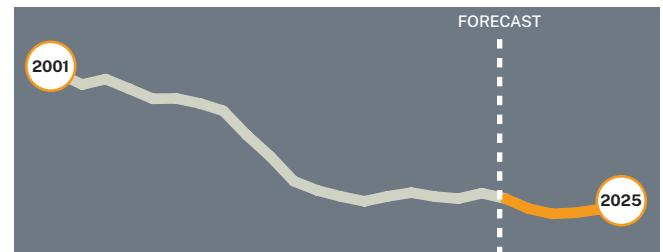
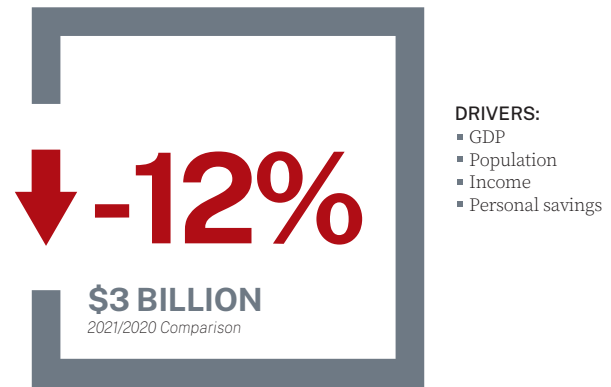
EDUCATIONAL



2021	DWN	-6%	\$101 B
2022	STA	2%	\$104 B
2023	UP	5%	\$109 B
2024	UP	7%	\$117 B
2025	UP	7%	\$125 B

- A successful return to classrooms will fuel renovation and expansion spending into 2022.
- Significant and long-running K-12 renovation and reconstruction needs persist.
- Expect added federal investment in new facilities and facility upgrades (e.g., filtration, safety and automation) beginning in late 2022.
- Higher education owners face ongoing challenges and restructurings in the coming year(s). Spring enrollments for 2021 fell 3.5% to 16.9 million from 17.5 million, with approximately 65% of losses occurring across community college systems.

RELIGIOUS

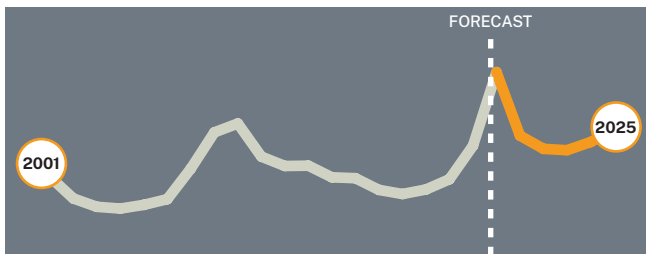
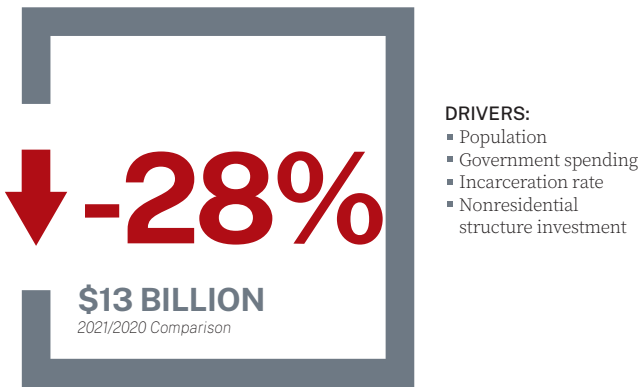


2021	DWN	-12%	\$3 B
2022	DWN	-7%	\$3 B
2023	STA	2%	\$3 B
2024	UP	5%	\$3 B
2025	UP	6%	\$3 B

- According to 2021 Gallup research, only 47% of adult Americans consider themselves members of a church, the lowest level in the history of Gallup's poll, spanning more than eight decades.
- Successful religious institutions have leveraged communication technologies to increase participation and reach their audiences, ultimately reducing traditional facility needs.
- Opportunities for capital expansion, alongside rising vacancies across lodging, office and retail space, will become more viable and attractive over the coming years.



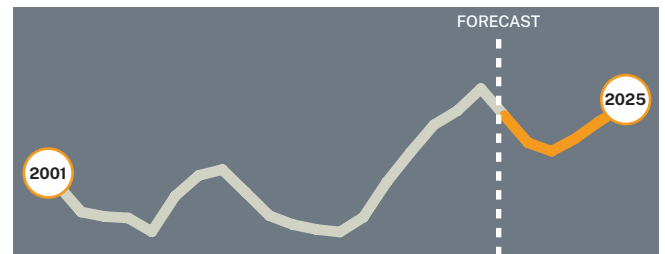
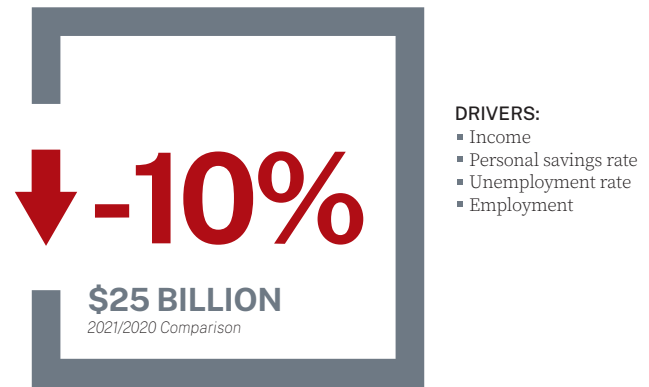
PUBLIC SAFETY



2021	DWN	-28%	\$13 B
2022	DWN	-8%	\$12 B
2023	DWN	-1%	\$12 B
2024	UP	6%	\$12 B
2025	UP	8%	\$13 B

- Significant growth in emergency response facility spending last year has abruptly reversed in 2021. Expect declining spending into 2023.
- Expect added federal stimulus/infrastructure investment in new facilities and facility upgrades (e.g., filtration, safety and automation) beginning in late 2022.
- Social unrest is expected to continue into 2022 as a result of the pullback in stimulus programs/payments, increasing homelessness, mental health concerns and violent crime.

AMUSEMENT AND RECREATION

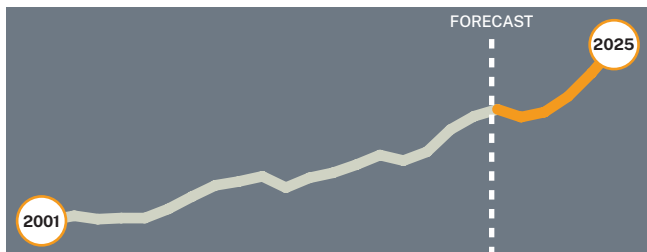
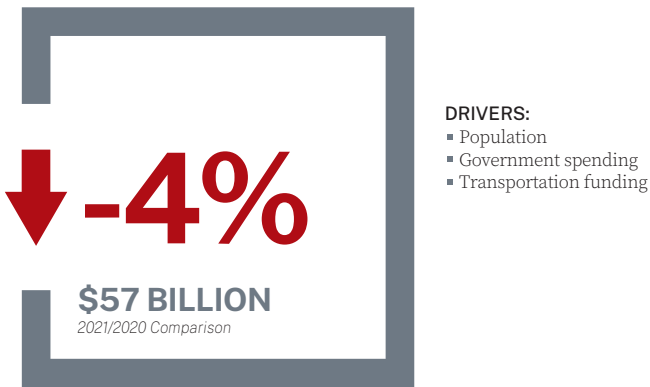


2021	DWN	-10%	\$25 B
2022	DWN	-4%	\$24 B
2023	UP	6%	\$25 B
2024	UP	7%	\$27 B
2025	UP	6%	\$28 B

- Ongoing losses are being realized in 2021 across movie theaters and studios, amusement parks, fitness facilities and meeting centers. Sports investment and social centers have stabilized and appear in recovery.
- Permanent impact of long-running regulation targeting social gatherings will inhibit future growth.
- Permanent disruptions to business travel will reshape meeting and convention space needs.



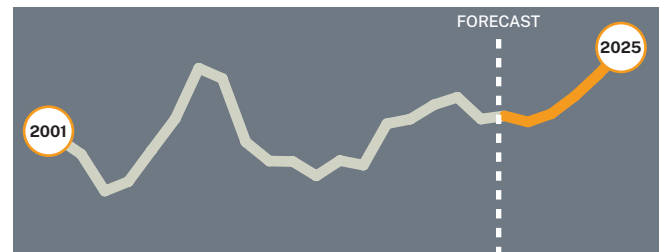
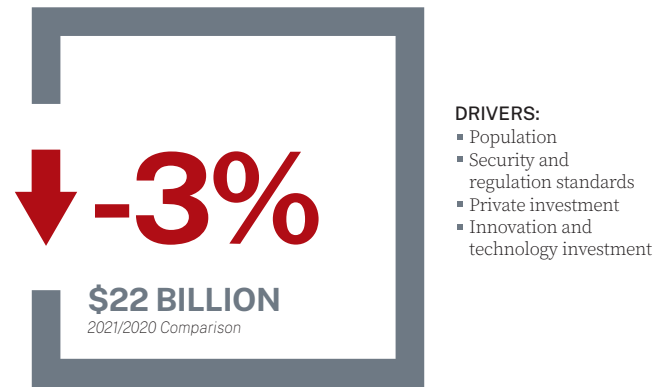
TRANSPORTATION



2021	DWN	-4%	\$57 B
2022	STA	3%	\$59 B
2023	UP	8%	\$64 B
2024	UP	12%	\$71 B
2025	UP	12%	\$80 B

- The bipartisan infrastructure bill outlines more than \$170 billion in future investments in multimodal transportation infrastructure (i.e., rail, air and waterway ports). Proposed funding levels, if passed, would have a significant impact on annual put in place.
- Included in the bipartisan infrastructure bill is a five-year, \$78 billion multimodal Surface Transportation Act of 2021 (STIA), which represents a 32% increase in programmed multimodal transportation investment over prior FAST Act funding levels.
- Bipartisan infrastructure legislation will double private activity bond volume for surface transportation projects, from \$15 billion to \$30 billion, to encourage the consideration of public-private partnerships.

COMMUNICATION



2021	DWN	-3%	\$22 B
2022	STA	4%	\$23 B
2023	UP	8%	\$25 B
2024	UP	9%	\$27 B
2025	UP	10%	\$30 B

- The bipartisan infrastructure bill allocates \$65 billion toward high-speed broadband, of which nearly \$45 billion will be realized in infrastructure construction over the next eight years.
- Federal infrastructure package funding will have a significant impact on annual investment and spending growth beginning in late 2022.
- 5G and other network technologies continue to drive new opportunities for device and data integration. Investment demand overlaps with growth across connected devices, data centers, distribution and logistics spending.

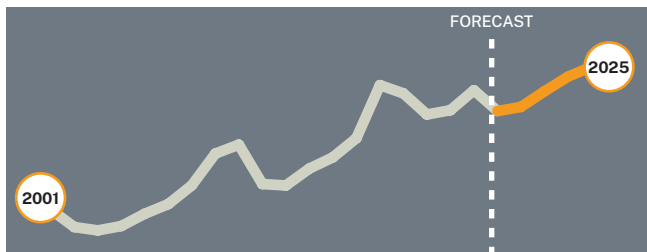


MANUFACTURING



DRIVERS:

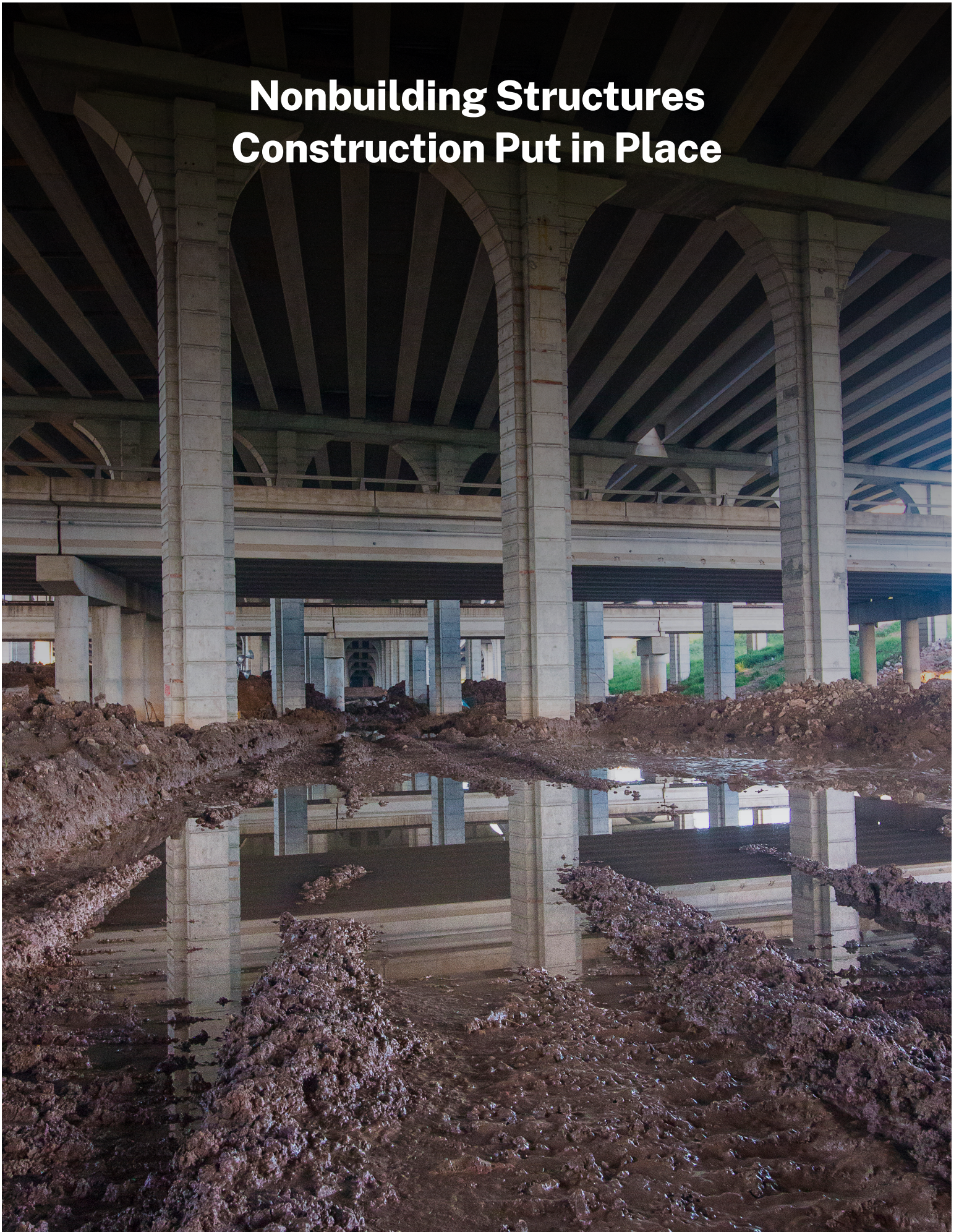
- PMI
- Industrial production
- Capacity utilization
- Durable goods orders
- Manufacturing inventories



2021	STA	2%	\$74 B
2022	UP	9%	\$81 B
2023	UP	8%	\$87 B
2024	UP	5%	\$91 B
2025	STA	0%	\$91 B

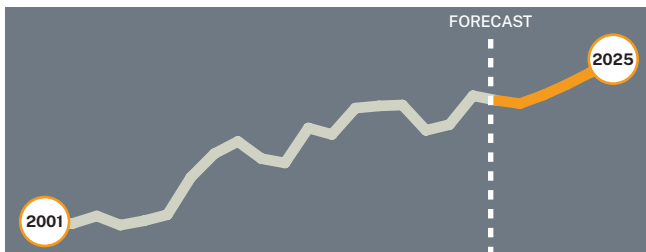
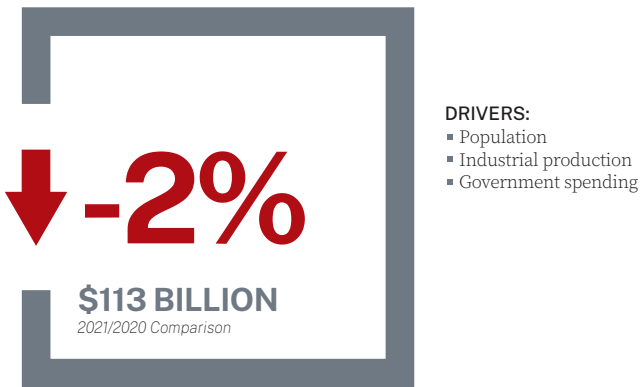
- Domestic manufacturing investment through 2021 is being led by growth in fabricated metals and food and beverage.
- Supply chain constraints are expected to remain in place through 2022. Rising transport costs support increased domestic investment while industrywide labor shortages intensify.
- Long-term infrastructure spending reshapes and reshores critical components (e.g., solar panels, semiconductors, etc.).

Nonbuilding Structures Construction Put in Place





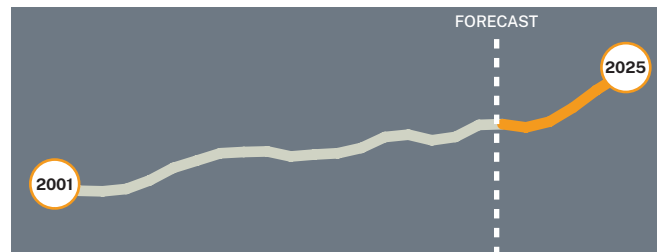
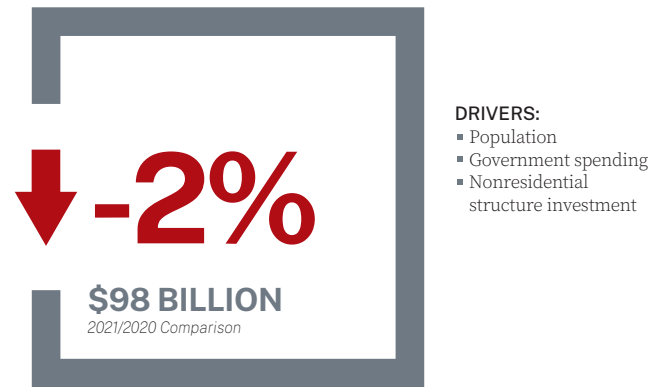
POWER



2021	DWN	-2%	\$113 B
2022	UP	5%	\$118 B
2023	UP	6%	\$125 B
2024	UP	6%	\$133 B
2025	UP	5%	\$139 B

- Expect to see increased investment in sustainable clean energy, including utility and industrial scaled batteries, renewable generation capacity and transmission resources.
- The recent strong rebound in oil and gas prices is expected to drive increased production and associated investment. Related megaprojects are resurfacing quickly along the Gulf Coast, but expect new rules and intensified oversight and regulation.
- Like what is observed in European and Asian markets, the combined result of supply chain issues and a rapid push for adopting clean energy sources may disrupt the domestic energy landscape in the coming months. Prioritization for renewables may be challenged if energy instability is realized over the winter.

HIGHWAY AND STREET

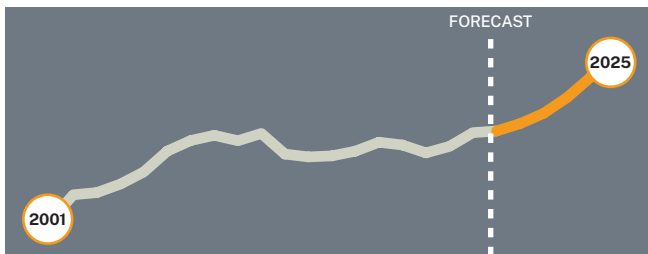
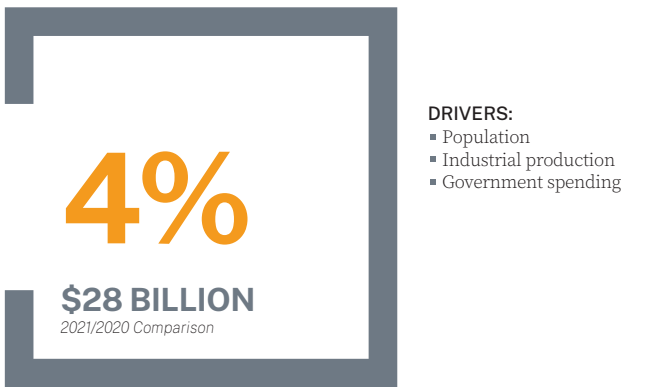


2021	DWN	-2%	\$98 B
2022	STA	4%	\$101 B
2023	UP	9%	\$110 B
2024	UP	10%	\$122 B
2025	UP	8%	\$131 B

- The bipartisan infrastructure bill allocates just over \$350 billion in investment in roads and bridges over the next eight years.
- Bipartisan infrastructure legislation will double private activity bond volume for surface transportation projects, from \$15 billion to \$30 billion, to encourage the consideration of public-private partnerships.
- Included in the bipartisan infrastructure bill is a five-year, \$303 billion Surface Transportation Reauthorization Act of 2021 (STRA), which represents a 22% increase over prior programmed FAST Act funding levels.



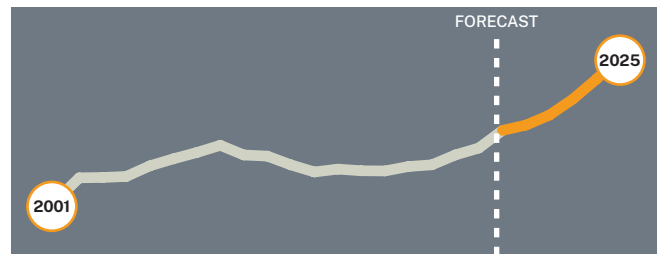
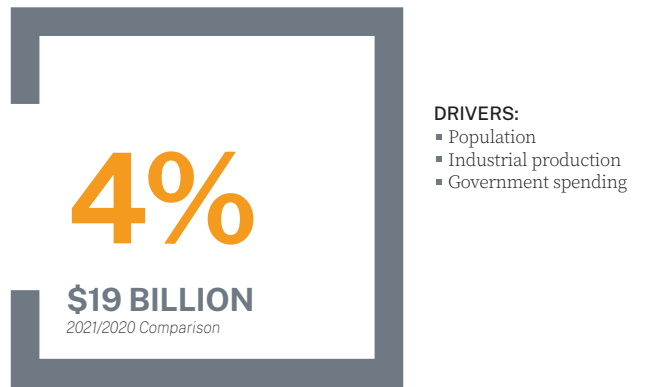
SEWAGE AND WASTE DISPOSAL



2021	STA	4%	\$28 B
2022	UP	6%	\$29 B
2023	UP	9%	\$32 B
2024	UP	10%	\$35 B
2025	UP	11%	\$39 B

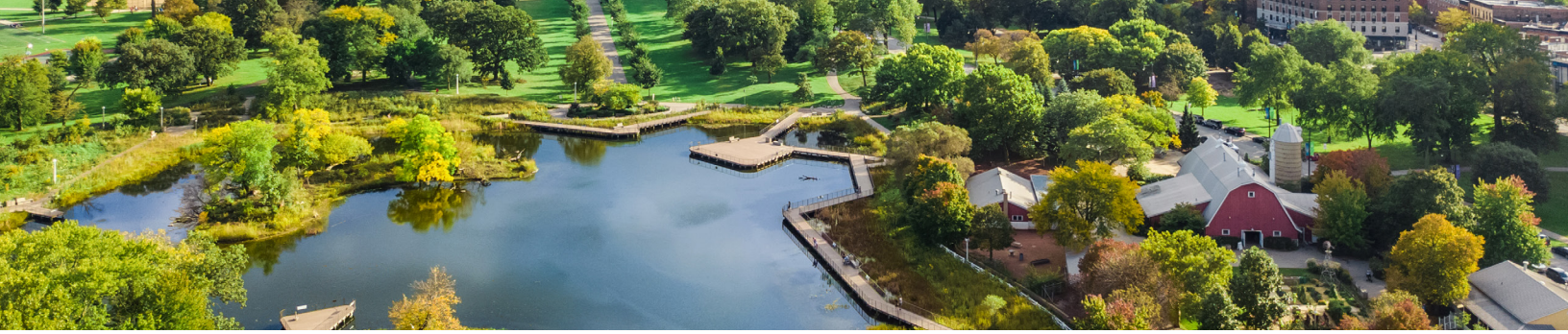
- The bipartisan infrastructure bill allocates \$60 billion in investments in water and wastewater infrastructure, including \$55 billion from new revenue sources. Proposed funding levels, if passed, would have a significant impact on annual construction spending.
- The 2021 ASCE report card features a wastewater grade of D, a stormwater grade of D+, and a solid waste score of C+, highlighting the fact that 15% of the nation's 16,000 wastewater treatment plants are running at or above capacity while underground pipes are on average 45 years old and aging.

WATER SUPPLY

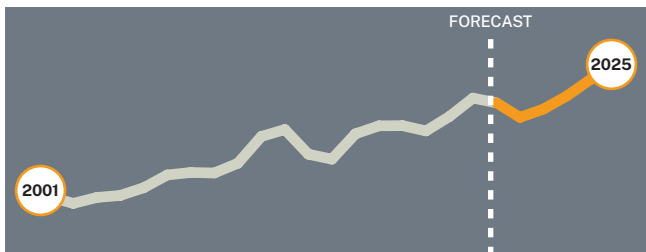
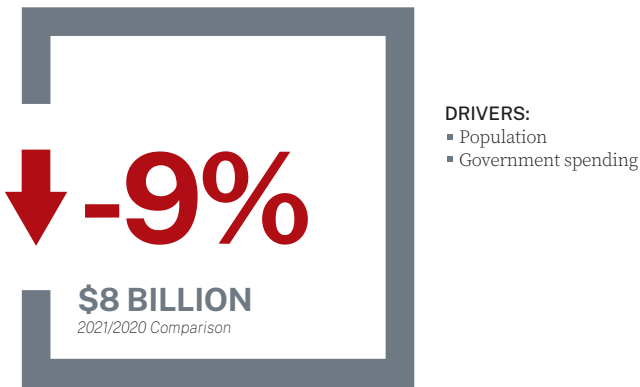


2021	STA	4%	\$19 B
2022	UP	7%	\$21 B
2023	UP	10%	\$23 B
2024	UP	12%	\$26 B
2025	UP	12%	\$28 B

- Proposed federal water infrastructure funding will be directed foremost into bolstering state revolving funds (\$23 billion), accelerating lead line replacement (\$15 billion), improving storage and resilience infrastructure for droughts (\$8 billion), and addressing emerging contaminants (\$5 billion).
- Telecommunications firms have been investing broadly in products and services that will use internet of things (IoT) solutions for connecting our nation's highly fragmented water infrastructure. Digital water spending is expected to realize double-digit growth annually over the next decade.
- The latest 2021 ASCE infrastructure report suggests a minimum annual investment of \$123 billion over the next 10 years in order to maintain a good state of repair.



CONSERVATION AND DEVELOPMENT



2021	DWN	-9%	\$8 B
2022	UP	5%	\$9 B
2023	UP	8%	\$9 B
2024	UP	9%	\$10 B
2025	UP	11%	\$11 B

- The bipartisan infrastructure bill includes just over \$21 billion toward remediation of legacy pollution.
- Michael Regan, head of the EPA, recently announced the U.S. would reduce production and consumption of refrigerants, or hydrofluorocarbons (HFCs), by 85% over the next five years. The agency is also working on new rules to manage pollution through vehicle, landfill methane, industrial soot and power plant emissions.
- Expect increased environmental regulation and oversight across all segments over the coming years, especially in those that will receive federal infrastructure aid.

Construction Put in Place Estimated for the United States

Millions of Current Dollars

4th Quarter 2021 Forecast (Based on 2nd Quarter 2021 Actuals and 3rd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	242,939	270,365	289,855	280,385	310,051	353,659	368,256	363,864	377,578	398,830
Multifamily	79,112	80,403	83,411	88,401	93,935	98,486	103,284	107,437	113,333	121,105
Improvements*	163,913	194,986	190,611	184,656	234,102	264,282	263,911	258,593	266,915	278,203
Total Residential	485,964	545,754	563,877	553,442	638,088	716,426	735,451	729,894	757,826	798,138
NONRESIDENTIAL BUILDINGS										
Lodging	27,077	28,660	31,464	33,461	29,053	22,279	20,490	21,481	23,391	25,744
Office	67,907	68,685	76,662	88,724	87,399	82,061	79,897	83,332	88,205	92,913
Commercial	78,696	87,626	86,422	84,345	86,816	88,901	90,594	91,599	95,968	101,620
Health Care	40,574	43,120	43,450	46,263	48,113	48,290	50,659	54,669	57,843	60,218
Educational	91,629	96,685	101,210	108,952	107,435	101,325	103,840	109,441	116,934	124,941
Religious	3,752	3,586	3,499	3,730	3,500	3,070	2,852	2,904	3,043	3,217
Public Safety	8,177	8,539	9,353	12,012	17,878	12,818	11,770	11,662	12,310	13,281
Amusement and Recreation	23,652	26,569	28,068	30,416	27,550	24,676	23,776	25,096	26,887	28,441
Transportation	43,339	46,137	53,219	57,448	59,661	57,186	58,774	63,731	71,191	79,845
Communication	22,179	23,696	24,502	22,184	22,521	21,883	22,752	24,626	26,949	29,527
Manufacturing	79,633	70,682	72,508	80,978	72,143	73,907	80,534	86,731	90,950	91,219
Total Nonresidential Buildings	486,615	503,985	530,357	568,513	562,069	536,396	545,937	575,272	613,671	650,964
NONBUILDING STRUCTURES										
Power	112,067	95,951	99,569	117,960	115,048	112,958	118,436	125,196	132,784	139,391
Highway and Street	93,187	89,620	91,745	99,402	99,888	97,819	101,458	110,392	121,569	130,997
Sewage and Waste Disposal	24,151	22,901	23,931	26,119	26,379	27,547	29,177	31,694	34,931	38,632
Water Supply	13,940	14,168	15,477	16,397	18,727	19,435	20,757	22,889	25,536	28,473
Conservation and Development	7,745	7,464	8,229	9,207	8,955	8,182	8,622	9,324	10,199	11,278
Total Nonbuilding Structures	251,090	230,104	238,951	269,085	268,997	265,941	278,450	299,495	325,018	348,770
Total Put in Place	\$1,223,669	\$1,279,843	\$1,333,185	\$1,391,040	\$1,469,154	\$1,518,763	\$1,559,838	\$1,604,661	\$1,696,515	\$1,797,873

Construction Put in Place Estimated for the United States

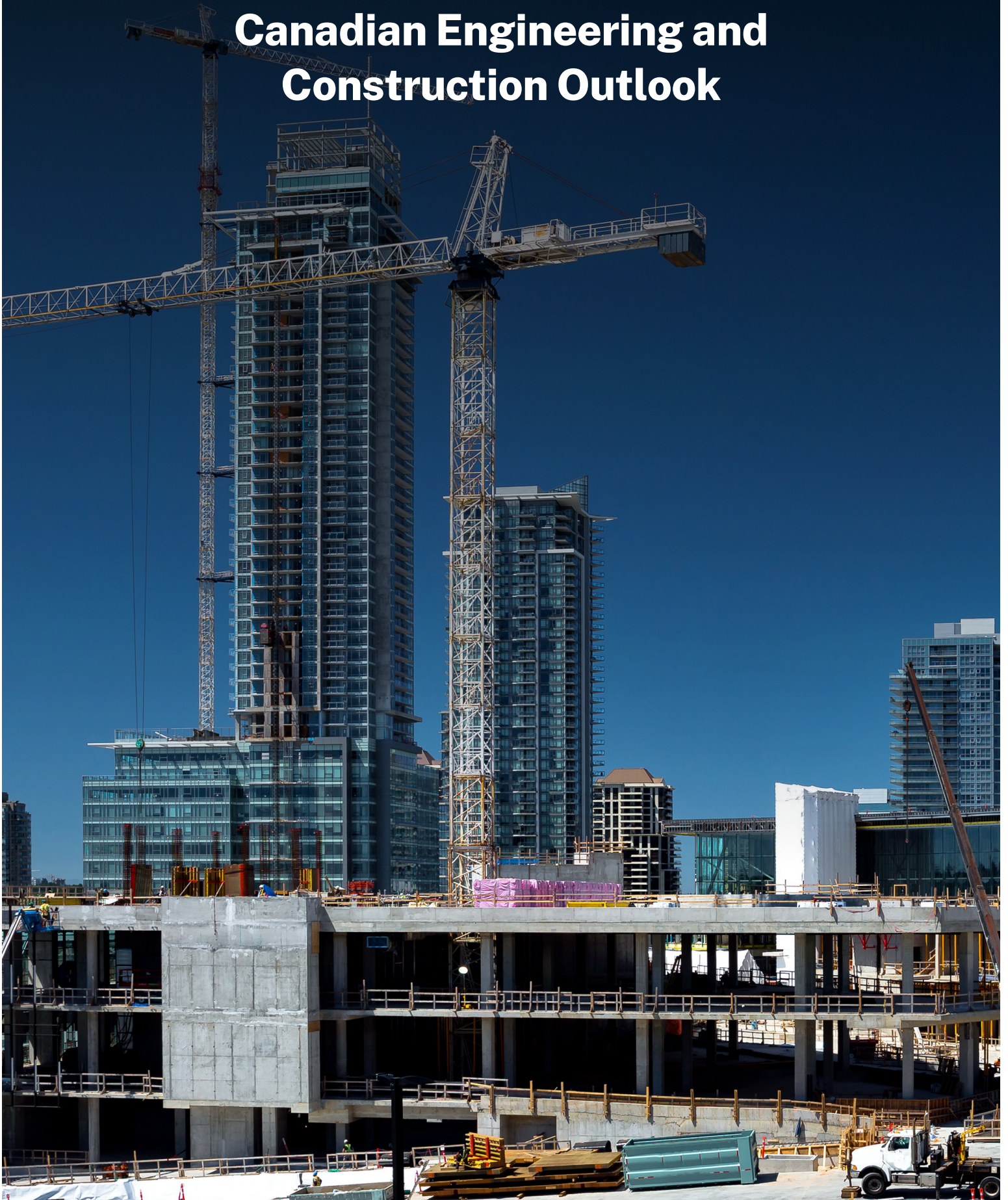
Change From Prior Year - Current Dollar Basis

4th Quarter 2021 Forecast (Based on 2nd Quarter 2021 Actuals and 3rd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	10%	11%	7%	-3%	11%	14%	4%	-1%	4%	6%
Multifamily	16%	2%	4%	6%	6%	5%	5%	4%	5%	7%
Improvements*	10%	19%	-2%	-3%	27%	13%	0%	-2%	3%	4%
Total Residential	11%	12%	3%	-2%	15%	12%	3%	-1%	4%	5%
NONRESIDENTIAL BUILDINGS										
Lodging	23%	6%	10%	6%	-13%	-23%	-8%	5%	9%	10%
Office	21%	1%	12%	16%	-1%	-6%	-3%	4%	6%	5%
Commercial	17%	11%	-1%	-2%	3%	2%	2%	1%	5%	6%
Health Care	2%	6%	1%	6%	4%	0%	5%	8%	6%	4%
Educational	7%	6%	5%	8%	-1%	-6%	2%	5%	7%	7%
Religious	4%	-4%	-2%	7%	-6%	-12%	-7%	2%	5%	6%
Public Safety	-4%	4%	10%	28%	49%	-28%	-8%	-1%	6%	8%
Amusement and Recreation	15%	12%	6%	8%	-9%	-10%	-4%	6%	7%	6%
Transportation	-4%	6%	15%	8%	4%	-4%	3%	8%	12%	12%
Communication	2%	7%	3%	-9%	2%	-3%	4%	8%	9%	10%
Manufacturing	-4%	-11%	3%	12%	-11%	2%	9%	8%	5%	0%
Total Nonresidential Buildings	8%	4%	5%	7%	-1%	-5%	2%	5%	7%	6%
NONBUILDING STRUCTURES										
Power	1%	-14%	4%	18%	-2%	-2%	5%	6%	6%	5%
Highway and Street	2%	-4%	2%	8%	0%	-2%	4%	9%	10%	8%
Sewage and Waste Disposal	-2%	-5%	4%	9%	1%	4%	6%	9%	10%	11%
Water Supply	4%	2%	9%	6%	14%	4%	7%	10%	12%	12%
Conservation and Development	0%	-4%	10%	12%	-3%	-9%	5%	8%	9%	11%
Total Nonbuilding Structures	1%	-8%	4%	13%	0%	-1%	5%	8%	9%	7%
Total Put in Place	7%	5%	4%	4%	6%	3%	3%	3%	6%	6%

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




Canadian Engineering and Construction Outlook



Canadian Key Takeaways

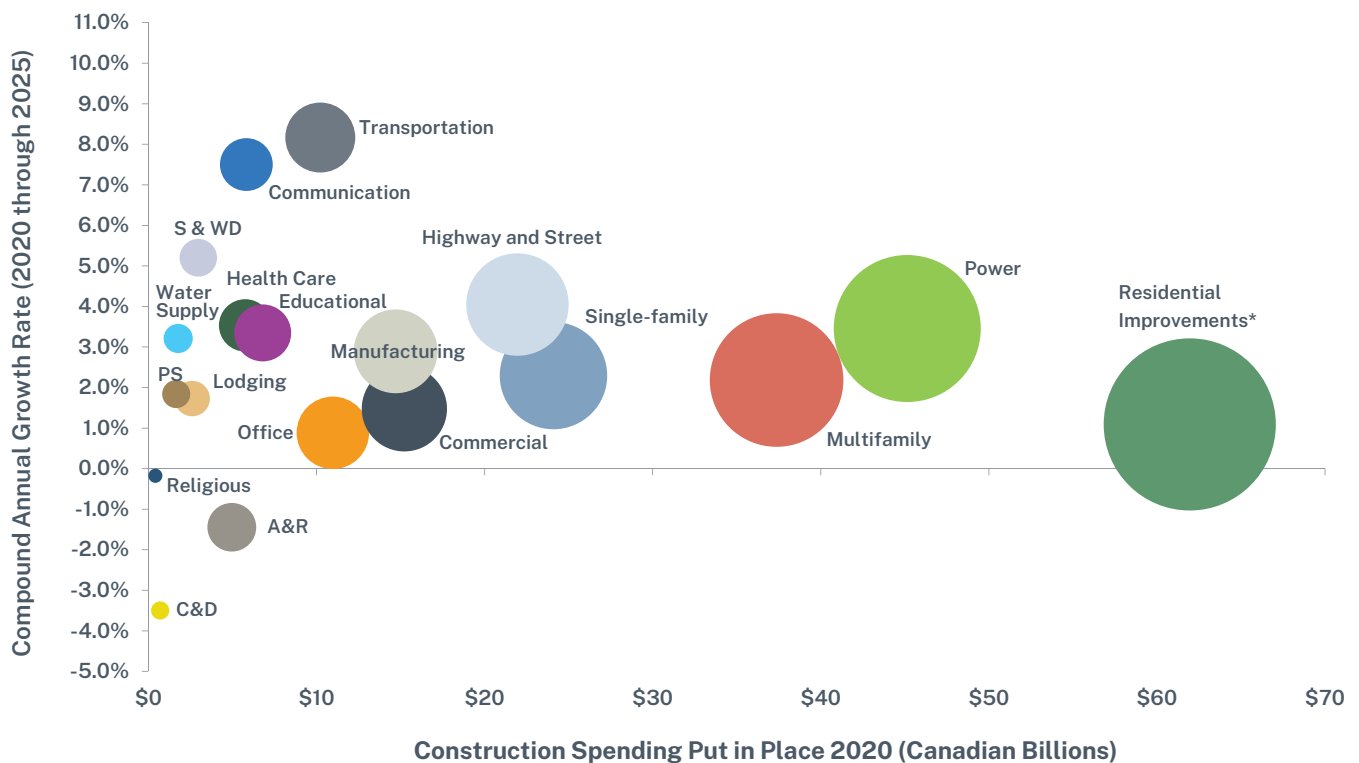
- Total engineering and construction spending for Canada is forecast to end 2021 up 5% compared to 0% growth in 2020.
- Transportation, multifamily residential, single-family residential, improvements, health care, education, highway and street, and communication are strong growth segments, with each anticipated to experience 2021 year-end growth rates of 5% or greater. The power, water supply, and sewage and waste disposal segments are expected to end the year with growth roughly in line with the rate of inflation, and therefore considered stable.
- Declines in 2021 will be led by decreasing investment in private nonresidential building segments, including lodging, commercial, and amusement and recreation. Reduced spending will also impact office, manufacturing, public safety, conservation and development, and religious spending.

Canada 2021 Segment Performance 2021/2020 Comparison

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



Total Canadian Construction Spending Put in Place 2020 and Forecast Growth (2020 through 2025) by Construction Segment

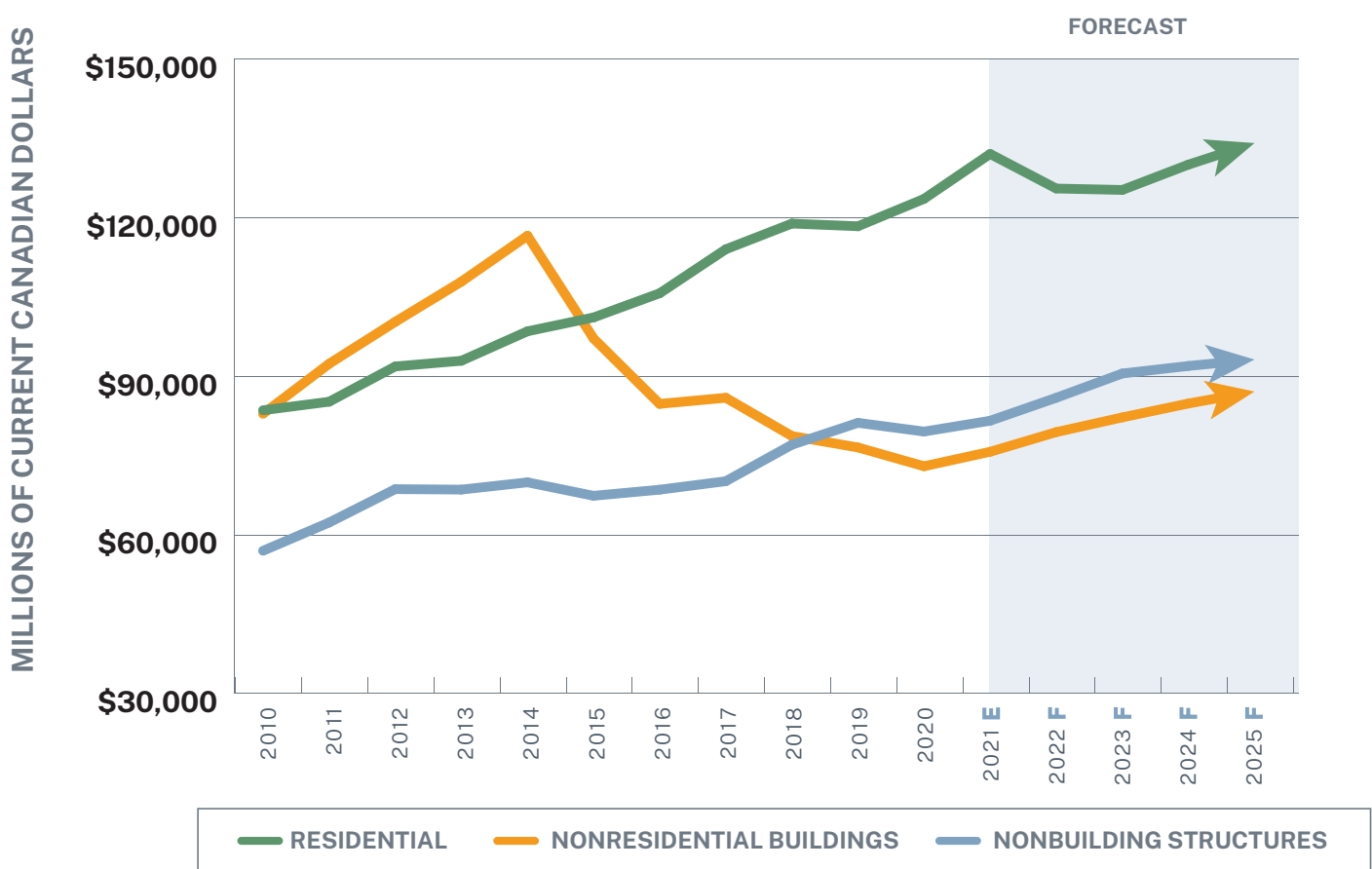


*Improvements includes additions, alterations and major replacements. Maintenance and repairs are not included.

SOURCE: FMI FORECAST Q4 2021



Total Construction Spending Put in Place Estimated for Canada



SOURCE: FMI FORECAST Q4 2021

Fourth quarter 2021 forecast based on second quarter actuals and third quarter assumptions.

Construction Put in Place Estimated for Canada

Millions of Current Canadian Dollars

4th Quarter 2021 Forecast (Based on 2nd Quarter 2021 Actuals and 3rd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	26,964	28,106	26,394	22,839	24,095	26,201	25,093	25,176	26,278	26,989
Multifamily	25,267	28,428	31,860	34,243	37,367	39,283	37,908	38,605	40,326	41,632
Improvements*	53,223	57,287	60,460	61,121	61,954	66,480	62,381	61,333	63,330	65,414
Total Residential	105,454	113,821	118,714	118,204	123,416	131,964	125,382	125,114	129,934	134,034
NONRESIDENTIAL BUILDINGS										
Lodging	2,569	2,557	2,766	2,695	2,606	2,538	2,542	2,632	2,739	2,839
Office	8,977	9,011	10,138	11,302	10,972	10,753	10,512	10,444	11,052	11,465
Commercial	13,357	13,472	14,002	15,748	15,228	14,407	14,526	15,104	15,847	16,387
Health Care	4,823	5,168	5,252	5,319	5,756	6,241	6,688	6,787	6,770	6,847
Educational	6,645	7,729	7,678	6,744	6,799	7,295	7,685	7,759	7,861	8,017
Religious	413	386	382	444	415	384	378	386	402	412
Public Safety	970	1,289	1,250	1,697	1,647	1,636	1,701	1,720	1,775	1,805
Amusement and Recreation	4,429	4,488	4,090	4,113	4,961	4,235	4,011	4,212	4,408	4,613
Transportation	7,074	7,510	10,214	10,454	10,218	11,996	13,238	14,425	14,835	15,131
Communication	5,781	5,904	6,327	6,725	5,829	7,202	9,167	10,400	8,671	8,368
Manufacturing	13,038	12,177	14,525	15,558	14,705	14,510	15,116	16,319	17,260	16,959
Total Nonresidential Buildings	68,077	69,691	76,624	80,799	79,138	81,195	85,564	90,186	91,621	92,843
NONBUILDING STRUCTURES										
Power	57,954	57,583	52,893	49,592	45,146	46,697	48,449	49,956	51,720	53,503
Highway and Street	17,725	19,706	20,480	21,163	21,955	22,983	24,389	25,377	25,996	26,774
Sewage and Waste Disposal	5,114	4,655	2,797	2,918	2,966	3,099	3,524	4,004	4,182	3,822
Water Supply	3,000	3,145	1,680	1,735	1,768	1,831	1,919	1,958	2,012	2,071
Conservation and Development	611	482	442	704	701	680	747	539	568	587
Total Nonbuilding Structures	84,404	85,571	78,292	76,112	72,536	75,291	79,028	81,834	84,478	86,756
Total Put in Place	\$257,934	\$269,084	\$273,630	\$275,115	\$275,090	\$288,449	\$289,975	\$297,135	\$306,033	\$313,633

Construction Put in Place Estimated for Canada

Change From Prior Year - Current Canadian Dollar Basis

4th Quarter 2021 Forecast (Based on 2nd Quarter 2021 Actuals and 3rd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	5%	4%	-6%	-13%	5%	9%	-4%	0%	4%	3%
Multifamily	6%	13%	12%	7%	9%	5%	-3%	2%	4%	3%
Improvements*	3%	8%	6%	1%	1%	7%	-6%	-2%	3%	3%
Total Residential	5%	8%	4%	0%	4%	7%	-5%	0%	4%	3%
NONRESIDENTIAL BUILDINGS										
Lodging	4%	0%	8%	-3%	-3%	-3%	0%	4%	4%	4%
Office	-2%	0%	13%	11%	-3%	-2%	-2%	-1%	6%	4%
Commercial	-6%	1%	4%	12%	-3%	-5%	1%	4%	5%	3%
Health Care	-6%	7%	2%	1%	8%	8%	7%	1%	0%	1%
Educational	12%	16%	-1%	-12%	1%	7%	5%	1%	1%	2%
Religious	-7%	-7%	-1%	16%	-7%	-8%	-2%	2%	4%	2%
Public Safety	-36%	33%	-3%	36%	-3%	-1%	4%	1%	3%	2%
Amusement and Recreation	26%	1%	-9%	1%	21%	-15%	-5%	5%	5%	5%
Transportation	14%	6%	36%	2%	-2%	17%	10%	9%	3%	2%
Communication	11%	2%	7%	6%	-13%	24%	27%	13%	-17%	-3%
Manufacturing	0%	-7%	19%	7%	-5%	-1%	4%	8%	6%	-2%
Total Nonresidential Buildings	2%	2%	10%	5%	-2%	3%	5%	5%	2%	1%
NONBUILDING STRUCTURES										
Power	-15%	-1%	-8%	-6%	-9%	3%	4%	3%	4%	3%
Highway and Street	-7%	11%	4%	3%	4%	5%	6%	4%	2%	3%
Sewage and Waste Disposal	-7%	-9%	-40%	4%	2%	4%	14%	14%	4%	-9%
Water Supply	-19%	5%	-47%	3%	2%	4%	5%	2%	3%	3%
Conservation and Development	78%	-21%	-8%	59%	0%	-3%	10%	-28%	5%	3%
Total Nonbuilding Structures	-13%	1%	-9%	-3%	-5%	4%	5%	4%	3%	3%
Total Put in Place	-3%	4%	2%	1%	0%	5%	1%	2%	3%	2%

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

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